



# **Study on the role of digitalisation and innovation in creating a true single market for retail financial services and insurance**

*Call: FISMA/2015/075D*

*Final Report*

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## EUROPEAN COMMISSION

*Directorate-General for Financial Stability, Financial Services and  
Capital Markets Union*

# Study on the role of digitalisation and innovation in creating a true single market for retail financial services and insurance

Call: FISMA/2015/075D

## Final Report

*June 2016*

*Centre for European Policy Studies  
Luxembourg Institute of Science and Technology  
University College Cork*



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# Final Report

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## **List of Abbreviations**

|       |                                                                 |
|-------|-----------------------------------------------------------------|
| ABBL  | Association des Banques et Banquiers, Luxembourg                |
| ACCIS | Association of Consumer Credit Information Suppliers            |
| AISP  | Account Information Service Providers                           |
| AML   | Anti-money laundering                                           |
| API   | Application Programming Interface                               |
| ASPS  | Account Servicing Payment Service Provider                      |
| ATM   | Automated Teller Machine                                        |
| B2B   | Business-to-business                                            |
| B2C   | Business-to-customer                                            |
| BIC   | Bank Identifier Code                                            |
| CCD   | Consumer Credit Directive                                       |
| CENFE | Caisse d'Épargne Nord France Europe                             |
| CKMS  | Compliance Knowledge Management Systems                         |
| CNIL  | Commission nationale de l'informatique et des libertés (France) |
| CRO   | Conversion Rate Optimisation                                    |
| DCC   | Digital Command Control                                         |
| DVLA  | Driver and Vehicle Licensing Agency                             |
| EHFCN | European Healthcare Fraud and Corruption Network                |
| EHIC  | European Health Insurance Card                                  |
| EIDAS | Electronic Identification and Signature                         |
| EMD   | E-Money Directive                                               |
| FACTA | Foreign Account Tax Compliance Act                              |
| FOE   | Freedom of Establishment                                        |
| FPS   | Free Provision of Services                                      |
| GAFA  | Google-Apple-Facebook-Amazon                                    |
| GWP   | Gross Written Premiums                                          |
| IBAN  | International Bank Account Number                               |
| IoT   | Internet of Things                                              |
| KYC   | Know Your Customer                                              |
| MCD   | Mortgage Credit Directive                                       |
| M3PL  | Third Party Liability Motor Insurance                           |
| MNO   | Mobile Network Operator                                         |
| MVP   | Minimum Viable Product                                          |
| NFC   | Near Field Communication                                        |
| NHG   | Nationale Hypotheek Garantie                                    |
| P2P   | Peer-to-peer                                                    |
| PAD   | Payment Accounts Directive                                      |
| PHI   | Private Health Insurance                                        |
| PISP  | Payment Initiation Service Providers                            |
| POS   | Point of Sale                                                   |
| PSD   | Directive on Payment Services                                   |
| PSD2  | Revised Directive on Payment Services                           |

|       |                                        |
|-------|----------------------------------------|
| PSP   | Payment Services Provider              |
| PSU   | Payment Service User                   |
| SEO   | Search Engine Optimisation             |
| SEPA  | Single Euro Payments Area              |
| SME   | Small- and Medium-sized Enterprises    |
| STO   | Straight-Through Processing            |
| TELCO | Telecommunications company             |
| TPA   | Third Party Administrator              |
| WEW   | Stichting Waarborgfonds Eigen Woningen |
| WHO   | World Health Organisation              |

## **Executive Summary**

As in many sectors of the economy, digital technologies are transforming retail financial services and non-life insurance. This digital transformation will probably continue to shape these two sectors in the coming years, and has already resulted in new products and processes that are developed and implemented by 'traditional' providers, such as banks and insurance companies. In recent years, however, new companies (defined as FinTech or InsurTech companies) have emerged on the market by developing and distributing products, either for banks and insurance companies, or for consumers. Companies that have been traditionally active in other sectors such as asset management, information and communication technology are also examining the possibility of offering retail financial services and non-life insurance.

Some of the new entrants might contribute to market integration with different expansion strategies. While the traditional providers have to deal with legacy issues such as local office networks and contracts with agents, the new entrants do not necessarily need a local presence to distribute their products. Hence, with a large part of the entire product/service being delivered virtually, the location of the provider becomes less relevant. It should thus become easier to offer services directly across borders.

The direct cross-border sales have been negligible to date, with the exception of some niche segments. For example, on average, only 0.8% of household loans granted in the euro area are extended on a cross-border basis. The only exceptions that have been identified in the study are Luxembourg for loans and accounts, owing to the significant number of cross-border commuters, and the UK for housing loans, mirroring the high volume of UK real estate purchased by overseas buyers.

This study focuses on the crossroads between digitalisation and direct cross-border activity. More specifically, the study assesses whether and to what extent digitalisation can contribute to the creation of a true single market for retail financial services and non-life insurance.

## **Methodologies**

Barriers to the integration of retail financial services markets can be broken down into two broad categories. First, the so-called natural barriers, which are mainly demand-driven, such as geographical distance and language. Second, the so-called structural barriers, which are mainly related to the high costs incurred in cross-border expansion, owing to differences in regulation, taxation, institutional framework, infrastructure/technologies, etc. Certain types of digitalisation and the related innovation in processes and products have the potential to overcome some of these barriers. Such innovations can come about either by improving existing processes and products, or from new approaches.

A wide range of research tools were used in this study, including academic research, interviews and focus groups. In total, 93 interviews were conducted to identify the channels through which digitalisation could reinforce the single market for retail banking and non-life insurance. Interviews were conducted with representatives from banks, insurers, brokers, agents, other financial institutions, large technology companies, FinTechs, supervisors and regulators. In addition, 53 consultants,

regulators, practitioners, academics and consumer representatives actively participated in four focus groups in Brussels and London. The focus groups have been used, primarily, to develop a pan-European view on the different future developments in digitalisation and innovation in retail banking and non-life insurance. The analyses contained in the study are based on the market developments observed until April 2016.

The study focused on a subgroup of 11 EU member states that have a large retail banking/insurance sector with advanced digitalisation/innovation and/or large cross-border activities: Belgium, Estonia, Finland, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Poland and the United Kingdom.

## Structure

The retail financial and non-life insurance markets have been subdivided into six segments for this analysis: i) payments; ii) current and savings accounts; iii) consumer and housing loans; iv) car insurance; v) property insurance; and, vi) health insurance. The segments are discussed in order of likelihood and potential to create a broad and deep cross-border market. Hence, for payments and to a lesser extent current and savings accounts, the prospects for a cross-border market are brightest, partly owing to the rapid adoption of new technologies. Although a broad cross-border market is less likely for consumer and housing loans, car insurance and property insurance, expansion for certain groups of consumers seems to be feasible in these markets as well. The lowest probability for substantial cross-border sales seems to be in health insurance, which is organised very differently across member states.

For each segment, an overview is provided of the current level of cross-border activity as well as of offers, providers and consumers involved. Furthermore, the study identifies the areas where digitalisation and innovation could help to open up the Single Market for retail financial services and non-life insurance. Finally, the potential development of cross-border activity in the context of growing digitalisation is assessed according to three scenarios.

## Key findings: types of providers and consumers engaged in cross-border sales

Overall, the share of cross-border sales at country level has been quite low to date for both retail financial services and non-life insurance products. There has, nevertheless, been a *high diversity of providers in cross-border sales*. Current cross-border activity in payments has been characterised by platforms that provide payment products linked to online current accounts. These accounts can be electronic wallets that are funded by bank accounts from different countries. Some specific FinTech companies have distributed savings accounts of smaller banks across borders, whereas others (notably some peer-to-peer platforms) have provided cross-border unsecured consumer loans. So far, the segment of cross-border housing loans has been covered almost exclusively by specialised banks and departments of large banks.

A few niche consumers have engaged in purchasing cross-border products. Younger and high-income consumers are perceived to be strong adopters of new cross-border payment instruments. For current/savings accounts and housing/consumer loans, expatriates and cross-border commuters are the primary target. In addition, some consumers with thin credit profiles (e.g. recent migrants, the young, etc), who are

underserved in their home country, are looking for (cross-border) alternatives in terms of unsecured consumer loans. Others want to benefit from higher interest on foreign savings accounts (e.g. some consumers in Austria, Germany and the Netherlands).

Demand for cross-border non-life insurance policies is also higher for cross-border commuters and expatriates. Furthermore, holiday home-owners with properties located in another country are more likely to ask or search for cross-border property insurance, whereas frequent travellers and consumers who go abroad for healthcare reasons might be interested in purchasing cross-border private health insurance coverage.

### **Key findings: contribution of digitalisation to overcome barriers to cross-border sales**

*The low switching levels* for most banking and non-life insurance products remain one of the major barriers to entering retail financial markets in general and cross-border markets in particular. Nevertheless, consumers are increasingly aware of new products and services, thanks to the internet and mobile channels. Boosted by social media platforms, comparison websites, targeted online campaign and switching tools, the notion of online 'shopping around' has embedded itself into consumer culture and could result in further cross-border demand, should some other conditions be fulfilled.

*Consumers' lack of trust in cross-border products* is another key barrier to the development of a single market. Digitalisation can contribute to enhancing the trust of consumers through global convergence in security tools, and in the design of websites and applications. Trust can also be strengthened by the increasing use of social media to share experiences about products, as well as by the ever-greater number of online tools at the disposal of consumers to foster their financial education and ability to handle vast amounts of digital information (particularly needed on a cross-border basis).

Some of the so-called *Know Your Customer (KYC) requirements make it difficult for providers to offer cross-border financial services*. The Anti-money laundering (AML) legislation requires the identification of consumers that use financial services. The implementation of these requirements varies between countries. Until recently, it was not possible to conduct the required authentication at distance in all countries, thereby adding further burden to cross-border activities. However, encouraged by the eIDAS, new technologies to identify customers through digital means (such as online video solutions) are rapidly emerging.

*The need for face-to-face advice and assistance* persists for many consumers, especially when it pertains to more complex products such as housing loans and health insurance. This need concerns all the phases of product distribution, i.e. orientation, selection, documentation, handling claims, etc. Until recently, local agent-based models were the most adequate response to this need. Nevertheless, increasingly sophisticated distribution channels relying on digital techniques like video-calls, robo-advice that apply machine-learning techniques to support decisions, etc. are gradually replacing personal advisers. These technologies can assist consumers any time, regardless of their location (provided that differences in language are not an insurmountable obstacle).

Another significant barrier to the emergence of a single market is *the time needed to acquire (non-resident) consumers*. Digitalisation is increasing the speed of acquisition for most products thanks to faster broadband connectivity, instant settlements instruments for an EU audience, faster scoring and pricing techniques, etc. Nevertheless, for some markets such as housing loans, the time needed to finalise a contract will continue to be longer owing to the need to interact with a higher number of external stakeholders (notaries, land administration, etc).

*There is still a high proportion of cash used in many EU countries*, especially among unbanked or underbanked consumers. Digital solutions are already available to process cross-border transfers of cash, by enhancing some of the attributes associated with cash (anonymity, flexibility, no interchange fees).

*Little financial data is available for significant parts of the population*: young households, new migrants, etc. In that context, scoring remains difficult (especially on a cross-border basis), resulting in poor access of these households to credit markets. One digital possibility that has been developed by a growing number of FinTech companies is the incorporation of algorithms that can process unstructured data, such as the one produced by social media to assess the creditworthiness of these households. Given that social media data is available and standardised at a global level, several FinTech companies already score and provide loans to non-residents based on these techniques.

*Processes to exchange domestic data on claims history (generally collected by a consortium of domestic providers) and structured data collected notably by credit bureaus remain limited across countries*. Some recent digital developments imply that providers can use alternative data to conduct cross-border business. For example, data collected from the 'Internet of Things' (IoTs), via the connected devices (vehicle telematics, smart home solutions, etc), or smart phone applications could help insurers better understand the behaviour of connected non-residents, resulting in more accurate cross-border pricing.

*Fragmentation across countries persists in recovery and claims processes*. In addition, physical presence is often requested or needed during these processes, i.e. check for fraud, presence at the court, etc. Against that background, engaging in cross-border sales appears to be both complicated and risky. However, the increasing availability of data and sophistication of the means to analyse this data also allows loan providers to identify potential missed payments earlier, which may help, in combination with behavioural strategies, to find solutions before entering costly and complex (cross-border) litigation. Turning to non-life insurance, specific data collected through the (IoTs) should contribute to lower the risk of fraud and improve policyholders' behaviour, thereby potentially reducing the number of (cross-border) claims.

## **Key findings: remaining barriers**

The lack of interoperability between providers, consumers and other stakeholders, both within and across countries, still impedes the emergence of a single market. For instance, the complete digitalisation of housing loans (especially the pre-sale and sale phases) and health insurance (especially the sales and post-sale phases) also depends on the degree of digitalisation achieved by actors as diverse as brokers, notaries, land administration, agents, doctors, tax authorities, etc.

Moreover, the processes for exchanging domestic structured data across countries, such as data on credit history for loans or data on claims history for car insurance,

continue to be limited. Acquisition of non-resident consumers that have financial history but might not be interested in alternative scoring, based for example on social media data, therefore remains difficult. In addition, consumers still have little access to the foreign data that is needed to compare foreign with domestic products.

Last but not least, insufficient harmonisation in some rules such as data protection, electronic signature, etc. discourages providers from engaging in cross-border sales. The poor consistency over time and across member states in taxation rules also hinders the cross-border sales of housing loans, savings accounts and even property and car insurance.

## **Key findings: scenarios**

The potential development of cross-border activity is assessed along the lines of three complementary scenarios. The first 'business as usual' scenario assumes that the current trend will continue; the second 'expansion in specific pockets' identifies some key areas in which cross-border activities could be boosted; and the third scenario, labelled 'integrated EU market', explores what would be needed for a truly single market. Scenarios 1 and 2 are generally considered to be complementary, with some aspects of Scenario 2 likely to develop more quickly than others. Scenario 3 is also one that will evolve in parallel, but at a slower pace, given the related technological, economic and regulatory challenges to be faced. For each scenario, the opportunities and threats, as well as the policy measures and other conditions that are necessary to reach more integrated markets, are identified.

### *Scenario 1: Business as usual*

There is a high probability that the share of cross-border activities will remain broadly similar. Lasting fragmentation in rules across the EU-28 will continue to deter both consumers and providers from entering the cross-border market. In addition, if hybrid distribution models, including both online channels and face-to-face interactions, persist for a significant share of products, the barrier of geographical distance will not be completely removed. The poor access of providers to non-residents' data, combined with the difficulty of consumers to obtain reliable data to compare products on a cross-border basis, will reinforce the status quo.

### *Scenario 2: Development of cross-border sales in specific pockets*

The number of niche consumers who ask for cross-border products could increase significantly in 5-10 years, if specific conditions are fulfilled. First of all, the global convergence in security tools and the design of applications/websites should enhance the confidence of consumers in engaging in cross-border sales, especially those who are inclined to switch.

The digital transformation of the supply chain within Scenario 2 should bring several opportunities for cross-border sales (provided that the language barrier can be overcome). Partly thanks to their acquisition of some FinTech and InsurTech companies, most 'traditional providers' will hasten the complete digitalisation of their distribution channels. Virtual offerings will integrate products from different segments, with interoperability becoming a competitive advantage. If, for example, traditional and FinTech providers tend to focus further on the cross-border sales of online current accounts, they could easily conduct credit scoring for their non-resident clients, by using the transaction and balance information from their foreign accounts. Potential new entrants could also contribute to further cross-border activity. For instance, based on their global approach, digital expertise and large amounts of personal data, multinational information technology companies will have the potential to develop

global solutions in retail finance and non-life insurance for their existing clients, irrespective of their location.

In order to facilitate the emergence of niches for cross-border sales, regulators should continue to reinforce the harmonisation of rules across the EU-28 as much as possible. In parallel, policy-makers should maintain sufficient room for the development of innovative processes and products. Regulators could also take several specific measures to promote the cross-border sales of simple products such as current and savings accounts by, for example, insisting on the inclusion of foreign accounts in the results of comparison tools.

#### *Scenario 3: EU integrated market*

Overall, the emergence of a true single market seems within the realm of possibility for payments, current accounts, savings accounts and unsecured consumer loans in 10-15 years. The probability of a single market will, however, be lower for housing loans, car insurance, property insurance and health insurance. The preconditions for Scenario 2 to materialise as well as a significant number of other conditions will need to be achieved for Scenario 3 to unfold.

The increasing use of passports by intermediaries and the multiplication of digital identity initiatives, such as the e-identity tools in Estonia, would make the physical location of many brokers, agents, lenders and insurers of little importance, thereby multiplying the possibilities of cross-border offers. For housing loans and health insurance, the significant digitalisation of the processes of external actors such as notaries, land administration and doctors, in combination with high interoperability between consumers, providers and these external actors will make the complete digitalisation of the distribution of these products feasible.

By reaching full maturity, nascent technologies will greatly contribute to the complete digitalisation of distribution channels of all retail financial services and non-life insurances: video-calls, robo-advisers, digital authentication, blockchain, telemedicine, etc. For instance, contracts for all the products covered by the study could be designed as 'smart contracts', which can be verified programmatically via the blockchain (provided that the related capacity issues can be solved), resulting in faster, safer and more transparent processes, regardless of where consumers, providers and other stakeholders are located. Some initiatives already exist such as in Estonia, where in 2015 the government introduced a public service whereby notaries contract their services on the blockchain for e-residents.

Last but not least, true pan-European product comparison platforms (that could be notably developed by global information technology companies), in combination with the increasing digital and financial literacy of consumers, will significantly boost consumers' search for cross-border products. In parallel, providers will need true pan-European databases for credit, property insurance, car insurance and health insurance (unlikely for this latter owing to the sensitive character of health data). Additionally, the development of European bodies (private or public) that provide exploitable alternative data could greatly contribute to cross-border supply: data produced by IoTs, social media data that can help insurers and banks, etc. Based on this data standardised at European level, the increasing sophistication of algorithms will allow providers to perform adequate marketing campaigns, scoring, pricing, fraud detection, early warning schemes, etc., for products sold to non-residents.

Overall, due to the high number of elements and conditions related to scenarios 2 and 3, regulators will need to adopt a holistic approach to facilitate the emergence of a

true single market for retail financial services and non-life insurance services, by ensuring consistency across the different digital layers (data protection, security, authentication, interoperability, etc.). Nevertheless, numerous policies that could facilitate the emergence of this single market are not contained in the digital agenda and should also be taken into consideration, notably the need to supervise banks exclusively at a centralised European level. In parallel, regulators should continue to reinforce the harmonisation in rules over the EU-28 in various areas of non-financial legislation, including insolvency and liability laws.

## Résumé

A l'instar de nombreux secteurs économiques, les technologies numériques sont en train de transformer les services financiers de détail et l'assurance non-vie. Selon toute vraisemblance, cette transformation digitale devrait continuer à façonner ces deux secteurs au cours des prochaines années, et a déjà donné lieu au développement et à la mise en œuvre de nouveaux produits et processus par les fournisseurs «traditionnels» tels que les banques et les compagnies d'assurance. Ces dernières années, toutefois, de nouvelles entreprises (définies comme des sociétés FinTech ou InsurTech) ont émergé sur le marché en développant et distribuant des produits à l'intention des banques ou des compagnies d'assurance, ou d'utilisateurs finaux. Des sociétés traditionnellement actives dans d'autres secteurs économiques tels que la gestion d'actifs, l'informatique et les télécommunications semblent également intéressées à entrer sur les marchés des services financiers de détail et de l'assurance non-vie.

Certains des nouveaux fournisseurs pourraient contribuer à l'intégration des marchés en s'appuyant sur différentes stratégies d'expansion. Si les fournisseurs traditionnels doivent gérer l'héritage représenté par exemple par les réseaux d'agences locaux et les contrats qui les lient à des agents, les nouveaux acteurs n'ont pas nécessairement besoin d'une présence locale pour distribuer leurs produits. Dès lors, puisqu'une grande partie des produits/services est fournie virtuellement, la localisation du fournisseur perd de son importance. Il devrait donc devenir plus aisé de proposer des services directement par-delà les frontières.

Jusqu'à présent, les activités transfrontalières directes dans le secteur des services financiers de détail ont été négligeables, à l'exception de certains segments de niche. Par exemple, en moyenne, à peine 0,8 % des crédits accordés aux ménages dans la zone euro le sont sur une base transfrontalière. Les seules exceptions identifiées dans l'étude sont les prêts et comptes au Luxembourg, reflétant le nombre important de navetteurs transfrontaliers, et les prêts immobiliers au Royaume-Uni, en raison du niveau élevé d'actifs immobiliers détenus par des non-résidents.

Cette étude se concentre sur les relations entre la digitalisation et les activités transfrontalières. Plus particulièrement, elle analyse si et dans quelle mesure la digitalisation peut contribuer à la création d'un véritable marché unique pour les services financiers de détail et l'assurance non-vie.

## Méthodologie

Les barrières à l'intégration des services financiers de détail peuvent être classées en deux grandes catégories. Premièrement, il y a les barrières dites naturelles, qui sont principalement déterminées par la demande: distance géographique, différences de langues, etc. Deuxièmement, il y a les barrières dites structurelles, qui sont avant tout liées aux coûts élevés occasionnés par l'expansion transfrontalière en raison de différences au niveau de la réglementation, de la fiscalité, du cadre institutionnel, de l'infrastructure, des technologies, etc. Certains types de digitalisation et l'innovation des processus et des produits qui leur est associé disposent du potentiel nécessaire pour dépasser certaines de ces barrières. Ce genre d'innovation peut se baser sur une amélioration des processus et produits existants, ou de nouvelles approches.

Un large éventail de méthodes de recherche a été mis en œuvre afin de réaliser la présente étude, incluant des recherches universitaires, des entretiens et des groupes de discussion. Au total, 93 entretiens ont été menés en vue d'identifier les canaux au travers desquels la digitalisation pourrait renforcer le marché unique pour la banque de détail et l'assurance non-vie. Les entretiens ont été réalisés avec des représentants des banques, des assureurs, des courtiers, des agents, d'autres établissements financiers, de grandes entreprises technologiques, des entreprises FinTech, des superviseurs et des régulateurs. En outre, 53 consultants, régulateurs, praticiens, universitaires et représentants des consommateurs ont participé de manière active à quatre groupes de discussion à Bruxelles et à Londres. L'objectif principal des groupes de discussion était d'élaborer un point de vue paneuropéen sur les développements futurs en matière de digitalisation et d'innovation dans la banque de détail et l'assurance non-vie. Les analyses contenues dans cette étude se basent sur les développements de marché observés jusqu'en avril 2016.

L'étude s'est intéressée prioritairement à un sous-groupe de 11 États membres de l'UE disposant d'un important secteur dans la banque de détail et l'assurance, ainsi que d'une digitalisation et d'une innovation avancées et/ou d'activités transfrontalières de grande ampleur : Belgique, Estonie, Finlande, France, Allemagne, Irlande, Italie, Luxembourg, Pays-Bas, Pologne et Royaume-Uni.

## **Structure**

Les marchés des services financiers de détail et d'assurance non-vie ont été subdivisés en six segments distincts pour cette analyse : paiements, comptes courants et d'épargne, crédits à la consommation et immobiliers, assurance voiture, assurance de biens et assurance maladie. Les différents segments sont examinés selon l'ordre de probabilité et de potentialité de création d'un vaste marché transfrontalier. Dès lors, pour les paiements et, dans une moindre mesure, pour les comptes courants et d'épargne, les perspectives de création d'un marché transfrontalier sont prometteuses, en partie du fait d'une adoption rapide des nouvelles technologies. Bien que la création d'un vaste marché transfrontalier soit moins probable pour les crédits à la consommation et immobiliers, et l'assurance voiture et de biens, l'expansion pour certains groupes de consommateurs semble réalisable sur ces marchés. La probabilité que les ventes transfrontalières deviennent substantielles est la plus faible pour le segment de l'assurance maladie, qui est organisé très différemment d'un État membre à l'autre.

Pour chaque segment, un aperçu est fourni sur le niveau actuel des activités transfrontalières ainsi que des offres, des fournisseurs et des consommateurs afférents. Par ailleurs, l'étude identifie les différentes zones où la digitalisation et les innovations pourraient contribuer au développement du marché unique pour les services financiers de détail et l'assurance non-vie. Finalement, les développements potentiels à venir des activités transfrontalières dans un contexte de digitalisation croissante seront évalués selon trois scénarios.

## **Principales conclusions : types de fournisseurs et de consommateurs impliqués dans les ventes transfrontalières**

Globalement, à ce jour la part des ventes transfrontalières par pays est relativement faible tant pour les services financiers de détail que pour les produits d'assurance non-vie. Malgré la faible part de marché, les fournisseurs de produits bancaires

transfrontaliers ont affiché une grande diversité. Les activités transfrontalières actuelles dans le secteur des paiements sont caractérisées par des plateformes ayant accès à des comptes courants virtuels. Ces comptes virtuels peuvent être des portefeuilles électroniques approvisionnés par des comptes ancrés dans tel ou tel pays. Certains établissements spécifiquement FinTech ont distribué de manière transfrontalière des comptes d'épargne de banques plus petites, tandis que d'autres (notamment certaines plateformes pair à pair) ont accordé des crédits à la consommation transfrontaliers non sécurisés. Jusqu'à présent, le segment des crédits immobiliers transfrontaliers était couvert presque exclusivement par des banques spécialisées ou des départements de banques traditionnelles.

Plusieurs niches de consommateurs ont effectué des achats transfrontaliers de produits. Les consommateurs jeunes et à revenu élevé sont perçus comme de fervents adeptes des instruments de paiement transfrontaliers. Concernant les comptes courants/d'épargne et les crédits immobiliers/à la consommation, les expatriés et les navetteurs transfrontaliers sont la cible principale. De plus, certains consommateurs disposant d'un profil de crédit avec peu de données exploitables (par exemple les nouveaux migrants, les jeunes ménages, etc.) recherchent des solutions alternatives transfrontalières en termes de crédits à la consommation non sécurisés. D'autres types de consommateurs sont intéressés par les comptes d'épargne étrangers compte tenu du bas niveau persistant des taux d'intérêt domestiques sur ces produits (par ex. en Autriche, en Allemagne et aux Pays-Bas).

La demande de polices d'assurance non-vie transfrontalières est également plus élevée parmi les navetteurs transfrontaliers et les expatriés. De plus, les propriétaires de résidences de vacances situées à l'étranger sont davantage susceptibles de demander une assurance de biens transfrontalière, tandis que les voyageurs fréquents et les consommateurs qui se rendent à l'étranger pour se faire soigner pourraient être intéressés par une couverture d'assurance maladie privée transfrontalière.

### **Principales conclusions : contribution de la digitalisation au franchissement des barrières empêchant les ventes transfrontalières**

*La faible propension des consommateurs à changer de produits bancaires et d'assurance non-vie* reste l'un des obstacles principaux à l'entrée de nouveaux fournisseurs sur les marchés en général et sur les marchés transfrontaliers en particulier. Néanmoins, les consommateurs sont de plus en plus conscients des nouveaux produits et services, grâce à internet et aux applications mobiles. Poussée par les plateformes de médias sociaux, les sites de comparaison, les campagnes digitales ciblées et les outils permettant de changer de produits, la notion de « faire ses courses sur internet » s'est pleinement intégrée à la culture des consommateurs et pourrait contribuer à davantage de demande de produits transfrontaliers, sous réserve que certaines conditions soient respectées.

*Le manque de confiance des consommateurs vis-à-vis des produits transfrontaliers* constitue une autre barrière importante au développement du marché unique. La digitalisation peut contribuer à améliorer la confiance des consommateurs grâce à la convergence mondiale des outils de sécurité, et de la conception des sites internet et des applications. La confiance peut également être renforcée par l'utilisation croissante des médias sociaux permettant de partager les expériences avec certains produits, et par le nombre toujours plus grand d'outils internet à la disposition des consommateurs visant à promouvoir leur éducation financière ainsi que leurs aptitudes à gérer de vastes volumes d'informations digitales (d'autant plus nécessaire dans un cadre transfrontalier).

Certains des soi-disant principes du «*Know Your Customer (KYC)* » *rendent les ventes transfrontalières difficiles pour les fournisseurs*. La législation sur la lutte contre le blanchiment d'argent exige d'identifier les consommateurs qui utilisent les services financiers de détail. L'exécution de ces exigences varie entre les pays. Jusqu'à récemment, il était impossible d'effectuer l'identification à distance dans tous les pays, ce qui rajouter aux difficultés des activités transfrontalières. Cependant, encouragées par la réglementation européenne sur l'identification électronique et les services de confiance pour les transactions électroniques au sein du marché intérieur, de nouvelles technologies permettant d'identifier les consommateurs avec des outils digitaux (telles que les solutions vidéo sur l'internet) sont en train d'émerger rapidement.

*Le besoin de conseil et d'aide en face-à-face persiste pour de nombreux consommateurs*, en particulier pour les produits plus complexes tels que les prêts immobiliers et l'assurance santé. Ce besoin concerne toutes les phases de la distribution de produit, à savoir l'orientation, la sélection, la documentation, la demande d'indemnisation, etc. Jusqu'à récemment, les modèles basés sur des contacts locaux étaient la réponse la plus adéquate à ce besoin. Néanmoins, des réseaux de distribution de plus en plus sophistiqués reposant sur des techniques digitales telles que les appels vidéos, les robots-conseillers qui appliquent des techniques d'apprentissage automatique afin d'aider à la décision, etc. remplacent graduellement les conseillers personnels. Ces technologies peuvent assister les consommateurs à n'importe quel moment, quelque soit l'endroit où ils sont situés (sous réserve que la différence de langue ne représente pas un obstacle infranchissable).

Une autre barrière significative à l'émergence d'un marché unique est *le temps nécessaire à l'acquisition de consommateurs (non-résidents)*. La digitalisation accentue la vitesse d'acquisition pour la plupart des produits grâce à une connectivité haut débit plus rapide, des instruments de décision instantanés pour une audience européenne, des techniques plus rapides d'évaluation de la solvabilité et de tarification, etc. Néanmoins, pour certains marchés tels que les prêts immobiliers, le temps nécessaire pour finaliser un contrat continuera à être plus long en raison du besoin d'interagir avec un plus grand nombre d'acteurs extérieurs (notaires, administration foncière, etc).

*Dans de nombreux pays européen, l'utilisation d'argent liquide reste très répandue*, en particulier parmi les consommateurs non ou peu connectés au système bancaire. Des solutions digitales sont disponibles pour réaliser des transferts transfrontaliers d'argent liquide, en mettant en avant certains des attributs associés à l'argent liquide (anonymat, flexibilité, absence de commissions d'interchange).

*Peu de données financières sont disponibles pour des parts significatives de la population*: jeunes ménages, immigrés récents, etc. Dans ce contexte, l'évaluation de la solvabilité reste difficile (en particulier sur une base transfrontalière), ce qui limite l'accès des ces consommateurs aux marchés du crédit. Une solution digitale qui a été développée par un nombre croissant d'entreprises FinTech est l'incorporation d'algorithmes permettant de traiter des données non structurées, telles que celles produites par les médias sociaux, afin d'évaluer la solvabilité de ces ménages. Etant donné que les données des médias sociaux sont disponibles et standardisées au niveau mondial, plusieurs compagnies FinTech évaluent la solvabilité des non-résidents grâce à ces techniques et peuvent déjà leur fournir des crédits à la consommation non sécurisés.

*Les processus d'échange de données domestiques sur les demandes d'indemnisation (collectées généralement par un consortium d'assureurs nationaux) et de données structurées collectées notamment par des bureaux de crédit restent limités entre les pays. Certains des récents développements digitaux impliquent que les fournisseurs peuvent utiliser des données alternatives pour gérer les activités transfrontalières. Par exemple, les données collectées par l'intermédiaire de l'« Internet des objets » (IdOs) et des objets connectés (télématicques des véhicules, solution de la domotique, etc), ou des applications des smartphones pourraient aider les assureurs à mieux comprendre le comportement des non-résidents connectés, permettant ainsi une tarification transfrontalière plus précise.*

*Des différences dans les régimes de recouvrement et de gestion des demandes d'indemnisation persistent entre les pays. De plus, la présence physique est souvent requise ou nécessaire durant ces processus (vérification des fraudes potentielles, présence à la cour de justice, etc). Dans ce contexte, les activités transfrontalières peuvent s'avérer à la fois complexes et risquées. Cependant, la disponibilité croissante des données financières et personnelles, et la sophistication grandissante des moyens d'analyser ces données permettent aux prêteurs d'identifier les risques potentiels de non-remboursement à l'avance. En s'appuyant sur des stratégies comportementales, ceci permet de trouver des solutions avant d'entrer dans des processus juridiques (transfrontaliers) à la fois coûteux et complexe. Au sujet de l'assurance non-vie, des données spécifiques collectées via les (IdOs) devraient permettre de réduire le risque de fraude et d'améliorer le comportement des assurés, ce qui pourrait réduire le nombre des demandes d'indemnisation (transfrontalières).*

## **Principales conclusions : les barrières restantes**

Le manque d'interopérabilité entre consommateurs, fournisseurs et autres acteurs, à la fois au sein d'un même pays et entre pays, continue d'entraver l'émergence d'un marché unique. Par exemple, la digitalisation complète des crédits immobiliers (en particulier les phases de préventes et de ventes) et de l'assurance maladie (en particulier les phases de ventes et d'après-vente) dépend également du degré de digitalisation atteint par des acteurs aussi divers que les courtiers, les notaires, l'administration foncière, les agents, les médecins, les autorités fiscales, etc.

Parallèlement, les processus visant à échanger des données structurées entre pays telles que des données relatives à l'historique des crédits ou des données relatives à l'historique des demandes d'indemnisation restent limités. L'acquisition de clients non-résidents qui disposent de données financières mais qui sont susceptibles de ne pas être intéressés dans les évaluations alternatives basées notamment sur les données des médias sociaux, reste donc difficile. De plus, les consommateurs ont un accès limité aux données étrangères nécessaires pour comparer produits étrangers et produits domestiques.

Enfin, et ce n'est pas le point le moins important, l'harmonisation insuffisante de certaines réglementations telles que celles sur la protection des données, sur la signature électronique, etc. décourage les fournisseurs de s'engager dans des ventes transfrontalières. Les différences fiscales au cours du temps et entre les différents États membres contribuent également à entraver les ventes transfrontalières de crédits immobiliers, de comptes d'épargne et même d'assurances de biens et voiture.

## Principales conclusions: les scénarios

Le développement potentiel des activités transfrontalières est analysé en fonction de trois scénarios. Le premier scénario, intitulé « business as usual » considère que les tendances actuelles vont se poursuivre; le second, intitulé « expansion dans des niches spécifiques » met en évidence certains éléments clés grâce auxquels les activités transfrontalières pourraient être stimulées ; et le troisième scénario, baptisé « marché européen intégré », explore les conditions nécessaires pour obtenir un véritable marché unique. Les scénarios 1 et 2 sont généralement considérés comme complémentaires, sachant que certains aspects du scénario 2 sont susceptibles de progresser plus rapidement que d'autres. Le scénario 3 est un scénario qui évoluera en parallèle, mais à un rythme plus lent, compte tenu des défis technologiques, économiques et réglementaires auxquels il est nécessaire de faire face. Pour chaque scénario, l'étude identifie les opportunités et les menaces, ainsi que les politiques et autres conditions nécessaires à la réalisation de marchés plus intégrés.

### *Scénario 1: Business as usual*

Il y a de fortes chances pour que la part des activités transfrontalières demeure dans l'ensemble identique. La fragmentation persistante des réglementations dans l'UE-28 continuera de dissuader les consommateurs et les fournisseurs à entrer sur le marché transfrontalier. De plus, si les modèles de distribution hybrides incluant à la fois des interactions en face-à-face et des interactions digitales, persistent pour une part importante de produits, la barrière de la distance géographique ne sera pas entièrement éliminée. La difficulté, pour les fournisseurs, d'accéder aux données de non-résidents, combinée à la difficulté, pour les consommateurs, d'obtenir des données fiables pour comparer les produits sur une base transfrontalière, renforceront le statu quo.

### *Scénario 2: Expansion dans des niches transfrontalières spécifiques*

Le nombre de consommateurs dans des marchés de niche qui demandent des produits transfrontaliers pourrait fortement augmenter dans 5 à 10 ans, pour peu que certaines conditions spécifiques soient remplies. Tout d'abord, la convergence mondiale des outils de sécurité et de la conception des applications et des sites internet devrait permettre d'inciter davantage les consommateurs à acheter des produits transfrontaliers, en particulier les consommateurs ayant une plus forte propension à changer de fournisseur.

La transformation digitale des fournisseurs dans le cadre du scénario 2 devrait apporter davantage d'opportunités pour les ventes transfrontalières (sous réserve que la barrière de la langue puisse être surmontée). En partie grâce à leur acquisition de certaines entreprises de la FinTech et de l'InsurTech, la plupart des fournisseurs traditionnels accéléreront la digitalisation complète de leurs réseaux de distribution. Des offres virtuelles intégreront des produits de différents segments, l'interopérabilité devenant un avantage compétitif. Si, par exemple, les fournisseurs traditionnels et les entreprises FinTech se concentrent davantage sur les ventes transfrontalières de comptes courants virtuels, ces organisations pourront aisément évaluer la solvabilité des non-résidents, en utilisant les données sur les soldes et les transactions dans ces comptes étrangers. Les nouveaux entrants potentiels pourraient également contribuer à davantage d'activité transfrontalière. Par exemple, en se fondant sur leur approche globale, leur expertise numérique et leurs vastes quantités de données personnelles, les multinationales des technologies de l'information auront le potentiel de développer des solutions mondiales dans les services financiers de détail et l'assurance non-vie pour leurs clients existants, peu importe la localisation de ces derniers.

Afin de faciliter l'émergence de niches de consommateurs qui s'ouvrent aux ventes transfrontalières, les régulateurs devraient continuer à renforcer autant que possible l'harmonisation des règles au sein de l'UE-28. En parallèle, les législateurs devraient maintenir un espace suffisant pour le développement des produits et processus novateurs. Les régulateurs pourraient également prendre des mesures spécifiques pour promouvoir les ventes transfrontalières de produits simples tels que les comptes courants et les comptes épargne, en insistant par exemple pour l'inclusion des comptes étrangers dans les résultats des sites comparatifs.

### *Scénario 3: marché européen intégré*

Dans l'ensemble, l'émergence d'un véritable marché unique semble appartenir au domaine du possible pour les paiements, les comptes courants, les comptes d'épargne et les crédits à la consommation non sécurisés d'ici 10 à 15 ans. La probabilité d'un tel marché sera toutefois plus faible pour les crédits immobiliers, l'assurance voiture, l'assurance de biens et l'assurance maladie. Les pré-conditions pour permettre au scénario 2 de se concrétiser ainsi qu'un grand nombre d'autres conditions devront être respectées pour permettre la réalisation du scénario 3.

L'utilisation croissante des passeports par les intermédiaires et la multiplication des initiatives d'identité électronique, telles que les instruments de l'«e-identity» en Estonie, rendraient insignifiante la localisation physique de multiples courtiers, agents, prêteurs et assureurs, contribuant par la même à la multiplication des possibilités d'offres transfrontalières. Concernant les crédits immobiliers et l'assurance maladie, la forte digitalisation des processus d'acteurs extérieurs tels que les notaires, l'administration foncière et les médecins, combinée à une forte interopérabilité entre consommateurs, fournisseurs et ces acteurs extérieurs, rendra faisable la digitalisation complète de la distribution de ces produits.

En atteignant leur phase de maturité, certaines technologies naissantes contribueront grandement à la digitalisation complète des réseaux de distribution de l'ensemble des services financiers de détail et d'assurance non-vie : appels vidéo, robots-conseillers, identification digitale, chaîne de blocs, télémédecine, etc. Par exemple, les contrats de l'ensemble des produits couverts par l'étude pourraient être conçus sur le modèle des « contrats intelligents », qui peuvent être confirmés de manière programmée via la chaîne de blocs (sous réserve que cette technologie parvienne à résoudre ses problèmes de capacité). Ce système devrait aboutir à des processus plus rapides, plus sûrs et plus transparents, peu importe la localisation physique des consommateurs, fournisseurs et autres acteurs. Certaines initiatives existent déjà en Estonie, où le gouvernement a introduit en 2015 un service public permettant aux notaires d'enregistrer directement les contrats de services sur les chaînes de blocs pour les citoyens virtuels.

Enfin, et ce n'est pas le point le moins important, de véritables plateformes paneuropéennes de comparaison de produits (qui pourraient notamment être développées par les multinationales des technologies de l'information), combinées à l'éducation croissante des consommateurs en matière financière et digitale augmenteront de manière significative la recherche de produits transfrontaliers par les consommateurs. En parallèle, les fournisseurs auront besoin de véritables bases de données paneuropéennes sur le crédit, l'assurance des biens, l'assurance voiture et l'assurance santé (peu probable pour ce dernier en raison du caractère sensible des données médicales). De plus, le développement d'organisations paneuropéennes (privées ou publiques) qui fournissent des données alternatives exploitables pourraient accroître de manière significative l'offre transfrontalière : données produites par les (IdO)s, données des médias sociaux pouvant aider les assureurs et les banquiers, etc. En se basant sur ces données standardisées au niveau européen, la sophistication

croissante des algorithmes permettra aux fournisseurs d'améliorer de manière significative les campagnes marketing, l'évaluation de la solvabilité, la tarification, la détection des fraudes, les systèmes de détection préventifs, etc, pour les produits vendus aux non-résidents.

D'une manière générale, vu le grand nombre d'éléments et de conditions liés aux scénarios 2 et 3, les régulateurs devront adopter une approche globale pour faciliter l'émergence d'un véritable marché unique pour les services financiers de détail et les services d'assurance non-vie, en assurant la consistance à travers les différents niveaux de la digitalisation (protection des données, sécurité, identification, interopérabilité, etc.). Toutefois, de nombreuses politiques qui pourraient faciliter l'émergence de ce marché unique ne figurent pas dans l'agenda numérique européen et devraient également être prises en compte, notamment la nécessité de superviser les banques exclusivement à un niveau européen centralisé. De plus, les régulateurs devraient poursuivre le renforcement de l'harmonisation des réglementations à travers toute l'UE-28 dans les différents secteurs de la législation non financière, y compris la législation en matière d'insolvabilité et de responsabilité civile.

## **1. Introduction**

Technological developments are rapidly changing the retail financial sector and potentially also the Single Market for financial services. In the last decade the 'digital revolution' has been the technological force behind the innovation dynamics in the financial sector.

The digital transformation has resulted in new products and processes. These products and processes are developed and implemented by the traditional providers of retail financial products like banks and insurance companies. But there is also a large range of companies that are entering the market for the first time. The latter group includes other financials (e.g. leasing companies, asset managers and pension funds) and companies that have traditionally been active in other sectors. The companies that are specialised in communications and/or technology seem to be especially interested in entering the retail financial market.

The new entrants are considering different expansion strategies. While the traditional providers have to deal with legacy issues such as large office networks and contracts with agents, the new entrants do not necessarily need a local presence anymore. Hence, with a large part or the entire product/service being delivered virtually, the location of the provider becomes less relevant. It should thus also be easier to offer services directly across borders, instead of indirectly through subsidiaries and branches, as was common practice in the past decades.

The direct cross-border activities in the retail financial sector have traditionally been negligible. For example, in the euro area, only 0.8% of retail loans for households were extended on a cross-border basis in 2013. One exception is Luxembourg (31.6%), which has large groups of commuters. The low market shares can be explained by the presence of several obstacles. Varying from natural barriers like geographical distance and languages to structural barriers like differences in regulation, taxation, infrastructure and institutional framework.

This study examines the crossroads of both digitalisation/innovation and direct cross-border activity. Digitalisation and innovation are likely to have the potential to partly or entirely overcome the structural and natural barriers, thereby enhancing the market share of cross-border activities of retail banking and non-life insurance. The study assesses whether and to what extent digitalisation can contribute to the creation of a true single market for retail financial services and non-life insurance.

## **Objectives**

The main objective of the study is to assess which role digital developments and innovation in general play in the creation of a true single market for retail banking and non-life insurance. In this respect, it is important to understand the trends, drivers and impacts of digitalisation on the retail banking and non-life insurance markets. This analysis will help us to assess how and to what extent digitalisation and innovation in the financial sector have helped and will help mitigate the negative effects resulting from specific barriers on the volume of cross-border sales.

The second objective of the study is to identify the policy measures that would be necessary to achieve a more integrated EU markets for financial services, with a specific emphasis placed on achieving full interoperability between member states and between services, usability and security, making consumers aware of services from

other member states and making firms aware of ways to provide services across borders. In other words, the study assesses which measures are necessary to help innovation and digitalisation overcome specific barriers to the cross-border sale of products. These measures are designed in order to create a framework in which cross-border activities could be profitable for both providers and consumers.

## **Methodology**

Very few in-depth research studies have been conducted on the impact of innovative processes and products on the ability of providers of retail banking and non-life insurance products to raise the market share of cross-border activities. Therefore, a significant part of the study enters uncharted waters, requiring the use of robust methodologies in order to define barriers to cross-border sales that could be overcome by innovation in the financial sector and the (potential) innovative solutions to help overcome these barriers.

Innovation can aim at improving existing products and processes or it can be based on a 'greenfield strategy' by creating 'everything from scratch'. The research considers four types of innovations: new products and improved products; and new processes and improved processes.

Barriers to the integration of retail financial services markets are broken down into two broad categories. First, the so-called natural barriers, which are mainly demand-driven barriers, such as geographical distance and languages. These obstacles are generally difficult to overcome, unless financial players adapt their commercial strategies to consumer preferences and consumers are willing to change their preferences. Second, the so-called structural barriers, which are mainly related to the high costs incurred in cross-border expansion owing to differences in regulation, taxation, institutional framework, infrastructures/technologies, etc.

The study identifies the barriers and (potential) solutions. Moreover, the current level of cross-border activities in retail financial services and insurance, as well as the role of digitalisation and innovation in pre-sales, sales and post-sales handling of retail banking and non-life insurance are assessed. In addition, different scenarios for the development of the market of cross-border retail financial services are formulated, with both the necessary conditions behind each scenario in terms of regulations, technologies and innovations as well as the related implications for the development of the Single Market explained.

A wide range of research tools are used for the study, including desk research, interviews and focus groups. Stakeholder consultation through interviews and focus groups played an important role in this study, both as a source of input and validation, and as a tool for mapping divergent stakeholder interests and views (and related bottlenecks in implementation).

In total, 92 interviews were conducted between 17 February 2016 and 8 April 2016 with representatives in 11 selected EU member states. Phone and face-to-face interviews were conducted with representatives from banks (29), insurers (10), brokers/agents (15), other financial institutions (8), large technology companies (2), FinTechs (10), supervisors (3) and regulators (15) (see Annex 1 for distribution by country). The interviews were used to identify developments in and the impact of digitalisation/innovation in retail banking and non-life insurance, and the channels through which this could impact the Single Market.

In addition, 53 consultants, regulators, practitioners, academics and consumer representatives attended the four focus groups. These separate meetings on banking and insurance were held on 10 and 22 March 2016 in Brussels and London, respectively (see Annex 2 for the name of the participants). The focus groups were primarily used to develop a pan-European view on the different future developments in digitalisation and innovation in retail banking and non-life insurance.

The study covers a representative sample of 11 EU member states. The selected countries have either a large retail banking/insurance sector with advanced digitalisation/innovation and/or large cross-border activities. The 11 selected countries are: Belgium (BE), Estonia (EE), Finland (FI), France (FR), Germany (DE), Ireland (IE), Italy (IT), Luxembourg (LU), Netherlands (NL), Poland (PL) and the United Kingdom (UK).

## **Structure of the study**

The study assesses the potential impact of digitalisation and innovation on cross-border activity, as well as the development for the various segments of retail financial services and non-life insurance. More specifically the payments, current and savings accounts, consumer and housing loans, car insurance, property insurance and health insurance-segments are examined. For each segment, the study provides an overview of the current level of cross-border activity as well as the providers that allow some groups of EU citizen to purchase in other member states. Moreover, it discusses the impact of digitalisation and innovation on the usage and collection of data as well as the interaction between customers and providers, and how this will affect the different related barriers to offering services on a cross-border basis.

Finally, for each of the six types of financial services, three scenarios have been developed in order to assess the future potential for cross-border sales in the coming years. The first 'business as usual' scenario assumes that the cross-border activity will develop along its current path, i.e. cross-border sales will remain very low for most consumer segments, except for certain niches markets, e.g. expatriates, commuters, etc. The second scenario – 'expansion in specific pockets' – detects certain niches in which cross-border activity could be expanded with limited regulatory intervention and where the digital potential could be exploited. The third scenario foresees an 'integrated EU market' and assumes that a true single market for retail financial services will be created. Scenarios 1 and 2 are generally considered to be complementary, with some aspects of Scenario 2 likely to develop more quickly than others. Scenario 3 is also one that will evolve in parallel, but at a slower pace, given the related technological, economic and regulatory challenges to be faced. For each scenario, the opportunities and threats, as well as the necessary conditions and probabilities are provided based on a review of the literature, as well as inputs from stakeholders in the interviews and focus groups.

The annexes from 3 to 15 at the end of the study provide a summary of the barriers that digitalisation can overcome and the main elements of each scenario. The annexes that focus on barriers provide a list of these specific barriers, as well as the digital solutions available to offset them and digital alternatives for doing so. Digital solutions emerge when there is a clearly defined problem and a reasonably good understanding of how to solve it with existing digital tools, whereas digital alternatives tend to be new approaches to existing processes and products. The annexes on scenarios provide a brief narrative of what the scenario is about, who are the targeted consumers, the necessary conditions and barriers to overcome for this scenario to materialise and finally the probability that this scenario will happen.

## **2. Payments**

International payment solutions have existed in the form of credit and debit card schemes since the late 1960s, in which groups of participating banks issue cards that allow their members to access their nationally held accounts via a privately run network (e.g. VisaNet). Such global 'open loop' payment solutions mean that consumer payments can be made anywhere, but the payment instrument is issued by the consumer's local domestic bank.

Today, there is a new requirement for value, competitive pricing and speed among consumers who are mobile and connected. These consumers attach high priority to the ability to access payment instruments from any jurisdiction. A competitive EU-wide financial services industry will therefore need to be able to attract and retain customers through services that are interactive, frictionless and pan-European. As expressed in an interview for this study by a Spanish national working for a French start-up based in the Netherlands: "We are EU citizens; we shouldn't be discriminated against because we are not local."

The need for better cross-border payment instruments is threefold. Firstly, consumers require more autonomy in their choice of payment instruments. Domestic banks offer limited payment products, and all are predicated on the assumption that the use of any particular payment instrument is subject to a charge (consumers pay to pay). The "switching inertia" so often referenced in this study as consumer reticence may also be interpreted as lack of choice in terms of service provision. In a digital culture in which consumers are accustomed to being rewarded for service usage, at the expense of succumbing to targeted advertising campaigns (the 'freemium' model), domestic banks have yet to assimilate the lesson from FinTech innovation: digitalisation is not just about a new distribution channel (the smartphone), but crucially concerns the commercial basis upon which products and services are provided. Domestic institutions and supervisors must address consumer requirements for better value and choice by opening up access to instant settlement instruments to an EU audience.

Secondly, payment services in Europe are already dominated by global card schemes issued through domestic banks. Such disintermediation simply multiplies the number of parties involved in processing payments, therefore increasing the transaction cost to the consumer and merchant alike. With global technology and FinTech innovators alike eyeing the handsome margins in payments processing, and with the advantage of channel domination (phone, airtime plan or customer profile), it is vital for European economic sovereignty and for consumer protection to nurture a healthy EU-based sector around digital financial services.

Finally, the goal of a single market for goods and services in the EU can only be served by platforms that permit such open trade. The first phase of such trade may be considered to be e-commerce platforms and internet-based online accounts linked to existing domestic payment instruments. The second phase of cross-border trade is access to cross-border payment instruments, such that the increased competition in products and services is exemplified by increased competition in payment options.

Already, new FinTech offerings discussed in this chapter support online consumer payments independently of the country of residence. They provide intermediary payment accounts or digital wallets, which can be used by consumers and merchants alike to exchange monetary value across-borders and time zones.

Such innovations, boosted by the access to current accounts driven by the second Directive on Payment Services (PSD2),<sup>1</sup> demonstrate this latent consumer appetite for de-constructing the communication process between payer, trusted third party and payee, and reducing the delay in settlement to near real time. Born out of consumers' desire to purchase online, to make cross-institution and cross-border payments at reasonable economic cost, and to take advantage of real-time visibility of financial data to support decision-making, the success of today's FinTech economy strongly suggests that opportunities to deliver value to EU citizens revolve around a deeper understanding of their requirements.

This study demonstrates that current cross-border possession of means of payments is low, but the rapid growth of the FinTech payment sector suggests strong demand for straightforward registration processes, simplified account access and value-added decision support services. There is ample evidence in this report that consumer uptake of digital financial services can scale rapidly once access to those services is linked to specific usage scenarios (such as online shopping<sup>2</sup> or transportation ticketing<sup>3</sup>). These integration scenarios lend themselves well to a single market context, as discussed in the scenarios section of this chapter.

Furthermore, the advantages of such innovation for consumers is dwarfed by the potential benefits for businesses in accessing cross-border payments. While not the focus of this study, the economic impact for small, medium and large enterprises of a wider choice of pan-European payment instruments is hugely significant, given that business-to-business (B2B) payments, while representing only a small fraction of transaction volumes, are responsible for the vast majority of the exchange of monetary value. Currency exchange markets are built on speculation on visibility of the instantaneous value of money, where it is estimated that \$5.3 trillion changes hands every day. Integrating real-time visibility of the processing of payment and settlement instructions in a cross-border context will create opportunities to fundamentally alter the supply/demand relationship.

So while many of the business models discussed in this report rely on the ability to use technology to bridge the gap between national and international payment systems for consumer payments, without necessarily changing the status quo, the emerging picture has far greater implications for the financial services industry in the longer term: consumer lifestyles, habits and requirements are changing rapidly, and traditional nationally focused products and services will no longer satisfy a smartphone-driven desire for interactivity, convenience and speed. And, as the burgeoning market for FinTech innovation demonstrates, consumer-centric solution design rapidly translates into an increasing appetite for integration at an enterprise level.<sup>4</sup>

Pan-European banking platforms<sup>5</sup> and mobile payment services<sup>6</sup> reflect this service culture, where busy mobile lifestyles are facilitated by smart applications that interact

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<sup>1</sup> Article 28, OJ L 173 of 12.6.2014 (<http://eur-lex.europa.eu/legalcontent/EN/TXT/PDF/?uri=CELEX:32014L0059&from=EN>).

<sup>2</sup> Success of payment platforms such as Klarna or iDEAL.

<sup>3</sup> Car/Ride-sharing platforms such as BlaBlaCar or Travel card top-up apps such as Oyster (UK) or Leap (IRL).

<sup>4</sup> Payments processing intermediaries, created for frictionless online experience for consumers, discovering new value propositions for handling, formatting and analysing transactional data on behalf of banks (focus group in London, 22 March 2016).

<sup>5</sup> E.g. Number26, Sofort, Ipagoo, S-Money, Pivo, Klarna, DigiCash, Blik and Pay-Facile.

<sup>6</sup> E.g. Pingit, paym, Bancontact and iDEAL.

openly with existing accounts to facilitate rapid decision-making. Such service distribution platforms offer access to cross-border payment services, with a single and real-time KYC (know your customer) account-creation process (residence justification in one country). Current passporting regulation allows single authorisation for payment institutions, meaning that a payment platform may provide the services for which it is authorised in its home state throughout the EU. With online stored value wallets that are funded via diverse methods, or interacting directly with current accounts to push transactions from consumers to payees, such innovation is built on an understanding that a customer-focused design culture is a pre-requisite for modern borderless banking. More explicitly, customer value can be derived from the intelligent and appropriate use of banking data.

Alongside such digital platforms for cross-border banking, a promising evolution in the development of decentralised networks, such as the blockchain protocol (upon which the exchange of virtual currencies such as BitCoin is based), is the notion of citizen-owned and protected identity.<sup>7</sup> As such, the concept of centralised user authorisation is inverted in that the decentralised network processes and validates all customer transactions, reducing the key vulnerability issue of one single point of access.

This chapter aims to shine light on such emerging trends in cross-border payments innovation, and leverages this insight to assess their contribution to a deeper single EU market for payment services.

## **2.1 Current cross-border activity**

Quantitative data sources at the euro-area level<sup>8</sup> show transaction volumes across the different types of payment service. PSD2 drives the digitalisation of cross-border payments towards 'debit' instruments that access consumers' current accounts in real time, as distinct from consumers using credit cards (or delayed debit cards) from a global scheme to make purchases anywhere (not a cross-border transaction in terms of this study<sup>9</sup>).

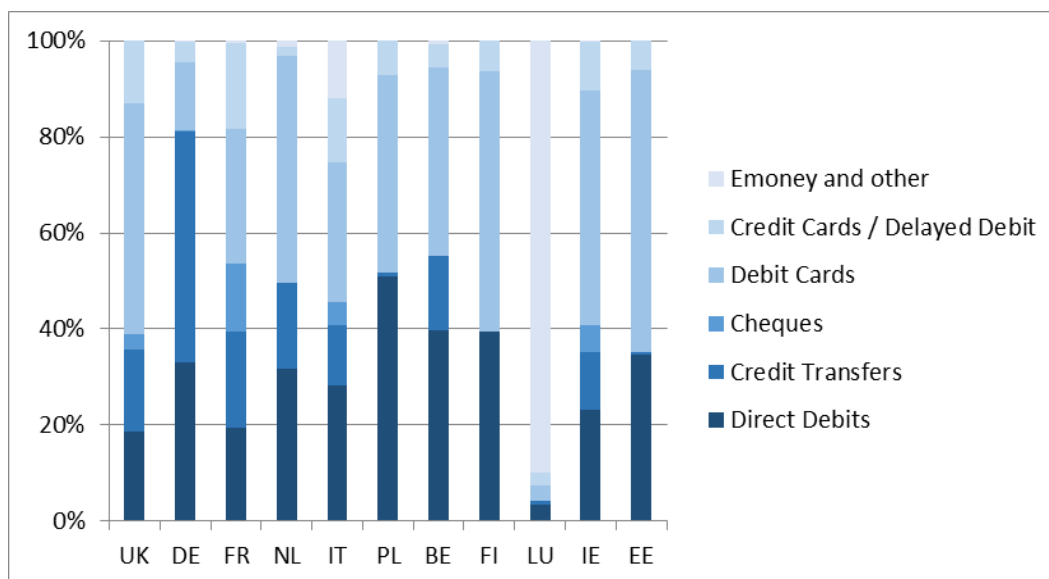
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<sup>7</sup> Organisations such as Evernym ([www.evernym.com/](http://www.evernym.com/)) and onename (<http://onename.com/>) are looking to harness decentralised blockchain protocols for better management of virtual identity.

<sup>8</sup> Based on data from the ECB Statistical Data Warehouse (<https://sdw.ecb.europa.eu/>).

<sup>9</sup> Tender proposal from CEPS/LIST/UCC for the call FISMA/2015/075/D, p.21.

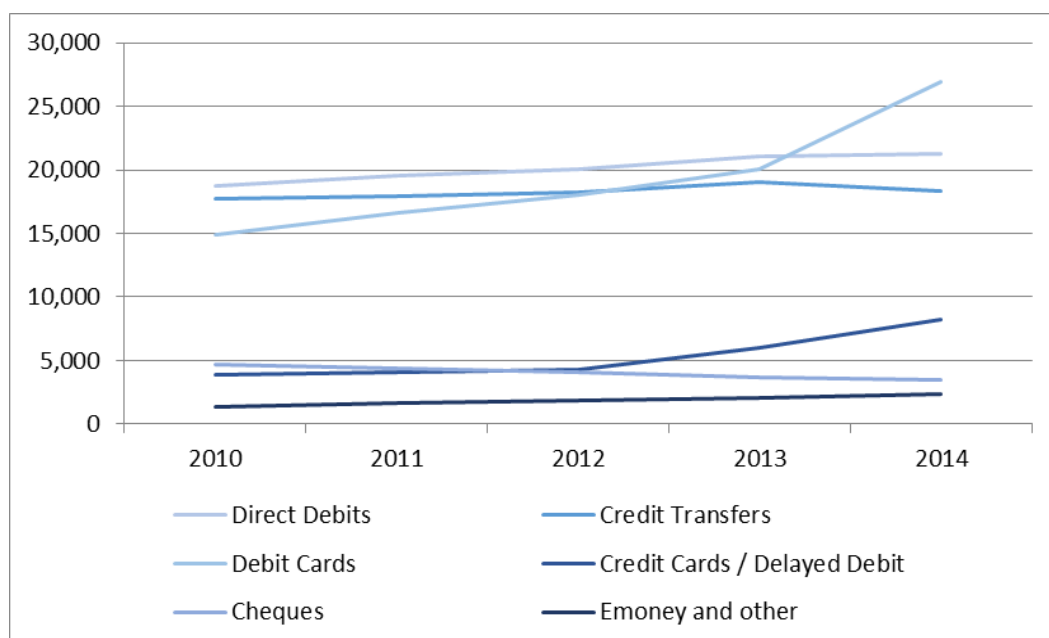
Figure 2.1 Transactions by type of payment service, by country (% of total, 2014)



Source: FSIC analysis on ECB Statistical Data Warehouse (2014).

ECB data are useful in revealing trends towards such debit-type payment instruments, and may point to a key success factor for online versions (e.g. push payments using Credit Transfer). Figure 2.1 shows the breakdown of payment types across all payment transactions for 2014; the countries are displayed in order of total transaction volume. The trend behind these numbers is shown in Figure 2.2 over the four years (2010-14) of the ECB data.

Figure 2.2 Transactions by payment service for selected countries (millions, 2010-14)



Source: FSIC analysis based on 2014 data from ECB Statistical Data Warehouse.

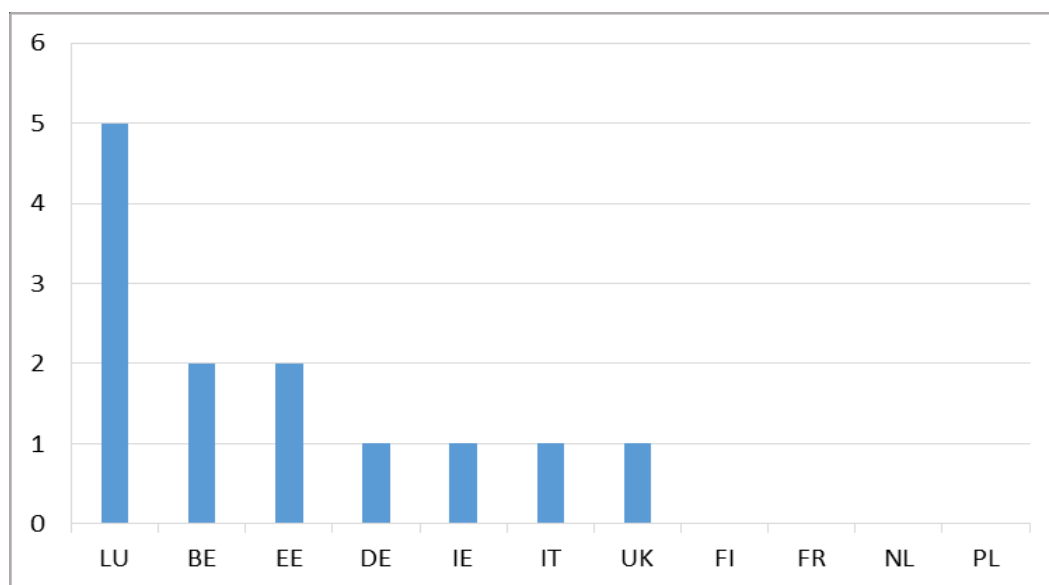
These numbers give a basis for evaluating the business case for on-line versions of these instruments, where the trade-off between cost, fee transparency and speed of settlement will continue to strongly influence consumer behaviour.

Traditionally most European consumers use the payment instruments that are linked to their current accounts. The figures for cross-border access to current accounts from the Eurobarometer are presented in section 3.1. In short, they show that only 4% of EU citizen had in 2011 a current account in another EU country. Moreover, only 5% indicated that they would ever consider opening a current account abroad. Among the 11 countries covered in this study, there are none with major shares of cross-border access. Luxembourg and Belgium have the highest levels, with up to 8% of the respondents having access to current accounts abroad.

Clearly the notion of an anchor institution for financial services remains strong for consumers, with little appetite for multiplying the number of products consumed, regardless of professional or lifestyle requirements for increased mobility. 'Fear of being discriminated against' or 'penalised' from a financial-cost perspective because of movement across EU borders was a theme that arose repeatedly in field work for this study.

With respect to ownership of a payment instrument issued in another country (e.g. a credit card), the level of cross-border activity is even more restrained.

Figure 2.3 Credit cards held abroad (share of population, 2011)



Source: Authors' configuration based on Eurobarometer 2011 data.

Given that credit card issuance (from the major schemes) is linked to the current account of the customer's issuing bank, the number of cross-border credit cards in use (average 1%) is limited by the low number of current accounts abroad. Across all EU countries surveyed, the proportion of credit cards held in a foreign country is 0.76%.

The same survey asked respondents if they would ever consider purchasing a credit card from another EU member state, the average across the entire sample was 3%, with a slightly higher average (4%) for the countries in this study. These figures indicate strongly that the low level of interest in cross-border payment instruments is not likely to evolve rapidly, again perhaps attributable to the economic crisis.

There may also be an effect of aversion to using credit, with consumers downgrading their use of credit cards in favour of debit cards in recent years, but particularly since

2008. As the Single European Payments Area (SEPA) project drives the development of competitive cross-border payment instruments, such as direct debits and credit transfers, it can be assumed that consumers will increasingly leverage their current account for cross-border transactions .

Online payment platforms, ostensibly the ideal platform for cross-border payments, don't appear to be encouraging such traffic with interchange fees (3.4% + €0.35), currency conversion charges<sup>10</sup> and cross-border charges<sup>11</sup> (%) being applied when a customer makes a payment across jurisdictions. Taking into account such charges, consumers are facing 5-10% surcharges on payments to payees on the same platform.

Consumption of traditional payment instruments purchased in other EU countries is still constrained by the mandatory links of these products to current accounts, and by reluctance of consumers to take on fee-paying financial services outside their country of residence.

The next sections explore the notion of cross-border payments by examining the various products, consumers and providers of cross-border payments.

### **2.1.1 Types of providers and products**

FinTech companies have been quick to exploit the opportunities through SEPA by connecting single-entity digital platforms to multiple consumer accounts regardless of where those accounts are, and the range of services is growing rapidly that help consumers manage their finances in a way that is social, borderless and real-time. Indeed the speed of this evolution renders the categorisation of the services challenging, and in particular, the extent to which these solutions offer true cross-border capabilities (as defined in this study).

Digitalisation gives consumers real-time control over liquidity and payments, and decision support services around the analysis of related transactional data are inverting traditional customer relationships.

The classification of today's range of payment solutions hinges on two key pieces of legislation, which have opened up payment services to online consumer access.

The Payments Service Directive<sup>12</sup> (2007) defined two notions of service provider: the Account Servicing Payment Service Provider (ASPSP) and the Payment Service Provider (PSP). The ASPSP is the traditional bank with which a consumer holds one or more accounts from which payments are made or received. This relationship between the consumer and payment institution is anchored around the current account, implying local residency of the consumer and includes access to all the traditional payment instruments such as credit transfers, standing orders, bank drafts, cheques and direct debits. These payment instruments work on a 'pull' basis, that is, the consumer authorises that the amount that the payee has requested will be taken from their accounts.

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<sup>10</sup> PayPal's terms: "If your transaction requires a currency conversion, we will use a wholesale foreign currency exchange rate (determined by an outside financial institution) plus a currency conversion fee."

<sup>11</sup> PayPal cross-border charges vary from 1.9% to 3.4% + €0.35 ([www.paypal.com/ie/cgi-bin/webscr?cmd=\\_display-xborder-fees-outside&countries](http://www.paypal.com/ie/cgi-bin/webscr?cmd=_display-xborder-fees-outside&countries)).

<sup>12</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32007L0064&from=EN>.

PSPs offer online services for accepting electronic payments by a variety of methods including payment cards and real-time credit transfers. Existing banks and a diverse set of FinTech players have created a range of apps and online services that access traditional payment accounts (current accounts, credit cards, debit cards, etc.) and automate the authorisation stage without changing the nature of the payment product executing the transaction in the background.

The Payments Service Directive 2 (2015)<sup>13</sup> added two new categories of service provider, critically introducing the notion of 'push' transactions. Payment Initiation Service Providers (PISP) are authorised by consumers to initiate payments on their behalf, bridging the merchant's website to the online banking platform of the customer to initiate payment. Account Information Service Providers (AISP) are aggregators of data related to consumer accounts, even if those accounts are held across many different ASPSPs.

Incumbent banks are consequently experiencing downward pressure on transaction costs due to increased competition from FinTech service providers. Banks are therefore encouraging consumers to use payment services with all kinds of value-added services such as loyalty programmes and personal finance management options. There seem to be no banks in the selected countries that specifically target cross-border payments.

The range of cross-border services provided today can be categorised according to these definitions:

## **i) ASPSP offerings for cross-border payments**

### *a. Payment gateway integrators (B2B)*

*Examples:* Currence<sup>14</sup>(NL), Adyen<sup>15</sup> (NL), Realex<sup>16</sup> (IE), IcePay<sup>17</sup> (NL), WorldPay<sup>18</sup> (UK), PPRO (UK)<sup>19</sup> and B2Bill<sup>20</sup> (FR)

Many payment specialist organisations exploit the opportunity to service international e-commerce by offering an integration service (or gateway) that combines the payment instruments that are the most familiar to the target audience. Instead of working with payment options tied to one bank, such integrators licence their e-commerce customers for a range of payment services adapted to the specific market. The key value proposition for merchants is that they do not need to sign an agreement with all the individual payment providers to give their customers a range of payment options. Such intermediaries charge a low fixed fee per transaction.

The use of such payment platform providers disintermediates the bank from its customers, relegating them to the role of back-office payments processors. These banks might in this case become a de facto back-office. It is crucial for the platform

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<sup>13</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32015L2366&from=EN>.

<sup>14</sup> For additional information, see: [www.currence.nl/](http://www.currence.nl/).

<sup>15</sup> For additional information, see: [www.adyen.com/](http://www.adyen.com/).

<sup>16</sup> For additional information, see: [www.realexpayments.ie/](http://www.realexpayments.ie/).

<sup>17</sup> For additional information, see: [www.icepay.com/](http://www.icepay.com/).

<sup>18</sup> For additional information, see: [www.worldpay.com/](http://www.worldpay.com/).

<sup>19</sup> For additional information, see: [www.ppro.com/](http://www.ppro.com/).

<sup>20</sup> For additional information, see: [www.be2bill.com/en/approach](http://www.be2bill.com/en/approach).

providers to offer a consumer-friendly (fast and simple to use) and safe product that is attractive for merchants to offer. Merchants benefit when the payment options they offer are trusted and easy to use. The success of this trust can be measured by the preference by many customers to use iDEAL to load e-Wallets (e.g. PayPal, Google Wallet, etc.).

In turn, direct online payment solutions like iDEAL, by routing traffic through the banks' own payment portals, benefit banks by bringing customers into their environment. This appeals to banks fearful of losing control of the part of the value chain that generates higher margins.

Merchants themselves availing of such integration are promoting international e-commerce, by encouraging consumers to use trusted payment solutions to settle a purchase directly from a local current account to the merchant's bank account. The success of these integrators may be seen as a workaround to the absence of true cross-border payments instruments, in that they support merchants, large and small, to trade with an international audience but settling with local payments providers. For large-scale online merchants, such integration would, in the past, have to be negotiated country by country with local payment schemes.

For example, for an online gaming platform, the ability to integrate multiple customer payment options in any one geographical area necessitates a significant investment of resources in local research and development.<sup>21</sup>

Figure 2.4 Integration of multiple payment options on a gaming platform



Source: Paddy Power.

There is clearly a potential role for such integrators in the provision of cross-border access to payment instruments, with potential comparator-type features in providing customers with the best value in payment instruments for a given purchase.

#### b. SEPA transfers between current accounts in different EU countries

*Example:* SEPA Direct Debits<sup>22</sup> (IE - provide software to support SEPA transfers for customers for an annual licence fee of €199)

SEPA allows non-real time payments (credit transfer or direct debit) to be made in euros from any anchor account to any other of the 38 SEPA countries. The SEPA credit transfer scheme ensures electronic payments within 24 hours. Current ERPB

<sup>21</sup> Remarks by Head of Customer Operations at PaddyPower.com regarding expansion into Italian market (2012).

<sup>22</sup> SEPA Direct Debits is a service offered by Business Software Solutions ([www.businesssoftware.ie/](http://www.businesssoftware.ie/)). For additional information, see: [www.sepadirectdebits.ie/](http://www.sepadirectdebits.ie/).

proposals<sup>23</sup> are examining the design of an instant SEPA credit transfer scheme, with design issues including consideration of AML (anti-money laundering) issues, customer balance checking and risk mitigation. Notwithstanding the resolution of such issues, the scheme is expected to be ready for launch by November 2017.

Equally, foreign nationals working in one EU country may have their salaries paid directly into their domestic accounts. In effect, this reduces the need to access a cross-border payment product, as the same domestic account could be used for payments in the host country.

SEPA Direct Debits are slower, with a 3-6 day turnaround time. There are no transaction charges if the transfers are made in euros. Multi-currency SEPA transfers allow DD (direct debit) payment instructions to specify the payment amount in the target payee's currency, with the payment drawn from the payer account in euros, for example. Such services allow EU citizens and businesses to convert legacy payment instructions (e.g. BACS format in the UK) to SEPA-compliant direct debit and credit transfers.

For example, businesses in the UK and Ireland with current accounts in both € and £ can automate regular payments between these accounts using such a service.

*c. Direct online payments via ASPSP's online banking facility (2-party system)*

*Examples:* Pay-Facile<sup>24</sup> (FR - uses Stripe API), Bancontact<sup>25</sup> (BE - BCMC), iDeal<sup>26</sup> (NL - 60% online purchases), Sofort<sup>27</sup> (DE), PayDirekt<sup>28</sup> (DE), and SatisPay<sup>29</sup> (IT - uses IBAN not credit card)

Single gateway to participating banks to allow credit transfer directly from customer current account or credit card account to merchant bank account. Such intermediary platforms process payments from existing bank accounts without storing value in online accounts. Although not settled in real-time, the customer authorisation is instantaneous. Such instruments are globally accessible and frequently integrated on merchant websites as a payment option, alongside traditional payment cards. Many use a multi-factor authentication technique to authorise an individual transaction (authorisation code sent by SMS to confirm payment). The value proposition is increasingly related to the convenience of payment set-up, such that SMEs or sole traders may begin accepting on-line payments for their services immediately.

Direct online payment platforms act as intermediaries for remote access to local payment instruments, providing a frictionless bridge between customer and merchant accounts. As mentioned above for the integrators, such platforms offer cross-border business opportunities by providing a bridge between locally held accounts.

The typical 'use case' for such online payment services is the following: at the checkout stage of an online shopping transaction, the consumer selects the relevant payment instrument (Sofort, iDeal, ...) instead of the typical credit/debit card options. The consumer is now brought to the payment platform, with the contents of the

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<sup>23</sup> For additional information, see: [www.ecb.europa.eu/paym/retpaym/euro/html/index.en.html](http://www.ecb.europa.eu/paym/retpaym/euro/html/index.en.html).

<sup>24</sup> For additional information, see: [www.en.payfacile.com/](http://www.en.payfacile.com/).

<sup>25</sup> For additional information, see: [www.bancontact.com/](http://www.bancontact.com/).

<sup>26</sup> For additional information, see: [www.ideal.nl/](http://www.ideal.nl/).

<sup>27</sup> For additional information, see: [www.sofort.com/](http://www.sofort.com/).

<sup>28</sup> For additional information, see: [www.paydirekt.de/](http://www.paydirekt.de/).

<sup>29</sup> For additional information, see: [www.satispay.it/](http://www.satispay.it/).

shopping cart pre-loaded on the landing page (shop identification, product, price, etc.). At this point the consumer selects the bank, after which a User ID and Password are requested, with which the platform is connected into the consumer's online banking facility in order to process the transaction automatically. The consumer is still on the payment platform, the connection to the online banking facility is made "behind the scenes". At this point most platforms use a one-time transaction verification code (e.g. sent to the consumer by SMS or email), and this code must now be entered by the consumer to validate the transaction. Once entered, the transaction is confirmed and the consumer continues shopping.

*d. Conclusion to ASPSP providers and services*

Banks have the core advantage over FinTech competitors in their relationship as trusted advisors for consumers, their ownership of anchor accounts and their ability to leverage scale to obtain competitive prices on 'passport' foreign services to local customers. Trust is particularly important as consumers venture beyond their national borders for payments, and our research suggests that switching inertia will not radically sway the older age groups away from the global card schemes for international payments, with which they are "comfortable"<sup>30</sup>. However, FinTech success suggests that millennials will adopt online payments services that are adapted to their needs for mobility, flexibility and convenience.

Section 2.1.2 showed evidence in the countries studied of a marked trend away from credit-based instruments for payments, in favour of debit-based transactions (credit transfer, direct debit, etc.). The success of the newer ASPSP and PISP players (Ipagoo, Number 26, etc.) suggests strongly a gap in the market for push-style payment-type services that leverage these lower-cost debit solutions. Such providers target mobile professional customers with an international lifestyle. Therefore, the ability to bring a frictionless user experience to cross-border payments at reasonable cost will be a key factor for competitive advantage among traditional banking service providers.

Trust in the appropriate use of customer data was also mentioned frequently during interviews in this study, as banks are culturally places where customer data are sacrosanct, and certainly there is reticence to the notion of 'monetising' this data. This is at odds with the traditional bank's brashness in monetising the production, storage and movement of customers' money in the form of transaction charges. Typical bank statements itemise without compunction the amounts paid by customers to make payments, without a clear elaboration of any value being provided in terms of decision support. Customers today expect such visibility for free, and, what's more, expect a reward for using a particular service provider over another.

So the key lesson from FinTech success for the industry appears to be that a cultural shift will be required to move from a product culture to a customer experience culture. Where customer data are mined by banks for transaction based revenue, FinTech companies are mining and collating the same data for insight into expenditure patterns, decision support in utilisation of resources and forward-planning for financial resources. Larger banks now recognise the potential value embedded in customer data, and the urgency to leverage this value to improve customer relationships. How this inversion of the customer relationship is achieved while retaining customer trust will be another key success factor for traditional banks.

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<sup>30</sup> CSFI (2015), "Banking Banana Skins 2015", Annual Survey of Bank Risk, Centre for the Study of Financial Innovation, Vol. 121, London.

The organisational challenges for existing banks to change mind sets from a product to a service focus, while at the same time integrating with 'born digital' FinTech companies, will be the greatest challenge facing the industry in developing cross-border payments offerings. Combining the brand strength and trusted relationships of incumbent banks with the creativity and customer experience focus of FinTech is likely to yield the greatest dividends.

## **ii) PSP/PISP offerings for cross-border payments**

### *a. 'Freestyle' banking: Direct online banking platform for real-time payments*

*Examples:* Fire Financial Services<sup>31</sup> (IE – Free), Ipagoo<sup>32</sup> (UK - £10/month), KeyPack<sup>33</sup> [BE], and Number26<sup>34</sup> (DE - Online and offline a/c's)

Consumers in many European countries now have access to free banking services which are competing with traditional bricks and mortar banks. These providers leverage SEPA standardisation in account identification and relationships with existing card schemes to offer current account management and payments possible with push notification of account activity. Although payment instructions are notified instantly, the SEPA settlement process incurs a delay of one to three days.

Key to the value proposition is frictionless account registration (for example, using video calls for account owner verification), low cost of banking and agile customer-centric product development and enhancement. Enhanced cash management services are offered on top of typical account-management features, and contacts (payees) are managed via social network-style contacts.

Payment accounts are also differentiated on the basis of whether deposits are free (Number26) or charged for (1.5% on deposits over €100 per month).

These digital banking products are designed for use on a pan-European basis through the creation of a validated online account which is passported to the different countries supported. To facilitate cross-border access to local payment instruments, it would suffice that these online bank accounts incorporated API functionality that would allow access to offline ACH banking features (credit transfer, direct debit), in a similar manner to the ASPSP's online banking services mentioned above. In such a scenario, consumers would use the virtual current account to monitor and drive transactions in offline current accounts of any participating country.

The commercial model for such services to be offered would require research, probably necessitating a research and development charter with a number of innovative players who may currently see themselves as competitors (banks, online payments ASPSPs and PISPs). In order to avoid business model conflicts, a neutral "sandbox" environment hosted by a European-level regulator might be used.

The launch of the Euro Retail Payments Board<sup>35</sup> in 2013, with its remit to promote an integrated, innovative and competitive market for retail payments in the European

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<sup>31</sup> For additional information, see: [www.paywithfire.com/](http://www.paywithfire.com/) (UK and Ireland only).

<sup>32</sup> For additional information, see: [www.ipagoo.com](http://www.ipagoo.com) (not yet operational, but will offer online current accounts and associated payment services in UK, FR, IT and ES).

<sup>33</sup> For additional information, see: [www.keytradebank.be/en/banking/](http://www.keytradebank.be/en/banking/).

<sup>34</sup> For additional information, see: [www.number26.eu/](http://www.number26.eu/) (for customers in DE, AT, IRL, FR, ES, IT, GR and SK).

<sup>35</sup> For additional information, see: [www.ecb.europa.eu/paym/retpaym/euro/html/index.en.html](http://www.ecb.europa.eu/paym/retpaym/euro/html/index.en.html).

Union, provides the multi-disciplinary platform for the development of such a collaborative research platform. Anchored by central bank membership from member countries, but incorporating representation from banks, FinTech players and merchants, this forum is currently working on the parameters of an instant SEPA Credit Transfer facility.

As discussed in the conclusion to this section of the report, the conditions for offering greater choice to consumers with respect to cross-border payments will depend on creating the commercial climate for such collaborations to flourish. One key enabler of this commercial climate would be the virtual European bank account, valid for direct debit, credit transfer, ATM and debit card transactions only. This account would be SEPA compliant and regulated at a European level. The process whereby such accounts could be applied for, validated and opened with appropriate KYC measures would require elaboration and testing. The modalities (and open APIs) whereby such an account would be loaded from existing funding accounts (current, deposit, savings, credit card, pre-paid debit) would require formalisation.

Such pan-European payment accounts would obviate the need for cross-border payment instruments, by allowing the consumer to access an EU-wide virtual banking infrastructure. It is likely that the PISP offerings for cross-border payments will continue to evolve in this direction.

*b. Online wallet connected to current account or credit card (3 party system)*

*Examples:* PayPal<sup>36</sup> (UK), S-Money<sup>37</sup> (FR - requires French mobile no.), MyBank<sup>38</sup> (UK), MondoBank<sup>39</sup> (UK), DigiCash<sup>40</sup> (LU - also mobile P2P and NFC), CashCloud<sup>41</sup> (LU - + PrePaid & mobile P2P), GoCardless<sup>42</sup> (UK - b2b), Zapp<sup>43</sup> (UK), Pingit Barclays<sup>44</sup> (UK), Paym<sup>45</sup> (UK - works with existing online a/c), Sixdots<sup>46</sup> (BE), KBC<sup>47</sup> (BE - SmartWatch enabled), HelloBank<sup>48</sup> (BE), Dopay<sup>49</sup> (NL - payroll for unbanked), Klarna<sup>50</sup> (DE), Pivo at OP-pankki<sup>51</sup> (FI), Blik<sup>52</sup> (PL), WoW from CheBanca!<sup>53</sup> (IT) and PocoPay<sup>54</sup> (EE).

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<sup>36</sup> For additional information, see: [www.paypal.com/uk/](http://www.paypal.com/uk/).

<sup>37</sup> For additional information, see: [www.s-money.fr/](http://www.s-money.fr/).

<sup>38</sup> For additional information, see: [www.mybank.eu/mybank/what-is-mybank/](http://www.mybank.eu/mybank/what-is-mybank/).

<sup>39</sup> For additional information, see: [www.getmondo.co.uk/](http://www.getmondo.co.uk/).

<sup>40</sup> For additional information, see: [www.digicash.lu/](http://www.digicash.lu/).

<sup>41</sup> For additional information, see: [www.cashcloud.com/](http://www.cashcloud.com/).

<sup>42</sup> For additional information, see: [www.gocardless.com/](http://www.gocardless.com/).

<sup>43</sup> For additional information, see: [www.zapp.co.uk/](http://www.zapp.co.uk/).

<sup>44</sup> For additional information, see: [www.pingit.com/](http://www.pingit.com/).

<sup>45</sup> For additional information, see: [www.paym.co.uk/](http://www.paym.co.uk/).

<sup>46</sup> For additional information, see: [www.sixdots.be/en/about/](http://www.sixdots.be/en/about/).

<sup>47</sup> For additional information, see: [www.m.kbc.be/en/smartwatch/](http://www.m.kbc.be/en/smartwatch/).

<sup>48</sup> For additional information, see: [www.hellobank.be/en/](http://www.hellobank.be/en/).

<sup>49</sup> For additional information, see: [www.dopay.com/](http://www.dopay.com/).

<sup>50</sup> For additional information, see: [www.klarna.com/](http://www.klarna.com/).

<sup>51</sup> For additional information, see: [www.pivolompakko.fi/](http://www.pivolompakko.fi/).

<sup>52</sup> For additional information, see: [www.polskistandardplatnosci.pl](http://www.polskistandardplatnosci.pl).

<sup>53</sup> For additional information, see: [www.chebanca/wow](http://www.chebanca/wow).

<sup>54</sup> For additional information, see: [www.pocopay.com/](http://www.pocopay.com/).

Online wallet linked to email address allowing e-commerce payments without sharing payment card details. Account set-up involves connecting the online wallet to an offline bank accounts or credit cards for funding. Customer registration is achieved simply by signing up as an e-wallet user (email address and password), and adding funding account details (current account, credit or debit cards). These account details are securely stored offline and are not required when paying online. A small monetary transaction may be processed at this point to verify the account details. Consumers can link an online wallet to different bank accounts, potentially from different countries. Some platforms provide personal finance management (PFM) features and mobile banking functionality. Mobile users can shop online, make peer-to-peer (P2P) payments and keep track of all payments made.

A variant of these online wallets are the online savings accounts described in the next section.

*c. Online savings accounts*

*Examples:* Savedo<sup>55</sup> (DE), BuyBox<sup>56</sup> (FR - B2B solution), Leetchi<sup>57</sup> (FR), Le Pot Commun<sup>58</sup> (FR), Clink<sup>59</sup> (IE) and Satispay<sup>60</sup> (IT - Save and pay online)

A digital savings account or 'cagnotte' allows consumers to set up their savings plan, and then, by linking it to their bank accounts, execute that plan. Plans can be flexibly defined as a percentage of spending in certain categories, or an absolute amount per period. The real-time transparency and interaction makes saving a convenient and social activity. Grouping consumer donations towards a common purchasing goal or savings plan. They can be used for different social payment uses, such as joint gift cards, wish lists and travel kitties, and also to build up savings accounts in different countries based on preferential interest rates (Savedo). Such group payments boost average shopping cart value and amplify customer acquisition.

These PISP models are 'cross-border' in the sense that the digital platforms created, though linked to local accounts in bricks and mortar institutions in regulated national jurisdictions for funding and disbursement, are nonetheless accessible independently of geography, time zone or regulator.

*d. Conclusion to PSP/PISP providers and services*

As described in the previous section, the likely route to market for innovators in cross-border payments is through alliances between anchor account owners (ASPSPs) and innovative FinTech companies (PSPs and PISPs), such that the cross-border capability is integrated with standard payment facilities with a trusted partner. FinTech organisations that specifically target particular cross-border customers (mobile professionals, migrant workers, students, tourists, refugees, crowd-funding, etc.) will also gain critical mass when the integration with anchor accounts can be improved.

As presented above, it's useful to differentiate between two types of PSP/PISP organisation, the free-style bank and the online wallet or savings account. PayPal

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<sup>55</sup> For additional information, see: [www.savedo.de/](http://www.savedo.de/).

<sup>56</sup> For additional information, see: [www.buybox.net/en/](http://www.buybox.net/en/).

<sup>57</sup> For additional information, see: [www.leetchi.com/en/](http://www.leetchi.com/en/).

<sup>58</sup> For additional information, see: [www.lepotcommun.fr/](http://www.lepotcommun.fr/).

<sup>59</sup> For additional information, see: [www.clink.com/](http://www.clink.com/).

<sup>60</sup> For additional information, see: [www.satispay.com/](http://www.satispay.com/).

represent the scale of success of the online wallet, processing \$282 billion in payments in 2015. PayPal allows consumers to make cross-border and cross-institution payments by using the digital channel to link disparate payment instruments. Effectively PayPal takes up the burden of automating the interbank transfer process, facilitating payments between consumers and merchants, or simply between consumers, but crucially relying on a transaction-fee business model similar to incumbent payment schemes. According to this model, a cross-border payment incurs an additional surcharge (see Figure 2.5).

Figure 2.5 PayPal fees for cross-border payments

| Transferring money abroad            |                                                                                                               |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Using bank account or PayPal balance | A <b>cross border fee</b> of between <b>0.3% and 2%</b> applies, depending on where you're sending the money. |
| Using a debit card                   | A <b>cross border fee</b> of between 3.4% and 7.4% + a fixed fee (based on currency received) applies.        |
| Using a credit card                  | A <b>cross border fee</b> of between 3.4% and 7.4% + a fixed fee (based on currency received) applies.        |

Source: PayPal

Similar to card schemes, the convenience and security of using a value exchange platform incurs a 'handling fee'. Other PISP organisations take another approach by using the digital channel to automate access to the banks' existing payment instruments.

The digital credit transfer refers to schemes such as iDeal and Sofort, which leverage the access and convenience of digital channels (online and app) to give consumers access to low- cost legacy payment instruments (credit transfers and direct debits) without the use of a wallet as intermediary. Consumers can therefore initiate payments without incurring the same level of handling fee for platform usage as PayPal-like models. With SEPA terms standardising transaction cost and performance for cross-border payments, it is likely that such tools will make increasing inroads into non-discretionary cross-border spending. Today, as is evident in the take-up of credit transfer schemes for cross-border online shopping, the potential for extending to other person-to-person use cases is strong.

Finally, freestyle banking – as conceived of by start-ups such as Number26, Fidor and new contenders Ipagoo – holds out the promise of frictionless banking across borders. Born digital banks like these work from the starting point that consumer behaviour is the principle driver of service design, rather than product profitability. Such platforms can offer consumers a range of options for cross-border payments, potentially trading off commercial attributes such as speed, cost or discount. In effect, such platforms become distribution hubs for different cross-border payment services. The standardisation of a pan-European IBAN for a deposit-based virtual current account, along with a simple API (application programming interface)-based interconnection architecture will be the biggest regulatory enabler for such platforms.

For these digital offerings in financial services, the business model revolves around the enhanced customer intimacy of the digital channel. This increased access to customer

profile allows the provider to propose a trade-off to the consumer, balancing product or service rewards (cost, speed, convenience, etc.) against consent-based access to more personal information. In sales of health insurance, for example, it has been found that customers will sacrifice some additional personal information for a discount on policy pricing. For cross-border payments, we didn't uncover evidence that consumers would be willing to divulge more information about themselves to service providers in order to obtain best possible prices. The context of payment, from discretionary on-line shopping to low-cost travel, to subsistence-level remittances, these settings would require more analysis to understand the drivers of change in consumer behaviour.

The days of banks being the only 'account' held by consumers are well and truly over. Now every consumer has a range of accounts, and digital platforms compete on being the primary gatherer of profile information. The next section looks at the large digital players and their likely positioning with respect to the cross-border payment market.

### **iii) Google-Apple-Facebook-Amazon (GAFA)**

A 2014 PayPal study<sup>61</sup> suggests that cross-border shoppers are valuable consumers, their total online spend (domestic and cross border) being double that of their fellow consumers who only shop within domestic borders. For such a target audience, the strategic strength of the large technology companies (GAFA) is their global borderless vocation, their penetration of the EU market and their positioning as trusted platforms for digital living. All have launched products in the cross-border payments area (Google Wallet, ApplePay, Facebook Messenger payments and Amazon Payments), working on the convenience and integration with their existing online platform profile. A slick payment experience is key to reducing shopping cart abandonment, a key failure point in e-commerce<sup>62</sup>.

Consumers without GAFA profiles are not in the same position, and place value for money and choice higher than convenience. On the other hand, it is likely that the PISPs and other payment platforms will seek inter-operability with such social media platforms, such that they may be integrated into a cross-border shopping experience with a single sign-on like PayPal. These payment offerings are not alternative means of payments, simply virtualising existing credit, debit, charge and loyalty cards. Their impact on cross-border payments is thought therefore to be at the level of existing credit and debit card schemes (low and decreasing in EU cross-border payments).

### **iv) Mobile network operators and handset manufacturers**

Cross-border micro-payments will be heavily influenced by the offerings of mobile network operators (MNOs), where the payment experience is integrated into the base operating layer, allowing low-level integration with phone security features such as biometric scanners. The market will evolve rapidly where MNOs have acquired interests in online banking. Where the payment experience is simply providing access to legacy payment instruments, the difference in response times puts stress on the customer experience. Nevertheless, the degree of symbiosis between MNOs and PISP and PSP innovations has not been fully explored.

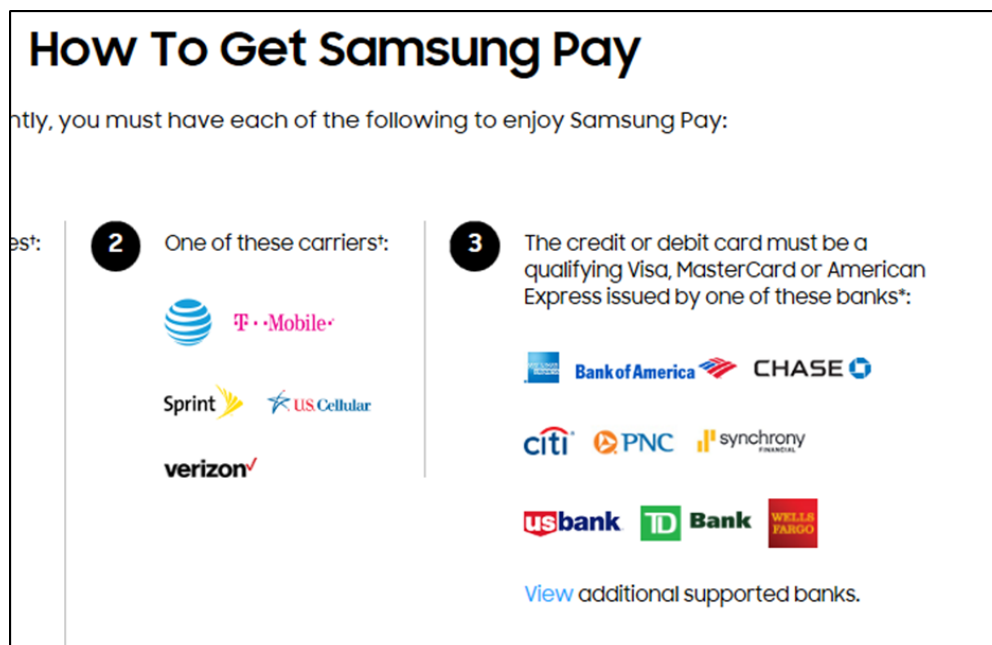
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<sup>61</sup> Paypal (2014), "Cross-Border Research 2014, Global Snapshot" ([www.paypalobjects.com/webstatic/en\\_US/mktg/pages/stories/pdf/paypal\\_cbt\\_global\\_snapshot\\_nov\\_2014\\_2.pdf](http://www.paypalobjects.com/webstatic/en_US/mktg/pages/stories/pdf/paypal_cbt_global_snapshot_nov_2014_2.pdf)).

<sup>62</sup> Kukar-Kinney, M. and A.G. Close (2010), "The determinants of consumers' online shopping cart abandonment", *Journal of the Academy of Marketing Science*, 38(2), pp 240-250.

As discussed above with Apple, handset manufacturers also integrate payment options as a base functionality, but do so by integrating a virtual wallet that links to existing card schemes. Like Apple, Samsung offers the integration of a range of credit and debit cards.

Figure 2.6 Mobile handset manufacturers offer wallet apps that integrate with cards



Source: Samsung promotional material.

A key integration point not leveraged by these players and clearly an opportunity in the cross-border micro-payments space is the use of the bill-to-carrier model, which allows payments to be made directly from mobile carrier accounts. Used initially for ringtones, parking or charity donations, such payment models are adopted by web merchants, game developers and other e-businesses to charge customers for digital content through a mobile phone instead of a credit card. Customers can make a purchase on a merchant website with no pre-registration required, and the charge is added to their mobile bill or deducted from a prepaid balance. Particularly for frequent cross-border travellers requiring local connecting journeys from transport hubs (airports, railway stations, motorway tolls, etc.) to other local connections (suburban rail, buses, local taxi, etc.), the ability to make small micro-payments across borders will have very high value.<sup>63</sup>

## v) AISP offerings for cross-border payments

### a. Read only access to bank account information

Example: Bankin<sup>64</sup> (FR)

Aggregator platforms (as regulated in the forthcoming PSD2), which access traditional bank accounts and provide read-only access to account information, but add value

<sup>63</sup> Examples: boxPAY (IE), Digital Pay (IT - Also bill to landline a/c), PingPing (BE) and Fortumo (EE).

<sup>64</sup> For additional information, see: [www.bankin.com/](http://www.bankin.com/).

through financial planning features such as automated alerts, analytics, and budgeting.

*b. Offline payment in cash for online purchases*

*Example:* Cashway<sup>65</sup> (FR) and BarZahlen<sup>66</sup> (DE)

Consumers shop online and are then issued a unique barcode for the payment transaction, by SMS or email. The consumer can pay for the item at any participating merchant using cash or any other payment means. Validation of the transaction initiates a receipt and delivery notice, received by the consumer by text.

*c. Peer-to-peer (P2P) payments*

*Examples:* TransferWise<sup>67</sup> (EE/UK) and CurrencyFair<sup>68</sup> (IE).

Apart from domestic banks initiating mobile payment services linked to customer credit/debit card accounts (for example, the Me2U app from Allied Irish Banks), there are few cross-border P2P payment products in the EU.

*d. International remittance payments (alternatives to money transfer agents)*

*Examples:* TransferWise<sup>69</sup> (UK), Western Union<sup>70</sup> (US), WorldRemit<sup>71</sup> (UK) and MoneyTIS<sup>72</sup> (FR - transfer comparator platforms).

International person-to-person payments across borders remains the domain of money transfer agents such as Western Union and MoneyGram. Unlike internet-based payment platforms, remittance businesses enable instant transfers in cash through its network of agents worldwide (Western Union has over half a million agent locations in 200 countries). Fixed transaction fees are charged (for example, Western Union charge €5 for an EFT/ACH transfer (3-5 days), and €15 for a Wire Transfer (1-2 days). Both sending and recipient banks may charge fees on top of transfer fees. These money-transfer agents are promoted as banking services for the unbanked.

In addition there are remittance comparator platforms (such as MoneyTIS), which compare remittance-fee rates in real time across a range of PSP partners. Consumers can then initiate payments using these partners within the platform. Such platforms are aimed mainly at people travelling, rather than offering any better value to migrant worker remittances. MoneyTIS doesn't work for cross-border payments within the EU, as SEPA transfers are considered adequate.

These platforms exist today in the form of 'passport' operators regulated in one country but authorised to offer services in another, and it is suggested that this type of activity will increase. For example, there are 6,600 money transfer agencies

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<sup>65</sup> For additional information, see: [www.cashway.fr/](http://www.cashway.fr/).

<sup>66</sup> For additional information, see: [www.barzahlen.de/](http://www.barzahlen.de/).

<sup>67</sup> For additional information, see: [www.transferwise.com/](http://www.transferwise.com/).

<sup>68</sup> For additional information, see: [www.currencyfair.com/](http://www.currencyfair.com/).

<sup>69</sup> For additional information, see: [www.transferwise.com/](http://www.transferwise.com/).

<sup>70</sup> For additional information, see: [www.westernunion.com/](http://www.westernunion.com/).

<sup>71</sup> For additional information, see: [www.worldremit.com/](http://www.worldremit.com/).

<sup>72</sup> For additional information, see: [www.moneytis.com/](http://www.moneytis.com/).

(remittances) licensed in France, but less than 5% of those are passported operators regulated in other jurisdictions (the UK, Belgium, Ireland, Luxembourg, ...).

*e. Pre-paid cards (physical or virtual) for spending abroad*

*Examples:* Prepaid Financial Services<sup>73</sup> (UK), Money2Go<sup>74</sup> (NL), NeTeller<sup>75</sup> (UK - Net+ Prepaid MasterCard), PaySafeCard<sup>76</sup> (UK - Prepaid MasterCard), Skrill<sup>77</sup> (UK - Prepaid MasterCard) and ViaBuy<sup>78</sup> (UK)

Pre-paid cards are loaded via multiple channels including cash at merchant terminals, voucher, bank transfer, debit/credit card and SMS. SMS notifications can be issued for loading and spending activity on a card. Prepaid cards are used for Payroll, Expense Management, Travel, Money Share, Insurance, Gaming and Online Shopping amongst other applications, with reduced exposure to fraud in a safe and secure environment. These payment options also allow lower cost options for international remittances (e.g. Skrill offers direct mPesa payments for 1% charge with fees capped at €10). Loading fees and usage fees vary across the different options, for example, fee waivers for SEPA transfers for card loading (ViaBuy).

**vi) Distributed payment infrastructures**

Bitcoin is a digital currency in which transactions can be performed without the need of a credit card or central bank. It is designed to enable users to send money over the Internet in a very simple and efficient way. The BitCoin revolution is really a combination of two innovations, the programmable virtual currency (crypto-currency) and the distributed public ledger principles of blockchain. Bitcoin also includes a multi-signature feature, which allows bitcoins to be spent only if a subset of a group of people authorise the transaction.<sup>79</sup>

Blockchain has heralded an era where decentralisation and governance are juxtaposed, and the need for a 'permissioned' distributed ledger where transparency of moderators/gatekeepers has given rise to new concepts of private blockchains. Yves Mersch, chair of the *Euro Retail Payments Board* (ERPB), believes in the disruptive potential of distributed ledger technology to bring many advantages to European payment systems, but cautions that such integration must be considered alongside existing infrastructures, and that the corresponding prudential and governance issues require further research.

Tim Swanson (of the R3 innovation consortium<sup>80</sup>) refers to a gradation between centralised models for inter-banking data interfaces (current clearing and settlement systems) and decentralised models (such as Blockchain). This gradation allows for a middle ground of private nodes on a 'decentralised permissioned ledger' where permission is managed and identities are made explicit, but the network still operates on a blockchain principle.

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<sup>73</sup> For additional information, see: [www.prepaidfinancialservices.com/about-us/](http://www.prepaidfinancialservices.com/about-us/).

<sup>74</sup> For additional information, see: [www.money2gocard.nl/](http://www.money2gocard.nl/).

<sup>75</sup> For additional information, see: [www.neteller.com/](http://www.neteller.com/).

<sup>76</sup> For additional information, see: [www.paysafecard.com/](http://www.paysafecard.com/).

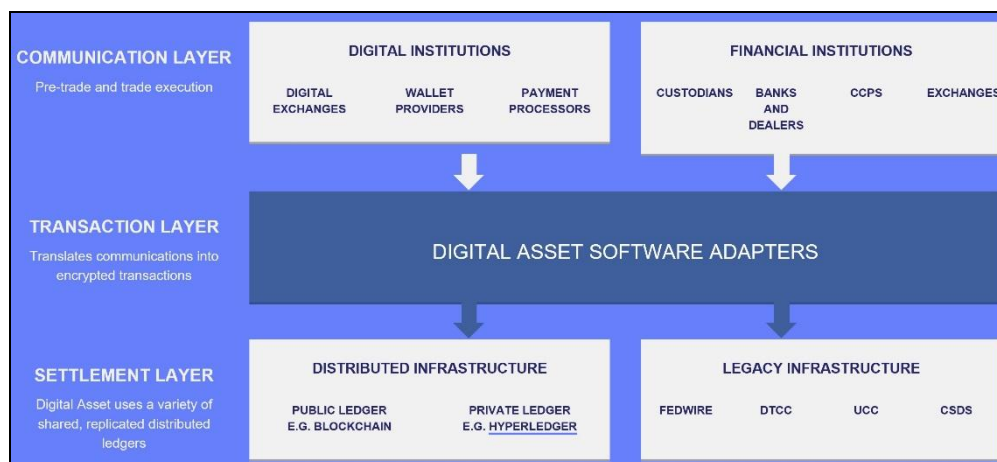
<sup>77</sup> For additional information, see: [www.skrill.com/](http://www.skrill.com/).

<sup>78</sup> For additional information, see: [www.viabuy.com/](http://www.viabuy.com/).

<sup>79</sup> For additional information, see: [www.bitcoin.org/](http://www.bitcoin.org/).

<sup>80</sup> For additional information, see: [www.r3cev.com/](http://www.r3cev.com/).

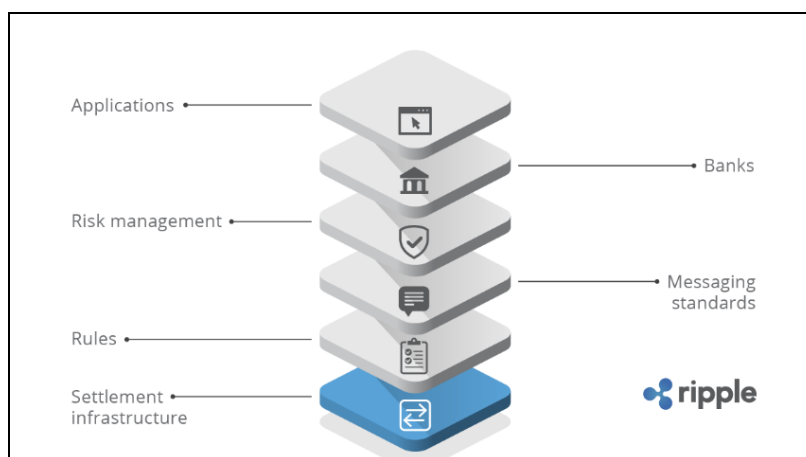
Figure 2.7 Hybrid infrastructure model for financial services



Source: Tim Swanson (2016), "What's the deal with DAOs?", blog posting on Great Wall of Numbers, 15 May ([www.ofnumbers.com/](http://www.ofnumbers.com/)).

Financial services institutions are actively seeking to understand how to leverage these evolutions and to understand the different roles involved.<sup>81</sup> Ripple is a distributed financial technology that enables real-time fund settlement between banks across currencies, geographies and payment networks. The 3R project is an example of a multi-partner industry research project aimed at understanding and exploiting the opportunities to offer new solutions arising from the application of blockchain technologies to traditional trading and settlement processes.

Figure 2.8 Ripple conception of roles in financial services ecosystem



Source: Executive Summary for Financial Institutions, Ripple Labs ([www.ripple.com/solutions/executive-summary-for-financial-institutions/](http://www.ripple.com/solutions/executive-summary-for-financial-institutions/)).

The roles for stakeholders in this highly dynamic ecosystem are emerging as service requirements evolve (for example, the BitCoin ecosystem is comprised of miners, wallet providers, currency exchanges, service brokers, etc.), as discussed in the remainder of this section.

<sup>81</sup> For instance, Mountain West Credit Unions Association ([www.mwcua.com/](http://www.mwcua.com/)) partners with Evernym ([www.evernym.com/](http://www.evernym.com/)) are investigating on how customer digital resources can be better protected.

As the technical capability to remove friction in the transmission and processing of international payments is developed by FinTech companies and research clusters, these roles need to be re-thought with respect to traditional retail industry responsibilities (central banks, credit institutions, online payment solution providers) and PSD2 defined roles (ASPSP, PISP, PSP, AISP and PSU). Here are some suggested categories of stakeholders in distributed computing models for FinTech.

*a. BitCoin miners*

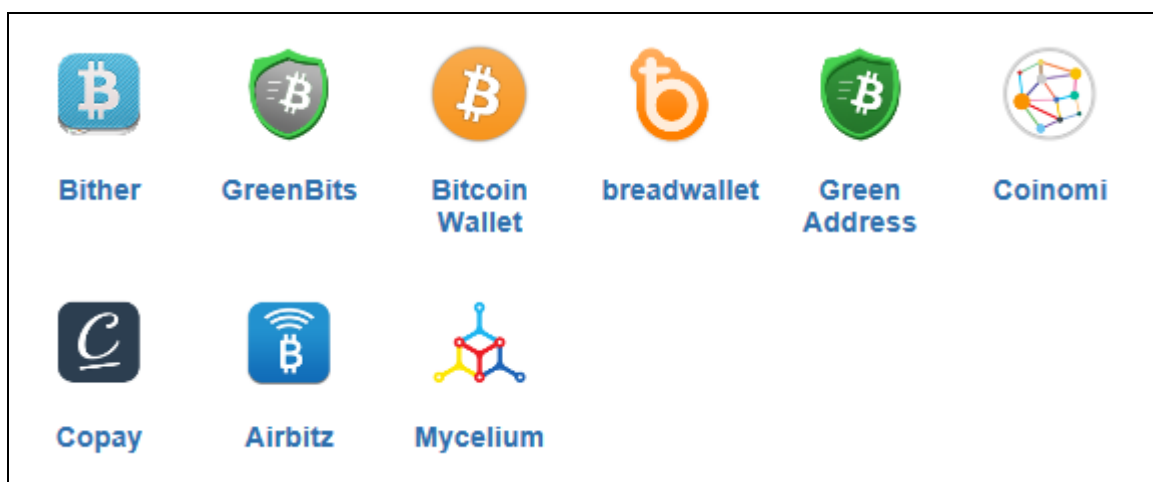
Bitcoin mining is the process of using computer hardware to do mathematical calculations for the Bitcoin network in order to confirm transactions. Miners, as individuals or as 'pools', collect transaction fees for the transactions they confirm and are awarded bitcoins for each block they verify.

*b. Online BitCoin wallet providers*

*Examples:* BitCove<sup>82</sup> (IE), HolyTransaction<sup>83</sup> (LU), CoinPlus<sup>84</sup> (LU - not yet launched) and SnapSwap<sup>85</sup> (LU - not yet launched)

BitCoin wallets allow cross-border payments to be made between parties in BitCoin. Using BitCoin wallets, consumers are able to shop online at merchants accepting BitCoin, to transfer funds between online wallets for peer-to-peer payments, and to convert BitCoins back to euros for access via conventional bank accounts.

*Figure 2.9 BitCoin wallet providers*



Source: [www.bitcoin.org/en/choose-your-wallet](http://www.bitcoin.org/en/choose-your-wallet).

<sup>82</sup> For additional information, see: [www.bitcove.ie/](http://www.bitcove.ie/).

<sup>83</sup> For additional information, see: [www.holytransaction.com/](http://www.holytransaction.com/).

<sup>84</sup> For additional information, see: [www.coinplus.com/](http://www.coinplus.com/).

<sup>85</sup> For additional information, see: [www.snapswap.eu/](http://www.snapswap.eu/).

*c. BitCoin exchanges*

*Examples:* Kraken<sup>86</sup> (US), BitStamp<sup>87</sup> (SI) and BT China<sup>88</sup> (CN)

BitCoin exchanges are trading platforms for buying and selling BitCoins, but only a fraction of bitcoins issued to date are found on these exchange markets. Bitcoin markets are competitive, meaning the price of a bitcoin will rise or fall depending on supply and demand. BitCoin currency speculation platforms exist as well as consumer-oriented platforms.

*d. BitCoin brokers*

*Examples:* BitCoin Belgium<sup>89</sup> (BE), BitCoin France<sup>90</sup> (FR) and BitCoin Germany<sup>91</sup> (DE)

The growth of start-ups in the BitCoin ecosystem will see space for localised BitCoin ‘brokers’ or advisors who will work with consumers and businesses to translate the potential of BitCoin for instantaneous global exchange of value into tangible value. BitCoin is an open source software platform, therefore access to the APIs (programming interfaces) is free, so that organisations can build payment solutions into their existing platforms, provided they have the technical skills to do so. Brokers will be represented by not-for-profit BitCoin associations aiming to promote the BitCoin ecosystem in each country.

**vii) Conclusion to Types of cross-border payments providers and products**

Section 2.1.1 introduced the types of cross-border payments products according to the PSD2-defined service provision categories (ASPSP, PSP, AISP, and PISP). These roles are superimposed on those of the traditional payment schemes (banks, acquirers, merchant services, processors, etc.). FinTech service providers differ fundamentally from their banking predecessors in terms of the two-way relationship with the customer, specifically aiming to build loyalty through convenience, smart use of data and ‘lack of friction’.

In the meantime, those platforms that have already amassed large customer bases through such rich connectivity (GAFA) are well placed to stake a claim in the processing of their customers’ payment instructions, albeit in partnership the incumbent payment schemes for transaction processing and settlement. Finally, mobile telecommunications operators and device vendors are highly trusted stakeholders with close customer relationships that will continue to vie for position in the cross-border payments market.

The next section describes the consumer types for cross-border payment products and services.

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<sup>86</sup> For additional information, see: [www.kraken.com/](http://www.kraken.com/).

<sup>87</sup> For additional information, see: [www.bitstamp.net/](http://www.bitstamp.net/).

<sup>88</sup> For additional information, see: [www.bitstamp.net/](http://www.bitstamp.net/).

<sup>89</sup> For additional information, see: [www.bitcoinassociation.be/](http://www.bitcoinassociation.be/).

<sup>90</sup> For additional information, see: [www.bitcoin-france.org/](http://www.bitcoin-france.org/).

<sup>91</sup> For additional information, see: [www.bundesverband-bitcoin.de/](http://www.bundesverband-bitcoin.de/).

### 2.1.2 Types of consumers

The type of consumers that might be interested in cross-border payments was initially segmented along age and income criteria.

The data gathered for this study suggest that younger generation (up to 30 years old) are most susceptible to adopting cross-border payment services, with some respondents stretching the age limit for this section up to 35-40 years old. Low-income and above 50 years old customers are seen less likely to adopt such services, but medium- and high-income customer segments are seen as high impact (see Table 2.1).

*Table 2.1 Types of consumers for cross-border payments products*

|                                            | <b>Probability of adoption of cross-border payment services</b> |
|--------------------------------------------|-----------------------------------------------------------------|
| Younger generation (under 30 years of age) | High                                                            |
| Age 30-40 generation                       | Med                                                             |
| Age 40-50                                  | Low                                                             |
| Age more than 50                           | Low                                                             |
| Low-income                                 | Low                                                             |
| Medium-income                              | Medium                                                          |
| High-income                                | High                                                            |

*Source:* University College Cork.

The type of consumer depends on the nature of the service required. The younger generation under 30 years of age (millennials), being the most likely to expect and trust the convenience and speed of FinTech apps, tend to be the most financially constrained. The high-income bracket, also perceived to be strong adopters of cross-border instruments, will have different requirements. The likelihood is that adoption of more basic payment services (money transfer, bill-pay, savings, etc.) will continue to be automated for self-service apps, while higher value-added services for the higher-income category will continue to be based on personal relationships and mutual trust, as was mentioned in several interviews.

Peer-to-peer payments would have a broad pool of customers, and would drive financial inclusion amongst the lower-income categories, building a higher degree of trust and ultimately flexibility in shaping further service characteristics. For example, the potential for future P2P lending at a European level would be tremendously improved with a stronger cross-border payments and KYC infrastructure,<sup>92</sup> which would have a knock-on effect on social inclusion throughout the member states.

Given the embedded nature of payments in the fabric of everyday life, the potential to engage with a wide range of customer categories is high. Furthermore, the trend towards digitalising micro-payments is broadening the spectrum of possible consumers in term of income class and age. Consumers will use mobile wallets for smaller everyday transactions such as retail, restaurant bills (for bill payment, group discounting, loyalty and bill sharing), private transport (taxis), public transport ticketing, toll-road payments, parking or phone credit.

<sup>92</sup> Observation by a P2P funding participant at the Focus Group organised for this study in London, 22 March 2016.

On the other hand, the cross-border mobility of these use cases will create at least two payment issues that will require further elaboration, one related to roaming charges for service access via consumer data plans, and one related to the transparency of transaction fees related to card schemes and their international usage terms. Similar to the money transfer options mentioned in section 2.1.1, interchange fees are based on a multi-party business model, where each party seeks compensation at the expense of the merchant or the payer.

For digital-service platforms such as Airbnb, whose business model relies on both a consumer (6-12%) and host fee (3%) of the value of the reservation, cross-border payments represent another source of income. The currency of payments is dictated by the country and payment method of the consumer, confirmed at the checkout stage of a transaction. At this point, if the native currency differs from the hosts chosen currency, then Airbnb charges a 3% conversion fee. This is independent of any fees payable to the credit-card issuer for processing the transaction.

The consumer profile for cross-border payments (predominantly millennials and high income bracket) may have more to do with the take-up of such online services (Uber, Netflix, Amazon, etc.) than any specific value proposition of the payment instrument itself. In the case of mobile payments, research has focused on the context of usage, and the use cases involved, to understand adoption.<sup>93</sup> For example, the specific cross-border use cases could include remittances, gifting, travel ticketing, transport hub retail and ancillary services, road-tolls and hospitality payments.

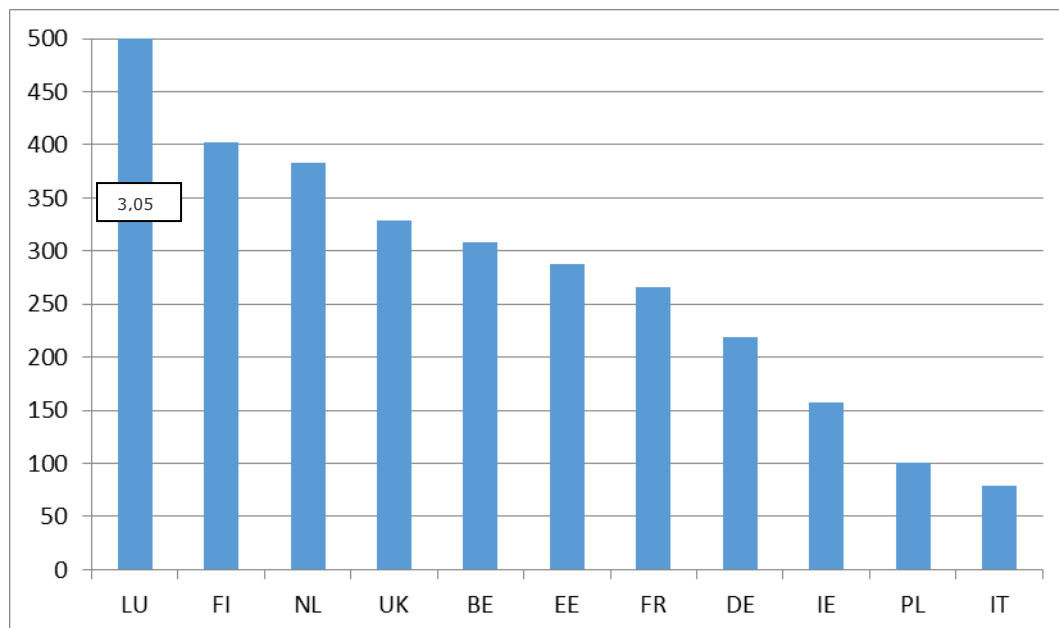
The customer experience for micro-payments is developed with social media integration for messaging (e.g. Facebook or WhatsApp): customers can frequently use their social media profiles to login, choose a contact from their contacts list and send the desired amount. Most accounts connected to the profile are held off-line or, alternatively, the consumer provides connection details to their online bank account. For some classes of micro-payments, bill-to-carrier payments may be made from phone credit. Therefore, those customer segments that are comfortable with instant social media and messaging applications can be targeted by micro-payment service providers.

Another angle to seeding innovation initiatives would be to classify consumer segments according to their openness to adoption of new ideas, their transaction intensity and their requirement for cross-border payments.

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<sup>93</sup> Nina Mallat et al. (2009), "The impact of use context on mobile services acceptance: The case of mobile ticketing", *Information & Management*, 46 (3), April, pp. 190–195.

Figure 2.10 Total transactions per capita (2014)



Source: Authors' configuration based on ECB 2016 data.

In summary, the likelihood of seeing rapid growth in cross-border activities in the payment segment in the near future is very high as regulatory barriers are being progressively removed, and the implications for daily service consumption are substantial.

### 2.1.3 Conclusion

In all aspects of the above innovations in cross-border payments, collaboration between the players is the key element. Consumers are looking for the convenience of an app, the value of paying with cash (zero cost) and the security of traditional banking instruments (credit transfers). Even in the most advanced cashless societies, cash is difficult to remove completely,<sup>94</sup> so solutions will have to allow account funding from offline loading points. Consumers acknowledge the increased importance of KYC rules when using a mobile phone to pay, but will be open to an exchange of value (discounts) in terms of providing additional personal information. Smarter supply/demand relationships will adapt to the difference in response time between the exchange of payment information and actual settlement between funded accounts. Digitalisation and PSD2 lend visibility to processes that previously were only visible to bank employees, and, matched with real-time inventory visibility, smarter demand and supply relationships will be possible.

The capability of digitalisation to render previously opaque processes visible needs to be better communicated, however. In the case of cross-border payments, SEPA provides an infrastructure that digitalisation can enhance with excellent customer experience. While existing providers align with legacy payment instruments, cross-border payments can be articulated around the real requirements of EU consumers for everyday needs. By developing such an understanding, integration partners can co-

<sup>94</sup> Interview with Jonas Hedman, Copenhagen Business School, 11/5/2016: 85% of payments in Sweden are now electronic, but the elderly and the young are two groups resisting change and still preferring cash.

design services that are adapted to actual consumer behaviour, instead of assuming that online access to existing legacy payment instruments will suffice for an increasingly mobile audience.

Such fundamental re-design should acknowledge the different types of cross-border payment context, from transit micro-payments to migrant worker remittances to savings accounts. It will also allow the incorporation of modern smartphone functionality (such as geolocation and biometric sensors) to be built into the consumer identification and payment confirmation process. It is through such technology integration with 'layered' customer value propositions that real value will be offered to EU citizens for cross-border payments.

## **2.2 Impact of digitalisation on cross-border activity**

Digitalisation offers opportunities to leverage SEPA account structures throughout Europe, with credit transfer and direct debit functionality delivering the security and performance required at a price that is highly competitive compared to credit card transactions, and leap-frogging those solutions in terms of settlement delays (moving towards same-day settlement) and customer experience (access via "freestyle banking" apps). With these persuasive "comfort" factors and better value and performance, it is suggested that the uptake of cross-border payment instruments can increase in line with current trends as discussed in section 2.1.

The impact of such digitalisation with respect to both provider and consumer behaviour is discussed below.

### **2.2.1 (Changes in) behaviour**

#### **Pre-sale and sales**

The different cross-border payment instruments described in section 2.1.1, are summarised below:

- ASPSP offerings
  - Payment gateways (B2B)
  - SEPA transfers between current accounts in different EU countries
  - Direct online payments via ASPSP's online banking facility
- PSP/PISP offerings
  - Freestyle banking: direct online banking platform for real-time payments
  - Online wallet connected to current account or credit card (3-party system)
  - Online savings accounts
- GAFA offerings
- MNO and handset offerings
- AISP offerings
  - Read-only access to bank account information
  - Offline payment in cash for online purchases
  - Peer-to-peer (P2P) payments
  - International remittance payments (alternatives to money transfer agents)
  - Pre-paid cards (physical or virtual) for spending abroad
- Distributed payment infrastructures
  - Online BitCoin wallet providers

The key barriers to be overcome by service providers in achieving success in cross-border payments are related to custodianship of the customer relationship, customer inertia to switching, integration of digital customer experience into existing services,

the registration of new customers in remote geographies, access to an EU wide settlement infrastructure, acceptance by merchants and consumers, fee structure and the integration of cash into cross-border payments.

### **Customer relationship tied to current account**

Smooth customer experience on an app will mean convergence with a number of stakeholders, each of whom will have a privileged customer relationship that they will be reluctant to relinquish (bank, payment service provider, payment processor, handset manufacturer and mobile network operator). These dependencies go beyond the payment products themselves, affecting third-party channel and infrastructure partners. Business model issues around customer ownership need to be addressed in the formulation of simple and efficient services to customers.

However, custodianship of customer data is not yet well understood in such multi-platform relationships. It is suggested that on-line banking will ultimately integrate (white label) successful on-line wallets within their customer platforms, such that the relationship between the customer and cross-border payments instruments is mediated through the issuing bank. This is analogous to the issuing relationship for existing card schemes, as mentioned in section 2.1.1, i) d.

### **Customer inertia in switching**

Consumers are more aware via the internet/mobile channel of new products and services, and comparator sites for specific types of cross-border payments will gain traction (e.g. MoneyTIS) because the notion of shopping around has become embedded in consumer culture. First assessment, advice and price comparison are aided greatly by the use of social channels.

Speed of customer acquisition will be reduced to the point where customers may acquire and transact with a new payment instrument instantaneously based on a contextual decision. The multiplication of payment channels may follow the upward trend in utilisation of different communication channels, with ultimately the scenario of “disposable” payment channels being used for specific types of payments, possibly discarded once the purchase is complete.

Despite this potential promiscuity across different payment channels, the reality is more prosaic. Ownership of anchor accounts is still the hook that retains customers from exploiting newer and more flexible cross-border payments options. PSPs have been able to get around this switching inertia by allowing a real-time interface to those accounts or card schemes, without seeking to replace them. This results in a multiplicity of accounts, and fragmentation of potential revenue for service providers. The nature of the ‘issuing’ relationship between banks and card schemes is an example of an arrangement, if adapted to FinTech offerings, that might resolve conflict over the customer account ownership.

The clear direction for cross-border offerings will be the wholly ‘dematerialised’ accounts, where local non-discretionary payments (salary, mortgage, insurance, etc.) are made with the same facility as discretionary spending, but with cost-neutral and transparent access to cross-border payers and payees. It is likely that scale will be an important factor in keeping costs down and negotiating competitive rates from cross-border partners, suggesting that the biggest competitors for banks won’t be FinTech start-ups, but larger players already at scale. On the other hand, the combination of FinTech service innovation capability and the traditional banks’ customer ownership at a national level will be a key strength, assuming that the requirements for cross-

border payments among existing and future customers are researched and understood.

### **From a product focus to a digital customer experience culture**

With the exception of international remittances, which retain an agent presence for both sender and receiver, the distribution channels for these products is predominantly online (75%) and mobile (25%). It is expected that distribution of payment instruments will leverage existing strong online brands as partners, rather than banks. These partnerships will increasingly leverage the mobile channel, eventually reversing the current balance across channels to 25% internet and 75% mobile. This is in line with an increasing replacement of the physical wallet with the phone, such that most customer interaction for payments will be based around the smartphone.

For example, peer-to-peer payments and personal finance management solutions leverage the ease of use of social communications channels to make the customer experience of payments analogous to the experience of interacting with friends on a social network. Indeed the extent to which the online/mobile customer experience is influencing other channels, even branch design, is growing.<sup>95</sup>

The organisational challenge of integrating on-line banking with “frictionless” digital customer experience and higher-value decision support is being tackled from two perspectives. One is via internal organic growth, with recruitment, for example, of a Chief Digital Officer to oversee the transition of the organisation from product focus to customer focus. A retail bank interviewed for this study has recruited a “digital evangelist” from a technology company; one of his first actions was to re-organise the banking app development team and customer product team into a co-located collaboration space where agile development methods and service co-creation approaches are emphasised (extremely short modification turnaround time, A/B testing for proposed new features, scrum communications style for team meetings).

The other approach is talent development through funding of start-up activity. Banks are investing heavily in FinTech companies to attract and nurture the skills required to transform their customers’ experience to that of modern social platforms. Innovation labs that foster entrepreneurial FinTech ventures where seasoned product professionals can interact with digital-age ‘creatives’ are seen to be an economical and rapid way to experiment with new business models.

In future, it is suggested that the success of such collaboration in cross-border payments will require more inter-bank coordination, such that solutions are promoted in a non-fragmented fashion, or at least that there is a roadmap for interoperability. Customer acquisition by Silicon Valley technology start-up companies is a function of a symbiotic and interoperable ecosystem. It is proposed that a similarly holistic view of markets and customers is required for the success of pan-European payments integration,

However, the regulatory environment for FinTech start-ups has an impact on the level of innovation that stays in the country. This study demonstrated that the combination of entrepreneurial talent (both technical, financial and commercial) required in the FinTech start-up space, is rare and impatient: if business opportunities are too slow to

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<sup>95</sup> For instance, mBank in Poland used the design of their online banking experience to re-design branches for shopping malls. AIB in Ireland, instead, has prototyped an innovative customer experience ‘lab’.

evolve in the EU, then the talent will move to other jurisdictions with a more liberal regulatory framework.<sup>96</sup>

### **Registration of new customers relies on domestic KYC models and passporting**

The use of data in pre-sales processes for 'born digital' FinTech start-ups hasn't changed radically in the last five years. These organisations came into operation in the era of the social media profile, so the gathering of data about customers for KYC processes has always been a key part of the pre-sale process. Despite the promise of biometric and other multi-media technologies (fingerprinting, retina scan, selfie, skype call, etc.) in improving real-time customer identification, national KYC requirements still require a face-to-face meeting at a branch. Consumer trust towards these digital identification solutions is still considered quite low by banks interviewed for this study. Some FinTech companies create innovative validation processes combining both remote and proximity-based techniques (e.g. courier delivery of physical form for customer signature acquisition). However, in "customer not present" registration processes, remote identification techniques must be leveraged.

Implementing customer validation processes across borders will rely on access to local sources such as legitimate postal address, bank sort codes and credit history.<sup>97</sup> As discussed in section 2.1 above, FinTech players have learned to apply innovative social media-based authentication tools and to develop proprietary micro-pools of data that help them automate the customer acquisition process.

The expertise in analysing payment data sets for risk profiles is considered a key asset among start-ups, in terms of analytics and tools to interrogate data and also awareness of risk patterns in transactional data. One organisation<sup>98</sup> has become adept at integrating national postal code data into its own KYC processes, allowing the speeding up of the proof of address validation stage during registration. Another start-up has developed expertise in analysing SEPA DD transaction data, thereby becoming adept at predicting the likelihood of a given transaction being successful or not.

FinTech companies will continue to exploit opportunities to extract data from legacy banking applications, adding value in the analysis and reconciliation of that data with other sources of data at a European level. Such analytic opportunities, if applied to SEPA standard transactions, should result in cross-border opportunities for information services (AISP sector). This is not simply a question of acquiring access to foreign databases, but also partnering with other start-ups who have access to the required data sets, and establishing mutually beneficial relationships. This notion of sharing of information assets rather than owning them may be culturally new to the traditional financial services mind-set.

So a key success factor in surmounting the barrier of remote customer acquisition will be cultivating the technical, commercial and legal skills to integrate banking platforms with customer profiles via FinTech platforms. Where customer consent agreements are required, digital solutions will manage the renewal of such agreements based on factors such as elapsed time or level of service usage.

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<sup>96</sup> French start-up quoting peers who have been attracted to either Silicon Valley or the Far East to develop their payment offerings.

<sup>97</sup> Colm Lyon, Fire Financial Services.

<sup>98</sup> Irish payments gateway.

The development of such tools and expertise is seen as a key factor in the growth of cross-border payments because it affects to what extent payments platforms can automate customer-acquisition processes. As mentioned in the type of consumers section 2.1.2 above, the business model behind the highly competitive FinTech offerings is one of scale, where speed of customer acquisition is key. Indeed many players present speed of signing up as a unique selling point.

Surprisingly, the value of offering such customer validation as a service to other FinTech players did not arise in the discussions during the focus group organised in London on 22 March 2016 for this study. Possibly data protection laws discourage players from thinking about the external value of such data sets. What is acknowledged by all players, traditional and new, in the online payments arena, is the importance of KYC. However, there appears to be little thinking around the development of such data-driven KYC processes as a service, instead of each player building and guarding its own data sets.

The data show that there is support for better use of algorithms to create new services that share information regarding risk across a number of entities (e.g. the Open Bank Working Group in the UK). The more data gathered for KYC processes, the greater the data protection risk for both the data holder and the consumer. The creation of standards such as eIDAS in 2016, following numerous high-profile data protection cases, standardises the format of electronic identity data for citizens and specifies the components of a “qualified electronic signature”. EIDAS has thereby facilitated the design of secure access to data sets by authorised individuals across EU borders. This paves the way towards the building of a solid, safe and trusted electronic identification framework, but the regulation does not preclude member states from developing their own third-party system (the eIDAS standard is technology agnostic).

Industry experience suggests that a high number of fraud attempts in online payments (fake ID, shell companies, etc.) in the EU originate from certain geographical regions, and that this may be associated with a more laissez faire supervisory attitude towards online cross-border transactions, which might not come under as much scrutiny as transactions within the local jurisdiction.<sup>99</sup> Professionals working in the industry build up experience in certain regions and their associated risk patterns.

The use of analytics will be crucial in the development of cyber-security algorithms that automatically recognise such risk patterns. But, in so doing, there is also a risk of increasing digital exclusion, where citizens may not have a sufficiently strong ‘digital footprint’ to be included in society as digitally literate citizens. Providers will have to be wary of the potential negative impact, therefore, of the growing dependence on data-driven customer acquisition processes on customer segments with weaker social media profiles.

Bearing in mind the high number of migrant workers working in the EU and their use of international remittances for sending money home, it will be important in broadening the range of cross-border payment options not to further exclude those most in need by raising the barrier of service access through more stringent automated KYC processes. Arguably, this is not new territory for banks, but the digital equivalent of customer trust based on a knowledge of credit history will need to be addressed by all players.

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<sup>99</sup> French start-up with previous payments industry experience.

### **Access to an EU wide settlement infrastructure**

The absence of an EU wide settlement infrastructure is the reason that the tri- and bi-party platforms of electronic payments have been successful. While the longer term view for retail banking includes improved settlement performance via a more integrated pan-European ecosystem, the short term solution is that existing national payment infrastructures will continue to be interconnected. Global research initiatives are looking at deconstructing the payment transaction structure such that more efficiency can be brought to bear on the processing of both payment instructions and account settlement/reconciliation. The complexity of connecting cross-border payments systems will limit the adoption of blockchain protocols to specific layers of the payments model (see section 2.1.1 vi) d.)

### **Acceptance by merchants and consumers**

It is suggested that critical mass for uptake of cross-border payments instruments by both merchants and consumers will be achieved initially via the most popular collective platforms such as iDeal in the Netherlands. However, the longer term view is the integration of banking with the social media platforms, where cash management and financial decision making is as intuitive as profile status updates, content likes and shares.

### **Legacy fee structures for cross-border payments (both consumer and merchant pay)**

As mentioned in section 2.1, the real brake on payments innovation is not the technology but the value proposition (both customer and merchant pay to avail of payment instrument). The interchange fee structure covers the default risk and infrastructure costs of the payment scheme. Therefore, the delivery of the payment service becomes more expensive for every intermediary added to the transaction execution process. Cross-border payments are an extreme case, where charges of (5% to 10%) are accepted as par for the course. Digitalisation has added an alternative model for monetising payments based on subscription, access to public settlement infrastructures, and a reward based customer experience focus. Given the ubiquitous nature and speed of broadband connectivity, at least in urban areas, and the GAFA inspired business model of freemium services, it is suggested that reward based models will be required in future, such that payments processing is provided for free, customers are rewarded for the use of particular instruments, but 'opt in' for inclusion in specific promotional ventures. Premium services will add decision support value (for example, price comparison, payment insurance, rule based payment automation, savings plan execution, etc.).

### **Integration of cash funding for cross-border payments**

The high proportion of cash used in EU countries, coupled with the number of unbanked or underbanked consumers suggests a need to incorporate into the payments offerings some of the attributes associates with cash (anonymity, flexibility, no interchange fees). The integration of cash into cross-border payments can be achieved today via kiosk or store based schemes where consumers connect an on-line payment with a visit to a local kiosk or store, at which point the transaction token (QR code, barcode, numeric code, ...) is used by the merchant to exchange cash for the settlement procedure. It is suggested that specific use cases such as travel, donations, remittances and peer-to-peer micro-payments will drive greater sophistication of value propositions in cross-border payments, These offerings,

perhaps inspired by solutions for the unbanked in developing countries, will make their way into mainstream banking products.

## Post-sales

Table 2.2 Future development of distribution channels for cross-border payments

|            | Online   |        | Personal-contact |        |                             |
|------------|----------|--------|------------------|--------|-----------------------------|
|            | Internet | Mobile | Call centre      | Branch | Mobile relationship manager |
| Pre-sales  | 5        | 4      | 2                | 3      | 1                           |
| Sales      | 5        | 4      | 2                | 3      | 1                           |
| Post-sales | 5        | 4      | 2                | 3      | 1                           |

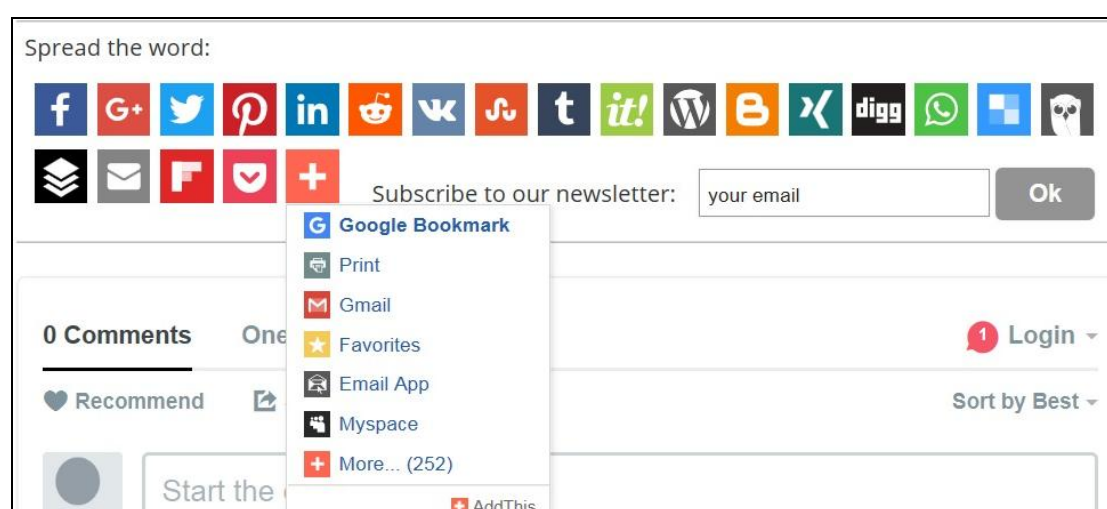
Source: FSIC data from study interviews.

Current account and related payment services will experience the greatest shift toward mobile and online distribution channels, particularly in post-sale phase, as they involve more day-to-day operations that require rapidity and flexibility. This is borne out by the data gathered for this study, as shown in Table 2.2.

In such a market where customer shares/likes and targeted advertising banners and pop-up ads are a driver of adoption, FinTech business models are no longer defined by the 'cost of service' reckoning, rather by the potential uptake by users. Switching is a given, and customer interaction means messaging (channels that are fast, personal and media rich).

Indeed social media channels have become commodities, so much so that management tools are required in order to manage the multiplicity of channels. On the one hand, Aggregator dashboards for social media messaging (for example Buffer, Slack, HootSuite, SproutSocial, HubSpot, Everypost, etc.) help to filter and organise channel activity, and, on the other, sharing utilities (for example, AddThis) facilitate the rapid sharing of preferences through the addition of 'share buttons'.

Figure 2.11 Example of productivity tool for virtual teams



Note: The figure above shows a print screen of the interface of Slack, a productivity tool for virtual teams, which allows the aggregation and use of multiple messaging accounts.  
Source: Slack (2016) ([www.slack.com/](http://www.slack.com/)).

Because it is still difficult to collect customer data from residents and non-residents within the European Union, a finer grained customer specific post-sale offer based on service usage is not always possible. This will be particularly relevant for the proponents of 'freestyle banking' where one digital platform allows cross-border payments to current accounts in different countries. The business model for such providers revolves around the value add in terms of account visibility and liquidity management. How easily such players can access historical transaction data in different countries will not only be a function of PSD2 regulation, but quite simply related to the complexity of the interfaces required to legacy applications.

Focus groups for this study were held in Brussels (10 March 2016) and London (22 March 2016) to elicit input from industry players and supervisors in financial services. Sessions were broken into either retail banking or insurance sectors. Feedback from participants in the retail banking sessions emphasised the importance of negative and positive credit worthiness data being available for service providers, but acknowledged the difficulty of standardisation in this area.

A common theme across these barriers is customer trust in the instruments proposed. The next section discusses how digital solutions to these barriers will translate into an enhanced sense of trust in cross-border payments, and how this trust will gradually permeate other cross-border financial services.

### **2.2.2 Remaining barriers**

Payments are at the heart of many other product segments, and are seen as fundamental to developing trust in banking relationships. Incumbent banks still retain control over the major expenditure lines in the consumer budget (mortgage, utilities, grocery shopping, etc.), and research suggests that although trust is high, satisfaction with customer experience is low.<sup>100</sup> The transparency provided by digital platforms will, however, become a norm for banking interaction, and will increase the confidence of consumers that charges are transparent.

The building of consumer trust will continue with experience of lower-end 'discretionary' spending related to online purchasing, or high-volume micropayments. Once this trust has developed, customers will begin to conceive of higher-value payments using digital instruments.

Crucially, the payment instruments will be open distribution channels for consumers to consider purchasing other banking products for cross-border services (credit, insurance or savings products). Larger incumbent banks will have the scale to negotiate competitive rates for local customers from cross-border suppliers.<sup>101</sup> Arguably it is in the cross-border payments area that the collaboration of FinTech players with incumbent banks can deliver an excellent customer experience, at economic cost, and thereby win the battle for the 'hearts and minds' of consumers for engagement with other types of cross-border products and services.

As mentioned in section 2.1.1 iv), the role of mobile telecoms operators in building trust among consumers in cross-border payments will be significant, particularly in the case of acquisition deals such as Orange acquiring 65% of Groupama bank. The challenge here will be matching the user experience of smartphones (instantaneous

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<sup>100</sup> BBA and Accenture (2015), "Digital Disruption: UK Banking report" ([www.bba.org.uk/news/reports/digital-disruption-uk-banking-report/#.V2F6qVV9670](http://www.bba.org.uk/news/reports/digital-disruption-uk-banking-report/#.V2F6qVV9670)).

<sup>101</sup> Paul Rohan, interviewed for this study, March 2016.

access to services on the go) to the latency impact of integration with legacy account systems, slower refresh rates and settlement delays that the typical mobile user will simply not comprehend. Payment by mobile phone (bill to carrier model) will in the short term be limited to micro-payments in the retail, vending machine and transport ticketing applications, where the low value of the transaction lessens the payment default risk for the operator.

The next section summarises the lessons from this research from a policy perspective on barriers to cross-border payments, the corresponding digital solutions and alternatives.

### **2.2.3 Conclusion**

The combination of pervasive connectivity and consumer demand for better value from financial services is fostering new distribution channels that come between the traditional bank and their customers. Citizens requiring access to payment services are no longer constrained by access to cash and payment cards, instead using their personal mobile devices to transfer value between their accounts and those of merchants and creditors at any time, and from anywhere.

There is an opportunity for this resource visibility and access to instant payments to radically change the nature of the purchase negotiation, with both buyers and merchants able to bring different settlement terms into play based on their knowledge of the exact payment and settlement parameters. This is an even more powerful lever when dealing with buyers/sellers engaged in remote negotiations.

With consumers in command of 'push' payments, the business model for service providers, currently based on transaction charges and commission fees, may no longer be the right paradigm. FinTech models may move to service subscription cost models (incorporating an app download charge and usage fee). Models for data credit plans from mobile operators offer different billing alternatives, for example. Although challenging, the infrastructural, organisational and commercial challenges of such alternatives may be less complicated than the typical 5-party interchange fee allocation for every card transaction today.

Service providers require confidence that offering a payment product to cross-border customers is not exposing them to disproportionate risk or cost. Policy-makers can promote trust in payments innovation in the provision of a common language<sup>102</sup> for cross-border business. Risk is an aspect of the value proposition in payments, and it is business-model issues that come to the fore in differentiating the FinTech offerings from the incumbent players, rather than policy issues.

Yet, surprisingly, our research suggests that incumbent players in retail financial services have difficulty thinking of digital capabilities as anything other than a new distribution channel for existing products and services, with little thought devoted to what new requirements an internationally mobile customer might have.<sup>103</sup> Valuable customer data have traditionally been jealously guarded with prudential oversight at the expense of conceptualising new notions of customer value from that data.

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<sup>102</sup> The Euro Retail Payments Board (ERPB), which replaced the SEPA Council, promotes and develops such a discourse, tackling the legal, prudential, operational, and access-related issues in promoting pan-European payment solutions, such as instant SEPA Credit Transfer.

<sup>103</sup> Focus Group organised for this study in London, 22 March 2016.

The challenge for policy-setters in this stand-off is to nurture a customer-focused innovation management culture in traditional organisations, and to promote an ecosystem where growing FinTech organisations can play a role in instigating such change. The next section examines three scenarios in this evolving landscape for FinTech integration into cross-border financial services.

## **2.3 Scenarios for cross-border activity**

### **2.3.1 Scenario 1: Business as usual**

#### **Description**

New FinTech offerings will continue to disrupt traditional business models by dissociating funding accounts from payment instruments that offer an integrated customer experience related to their lifestyle and individual context. Traditional banks owned the payment instruments offered to customers, and payment transactions formed a significant contribution to the bank's revenue stream. The impact of pervasive connectivity on banking is that customers expect instantaneous and intuitive access to funding accounts, and flexible, cheap and instantaneously settled payment instruments. The value proposition will be convenience, cost and transparency. Indeed, in a world where communications, storage and social applications are free, customers will increasingly question the very concept of transaction fees, expecting instead to be rewarded for the use of specific payment instruments.

Where banking once required the organisation of a set of customer-facing branch operations and a plethora of back-office transaction engines to exchange payment instructions and to complete settlement processing, digital disruption means that 'always-on' distribution channels provide frictionless transaction processing. In this omni-channel perspective, payments become a commodity service that increases the banks understanding of customer requirements, and the branch becomes the setting for the discussion of those requirements with respect to higher value-added products and services.

From a strategic perspective, organisations that provide other value-adding services to customers will adapt to the new environment. This value added will not come from access to digital resources, which will become a given. Instead, it will be derived from the planning, management and decision support features of the financial services offered. Key financial decisions regarding expenditure, credit facilities, budgeting and forward-planning will be levers to attract customers and engage in cross-selling and up-selling.

Geography becomes irrelevant with such models, allowing customers to interact with each other irrespective of country of residence. The key friction point until January 2018 remains the access to current accounts. As this access becomes ubiquitous, customers will choose financial service platforms that meet their social and professional needs and lifestyles.

While anchor account banking will remain with the country of residence, pan-European retail bank services in open architectures will allow consumers to bridge from that account to a single online entity (the virtual European current account, today represented by the ASPSP's online banking services, in section 2.1.1 c) that connects to current and savings accounts in any EU country. It is anticipated that the flexibility of connecting funding accounts will also become a differentiator, with convergence towards other accounts holding monetary value (phone credit, post-office, credit-

union, loyalty points, etc.).<sup>104</sup> Customers complete a single KYC/onboarding process to open accounts in any country (full IBAN and BIC to the format of the country), with residence justification in one anchor country. Transactions are instant (real-time) even for cross-border and cross-currency payments. Specialist services can be offered by the platform natively or by connecting to existing banks and other specialist financial service providers, essentially acting as a distributor for those services. For instance a client resident in country A would be able to place his money in a savings account in country B. The client can access the bank in country B from country A with a single onboarding process in the language of country A or English.

The key customer assurance for a payments service is confirmation that the payment was sent and received as instructed. As in health insurance, where visibility of the claims process is increasingly a feature of customer apps, for cross-border payment transactions, customers will expect real-time visibility of their payment transactions, the charges applied and the settlement confirmation<sup>105</sup>

Digitalisation represents, in this sense, the socialisation of banking, with consumers becoming their own branch managers. The app represents their current account on their own phones, and they initiate push payments (to payees irrespective of their location) via familiar messaging apps. Visibility of service consumption patterns and associated pricing options will be an expectation from customers, and brand loyalty for payment channels will decrease, with the context and country of the payee dictating the product chosen for the specific occasion.

Post-sales support is via instant messaging, with customised always on support. Cross-selling and up-selling will be automated, but consumers will expect instant access to advisors in the event of a payment query or new requirement. The nature of the customer experience will extend into the support organisation, so that the customer perception is of a smooth integrated organisation with individualised and context specific attention, regardless of which customer interaction channel is being used.

Automated payments advisory services recommending optimal payment methods for different creditor terms (based on speed of settlement, cost etc.) will increasingly be important as the number of methods available to consumers multiplies. Robo-advisors will help in decision support for the various payment options. As competition among cross-border payment options increases, it is likely that reward programmes will become a differentiating factor.

For consumers, specific targets for such services would be mobile professionals, migrant workers, EU citizens with family in more than one country, For example, Erasmus students and European Commission employees represent large communities of potential consumers of cross-border payments. Other specific groups might be employees of multinationals with subsidiaries in Europe and therefore frequent travellers in the EU (see summary in section 2.1.2).

The trend towards differentiated payment options based on the context of payment will continue, with, for example, an increasing use of pre-paid and cash-funded accounts for on-line payments, as a direct consequence of user reticence to divulge personal information online for fear of fraud.

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<sup>104</sup> Gyft is a digital loyalty app that allows consumers to aggregate loyalty points from different retailers into one place, and re-distribute that value according to the consumer's wishes.

<sup>105</sup> Health insurers are providing visibility of claims processing on customer apps; this concept of process transparency may translate to the payment and settlement process, with push notification of funds received.

Providers are those listed in section 2.1.1 a, that is 'Freestyle'-banking: direct payment platform for real-time payments. It is clear that the payments ecosystem will see a lot of consolidation in the coming years, with corporate-funded FinTech companies that succeed in market penetration being subsumed into the main banks product offerings.

## **Opportunities**

Opportunities for providers will be created in the near term for companies to compete on transaction charges, convenience and additional specialist 'cash management' services. These services will include support for cross-border savings accounts, low-cost cross-border micro-payments, currency exchange, international remittances to countries both within and outside the EU, integration with online retail platforms such that home currency billing and on-line shopping basket totals actually match and integration with other FinTech offerings for specialist services (VAT refund planning for purchases abroad, receipt management for expense tracking, analytics for better financial management).

Similarly, real-time micro-payment solutions, which are already stimulating online savings solutions, using pre-paid e-wallets, will continue to grow. Consumers are already using such online wallets as savings instruments (cf. on-line piggy-banks in section 2.1.1). From this concept it is a short step to see these savings as a source of short-term micro-finance solutions. Such citizen-based saving/lending models will disrupt the consumer credit industry in an irreversible fashion and should contribute towards financial inclusion. The supervisory infrastructure of such cooperative credit institutions will require some scrutiny, potentially mapping most closely to the existing 'credit union' model popular in many EU member states.

## **Threats**

The mixture of technical, financial and commercial resources to design, test and run new services may be difficult to find and retain (see section 2.2.2.).

GAFA might get there first. GAFA will continue to be an instigator and purveyor of the key messaging layer of cross-border payment apps, and will therefore continue to disrupt access to payment instruments, but not necessarily the instruments themselves (that is, they will remain dependent on links to existing bank accounts). The case of ApplePay may require specific focus, but it is estimated that even if such solutions achieve adoption in one jurisdiction, the business models espoused by such offers, involving linking to a credit or debit card account, do not fundamentally challenge EU cross-border payments requirements for low-cost and instant payments. It is estimated that the success of online credit transfer tools (such as iDeal) and freestyle banking solutions (such as Ipagoo) will create more compelling value propositions for EU citizens, particularly where such offerings can be combined.

Business model issues between ASPSP's, Mobile Telecom Operators and PSP's may hinder consumer experience. Previous mobile payment collaborations are evidence that where custodianship of the customer relationship has come into play, it has proved extremely difficult for these players to see eye to eye, principally because the view of revenue creation has had a transactional focus rather than a service focus. Innovation driven from a consumer requirement angle (design science approach) will require much more convergence of thinking across the different players.

Finally, users risk becoming confused with the plethora of apps available for payments, as the choice of individual payment instruments becomes increasingly complex.

## **Conditions**

### *Collection and use of data:*

- The notion of instantaneous and borderless financial services will lead to governance models that must co-exist alongside existing infrastructures. In existing models, the timing of transactions has been a lever which drives business models for intermediaries. From a securities market perspective, the business model of many actors is the capability to hold liquidity (with limited cost) by maintaining assets on their balance sheets for specific lengths of time. As retail banking sees settlement delays reduced to a matter of seconds, rather than days, the implications for both infrastructures and consumer purchase processes will have to be understood from a commercial and prudential perspective.
- Shortening settlement cycles for cross-border payments will depend on various factors, particularly related to the confirmation of both payment instructions and settlement across different international intermediaries.<sup>106</sup> The traditional view of settlement intervals is that shortening settlement cycles could result in an increase in settlement failures.

### *Interactions between consumers and providers:*

- Access to shared and standardised APIs for all countries, as foreseen by PSD2. Incumbent banks will have to develop more open architecture to cope with PSD2-driven API-access demands from FinTech actors.
- Where current-account access consent agreements apply, there will be a requirement to coordinate customer processes for automatic refreshing of agreements based on specific rules (transaction history, time since last transaction, etc.). This is an underdeveloped aspect of today's registration and retention policies.

### *Regulatory conditions*

- Rapid and efficient AML and KYC processes that are validated in one country and accepted in all others will be a pre-requisite for adoption; today's ASPSP's compete on the speed of registration (2-8 minutes).
- Interoperability will be required between ASPSP service-providers based on SEPA account parameters (IBAN and BIC); this cannot be taken for granted, as even within one jurisdiction the implementation of SEPA file format parameters can show divergence. It is likely that SEPA translation services as discussed in section 2.1.1 b will be increasingly important to facilitate interoperability in the short term.
- Standardisation of individual account fees payment limits and currency conversion protocols
- Roaming charges, geo-blocking and other MNO-related performance issues will have to be supervised, to ensure that consumers are not penalised for accessing services across-borders.

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<sup>106</sup> T. Kokkola (2010), "The Payment System: Payments, Securities and Derivatives, and the role of the Eurosystem", European Central Bank, Frankfurt.

## **Probability**

This scenario is rated high as it is the most likely evolution of the status quo that exists already. With 10 years of innovation surrounding the smartphone and 20 years of online banking, and borne out by feedback from focus groups in this study, it seems that change in the disruption of cross-border payments is slow. On the other hand, the exponential growth in consumer expectations for high-quality borderless financial services that are adapted to a modern European lifestyle will continue, driven by mature platform-based social and collaborative tools.

Scenario 1 is considered to be inevitable, but in the next scenario we see, in addition, the rapid evolution of more integrated cross-border payment instruments, driven by specific use cases.

### **2.3.2 Scenario 2: Expansion in specific pockets**

#### **Description**

Legacy applications are re-engineered to allow instant cross-border payments from anchor current accounts. FinTech features are integrated into native banking apps, all payments are offered on a push basis, automated triggers for improved financial management are provided to consumers as standard, and customers are offered a customised suite of features for specific requirements.

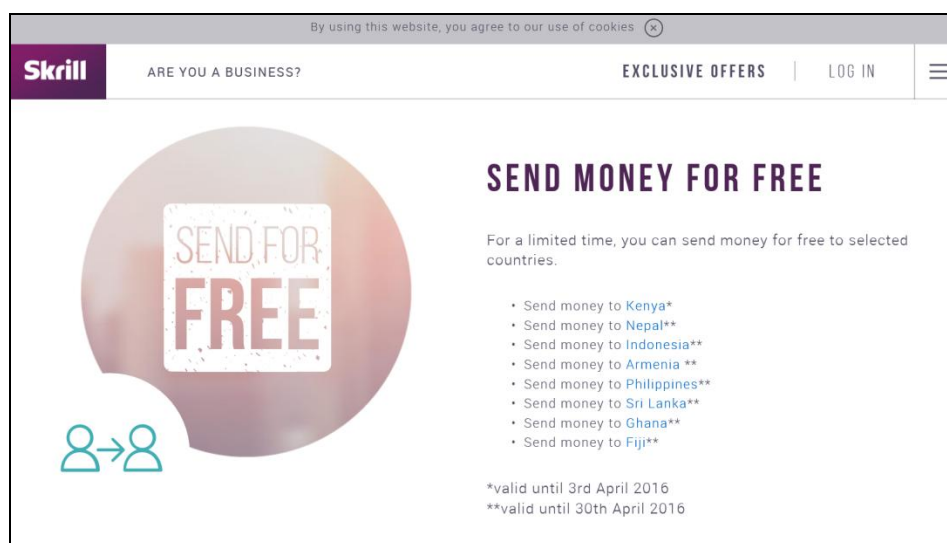
The status quo for EU consumers becomes mobile access at SEPA costs to cross-border payments. Building on this new EU payment standard, a number of niche markets develop, focusing innovation effort and attracting new entrepreneurial talent.

The key driver for international cross-border payments will be international remittances, where migrant workers, mobile professionals and tourists are offered more competitive rates on making cross-border payments, both to payees within the EU and residents outside the EU. Solutions will work for payers and payees who don't hold current accounts, but they will be obliged to hold an identity certified account with the remittance service provider. Integration with various international payment schemes (EU and non-EU) at reasonable cost to the consumer will be a unique selling point for these services. For example, making a payment to an mPesa account holder in Africa will be possible. Current online payment platforms<sup>107</sup> already offer this level of integration:

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<sup>107</sup> Online payment to SMS-based payment schemes from Skrill ([www.skrill.com/en/](http://www.skrill.com/en/)).

Figure 2.12 On-line account loading for integration with SMS payment schemes



Source: Skrill (2016).

Mobile payments will thrive in specific cases, and the experience will be that adoption can experience a snowball effect around the original use case. For example, success in transit ticketing applications will lead to mobile payment adoption in retail and vending machines in or around transit terminals, which will rapidly lead to micro-payment acceptance in cross-border scenarios.

The niche market of travel and tourism will see ancillary services combining in the same way that airline seat sales have become a distribution channel for car hire and travel insurance. Ancillary travel services will include ticket purchase, seat reservation, booking confirmation and online check-in. Access to various funding accounts including local travel pass balances, such that residual totals on urban and national travel cards can be accumulated virtually. Local transport integration will be required, including car hire, toll fees, shared-car scheme, tram, rail, bus, water taxi and public bikes.

Ancillary tourism services will see mobile payment options at local prices for venue access, entertainment and hotel bookings. The capability of virtualising the cards and payments required for travel within the EU, such that the experience of the commuter is frictionless, represents an integration challenge of significant proportions. However, the developments and innovations around this aspect of customer experience are seen to be critical in driving improvements in other aspects of cross-border financial services. Many of the FinTech companies interviewed for this study originated with the founders' experience of a particular inefficiency related to their mobility in a European or global context.

The requirement for conversion facilities between cash and online payment means will develop with the increasing use of kiosk/ATM loading options for uploading cash for use online. Value is captured, as with Pre-paid online cards today (see section 2.1.1 e) and stored in online accounts which may have linked debit card functionality. Once the account is funded, payment or withdrawal via a variety of means is possible (credit transfer to other account, on-line payment, mobile payment, off-line payment with debit card, ATM cash withdrawal, etc.).

Consumers for the re-engineered legacy applications are all EU account holders. Consumers for the niche solutions are all EU citizens. Specific target markets would be all those users of international and local transit services, migrant workers and humanitarian organisations, and specifically the unbanked for the remittance offerings.

The development of niche solutions relies on a convergence of players whose collaboration represents the biggest challenge for the success of each initiative. Payments specialists, security experts, blockchain developers, app developers, cloud platform providers, regulators, technology integration experts, banks, mobile network operators, SIM card manufacturers, handset manufacturers and a range of cross-border payment solution-providers (see section 2.1.1) would all be required in different capacities to contribute to the analysis, design and implementation of working solutions.

Each individual case would be worked on as a discreet project, with a defined product, for a defined audience, such that project scope could be narrowed. But scalability would have to be a qualifying criteria for any niche project, such that successes could be rolled out to a wider audience without re-engineering. The operational challenges of hosting and implementing scalable applications with excellent customer experience and high speed interconnections to legacy banking systems are particularly challenging, and the technical requirements for pan-European test facilities are discussed below in conditions for this scenario.

## **Opportunities**

There are a range of opportunities for service provision that would arise out of the standardisation of legacy data infrastructures, and the lab-based development of pilot cross-border payment initiatives. The principal opportunities could be envisaged as falling into one of two categories:

- 1) Payments solution design and implementation: skills and capabilities
  - Project management resources sourced among the various players involved would develop digital platform development skills that would be highly transferable.
  - Business analysts for cross-border payments, responsible for understanding requirements and designing solutions
  - Customer experience advisors, with responsibility for incorporating customer centric design into all aspects of service provision and support
  - Technology platform providers (cloud, payments solutions, transaction acquirers, transaction processors, network security experts, ...)
  - Fraud and AML prevention experts
- 2) Payments regulation innovation
  - The confluence of technology capability and burgeoning consumer demand for mobility makes the transition from the traditional static view of regulation to a more dynamic and proactive approach necessary. Involving policy-makers in the research around sustainable payments innovation is a fundamental pre-requisite for stimulating innovation in a market that only obeys short-term shareholder-led market dynamics and the financial gains of solutionism.
- 3) Data governance capabilities
  - Cross-border payments will be facilitated by PSD2 access to current accounts, and the use of this data, along with identification information and payment data, are subject to many constraints, as characterised by data

protection legislation. Key in the success of cross-border payments initiatives will be the ability to deliver value to the consumer without compromising data protection rights. Given the conflicting constraints of frictionless customer experience, protection of data from risk, cloud-based technology platforms and multiple-solution delivery devices, it will be important to develop data governance capabilities alongside an understanding of the solutions and how they work.

## **Threats**

The key risk for consumers is the compromise of personal data (identity, payment data, etc.) in the use of digital platforms for cross-border payments. An operational risk is that the transactions are incomplete, are not reversible or cannot be validated. The risk of unauthorised access to cross-border payment capabilities would be an AML concern, as would the ability to screen the funding accounts related to payers and the recipient accounts for payees.

The key risks for providers are the business model issues related to commercialising the solutions for specific markets. Service providers will naturally tend towards ownership of customer data, for the very good reason that customer service delivery and invoicing is related to the integrity of that data. Each handover between systems is a possible failure point and certainly a performance factor, so it will be necessary for these cross-border partners to think about other subscription-based models for revenue generation where customer data custodianship is relinquished for the greater good of seamless service integration.

Scale will be another challenge for FinTechs involved in such projects, where the solution adoption ramps from pilot to live, there will be a pressure on service continuance, which will require additional resources, something that FinTechs may not be comfortable with. Again, the custodianship of the customer relationship will be a crux issue to agree on for the success of such ventures.

## **Conditions**

For these niche markets to develop based on SEPA-based harmonised national payment schemes, banks will have to have cleansed their legacy data into an enterprise architecture that is separated from processing. The enterprise data store will be held in a private cloud and has nonstop, real-time analytics. These analytics will enable the bank to delve deeply into the transaction profile of its clients, and use neural networks to proactively predict their needs, advisory services and support mechanisms.

These support mechanisms are provided 24x365, account status is synchronised in real-time to multiple consumer devices, customised notifications are specified by the consumer, but basic account operations are automated (balance status push notification, bill payment, etc.).

The delivery of account visibility is sometimes via the bank directly, but often through third-party APIs that are plugged into the open source bank. The consumer's financial ecosystem is personalised at a micro level.

This is banking as a push service, with intelligent advisory and pre-emptive algorithms. The branch is designed to accommodate co-creation of new products and services as customer requirements evolve.

The focus of pan-European directives should be replaced by smaller-scale local regulatory changes to facilitate alignment of national standards around payments. It was felt that a distinction needs to be made regarding the role of the federal authority at the EU level with respect to responsibility for enforcing compliance and controlling behaviour.

For the significant convergence required for these niche markets to flourish, the value of national and EU level regulators in both hosting the research required, and arbitrating in case of conflict between actors, is primordial. The EU framework programme for research and innovation<sup>108</sup> would be seen to be a suitable vehicle for bringing together the relevant players and researchers in a collaborative project that designed the prototype for the solutions involved, lobbied for regulated access to national data sources where required, provided a test bed for solution development and concentrated the creativity and innovation around the goal of a more equitable payments platform for cross-border payments.

According to FinTech contributors to this study, the problem with the transposition of directives to local legal implementation is that an overly zealous adherence to a federal standard can lose the essence of the original directive, and have the opposite effect of dampening innovation at a local level. From this perspective, variation in practice and culture at a local level is not to be eradicated but embraced, as it encourages local pockets of innovation around constraints about which entrepreneurs at least have some influence. It is suggested that a digital payments sandbox environment is an ideal opportunity to bring such local skills to bear in the context of specific payment requirements.

## **Probability**

This is perceived a medium probability because, although some of the niche projects will transpire anyway over the next five years, research and practical experience would suggest that market forces will determine the winners or losers in service provision. The coordination of the different players in an open market is a big challenge, however laudable in the long term, and short-term performance criteria linked to shareholder concerns tend to take precedence.

However, this risk is mitigated by the interest and enthusiasm from all stakeholders in creating a level playing field for cross-border payments, such that new and innovative solutions can be designed and delivered, and new opportunities for value-added services can be created, once the stewardship of the transactional data can be agreed and secured.

Scenarios 1 and 2 can be considered to be complementary, with some aspects of Scenario 2 likely to develop more quickly than others. Scenario 3 is also one that will evolve in parallel, but at a slower pace, given the technological, economic and prudential barriers to be overcome. Nonetheless, the implications of blockchain are seen as the most disruptive in the current climate for cross-border payments, as it will fundamentally change the manner in which financial services are designed and delivered.

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<sup>108</sup> Horizon 2020 ([www.ec.europa.eu/programmes/horizon2020/](http://www.ec.europa.eu/programmes/horizon2020/)).

### **2.3.3 Scenario 3: Integrated EU market**

#### **Description**

The future of cross-border consumer payments is increasingly integrated with the integration of blockchain-based decentralised ledgers, particularly in the area of cross-border payments. Multi-sided business platforms/marketplaces will be supported by new collaborative business models, with open competitive pitches from service providers in transparent partnership relationships. Such solutions will develop alongside the evolution of traditional payment instruments, as detailed in scenarios 1 and 2.

The blockchain ecosystem will be open and collaborative, with Application Programming Interfaces (APIs) published as open source code libraries, such that developers can access and develop solutions to integrate with existing legacy infrastructure.

Real-time communication of payment information and settlement will become increasingly the norm, not an aspiration (for example, real-time processing means sub-3 second response times for customer identification, credit limit verification and payment authorisation). This can clearly be delivered when only dealing with online wallets; the settlement in legacy accounts is a different, but not insurmountable challenge.<sup>109</sup> To what extent the integration between blockchain-based protocols and existing payments networks can be achieved for safe, fast and transparent cross-border payments is unclear at the time of writing, but this scenario will see a long overdue step change in the speed of settlement processes.

Crucially, trustless networks will explore the utility of individual user authentication. A trustless network is one where no third party centralised authority is required to authenticate transactions, as each transaction is subject to verification by the network, rather than by one single node. This principle also removes the vulnerability of any one node on the network, as transactions can only be constituted by running an algorithm on all nodes. The implications of this embedded network authentication protocol are vast for the KYC and AML processes discussed earlier in this chapter. Indeed, the contribution of such research to the understanding of the interplay between user authentication and decentralised transaction verification has more importance for the future of payments than the adoption rate of any one cryptocurrency in the short term.

Public blockchain protocols are internet-based, and therefore the communication channels are free. Use of blockchain protocols opens up new dimensions of digital value (identity, financial, legal contracts, digital content, time, etc.). The implementation of such protocols alongside traditional payments systems is likely to open up the possibility of developing analytics on customer data that automatically push intelligent alerts and notifications for important decisions to customer apps, while back-end transaction processing is achieved automatically. The goal of achieving real-time pro-active governance of payments is considered to be achievable in the long term.

Initially developed around cross-border payments cases, the target audience will be, in fact, all online consumers, as virtual currencies designed for the 'internet of value'. It is anticipated that the science and economics of cryptocurrencies will evolve rapidly, in

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<sup>109</sup> Dutch banking is currently working on a sub-6 second transaction verification protocol based on the iDeal credit transfer payment instrument.

the same way that the payments ecosystem evolved rapidly with the earliest implementation of electronic funds transfer protocols.

This scenario includes the providers mentioned in scenarios 1 and 2, but introduces a new type of partner, the open source community of the blockchain. This is made up of different roles as described in section 2.1.1 vi), but the involvement of such large dispersed and decentralised autonomous organisations (DAOs) will bring its own innovation management challenges. These challenges and opportunities will be increasingly informed by collaborative research projects at an ERPB level.

With research and consultation exercises underway in the area of instant SEPA payments, proximity payments with mobile phone and e-invoicing solutions, the role of the ERPB in fostering the ongoing collaboration of payment stakeholders in the EU is crucial. The representative structure of the board, including supervisory, institutional and commercial (consumer and merchant) members at an EU level is the only governance umbrella that can draw collaboration across such a competitive market space. It is strongly suggested that the board consider a specific initiative focusing on the potential of blockchain-based technologies to underpin real-time clearing and settlement of payer and payee accounts in the EU payments ecosystem.<sup>110</sup>

## **Opportunities**

Multiple applications of blockchain technology, including crypto-currencies like BitCoin and Ether, have relevance to the digitalisation of financial services. Where centralised banking systems don't exist or don't satisfy consumer requirements, crypto-currencies offer the possibility of automating the exchange of value in a peer-to-peer (P2P) network, creating decentralised banking services for the masses. The same principle will be used for cross-border crowdfunding or lending services. Currently in Europe, P2P lending platforms (and indeed many innovative payment solutions) are regulated as credit institutions in the country of origin, and don't extend borrowing or lending services to non-residents. Expensive money services such as online tipping, micro-payments (<€15) or international remittances will be disrupted by blockchain-based services. With crypto-currency, the transaction logic can easily be decoupled from the value itself, meaning that intelligent services can be coded into manipulating and managing the value.

As well as being used to create digital currencies, the tradeable digital tokens can be used to represent assets, where a contract can be coded to govern the distribution and use of that asset. Ownership of digital assets can be audited by establishing a persistent link between the owner's identity and the digital file and its meta-data, using the blockchain as the proof of ownership.

'Smart' contracts are programmes that can be entrusted with money and rules around that money. The basic idea behind smart contracts is that a transaction's contractual governance between two or more parties can be verified programmatically via the blockchain instead of via a central arbitrator, rule-maker or gatekeeper.

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<sup>110</sup> FinTech organisations involved in this study have registered their appetite for involvement at an EU-policy and infrastructure-design level with regard to the integration of blockchain technologies.

## Threats

The single biggest threat regarding blockchain is the same one facing the industry with respect to the use of a public network (the internet) for secure consumer transactions. Is a decentralised network protocol, designed for permission-less value exchange, fit for purpose in managing a global payments network, becoming the internet of value?

This question is analogous to that facing the industry in the adoption of the internet for consumer access to banking services 20 years ago. The important point to stress is that consumer requirements must be understood in the area of EU cross-border payments, and based on those requirements, suitable *fit for purpose* solutions may be developed leveraging blockchain, existing payment and settlement systems, or a mixture of both, as described in section 2.1.1 vi).

As decentralised models gain traction for trustless instant transactions, so too are existing legacy infrastructures increasing their performance, with a Dutch payment system forecast to be capable of a 5-second settlement in the short term. So the choice of the information and payment systems infrastructure should be based around the model of decision-making required, taking into account decision algorithm parameters, transaction performance requirements, user authentication requirements and data protection requirements.

A discussion is required around the relationship between the potential speed of messaging (trending towards instantaneous) and the impact of such messaging in payment and settlement decision processes that are not necessarily comprehensible in real time (because there is an assessment of risk required). If not risk, then it's an assessment of the engagement of resources related to those decisions, the visibility of which is also increasingly automated. So the discussion needs to be around decision-making and resource engagement in a real-time transparent world, where the globally instantaneous exchange of payment and settlement data is within reach.

## Conditions

Instead of securing access to a centralised store of authorised users, blockchain protocols rely on consensus approval of any given transaction for authentication. This runs through the fabric of the new financial ecosystem, where 'public verification' is the vector of authentication.

New applications will be built around, or integrated with the real-time global exchange of value, and new service providers will emerge as FinTechs adjust their business models to adapt services to customer requirements in an agile and iterative approach to solution development. ASPSP's (incumbent banks) have, in the past, dealt with the uncertainty of promoting new products and services based on partner agreements, when development times were a matter of years, rather than months or weeks. Blockchain principles of identity invert the relationship of control between service provider and consumer (see the data custodianship issue mentioned in scenarios 1 and 2).

Instead of consumers (representing lots of small points of information) trying to access a service provider (one large point of centralised information), blockchain principles as applied to identity management allow consumers to own and control the data that are used in interactions with service providers (sovereign identity), and service providers become the requestors of information for consumer access.

However, the poor match between technology proponents (open source and collaborative) and business models of payments industry (closed and proprietary) means that the key challenge for the adoption of blockchain principles in consumer payments is the elaboration of the business model for the partners involved.

### **Probability**

The chances of this scenario to happen are assessed as low to medium.

The likelihood of incumbent banks moving away from their legacy applications to embrace blockchain protocols for payments is low, simply because banks are reliant on their existing systems for the maintenance of all transactional customer services, and don't have the skills or resources to migrate these applications to the cloud (removing the reliance on old hardware), re-engineer those applications using modern digital development frameworks, and phase out the older applications in a coordinated and consumer-friendly manner.

On the other hand, the above tasks will be familiar to most IS (information systems) professionals as systems migration tasks, a fairly constant requirement in all aspects of systems usage for the last half century. A key conflict in this context will be the 'solidifying' effect of rapid API development for new PSD2-driven payment services on existing infrastructures, which would increase, rather than decrease the reliance on proprietary and inflexible systems.

Again, IS professionals will be familiar with parallel running and cutover challenges when dealing with system migrations, so the mindset exists for such challenges, even if the tools and transition platforms will need to be designed. Transposing this difficulty to a question of resources, the question now becomes commercial. In the long term, those institutions that will embrace re-engineering of their systems will ultimately achieve competitive advantage for the suite of new real-time banking applications.

### **3. Current- and savings accounts**

Current and savings accounts are among the products that make up everyday banking. They embody the basic need to receive wages, make payments and save earnings for future projects or expenses.

Since both types of accounts are strongly intertwined, they are also analysed together. Hence, both current and savings accounts can be used to store funds and are often provided by the same bank. This is partially because most consumers prefer to manage their finances from a single institution, but also because banks sell or used to sell the accounts as a package to their customers. In particular large traditional banks in many countries require consumers to open a current account first before they can open a savings account.

Traditionally current accounts were strongly linked with payment products. But as the discussion in the previous chapter on payments showed, the introduction of new providers is increasingly leading to a separation between payment instruments and current accounts. Hence, the new payment products (e.g. e-wallets, e-payments, etc.) are often still linked to current accounts, but they are no longer provided by the same provider.

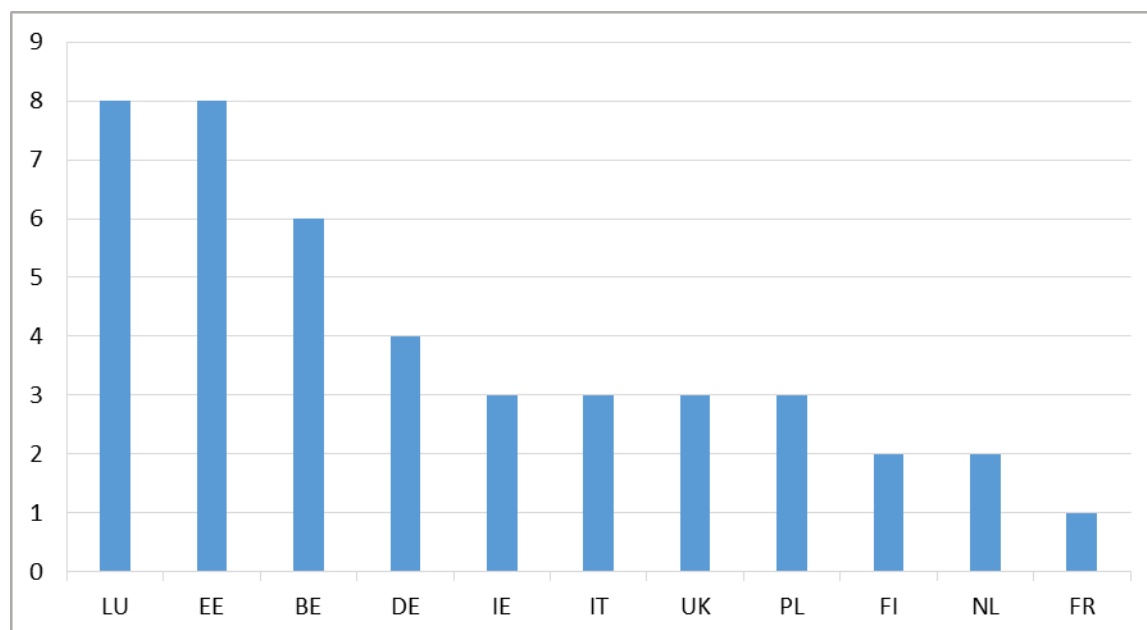
Most Europeans have current and savings accounts with domestic banks or with foreign banks with a subsidiary or branch in their own country. This chapter focuses, however, on cross-border current and savings accounts that consumers have directly with foreign banks, not through a subsidiary or branch in their country. Moreover, only the basic on-demand savings accounts and time-deposits are discussed, which form the majority of the savings account products offered by banks. In addition, there are also savings products that allow people to save for specific purposes with a tax advantage, in particular for (grand) children and retirement. Foreign banks are in most cases not eligible to offer this kind of savings product or other savings accounts that are tailored to the requirements (e.g. lock-up period and reporting).

This chapter assesses the trends in cross-border holdings and offerings of current and savings accounts and the role played by digitalisation and innovation. It also assesses potential scenarios for cross-border activities that could contribute to a deeper single market for current and savings accounts.

#### **3.1 Current cross-border activity**

Current and savings accounts that are held on a cross-border basis form only a minor part of the EU market at the present time. According to Eurobarometer, looking at all EU countries on average, only 3% of the total population possesses a current account in another country. The share of the population with cross-border current accounts is below 4% in most of the 11 selected countries diagrammed in Figure 3.1, with the only exceptions being Belgium, Estonia and Luxembourg. The shares varying between 6% and 8% may reflect the percentage of the population working cross-border.

Figure 3.1 Current accounts held abroad (% of total, 2011)



*Note:* The figure shows the share of the population that holds a current account with a payment card and/or a cheque book abroad.

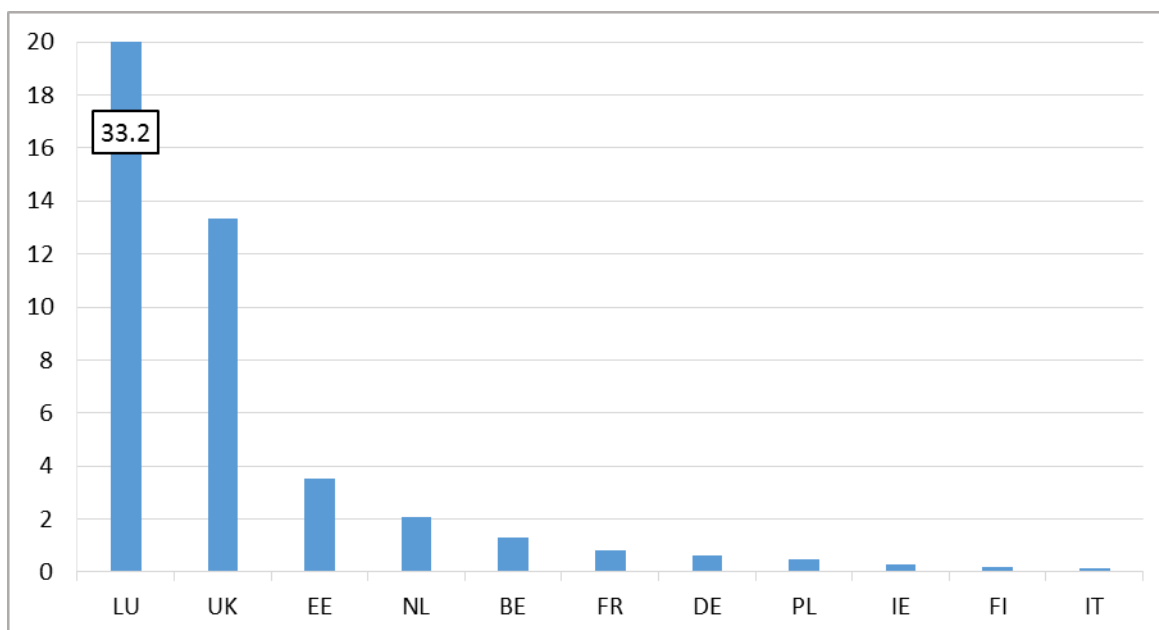
*Source:* Authors' own calculations based on 2011 data from Eurobarometer

The share of people who would ever consider opening a cross-border account in the EU and the selected countries is 5% and 6%, respectively. Hence, this means that slightly more than half of the people who would consider a cross-border current account already hold one.

To get an idea of the evolution of cross-border activities and cross-border holdings of savings accounts, the volume of deposits is used as a proxy.<sup>111</sup> Cross-border activity in savings accounts remains rather low. After a slight decrease between 2003 and 2006, the cross-border activity in the selected countries (excluding the UK and Luxembourg) has stabilised at around 0.7% until the end of 2015. Figure 3.2 shows that in most of the selected countries the cross-border household deposits from other (other) euro-area countries ranged between 0.1% and 3.5% at the end of 2015. In turn, the UK and Luxembourg registered substantially higher cross-border activity with 13.4% and 33.2%, respectively. The higher shares are explained by the particular structure of the financial sectors in both countries, with the financial centres in Luxembourg and the UK (i.e. London) catering to high-wealth individuals in euro-area countries.

<sup>111</sup> The data provided by the ECB do not allow us to make a distinction between household deposits held in current and savings account in other euro-area countries.

Figure 3.2 Cross-border savings in (other) euro-area countries (% of total, 2015)



Notes: The figure shows the share of household deposits from (other) euro-area countries as a share of total domestic and (other) euro-area household deposits.

Source: Authors' own calculations based on ECB 2016 data.

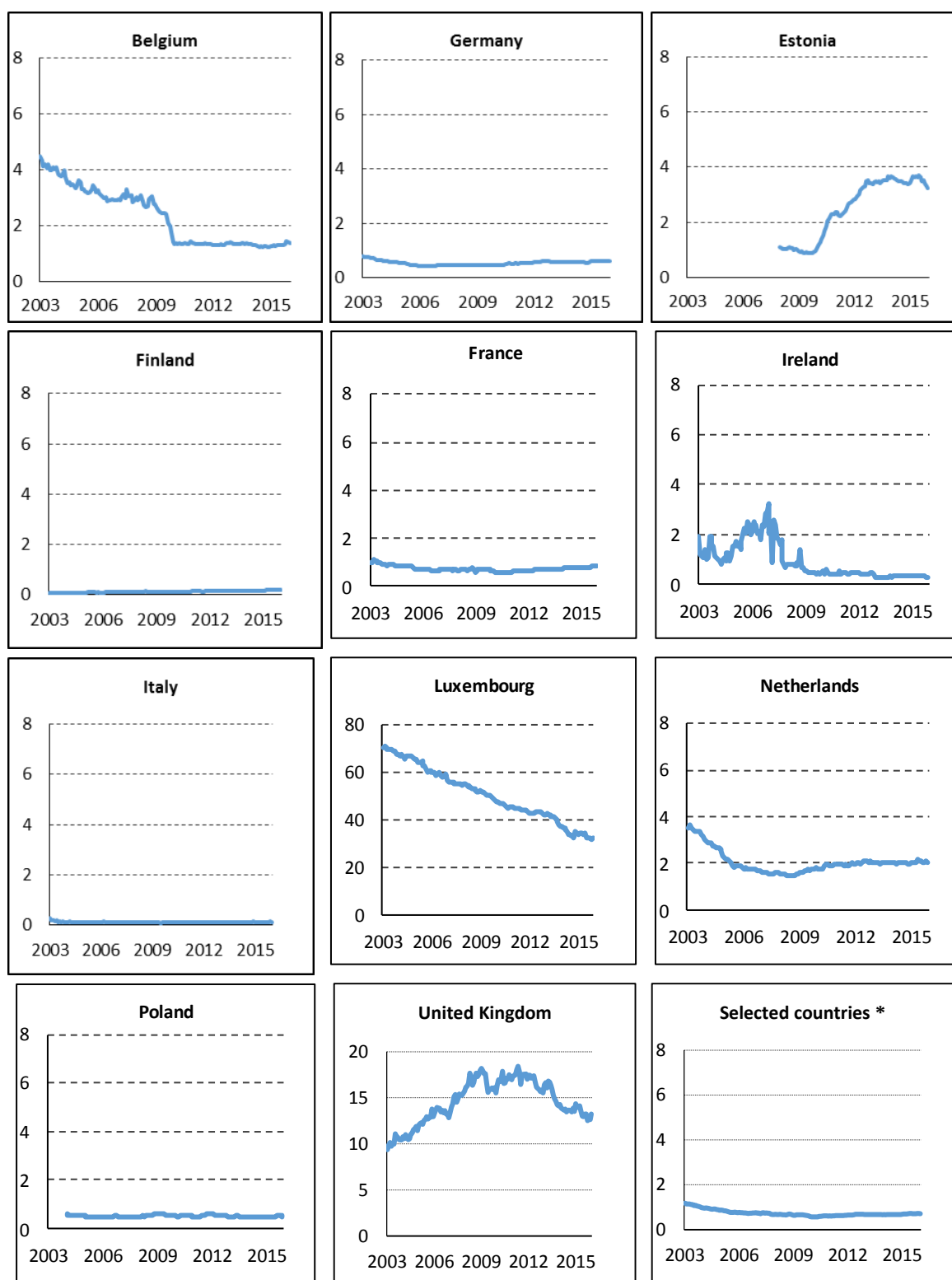
Nonetheless, the evolution over time of cross-border activity in household deposits has followed two different trends for the UK and Luxembourg. In the UK, there has been an increase from 9.4% January 2003 to 17.4% in January 2012, followed by an ongoing decline to 13.2% in January 2016. During this same period, the volume of cross-border activity in Luxembourg has registered a continuous and marked downward trend going from 70.2% to 32.5% during the same period (see Figure 3.3).

With regard to the other countries, only Estonia reported an increase in cross-border activity in the last few years, having experienced an increase in the share of deposits from other euro-area countries between January 2010 and January 2016 from 1% to 3.2%. Conversely, both Belgium and Ireland witnessed a significant drop in their cross-border activities in 2009, after which the share stabilised at around 1.4% for Belgium and 0.4% for Ireland. Also the Netherlands registered a decreasing share between 2003 and 2009 and stabilised around 2% afterwards. Looking at the remaining countries, the levels of cross-border activity were below 1% in Poland, Germany, and France, and even close to 0% in the case of Finland and Italy.

The cross-border holding of deposits was more common in the past. But the measures designed to reduce money laundering and tax evasion have made it harder for EU citizens to hide their foreign deposits from their national tax authorities. At the same time, it also has become more difficult for providers to offer savings accounts to non-residents. The know your customer (KYC) requirements under anti-money-laundering (AML) regulations required in most countries,<sup>112</sup> for instance, call upon banks to perform face-to-face identification, which was impossible to do at distance until quite recently.

<sup>112</sup> For example the recent 4th AML directive, OJ L 141 of 5.6.2015 ([http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L\\_.2015.141.01.0073.01.ENG&toc=OJ:L:2015:141:TOC](http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2015.141.01.0073.01.ENG&toc=OJ:L:2015:141:TOC)).

Figure 3.3 Cross-border household deposits in euro-area countries  
(% of total deposits, 2003-15)



Notes: The figures show the share of household deposits from (other) euro-area countries as a share of total domestic and (other) euro-area household deposits.

\* The average of the selected countries is calculated based on all selected countries excluding the UK and Luxembourg because of the particularities mentioned in the text.

Source: Authors' own calculations based on ECB 2016 data.

### **3.1.1 Types of providers and products**

Current and savings accounts are two key products for managing everyday finances. Hence, especially current accounts in combination with payment instruments still form an important financial product with which to attract customers for other financial products or so called cross-selling. The large majority of consumers have more products with their main bank. The importance for cross-selling means also that most banks are willing to offer the current account at low margins or even below cost, which makes it less attractive for FinTech companies to develop and sell these accounts.<sup>113</sup>

There are two broad groups of cross-border current and savings accounts. The first group consists of accounts offered by traditional banks targeting in particular people who are active in a country (e.g. for their work), but don't permanently live there. The second group of accounts are offered by new entrants such as FinTechs that offer their accounts in multiple countries to all consumers.

#### **Traditional banks**

Current accounts are still key products for those banks that have traditionally been the exclusive provider of that service. These large incumbents often offer current and savings accounts as part of a broader range of financial products, including other banking, insurance and investment products. The larger banks still seem to continue to stick with this business model, although they are increasingly interacting with their customers via digital means. Most of the larger banks use a hybrid strategy to develop the digital solutions that give them the opportunity to provide products tailored for their needs and that grant them a competitive advantage.

In many cases large banks combine the internal development of digital solutions with solutions developed by others, including FinTechs. In many cases the banks acquire all or part of the shares of these FinTechs. Aside from language, the digital solutions are also often amended for differences in customer preferences across countries. In turn, smaller banks in particular tend to prefer to buy 'off-the-shelf' digital solutions. There are many FinTechs and other companies, for example payment system providers, that offer these so called white-label solutions.

The KYC requirements are one of the main conditions making it difficult for banks to offer cross-border financial services. The German company IDnow developed a tool allowing the German market to identify customers through digital means (i.e. computer and/or smartphone), which is currently being used to identify clients of banks in several European countries. In principle, it does not matter where the customer is based in order to identify him/her. Non-residents who buy a financial product are under German law. The identification process consists of four steps: selection of a video for identification, actual identification through video chat (showing identity card/passport and person), signage of contract with verification code and transfer of data to financial service provider. The company only obtains the data for the identification. After the data have been transferred to the bank or other financial institution, it is erased from the servers of IDnow. This form of digitalisation seems beneficial for both the bank and the customer. Digital identification is not only faster than the screening process at the local postal office or using e-identity cards, which require a card reader. Moreover, the bank benefits from a higher conversion rate, i.e. a larger share of the people who start the subscription process complete it. Many people who apply for a product on-line do not complete the sales process; if the share

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<sup>113</sup> KPMG (2014), "Barriers to entry into the Dutch retail banking sector", see [www.acm.nl/en/download/publication/?id=13257](http://www.acm.nl/en/download/publication/?id=13257).

of people not completing the procedure is reduced, this can result in extra customers for the company.

Although digitalisation makes it easier for banks to offer products cross-border, all the banks interviewed indicated that they intended to stick to their current structure, i.e. providing financial services through local subsidiaries and branches. The current structure allows the banks to take advantage of their knowledge of the local market as well as offline customer services (e.g. office networks, call-centres, etc.). The banks also expressed the intention of streamlining their operations, e.g. by centralising selective IT services and product development. The cross-border offerings of the traditional banks are therefore likely to remain limited to specific groups like commuters and expatriates.

Commuters and expatriates traditionally form the largest group of buyers of cross-border current and/or savings accounts. This is especially the case in the Benelux area where Luxembourg leads in terms of the number of commuters and, of course, the solutions offered that are targeted at the latter market.

The Luxembourg-based BGL BNP Paribas,<sup>114</sup> for example, allows for a free and fully online application to set up an account only when the non-resident customer is from Belgium, France or Germany and has an *economic link* to Luxembourg. If both conditions are met, then the customer can simply upload his supporting documents and fully validate his contracts online; otherwise, the procedure is stopped and customers are asked to contact the bank by phone.

The Banque Internationale à Luxembourg (BIL) has a dedicated section on its website for cross-border accounts for commuters working or studying in Luxembourg.<sup>115</sup> Thus, as for BGL BNP Paribas, these arrangements are available only for residents in Belgium, France or Germany. BIL has several branches located at the borders of the three neighbouring countries, which are open at convenient hours for commuters. Moreover, BIL also offers a current account tailored for young commuters (aged 18 to 29) with no charges, a free bank card and lower rates for financial loans and mortgages.

Banque et Caisse d'Épargne de l'État (BCEE), based in Luxembourg, also has a dedicated section for cross-border commuters,<sup>116</sup> offering both current and savings accounts among other financial instruments. Also BCEE has a strong presence of branches along the borders with France, Belgium and Germany. Consumers first have to fill in the online application form, then they will be contacted by an advisor to tailor their offer, and finally they can complete the application by sending the documents back with a certified signature or signing it in a BCEE office.

ABN AMRO (NL)<sup>117</sup> offers current accounts to non-residents (both private and corporate), but no online application is available and clients have to contact the bank either by phone or email.

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<sup>114</sup> For additional information, see [www.bgl.lu/en/bank/pages-techniques/devenir-client.htm](http://www.bgl.lu/en/bank/pages-techniques/devenir-client.htm).

<sup>115</sup> For additional information, see [www.bil.com/en/individuals/dedicated-offers/cross-border/Pages/index.aspx](http://www.bil.com/en/individuals/dedicated-offers/cross-border/Pages/index.aspx).

<sup>116</sup> For additional information, see [www.bcee.lu/en/Private-customers/Cross-border-commuters](http://www.bcee.lu/en/Private-customers/Cross-border-commuters).

<sup>117</sup> For additional information, see [www.abnamro.com/en/clients/expats-non-residents/index.html](http://www.abnamro.com/en/clients/expats-non-residents/index.html).

In addition there are also international overseas accounts for workers who spend longer periods in countries with two or more different currencies (e.g. working in the EU but receiving salary in US dollars, or living in the UK and receiving rent payments from a property in euros). Major UK banks offer such accounts, such as Barclays,<sup>118</sup> which offers international savings accounts in the major currencies (dollar, sterling and euro). Customers can apply online by submitting their address history for the last three years together with employment and income details. Moreover, there is a minimum balance requirement of £25,000.<sup>119</sup> The bank offers three locations in which customers can set up their account: London, Isle of Man or Jersey, allowing customers to choose the most preferential tax treatment depending on their personal situation.

### **FinTech companies**

Besides the FinTech companies that deliver their services to banks, there are also some FinTech companies that offer current and savings accounts to consumers. Most of the smaller technology companies offering cross-border products either use the light regime to offer current account-like products, such as provided by WB21 (CH/UK/US) and Orwell Union Partners (parent company ipagoo [UK]), while others like Number26 (DE) and the brokers for foreign time-deposits like Raisin (DE) offer current accounts with their own brand using a partnership with small banks. There is also a small group of FinTech companies that have obtained or applied for banking license like Bunq (NL) and Starling (UK) that offer or announced their intention to offer current accounts. At the present time, however, these FinTech companies only offer their products domestically.

Number26 (DE) offers an app-based banking service. It has a banking license in Germany through their partner bank Wirecard and offers their bank accounts, overdraft facilities and cash withdrawal service to consumers in its home country Germany as well as in Austria, Ireland, France, Spain, Italy, Greece and Slovakia. Number26 has already indicated that it is planning to expand to cover the entire euro area and later the EU. The bank has chosen to expand to countries where it sees the most potential to attract vast groups of customers first, i.e. countries with the highest bank fees. The bank offers a 'no-frills' current account, card and cash service to its customers, who manage their bank business using a smartphone app and debit card. Most of the transactions are for free, except for overdrafts. The largest share of the revenues, however, is obtained from the fees for processing the card payments. Number26 complies with the on-boarding/Know Your Customer (KYC) requirements through online customer identification by IDnow<sup>120</sup> and physical face-to-face identification of customers at the post office. The website is available in English and German, but Number26 indicated that it will become available in other languages as well and that it wants to add other banking services to its product portfolio (e.g. savings accounts, loans). Tandem, Atom Bank, Monese, Mondo and Starling have

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<sup>118</sup> For additional information, see [wealth.barclays.com/en\\_gb/home/international-banking/products-and-services/banking/international-bank-account.html](https://wealth.barclays.com/en_gb/home/international-banking/products-and-services/banking/international-bank-account.html).

<sup>119</sup> On its website, Barclays informs prospective customers: "If you are a UK national living abroad, or a non-domiciled resident of the UK, you can choose to open your account in an offshore location, such as the Isle of Man." It further advises: "You should seek independent tax advice to see about possible advantages of banking or investing in either location. You should also consider the different compensation and regulatory schemes in different jurisdictions." And announces that financial information on residents from EU member states is reported to the tax authorities: "For EU residents, the European Union Savings Directive has been implemented to ensure that cross-border savings income is taxed effectively. In line with our responsibilities, we will share information about you and your savings income with the relevant tax authorities."

<sup>120</sup> For additional information, see [www.idnow.eu/](https://www.idnow.eu/).

announced or already launched in 2016 similar kinds of mobile banking services accessible to consumers from several or all EEA countries.

Ipagoo (UK) has announced the launch of international current accounts in France, Italy, Spain and the United Kingdom in 2016. Ipagoo envisages eventually offering its services in all the other European countries. Ipagoo will use the payment services Directive (PSD)<sup>121</sup> and E-money Directive (EMD)<sup>122</sup> based licenses of its parent Orwell Union Partners to offer the current account-like products with IBAN and BIC codes as traditional current accounts have. The new customer identification is not yet complete; for the pre-registration the customers need to create a login, provide personal details (e.g. photo ID and proof of address) and indicate their preferred country and currency. All transactions between Ipagoo accounts will be instant (real-time) even cross-border and cross-currency. Since Ipagoo/Orwell Union Partners do not have a credit institution license, it is not allowed to offer its own savings accounts or provide credit. Hence, it will not lend money in the accounts to third parties or invest it and keeps it separate from the companies' funds.

WebBank21 or WB21 (CH/UK/US) offers 'free private accounts' to private persons from 180 countries, including the EEA countries. Customers are allowed to open up to four accounts in more than 18 different currencies for free and virtual or physical debit cards. Although the product looks like and is presented as a current account, it is not. WB21 is not a bank but stored value facility (SVF) provider, regulated under Hong Kong law.<sup>123</sup> In order to offer their banking product, however, the FinTech is cooperating with banks that are eligible to hold the funds of the customers. Hence, WB21 is acting as an agent and custodian to offer the current account-like products. WebBank21 has developed a platform that allows the transfer of funds real time across the globe at just a fraction of the fee that traditional banks charge for these payments. Hence, WB21 makes money through transaction fees on international payments.

Turning to savings accounts, Raisin, Savedo and ZinsPilot (DE) offer their customers the possibility to benefit from higher interest earnings on savings accounts in other European countries. The FinTech companies will take care of the necessary account openings in the other member states. Raisin (known as WeltSparen in Germany) offers its customers a similar service for all EEA residents, with the exception of Belgium where its partner bank KeyTrade is based. The German customers at Raisin can open savings accounts located in Bulgaria, Croatia, Czech Republic, Germany, Ireland, Italy, Norway, Poland, Portugal and United Kingdom. The other customers can currently only open savings accounts at two banks located in Slovakia and Poland. SAVEDO offers German and Austrian residents the possibility to deposit money at savings accounts of partner banks in the Czech Republic, Croatia and Portugal. Zinspilot (DE) offers German residents the possibility to manage and open savings accounts in Austria, Germany, Malta and the United Kingdom. In order to comply with the KYC requirements, new providers closed deals with small banks in Belgium and Germany at which the consumers open a bank account (SAVEDO: biw AG [DE], WeltSparen: MHB-Bank AG [DE]/KeyTrade [BE], and ZinsPilot: biw AG/Sutor Bank

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<sup>121</sup> Directive 2007/64/EC on payment services in the internal market, OJ L 319 of 5.12.2007 (<http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32007L0064>).

<sup>122</sup> Directive 2009/110/EC on the taking up, pursuit and prudential supervision of the business of electronic money institutions, OJ L 267 of 10.10.2009 (<http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32009L0110>).

<sup>123</sup> For additional information, see [www.wb21.com/assets/sitedocs/Terms\\_and\\_Conditions\\_WB21\\_02\\_16.pdf](http://www.wb21.com/assets/sitedocs/Terms_and_Conditions_WB21_02_16.pdf).

[DE]). This can be done either through online verification (IDnow<sup>124</sup>) of the identity or locally at postal offices in Germany. From the bank accounts the customers can transfer money to the term deposits. The FinTech companies provide an online environment in which the users can manage their deposits in German or English. They further point to the existence of the Deposit Guarantee Schemes in the EU, which guarantee that the first €100,000 held with any of the partner banks is guaranteed through the deposit guarantee schemes in the destination country. In some destination countries the interest on savings is taxed (source taxation) or a tax identification number is required. Where the savings are taxed the arrangements under the double taxation treaties can be used to retain part of the tax. The platforms ease dealing with the formalities by providing the required forms and dealing with the tax authorities in the destination countries. Despite these facilities the platforms indicate that the accounts for which the tax needs to be retained are considerably less popular.

Besides the groups mentioned above, there are also current and savings accounts that are sold domestically, but become cross-border at the moment that the account holder moves abroad and does not transfer his/her funds.<sup>125</sup> These legacy accounts are not sold cross-border and therefore are not considered in this analysis. In addition, there are also legacy accounts with banks in countries that have strong bank secrecy laws. With the enhanced automatic information-sharing, the opening of accounts to hide non-declared income and savings in member states with strong bank secrecy laws is currently being reduced through the implementation of the various EU Directives on administrative cooperation and savings. There will, nevertheless, still be possibilities to open current and savings accounts to hide money from the tax authorities, particularly in countries that have not adopted and implemented the OECD's latest standard for automatic exchange of information for tax purposes or similar arrangements. The accounts offered to European citizens from these non-cooperative countries that are not actively sharing financial information are beyond the scope of this study.

### 3.1.2 Type of consumers

*A priori*, cross-border current and savings accounts can involve any kind of consumers. In practice, however, most people with a current account abroad have a particular need for an account abroad, because they, for example, work, study or stay for a longer period in the country. The pressing need to have a current account has been reduced for some since the introduction of the Single Euro Payment Area (SEPA), which makes cross-border transactions easier and cheaper. In turn, the creation of the FinTech-initiated products discussed above is increasing the number of active cross-border consumers who don't necessarily have a pressing need for a foreign account.

Among the sample countries, Luxembourg has the largest share of cross-border workers as well as cross-border current and savings accounts. Based on more recent data from 2015, the commuters represented 44% of the working population in Luxembourg.<sup>126</sup> On a larger scale, Luxembourg was the country of destination for 17%

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<sup>124</sup> For additional information, see [www.idnow.eu/](http://www.idnow.eu/).

<sup>125</sup> HSBC (UK), for example, offers to relocate the current account of its clients in the UK to an account in any of the 37 countries in which it operates around the world. A clean credit history is also a prerequisite in order to apply. Foreigners who already are HSBC clients can also set up an account in the UK by contacting their branch.

<sup>126</sup> STATEC (2015), "La situation économique au Luxembourg - Évolution récente et perspectives", Note de conjoncture N°2/2015 ([www.statistiques.public.lu/catalogue-publications/note-conjoncture/2015/PDF-NDC-02-15.pdf](http://www.statistiques.public.lu/catalogue-publications/note-conjoncture/2015/PDF-NDC-02-15.pdf)).

of all EU-15 commuters, in the EEA only Switzerland is receiving more commuters from its neighbouring countries.<sup>127</sup> There was and to some extent still is a need for the commuters to Luxembourg to open an account in the country, since most employers used to pay wages only to Luxembourg accounts as well as that it is easier to obtain a credit card or loans. Most of the people who work in Luxembourg and live in France (Lorraine), Belgium (Wallonia) and Germany (Saarland plus Rhineland-Palatinate) hold a current account in Luxembourg.

The expatriate community is another group that is familiar with managing accounts in other EU member states. Luxembourg is also a member state where many different nationalities reside and where there is an active expatriate community as in other major internationally-oriented EU cities such as Brussels, London and Paris. Expats have several motivations such as being allowed to hold funds in different currencies, reduce payment costs and simplifying the process of obtaining a loan.

Another particular group of consumers interested in holding cross-border current and savings accounts are people living closer to the border of another member state. Often there are consumption patterns that stimulate these residents to consider opening a current account in the other Member States (e.g. paying for gasoline, grocery shopping or eating out).

The group of customers without ties to the other Member State that is obtaining a cross-border current- and/or savings account seems to be growing rapidly but still only represents a fraction of the market. Not all of the FinTech companies provide figures on the number of customers they serve and the figures that are provided are in most cases are not audited and thus potentially inflated to serve business interests. Number26, which launched its current account service in January 2015, attracted 160,000 customers up to March 2016 in the eight EU countries in which it is active. In the first three months alone it attracted 60,000 new customers.<sup>128</sup> WB21, which offers services in 180 countries, attracted in March 2016 its 250,000<sup>th</sup> customer, just ten weeks after its launch. About 200,000 of these customers are private persons, of which 24% are from Europe. WB21 indicated that it was experiencing growth of about 33% per month in March 2016.<sup>129</sup> Moreover, Raisin, which expanded its service area from Germany to almost the entire EU at the beginning of April 2016, had by then already 40,000 customers. Their growth is nevertheless still limited compared to the multinational traditional banks that are successfully adopting innovation and digitalisation strategies. The ING Group (NL) alone attracted in 2015, for example, 1.4 million new customers bringing the total number of retail customers to 34.4 million customers.<sup>130</sup> ING attracts new customers primarily in countries where it is active with its digital business model targeted at keeping fees low as well as products simple and easy to use for customers.

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<sup>127</sup> Christiane Löh (2011), "Qui sont les travailleurs frontaliers de la Grande Région? Caractéristiques et déterminants de la mobilité professionnelle" ([www.grande-region.lu/eportal/pages/HomeTemplate.aspx?view=template&id=HTML\\_PUBLICATIONS](http://www.grande-region.lu/eportal/pages/HomeTemplate.aspx?view=template&id=HTML_PUBLICATIONS)).

<sup>128</sup> Business Insider (2016), "App-only bank Number26 doubled customers in 5 months — its CEO says he's building a bank like 'Uber or Spotify'" (<http://uk.businessinsider.com/interview-number26-valentin-stalf-2016-04>).

<sup>129</sup> WB21 (2016), "WB21 exceeds 250,000 customers" ([www.wb21.com/WBPressRelease17.03.16/](http://www.wb21.com/WBPressRelease17.03.16/)).

<sup>130</sup> ING Group (2016), "ING 2015 underlying net profit EUR 4,219 million; FY 2015 dividend at EUR 0.65 per ordinary share" ([www.ing.com/Newsroom/All-news/Press-releases/ING-2015-underlying-net-profit-EUR-4219-million-FY-2015-dividend-at-EUR-0.65-per-ordinary-share.htm](http://www.ing.com/Newsroom/All-news/Press-releases/ING-2015-underlying-net-profit-EUR-4219-million-FY-2015-dividend-at-EUR-0.65-per-ordinary-share.htm)).

For new customers the providers of the current and savings accounts primarily depend on switchers from other banks. It seems, however, difficult to motivate people to switch. Based on a consumer survey among Dutch current account holders commissioned by the domestic competition authority in 2014<sup>131</sup>, the main reason for consumers to switch current accounts is the performance of their own existing bank (e.g. financial stability [58% indicates it being one of the top three motivations], too many errors [46%], deteriorating service [44%], too expensive [34%], negative news [19%], closing of branch nearby [10%]), while portability of the account number (17%), temporary forwarding of transactions (4%) as well as possibility to compare accounts (8%) are considered substantially less important. Moreover, about a third would switch if they got a discount of up to € 50 per year, while another third requires a higher gift and a third indicates their intention never to switch. In the Netherlands, where the fees are among the lowest in Europe, this would mean that the new entrants would have to pay the consumers an inducement in order to attract substantial market shares. There seems more potential in countries with higher bank fees (e.g. Italy, Spain, France, Austria, and Latvia)<sup>132</sup>. Having said that, the banks are unlikely to give the market share away easily. The major Dutch banks announced, for instance, in March 2016 that they would lower their fees substantially for their most used current account packages during the course of this year. ABN AMRO, for instance, lowered the fee on the payment package including a current account from € 39 to € 16.80 per year.<sup>133</sup> The prices of current accounts in the Netherlands are among the lowest in the EU. In the UK, where the prices are average but skewed towards people with overdrafts, a large majority of consumers (88%) recently indicated in an online survey commissioned by a large electronic payments provider that they do not intend to switch their bank account in 2016.<sup>134</sup>

Another complication is that most consumers have their main savings account at the same bank as their current account. Looking again to the Netherlands, for which data is available, 72% of the consumers that have a savings account, hold most of their savings at the bank where they have their savings account. Although only 29% indicate that it is useful to arrange all financial affairs at one bank as one of their top three motivations.<sup>135</sup> New entrants that offer only a current account as a payment institution seem thus at a disadvantage.

Turning to savings accounts, the switching rates are low but considerably higher than for current accounts. In fact, in the current account survey 3% indicated that they had switched current account in the 12 months preceding the survey, while 21% indicated that they had changed savings account in a similar study on savings accounts.

There are also motivations for non-savers to stay with their current provider. Based on another consumer survey among Dutch holders commissioned by the domestic competition authority among savers most of them indicated that they have never considered switching (73%). This is also reflected in the answers when they are asked

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<sup>131</sup> ACM (2014), Consumer survey on personal current accounts (<http://acm.nl/en/download/publication/%3Fid%3D13259>).

<sup>132</sup> Bureau van Dijk & CEPS (2009), "Data collection for prices of current accounts provided to consumers" ([http://ec.europa.eu/danmark/documents/alle\\_emner/okonomisk/0906922\\_bank-rapport\\_en.pdf](http://ec.europa.eu/danmark/documents/alle_emner/okonomisk/0906922_bank-rapport_en.pdf)).

<sup>133</sup> NOS (2016), "ABN Amro verlaagt kosten goedkoopste betaalpakket" (<http://nos.nl/artikel/2091999-abn-amro-verlaagt-kosten-goedkoopste-betaalpakket.html>).

<sup>134</sup> YouGov and ACI Worldwide (2015), ([www.aciworldwide.com/news-and-events/press-releases/digital-disruption-in-uk-banking-sector-is-still-moving-at-slow-pace.aspx](http://www.aciworldwide.com/news-and-events/press-releases/digital-disruption-in-uk-banking-sector-is-still-moving-at-slow-pace.aspx)).

<sup>135</sup> ACM (2014), "Consumer survey on personal current accounts" (<http://acm.nl/en/download/publication/%3Fid%3D13259>).

for their motivations to stick with their current savings account. Most answer that they do not see the need to change (34%) or sufficient benefit from it (14%), would like to have all financial affairs with a single bank (14%), or are satisfied with their current bank (12%). The high interest paid by the bank is only a motivation for 2%. A deterioration of the performance of their current bank in a broad sense would seem to be the most important motivation to switch (e.g. financial stability bank [53% choose it as one of the top three motivations], deteriorating service [44%], negative news [35%], when the interest rate drops below other that of other banks [35%], closing of branch nearby [10%]) the possibility to compare accounts (14%) is less important as is whether the new provider offers all the required financial services (9%) or is just offering a current account in addition to the savings account (4%).

On the other hand, the switchers indicate that the interest paid on the savings account forms the main motivation to open a new savings account. 44% indicated that it was the main reason to switch, while 58% of the switchers indicated that it was the one of the top three reasons. The diversification of savings (for 24% among the top three motivations) and easy access through internet and mobile (20%) are other important motivations. The main selection criteria for switchers are, besides the interest rate (75%), whether money can be swiftly transferred to a current account (57%), covered by the DGS (50%) and good service (31%). Both the switchers and non-switchers prefer large Dutch banks over small Dutch banks. Although the consumer surveys only cover the Netherlands, they might be representative of a large part of Europe as was confirmed in the several of the interviews and focus groups on banking. In the interviews one of the providers of cross-border savings accounts in several European countries suggested that the interest rate is the main motivation for selecting a certain savings account on their platform. However, the attractiveness of the higher interest rate in other countries can be partially offset by potential currency risks and the administrative burden of claiming tax back. The later problem can currently only be partially be reduced by the cross-border providers of savings accounts.

### **3.1.3 Conclusion**

Cross-border activities in current and savings accounts remain scarce and relatively concentrated. The main cross-border activities are relevant to very specific types of consumers like commuters, expats and other people living abroad for longer periods. The traditional banking groups primarily target these customer groups.

In the past couple of years new entrants have launched products (in several countries or across the entire EEA) to offer current accounts and access to savings accounts, cross-border, for all residents. These new providers, in particular FinTech companies, provide their services digitally and they primarily try (initially) to acquire consumers in larger countries with high bank fees and/or low interest on savings. The consumers in these countries are also more likely to purchase these products.

The traditional banks in these markets, however, are likely to respond to entrance of these companies and other new entrants. The most fearful competition for the traditional banks in these countries currently still comes from traditional banks from other Member States who challenge them abroad with digital banks established through branches and subsidiaries. The traditional banks are responding with the adoption of digital strategies and the reduction of fees. Although the banks and FinTech companies have already attracted millions of new consumers in other countries, it will nevertheless be a challenge to attract vast market shares with most consumers not considering switching to either a domestic or a foreign bank.

## 3.2 Impact of digitalisation on cross-border activity

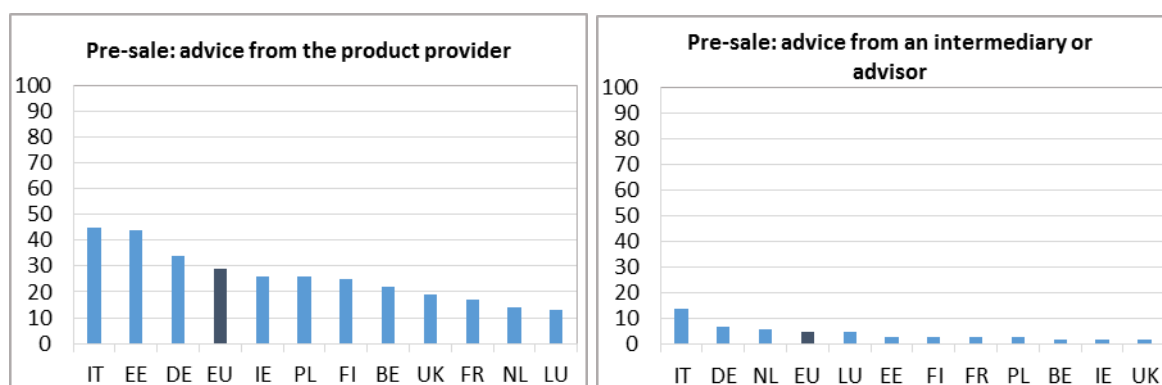
The main distribution channels for current- and savings accounts are still direct sales. Most traditional providers, such as banks, still rely on their own websites to stimulate interest, encouraging consumers to contact a branch (advisor) and meeting the consumer to start the account-opening procedures. However, several banks and new entrants now offer the possibility to open an account completely, or almost completely, online. In particular, direct banks do not have offices where consumers can buy their products, they sell their products online. This does not necessarily mean that there are no physical elements. Some of the banks require or give consumers the option to identify themselves at a post office, sign the contract on paper and send it back by post.

Digitalisation makes it possible to offer banking services from a distance and potentially also cross-border. This, however, does not automatically mean that the products will also be provided cross-border and demanded on a large scale. For example, the survey of the Dutch domestic competition authority showed that small and large Dutch bank are preferred over foreign banks. A lot of both the switchers and non-switchers indicate that they would never switch to a foreign bank, 53% and 61% respectively, while others request a substantial interest rate difference.<sup>136</sup>

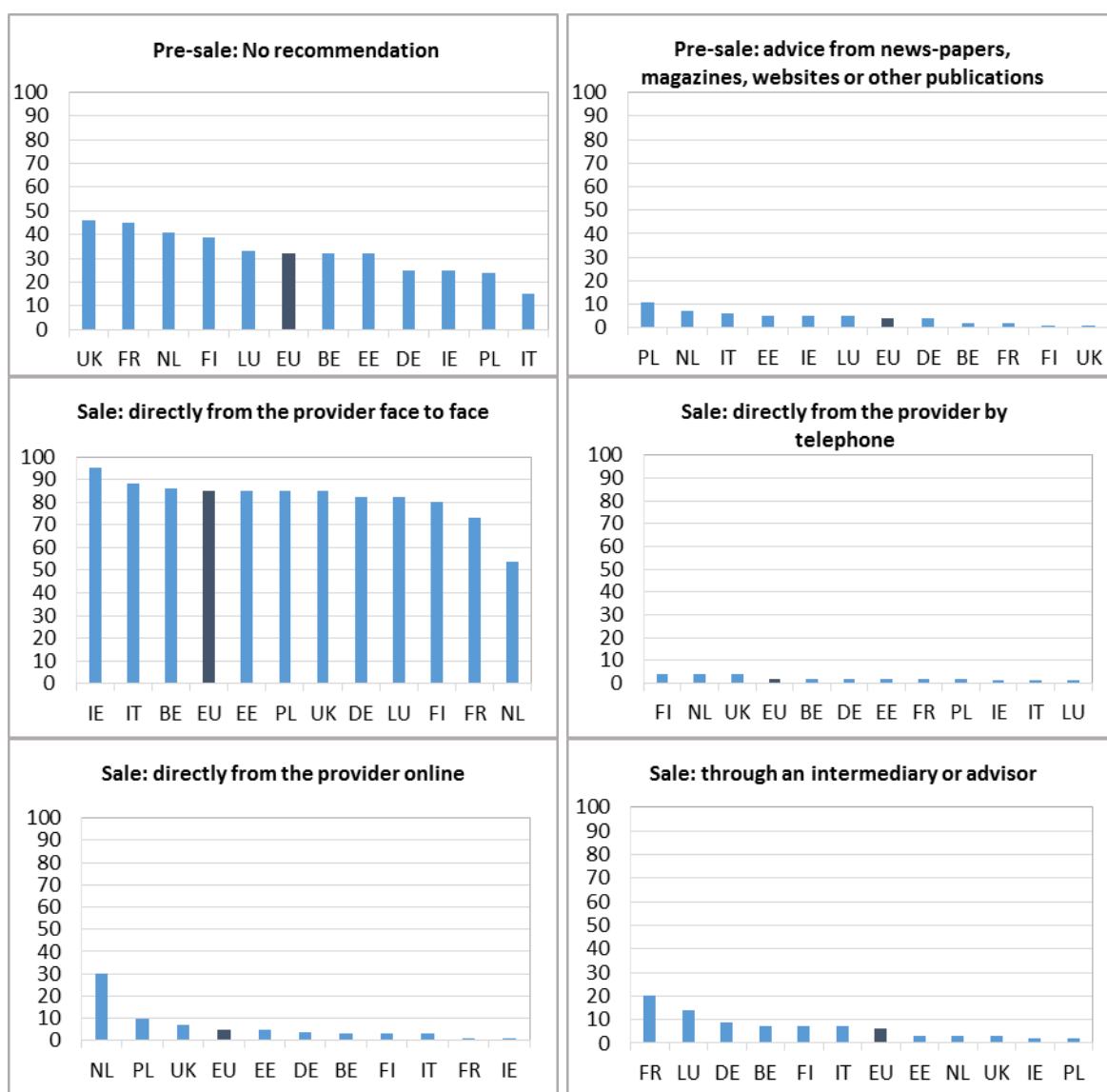
### 3.2.1 (Changes in) providers' behaviour

Digitalisation has already changed the pre-sales phase significantly and is now influencing the sales phase. Another significant change has occurred in the post-sale phase with the possibility to manage current- and savings accounts without needing to visit an office. However, differences between Member States do exist and data from a Eurobarometer survey (2011) illustrates this for current accounts.

Figure 3.4 Distribution channels used for purchase of current accounts (% , 2011)



<sup>136</sup> ACM (2014), "Consumer survey on personal savings accounts" ([www.acm.nl/en/download/publication/?id=13260](http://www.acm.nl/en/download/publication/?id=13260)).



Note: The data for Luxembourg was not available for online sales directly from the provider.  
Source: Eurobarometer (2011).

## **Pre-sales**

Overall there is an increased use of websites and mobile applications to inform consumers. The accounts are still in the basic service offer of branches but there is much more attention being paid to fully digital channels. Almost one in two of the surveyed consumers from Italy and Estonia asks advice from the providers, in Germany this represents one in three. In Ireland, Poland and Finland about one in four consumers asks the provider for more information. Consumers from the UK, France, the Netherlands and Luxembourg ask less often for additional information from the provider on the current account before actually buying one. Already in many different Member States, the opening of current- and savings accounts can be done fully online. Sometimes providers switch to a different brand while the back office is provided by a traditional branch (e.g. Hello bank! from BNP Paribas Fortis).

Consumers from Italy, Germany and the Netherlands rely relatively more often on intermediaries for advice than the EU average. Luxembourg is close to this average, while the other Member States revert less often to intermediaries for advice. The remaining data on the pre-sales phase shows that one in three EU consumers does not look for any recommendation before purchasing a current account. Consumers from the UK, France, the Netherlands, Finland and Luxembourg are among the customers who most often do not look for any additional information at all. Italian consumers appear to be the most cautious when buying a current account, more than four out of five looked for more information.

Looking at the developments in the pre-sales phase, account providers are digitalising an increasing part of their distribution channels. Although corporate websites, comparison tools (e.g. robo-advice) and apps are becoming more important, offices may still play a role in the distribution process. So offices will be re-oriented towards sales situations where there is a need for a more personal approach, such as, for example, for investment advice, buying a house or private banking.

The well-established and new providers of current- and savings accounts alike have been investing a lot in the creation of their digital platforms and applications. The main point of entry for new consumers is still the website. On average, about one in four EU-consumers looks at websites and other media for advice on current accounts. Consumers from Member States like Poland, the Netherlands, Italy, Estonia and Luxembourg are more active in their information search through these media. Newspapers, magazines and websites are barely consulted at all by consumers in Belgium, France, Finland and the UK for information on current accounts. Italian and Dutch consumers use these media more to inform themselves.

## **Sales**

Regarding the actual sale of current accounts, on average more than four in five consumers purchase current accounts directly face to face from the provider. Irish consumers are in particular attached to the personal channel while French and (in particular) Dutch consumers are substantially less interested in this distribution channel. They purchase current accounts through intermediaries/advisors and online for the French and Dutch respectively. Sales by telephone are only marginal. In addition, only 2% of current accounts are sold by telephone. Consumers from Finland, the Netherlands and the UK purchase a current account slightly more often over the phone. Sale through an advisor or intermediaries was at the time of the Eurobarometer used for a minority of savings accounts, but was still more significant than phone and online sales. In particular, French, Luxembourg and German consumers purchased accounts through advisors and intermediaries, while consumers

from Estonia, the Netherlands, the UK, Ireland and Poland barely use the personal distribution channel.

Sales channels are, however, changing through digitalisation. The providers of current- and savings accounts either opt for a full digital strategy or a hybrid strategy. The new providers are fully digital whilst the established providers opt for the hybrid approach as they have lower costs, related to their network of retail branches. The providers also need to consider new possible tools developed by other suppliers (e.g. know-your-customer analytics, webcam identification software for distance account opening). The actual sales phase can be fully digital, as demonstrated by examples from established and new providers of current- and savings accounts. The established players usually create dedicated distribution channels for new, digital-only, customers. These new channels allow the traditional brands to benefit from incremental innovations and leverage on their existing technological platform and back office processes. Most of the new providers go fully digital, since there are digital alternatives or solutions available for the activities that were previously physical (e.g. on-boarding). Moreover, the share of consumers that has access to smartphones and broadband internet has increased significantly. In addition, the consumers have become more comfortable in performing their banking affairs online. It is, however, likely to take some time until the fully digital sales becomes mainstream.

Traditionally one of the main issues for opening a current account has been the difficulty involved in switching accounts. This was, in the past, primarily addressed through self-regulation at Member State level, but these solutions were not always very practical, or they were not familiar to customers. Digitalisation offers new possibilities that can ease account switching, making it a procedure that takes a couple of minutes. One of the providers of such a switching service is FinReach, which already offers their services to several banks in Germany, including the largest commercial banks, Commerzbank and Deutsche Bank. These banks offer the service to their new customers to make the transition to the new account less cumbersome. FinReach analyse the old account to identify all the contacts and standing orders, to provide the customer with the possibility of re-installing transactions and informing contacts automatically of the change of account. The service is currently only available for German banks, but could also be offered for cross-border switches. The provider of the service indicated that the service could be developed for cross-border use, but there seems currently to be no demand from customers for this.

Banks are also hesitant to provide accounts cross-border because of compliance issues. Data provided by the customer needs to be checked. Often this information required in a physical format, adding more hassle for the consumer. The availability of structured and unstructured data could help with the preparation for (automation of) checking the customer and his identify for opening accounts, to meet compliance requirements and facilitate risk profiling. Various solutions already exist in this respect and they were not developed by the established providers (e.g. KYC<sup>137</sup> or iDETECT<sup>138</sup> just to name two). The potential benefits for the cross-border development of these solutions and their clear complementarity with the overall digitalisation of the pre-sale process, makes them another group of emerging suppliers for the new and established providers of account services. Digitalisation has therefore contributed to significantly reducing this barrier to cross-border current- and savings accounts. Traditional providers are gradually embracing the newly available digital solutions whilst the new entrants have already started using these solutions.

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<sup>137</sup> For additional information, see [www.kyc3.com/start/index.html](http://www.kyc3.com/start/index.html).

<sup>138</sup> For additional information, see [www.idetect-soft.eu/](http://www.idetect-soft.eu/).

## **Post-sales**

Consumers expect quick and easy management of their accounts as well as the ability to make payments and check their balances wherever they are. There is no need to look up a physical document to check the transactions. The account statements are now also available in various formats so that they can also be used for personal financial management programmes. Many providers encourage consumers not to opt for paper documents but rather to use the digital format, which also reduces the printing and postage costs for bank accounts in general and for cross-border accounts specifically.

There are no significant differences regarding the post-sale of current- and savings accounts in a national or cross-border perspective. Established providers such as the banks have almost all put a dedicated web banking platform at the disposal of their customers. There has been a long evolution of 'internet banking' and various forms of digitising the different parts of the sale have evolved over the past three decades.<sup>139</sup> The largest share of the consumers has been empowered to manage their accounts and transactions online. The banks could use the transaction data from these accounts to attempt some profiling for cross-selling. However the old legacy systems and silos of data repositories linked to business lines do not always make the reconciliation and centralisation of this data efficient.

### **3.2.2 (Changes in) consumers' behaviour**

The physical barrier to cross-border account opening has been significantly reduced through digitalisation. Consumers can now access all the information they need on these financial products without the immediate need to visit a branch or an intermediary. The distribution channels' relative importance has evolved towards more digital customer engagement and on-boarding. However the customer preference for more personal channels in most Member States still inhibits a complete elimination of this barrier.

## **Pre-sales**

Digitalisation makes it easier to identify the most suitable financial products. The consumers can use comparison websites and brokers, like those offered by cross-border savings account broker Savedo (DE) to identify the most attractive offer. The current accounts are in most cases sold in combination with other services (e.g. online banking, payment services, debit and/or credit cards). These banking services are either not charged at all, charged separately with a fixed price for the account plus variable charges depending on the number of transactions, or sold in packages with a single fixed charge for all or almost all the banking services.<sup>140</sup> Comparison of the packages is relatively easy, one can compare the prices of the packages that include the required services. The comparison of the other current account products with separate fees for other services is considerably more complex. Hence, it is impossible to estimate the exact usage of the customer in advance. Most comparison websites just provide an overview of the costs of the various services at the different banks

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<sup>139</sup> For additional information, see [www.thefinancialbrand.com/25380/yodlee-history-of-internet-banking/](http://www.thefinancialbrand.com/25380/yodlee-history-of-internet-banking/).

<sup>140</sup> Bureau van Dijk & CEPS (2009), "Data collection for prices of current accounts provided to consumers" ([http://ec.europa.eu/danmark/documents/alle\\_emner/okonomisk/0906922\\_bank-rapport\\_en.pdf](http://ec.europa.eu/danmark/documents/alle_emner/okonomisk/0906922_bank-rapport_en.pdf)).

(e.g. Tarifs Bancaires [FR])<sup>141</sup>, ask the consumers to make an estimate of the number of transactions they perform (e.g. ConfrontaConti [IT])<sup>142</sup> or use predefined profiles to determine transaction numbers (e.g. TestAchats.be [BE]).<sup>143</sup> In the future there might also be comparison websites that estimate the expected transactions based on the usage of peers (i.e. crowd sourcing) or calculate the number of transactions based on historic transactions, which is already possible seeing the technologies already used for various online switching tools. In the case that cross-border current accounts would also be included in the comparison, these might in the more sophisticated comparisons in some countries not appear in the results. Hence, the new cross-border offerings of current accounts do not in many cases provide all the (payment) services that are commonly used and will be required by consumers (e.g. paper based payments, local payment services, etc.).

The comparison of savings accounts is traditionally more straightforward than for current accounts. The savings and time-deposits are in generally standardized and thus is the interest rate the main indicator to compare. With the inclusion of the new cross-border offerings, comparing savings accounts becomes more complicated. The savings accounts are covered by different deposit guarantee schemes and potentially also other tax rules and currencies. Moreover, comparison websites for both current and savings accounts can be complimented by indicators on the quality of the service. Digitalisation allows the comparison websites that also sell the products like Independer (NL) to ask consumers who bought the financial products through their platform to give feedback on whether the provider acts sustainably.<sup>144</sup>

## **Sales**

The actual sales of current and savings accounts can be realized through a fully digitalised process where the use of physical face-to-face identification is replaced by online identification. The consumer can therefore easily open new accounts from a distance and thus potentially also cross-border. However the cross-border accounts are usually limited to offers from the new providers.

The traditional banks generally do not offer this possibility, unless they have a specific focus on niche markets such as expats and commuters. On the other hand there are new providers that facilitate the creation of new current accounts when the customer has been identified. In most other cases, the providers will ask for identification for every new account opened. The facilitation of this new account opening is actually very beneficial for consumers, it saves time and effort. For the providers, this once-only identification also allows economies of scale and a reduction in the amount of time needed for meeting compliance requirements.

Established customer preferences for more personal distribution channels are a barrier to cross-border developments. The availability of digital channels to conclude the sale of a current account are often still through offices. This is congruent with the general

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<sup>141</sup> For additional information, see [www.tarifs-bancaires.gouv.fr/](http://www.tarifs-bancaires.gouv.fr/).

<sup>142</sup> For additional information, see [www.confrontaconti.it/conti-correnti/confronto-preventivi-conti-correnti.aspx](http://www.confrontaconti.it/conti-correnti/confronto-preventivi-conti-correnti.aspx).

<sup>143</sup> Bureau van Dijk (2012), "Market study of the current state of play in Member States regarding initiatives in bank fee transparency and comparability in personal current bank accounts" ([http://ec.europa.eu/consumers/financial\\_services/reference\\_studies\\_documents/docs/20120119\\_market\\_study\\_en.pdf](http://ec.europa.eu/consumers/financial_services/reference_studies_documents/docs/20120119_market_study_en.pdf)).

<sup>144</sup> See, for example, the Eerlijke bankwijzer website: <http://eerlijkegeldwijzer.nl/bankwijzer/>.

behaviour from consumers, i.e. that they do not often switch from one financial provider to the other. This customer loyalty (or inertia) is an important barrier to the cross-border sale of current- and savings accounts.

Within the context of current accounts and savings accounts, the overall digitalisation of these financial products has made them a lot easier sell cross-border than before. As such, the physical barriers to cross-border service developments for current- and savings accounts have been significantly reduced. Consumers are no longer required to go to a bank or postal office to open accounts, whilst the providers have fully digitalised the accounts in their web banking platform and its mobile solutions.

### **Post-sales**

The increase in collection and usage of data for a growing group of consumers makes security and privacy protection more important. Scepticism is growing because of security breaches, over-personal marketing, personal information usage of governments, and the growing awareness of the impact of big data.<sup>145</sup> Several of the interviewees expressed, for example, that the need to provide a lot of personal information is one of the main reasons for quitting the registration process. Most of the participants (73%), in an online survey by SAS<sup>146</sup> of 2,900 consumers in six countries around the world, indicated that they view the usage of personalised data without permission as a violation of their privacy. Consumers are willing to share data if it is needed for the service, delivers a benefit (49%), is frequently used (39%) or an appealing product/service (39%), and secure (63%) and discretely used (38%). Overall, almost half of the consumers (45%) are likely and another quarter (28%) are very likely to share data with banks. The rates vary slightly across countries primarily depending on the general trust in the banking system.<sup>147</sup> Almost all of the consumers would be willing to share their name and email (94%), while less than a fifth are willing to share credit card and financial data (18%). Microsoft<sup>148</sup> did a similar kind of survey among 16,500 consumers in 13 countries across the globe, in which they found that consumers are willing to share personal data in exchange for certain benefits. Most consumers are willing to exchange personal data for cash (64%), while almost half of the consumers are likely to provide data in exchange for significant discounts (49%) and around a quarter of the consumers are willing to share data to develop new products (26%) or improve processes improve products (29%).

### **3.2.3 Remaining barriers**

Although many barriers such as on-boarding can be overcome through digitalisation, there are still some barriers remaining to cross-border sales of current and savings accounts. A barrier to cross-border current accounts is the need for basic product information. Consumers might be interested in cross-border accounts but more details

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<sup>145</sup> EY (2013), "The Big Data Backlash" ([www.ey.com/Publication/vwLUAssets/EY-The-Big-Data-Backlash/\\$FILE/EY-The-Big-Data-Backlash.pdf](http://www.ey.com/Publication/vwLUAssets/EY-The-Big-Data-Backlash/$FILE/EY-The-Big-Data-Backlash.pdf)).

<sup>146</sup> SAS (2015), "Finding the Right Balance Between Personalization and Privacy" ([www.sas.com/content/dam/SAS/en\\_us/doc/research1/balance-between-personalization-privacy-107399.pdf](http://www.sas.com/content/dam/SAS/en_us/doc/research1/balance-between-personalization-privacy-107399.pdf)).

<sup>147</sup> EY (2014), "Global Consumer Banking Survey 2014" ([www.ey.com/Publication/vwLUAssets/EY\\_-\\_Global\\_Consumer\\_Banking\\_Survey\\_2014/\\$FILE/EY-Global-Consumer-Banking-Survey-2014.pdf](http://www.ey.com/Publication/vwLUAssets/EY_-_Global_Consumer_Banking_Survey_2014/$FILE/EY-Global-Consumer-Banking-Survey-2014.pdf)).

<sup>148</sup> Microsoft (2015), "Consumer Data Value Exchange Study" (<http://news.microsoft.com/apac/2015/06/03/microsoft-research-reveals-understanding-gap-in-the-brand-consumer-data-exchange/#sm.0000494vkt7igewivzy1zx6l7jh9c>).

are needed on their pricing. These can, for example, be provided through comparison websites. The inclusion of cross-border offerings would be an important step to help raise awareness about the possible cross-border offerings that consumers from other Member States have access to, basic product information, and how to open an account.

Current accounts are often sold in combination with other payment products. Card payments and transfers are largely harmonised across the European Union. But there are also some country-specific payment methods (e.g. for small and internet payments) and bank authentications tools are increasingly used for identification on other platforms. In, for example, the Netherlands and Belgium the government allows citizen to logon to government portals with their bank identifiers, and there are plans to expand this also to other (commercial) platforms. It is possible for providers of cross-border current accounts to participate in all these payment systems. It will, however, make their operations more complex and expensive.

In the aftermath of the financial crisis the Deposit Guarantee Schemes (DGS) have been harmonised at the European level.<sup>149</sup> But the deposit guarantee schemes are still organised at Member State level. In fact, at the moment that a bank fails, the customer depends on a combination of the losses of the bank, creditor position and available funds to the DGS, for whether it will receive its balances back. The guarantor of the DGS is the ultimate safeguard for the customer, which means that the financial strength of the national government in the worst cases determines whether the deposit insurance can meet its promises. The European Commission proposed, in November 2015, a euro-area wide deposit insurance scheme (EDIS)<sup>150</sup>, which would pool the deposit guarantee funds over time. This would resolve the barrier at a Euro-area level, but not level the playing field with the non-euro area banks.

Another small barrier is the fact that the IBAN numbers include identifiers for both the country and the bank. This may, on the one hand, make it less appealing to some people to open a cross-border account because it visibly comes from another country, while on the other it makes the account number non-transferable. This barrier can, to a large extent, be overcome through the switching tools discussed above and through tokenisation, which would allow the creation of multiple 'tokens' or identifiers for a single account (e.g. telephone number, social network profile, etc.).

Finally, the cross-border sales of financial products makes it more difficult for consumers to enforce their rights. Since the providers are not located in the home country of the consumer, they may have to revert to a regulatory body in another country in case the provider is not voluntarily subject to the regulatory body. The cooperation between the regulatory bodies in the area of consumer protection is currently, however, insufficiently developed to guarantee a smooth functioning.<sup>151</sup>

### **3.2.4 Conclusion**

Digitalisation enhances the potential for the cross-border distribution of current- and savings accounts substantially. The FinTech companies show that it is already possible

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<sup>149</sup> For additional information, see [eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32014L0049](http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32014L0049).

<sup>150</sup> For additional information, see [ec.europa.eu/finance/general-policy/banking-union/european-deposit-insurance-scheme/index\\_en.htm](http://ec.europa.eu/finance/general-policy/banking-union/european-deposit-insurance-scheme/index_en.htm).

<sup>151</sup> For additional information, see [ec.europa.eu/finance/general-policy/docs/committees/140808-esfs-review\\_en.pdf](http://ec.europa.eu/finance/general-policy/docs/committees/140808-esfs-review_en.pdf).

to offer both current and savings accounts cross-border for a large group of consumers in multiple Member States.

The services are, however, currently not fully identical to the products offered domestically. Hence, the current accounts are, for example, not compatible with the national payment schemes and savings accounts are covered by different deposit guarantee schemes. Moreover, for both types of accounts it is more difficult to hold the provider accountable, if the service is not delivered as reasonably could be expected.

Moreover the value of cross-border transactions is still relatively low. On the one hand, this could be explained through the limited awareness of the product offerings across countries. This is preserved due to the exclusion of cross-border accounts from the existing general comparison websites as well as the fact that many current providers of current and savings accounts do not offer these financial products directly cross-border but through local branches and subsidiaries instead.

### **3.3 Scenarios for cross-border activity**

#### **3.3.1 Scenario 1: Business as usual**

##### **Description**

The first 'business as usual' scenario assumes that cross-border sales of current- and savings accounts will continue to develop, prolonging the current trend. In fact, without fundamental changes in the behaviour of providers and consumers, cross-border sales will remain limited to special groups (e.g. commuters, foreign students, etc.) and FinTech companies offering cross-border current accounts or access to savings accounts. The FinTech companies are likely to continue to show high growth figures, but will remain a small share of the entire market.

Non-residents economically active in a country have traditionally been an important group, for whom (special) cross-border current- and savings accounts were offered by traditional banks. They are likely to continue to serve this particular group of consumers with tailored products, although the sale of new accounts may decline in the euro-area. In such a way, the introduction of the Single Euro Payments Area (SEPA)<sup>152</sup> in 2014 has reduced the advantage to having an account in other euro-area countries. Although performing cross-border transactions may have become easier, consumers might still want a local current account for, for instance, credit cards and loans.

The FinTech companies that offer accounts are currently still relatively small with (when combined) only a couple of hundreds of thousands of consumers. The combination of consumer inertia, the various complications with the products (e.g. DGS, taxation, etc.) and limited information on cross-border offerings and the difficulties of switching accounts will limit their growth potential. The growth of the FinTech companies will most likely come from the expansion in the European countries with the highest fees on current accounts and with low interest rates on savings. The FinTech companies offering current accounts are, in these markets, likely to face competition from direct banks and may respond with the reduction of the fees. In turn, they may benefit from competition, which might allow them to offer services that

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<sup>152</sup> See [ec.europa.eu/finance/payments/sepa/index\\_en.htm](http://ec.europa.eu/finance/payments/sepa/index_en.htm)

other banks do not. The second payment services directive,<sup>153</sup> for example, allows them to aggregate several accounts from different providers, which traditional providers are less likely to offer because it could infringe upon the usage of their own accounts. The FinTech companies offering access to cross-border savings accounts further face a low interest environment, which reduces the interest rate spread and thus the attractiveness of opening accounts abroad.

## **Opportunities**

The continuation of the current trend means that cross-border activity will increase, but still it concerns a small minority of the current- and savings accounts markets in most Member States. This does, however, not necessarily mean that digitalisation does not have an impact on the convergence of prices in the single market. Hence, the threat from FinTech companies and direct banks that offer most services online entering the market is already likely to change the behaviour of the existing banks. The exact impact of these developments remains to be seen, but there is already evidence from the Netherlands that traditional banks are reducing their fees with new entrants at the gate. The impact of new entrants on the savings account interest rates is likely to be limited as long as expansionary monetary policy keeps the interest rates in the euro-area low. Savings accounts in some non-euro currencies are still paying higher interest rates, but these more risky products are only appealing to the small but growing group of consumers willing to take the exchange risk.

## **Threats**

In the current environment of low interest rates, the net interest income that forms the largest share of retail banks is under pressure.<sup>154</sup> This means that other income, including fee and commission income, are becoming more important. With more competitive markets through new participants entering the markets (e.g. FinTech companies, direct banks, etc.), fee income may come under pressure. This will force banks to cut their costs, which may have some unintended side effects with some services no longer delivered, some consumers not served (digital illiterates), and reductions to the resilience of the banking sector.

There are, however, also other ways as well as cost cutting through which traditional banks can protect their market shares. Hence, banks in various markets have developed their own systems for online payments that charge lower fees to merchants than, for example, PayPal and credit cards, and which use their authentication systems to access the tax, government, and other portals. These systems often deliver benefits for both consumers and providers in the form of easier access and lower fees, while at the same time it becomes more difficult for FinTech companies and others to participate. These will have to connect to these systems at Member State level, and this increases the entry barriers. It would be recommendable to assess to what extent some of these initiatives could be arranged at the European level instead, to reduce the negative side effects.

## **Conditions**

The main conditions for this scenario to occur are that consumers and providers do not change their behaviour and nor do the financial regulations change beyond what has

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<sup>153</sup> See [eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32015L2366](http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32015L2366).

<sup>154</sup> See Ayadi, R., W.P. de Groen, I. Sassi, W. Mathlouthi, H. Rey and O. Aubry (2016), "Banking Business Models Monitor 2015: Europe", International Observatory on Financial Service Cooperatives (IOFSC) publication.

already been adopted. In particular, consumers are currently hesitant to switch accounts and the main providers are choosing to offer accounts outside their home country through branches and subsidiaries located in the host countries.

Language might be a minor issue. In the interviews and focus groups the participants mentioned that the call-centres and translation services widely available in the large European cities allow for example FinTech companies to provide their services in multiple languages from a single location in the EU.

### **Probability**

This scenario has a high probability of occurring in the upcoming five years. Hence, it is unlikely that consumers are changing their attitude towards change and providers their internationalisation strategies. New legislation to change the market from the outside will likely take more time to be designed, adopted and implemented. Moreover, the risk that cross-border sales will drop is limited, given the low current levels.

### **3.3.2 Scenario 2: Expansion in specific pockets**

#### **Description**

Currently the cross-border interest for current- and savings accounts stems from specific niche customer groups such as expatriates, consumers living near the borders, and commuters between Member States. This group is already served by the existing banks, and the traditional necessity for these groups to open accounts has in many EU Member States diminished with the improvement of the cross-border payments through SEPA. Moreover, for transfers in foreign currencies there are already payment solutions that dramatically bring down the costs.

The main way to increase the cross-border sales of current- and savings accounts with limited regulatory action would therefore be to increase the awareness among consumers of the cross-border offerings available. This could potentially, in particular, increase the sales of cross-border accounts to consumers that were already considering switching accounts. The online comparison tools are currently the most-used tool for comparing accounts, and inclusion in these tools could therefore potentially deliver an important contribution. The cross-border offerings are currently, however, not included in the results of comparison websites.

The comparison tools are, at this moment, primarily used for savings accounts that are relatively easy to compare based on interest rates. The comparison of current accounts is currently considerably more difficult, but comparability could improve in the upcoming years. The current account packages often have different compositions and/or the charges are often more complex, with fees for different types of transactions. This is, in particular, the case in the countries with high costs for current accounts. The introduction of the Payment Accounts Directive, which aims to make fees more transparent, and digitalisation, which leads to a shift of payments towards electronic payments,<sup>155</sup> could (together with pressure from new market entrants that introduce products with significantly simpler fee structures) lead to a simplification of the fee structures in the market as a whole and improved comparability of the fees of the traditional providers. In that case, consumers may then also become more tempted to use comparison websites when opening a new account.

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<sup>155</sup> The marginal costs of electronic payments are in general lower than those for traditional paper-based payments.

## **Opportunities**

The opportunities will be similar to those mentioned under the first business-as-usual scenario, but stronger. Hence, cross-border activity is likely to increase more, which is likely to contribute to a stronger convergence of prices in the single market.

## **Threats**

The threats will also reinforce those in the above-mentioned business-as-usual scenario. The banks are likely to have to reduce their cost base in order to stay competitive, which might have some unintended side effects with some services no longer delivered, some consumers left un-served (digital illiterates), and the reduction of the resilience of the banking sector as well as the fact that banks may be more tempted to protect their markets.

The inclusion of cross-border accounts in the comparison tools can make it more difficult to compare the accounts. So the cross-border current account packages do not always include the same services. Moreover, the savings accounts are like the accounts offered through branches covered under different (foreign) deposit guarantee schemes and can be denominated in foreign currencies, which introduces an additional risk in the form of exchange risk.

## **Conditions**

The cross-border accounts should be included in the comparison websites to raise awareness, as described above. At the moment, the cross-border offers are not included in the standard comparison websites. This might change if the cross-border providers expand and it becomes economically interesting in particular for commercial comparison websites to include also the cross-border current- and savings accounts in their results. For public comparison websites, an additional effort may be required. The inclusion of cross-border offers in the comparison results might also take some of the doubt away among consumers over purchasing financial products from foreign providers.

The Payment Accounts Directive (PAD) adopted in 2014<sup>156</sup> aims to enhance the comparability, accessibility and switching of current accounts, but is unlikely to contribute much to inclusion in comparison websites. In the PAD there is the provision that every Member State must ensure that there will be at least one comparison website that offers free of charge unbiased, accurate, simple, sufficient information on a significant part of the market (Article 6). It is up to the member state how to define the detailed requirements. But since cross-border offerings currently are a small minority in most Member States, these do not necessarily need to be included. The directive is still in the transposition period until September 2016, but, for example, the French comparison website that was launched in response does not include cross-border offers. The first review of the PAD, foreseen for 2018, might be a natural moment for a revision if cross-border offers are still not included.

Moreover, in order to make it more attractive for consumers to use comparison tools for both current and savings accounts, the comparability, especially of current accounts, needs to be improved. Hence, the fees will need to become more transparent and simplified. The expectation is that this will occur with a shift to more electronic payments and pressure from new entrants and possibly also with the implementation of the PAD.

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<sup>156</sup> See [eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32014L0092](http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32014L0092).

Although switching tools are not a necessity for switching accounts and enhancing the number of people switching accounts, they can deliver an important contribution to make account change less hazardous. The current tools do not support cross-border switching, but it is likely that this will be developed at the moment that more FinTech companies are offering their services cross-border.

### **Probability**

The probability of this scenario is low in the short-term (up to five years) and medium for the somewhat longer term. Hence, for this scenario to occur, the banks in several Member States will need to change their fee structure and cross-border offers need to be included in the results of comparison websites. This might potentially go voluntarily, but there may also be a need for some governmental pressure. The PAD could need to be amended to ensure the inclusion of cross-border offers in the results. The amendment of the directive will, however, easily take a couple of years, which means that the probability in the medium-term (5 to 10 years) increases.

### **3.3.3 Scenario 3: Integrated EU market**

#### **Description**

In order to come to a true single market for current- and savings accounts, significantly more needs to be done. Digitalisation is likely to make a substantial contribution to convergence in fees and the low interest regime to delivering a convergence in interest rates on savings. The contribution to cross-border sales of accounts, however, remains to be seen. The FinTech companies that offer cross-border accounts are rapidly growing in absolute size, but they are likely to remain relatively small for the foreseeable future. The main shift in consumers, so far, is noticeable between banks with a traditional office-based banking model to banks with a direct bank model (i.e. online banking). Many of these direct banks are part of multinational banks, but are not considered cross-border under the definition of this study as long as they operate through branches and subsidiaries. For the creation of a true single market it would be important that these banks also offer their products to all citizen in the European Union and not just in the countries in which they have their headquarters or a branch or subsidiary.

#### **Opportunities**

The opportunities for the consumers are numerous, cheaper products, with a wide variety of providers that can offer truly customer oriented products, thanks to the intelligent use of their data. But most importantly, the differences in fees and interest rates between member states are likely to decrease. The larger market will also create the scale for banks to be able to tailor their products to serve groups with specific needs.

#### **Threats**

The main threat from a true single market comes from the possible systemic risks that it might create. Hence, without borders, the shock absorption of the financial system is likely to be reduced, especially in the event that the financial system consolidates and becomes more concentrated. Moreover, there are also security risks, with cybercrime becoming more attractive. In addition, the creation of a true single market might have unintended consequences, such as that under pressure for margins some

services will no longer be delivered, consumers will not be served (digital illiterates), and the resilience of the banking sector will be reduced.

### **Conditions**

For the creation of a true single market both the remaining barriers (e.g. national payment methods and applications of the account), as well as the barriers that have only partially been removed through digitalisation (e.g. customer inertia, switching, etc.) will have to be addressed. Moreover, in order to let the banks operate without borders, the non-financial (e.g. insolvency, etc.) and tax legislation related to any of their services will have to be harmonised and supervisors will have to allow banks to be exclusively supervised by their home supervisor or SSM.

### **Probability**

The probability of this scenario materialising is low both in the short- and longer-term (more than 10 years), primarily because of the substantial legislative action that is required, in combination with a limited political commitment to remove the remaining barriers to a true single market.

## **4. Consumer and housing loans**

The objective of this chapter is to analyse what the new digital technologies have accomplished so far to overcome the barriers to cross-border sales of consumer loans and housing loans, notably by emphasising the differences between these two types of loans. In that context, definitions and the main differences between consumer loans and housing loans will be first of all provided. Then, in line with the other chapters of the study, the present analysis will place some emphasis on the current and past levels of cross-border activities in consumer and housing loans in Belgium, Estonia, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Poland and the United Kingdom.

Against this background, this chapter will then assess the latest digital developments for both providers and consumers, and how these trends have contributed to overcoming existing barriers to cross-border sales. Much emphasis will be placed on the changes made in the collection and use of data, as well as on the level of digitalisation of the different types of interactions between lenders and consumers. Finally, based on the various analyses conducted, potential scenarios for the foreseeable future will be set out by assessing through which channels digital technologies could help boost further the cross-border sales of housing and consumer loans.

### **Defining housing loans and consumer loans**

This chapter covers consumer loans and housing loans. Consumer loans are defined as loans granted to households for personal consumption of goods and services, including home improvement. Housing loans are credit extended to households for the purpose of investment in housing. This category of loans includes loans secured by residential property (i.e. mortgage loans), which are then used for house purchase, and, where identifiable, other loans for house purchase provided on a personal basis or secured by other types of asset.

### **Barriers to cross-border sales: Complexity and diversity of housing and consumer loans**

As in other sectors, general barriers (such as different languages and local habits of customers) have significantly contributed to the low level of cross-border household loan sales. However, there are other barriers that are more specific to consumer loans and housing loans, and these can also differ significantly between consumer loans and housing loans.

Defining the complexity of the product can follow one of two possible approaches: a process approach or a contractual approach. The process approach takes all phases into account and includes all the resources needed to complete a task in relation to the product. (For instance, the signature by a notary of a certain number of documents might be needed to receive a mortgage.) The contractual approach covers all the terms and conditions of the contract (interest rates, the period of reimbursement, and so on). Sometimes both approaches can be intertwined, as some of the procedures that the consumer and the provider need to follow to complete a task in relation to the product can be stipulated in the contract.

The diversity of the products available in the related markets relates to differentiation in the processes and/or in the terms and conditions of the contract. The level of this diversity in products can depend on two elements: the level of complexity of the

product and the diversity in the motives of consumers. The more a product is complex *per se*, the more potential there is for diversity, as providers can compete on more elements to differentiate themselves from their competitors.

It is also important to highlight that the diversity of products can be boosted by the diversity of the motives of consumers. The motives of consumers on the housing market are relatively limited compared with the motives of those looking for consumer loans. Housing loans fund the purchase of a house and respond to two main motives: occupation (permanent or temporary) or investment. On the other hand, consumer loans respond to a multitude of motives: purchasing a car or a domestic appliance, or funding health expenditures, holidays or home improvement, etc.

The way that many products have been structured can directly result from this motive. For example, the consumer loans market can contain both secured and unsecured products: when the loan does not cover any tangible product, it is generally structured as a personal loan, namely unsecured credit not linked to the purchase of the good and service, with a contractually determined credit amount and repayment period. On the other hand, for the purchase of a car or any other tangible product, the consumer loan can be a secured credit linked to the acquisition of this good where the surety is the good bought. Many housing loans are also structured this way, with the purchased house as the surety.<sup>157</sup>

The diversity of products can be observed within and across countries. In the extreme case where the diversity is solely within countries and the same types of products are easily available all around Europe, the two main barriers to cross-border sales should be in theory the differentiation in languages and the need for direct interactions with a seller. Nevertheless, for both consumer loans and housing loans, differentiation in the processes and conditions of the contract is observed both within and across countries. This diversity is, in itself, a barrier to cross-border sales, as consumers and also providers need to follow a learning process before having a proper knowledge of the foreign products.

Overall, considering the elements dealt with so far, housing loans are more complex products than consumer loans. Admittedly, there are more motives on the consumer loan market for getting a loan (which involves different types of products); nevertheless, the purchase of a housing loan entails more complex processes, and the combination of a relatively high amount borrowed and a long reimbursement period has resulted in increasing sophistication in housing loans, with a vast number of different options in the terms and conditions. This higher complexity contributes to more diversity in the products available across countries, thereby raising the difficulties to engage into cross-border sales.

As regards the diversity across countries in the terms and conditions of housing loans, differentiation can concern interest rates, early repayment schemes etc. Typically, there are two main types of interest rate: a fixed-mortgage rate (FRM) and an adjustable mortgage rate (ARM). As highlighted in the Green Paper published by the European Commission in December 2015,<sup>158</sup> some domestic markets essentially

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<sup>157</sup> Given that housing loans represent the majority of household liabilities, most household loans are secured. For instance, according to the Bank of England, the share of outstanding unsecured household loans in the UK reached on average 15.5% between January 2007 and March 2015 (with a minimum of 14.4% in August 2012 and a maximum of 16.8% in January 2007).

<sup>158</sup> Green Paper on "Retail financial services: better products, more choice, and greater opportunities for consumers and businesses"  
([http://ec.europa.eu/finance/consultations/2015/retail-financial-services/index\\_en.htm](http://ec.europa.eu/finance/consultations/2015/retail-financial-services/index_en.htm)).

provide FRM products (such as in Germany), whereas some others (such as Spain) sell almost exclusively ARM products. Notable differences across countries can also be observed in the way ARM products are designed (periodicity of adjustment, ceiling on the variability of the mortgage, etc.) and the accessibility of early repayment schemes (expensive in Germany but relatively affordable in Belgium). Finally, marked differences have persisted in the schemes for repaying the capital: for instance, providers in the Netherlands, Denmark and the UK have offered a significant share of interest-only loans (with reimbursement of the capital at the end of the reimbursement period), while this product is used by a very small minority of consumers in some other countries (e.g. France).

Regarding processes, the contraction of a housing loan typically requires more procedures and the contribution of a higher number of external stakeholders than for a consumer loan: a notary, an expert for property valuation, land administration, etc. The habits and institutional framework of these types of stakeholder can differ markedly across the EU-28, thereby impeding significantly the possibility of cross-border sales. For instance, during the post-sale phase, the processes related to the claims that lenders have against borrowers (especially in relation to foreclosure) vary noticeably across member states. The recollection phase on a cross-border basis is therefore relatively complex for both secured consumer loans and housing loans. Against that background, one of the common requirements for cross-border housing loans is, for example, that the borrower already owns a property in the country of residence of the lender.

Overall, unsecured consumer loans such as personal loans seem to be the best candidates for a significant number of cross-border businesses. Nevertheless, due to the higher risk involved, the interest rates are most likely higher and less competitive, thereby reducing the attractiveness to many providers of offering these products to non-residents.

## **4.1 Current cross-border activity**

### **Total household loans**

Statistics provided by the ECB reveal that the market share of cross-border sales of household loans (mostly composed of consumer loans and housing loans) in other euro-area countries was very low overall in the sample covered by the study, reaching 0.8% in 2015 (3.1% with the United Kingdom included).<sup>159</sup> Excluding Belgium, Luxembourg and the United Kingdom, these percentages were somewhat similar across countries, as they were all below 1%: 0.8% in the Netherlands, 0.6% in Ireland, 0.5% in Estonia, 0.4% in Germany, 0.4% in France and 0.1% in Poland, Finland and Italy (see Figure 4.1).

The specific case of Belgium (3.7%) might be explained by the fact that similar languages are spoken on the other side of the border and that there are numerous commuters to-and-from surrounding countries. Nevertheless, for the case of Luxembourg (29.8%) and the United Kingdom (8.3%), the relatively high market share, is for the most part due, to the structure of financial centres that have been developed in these two countries (see section 4.1.2 on Expatriates and commuters). As such, in Luxembourg, the share of cross-border sales in housing loans was much

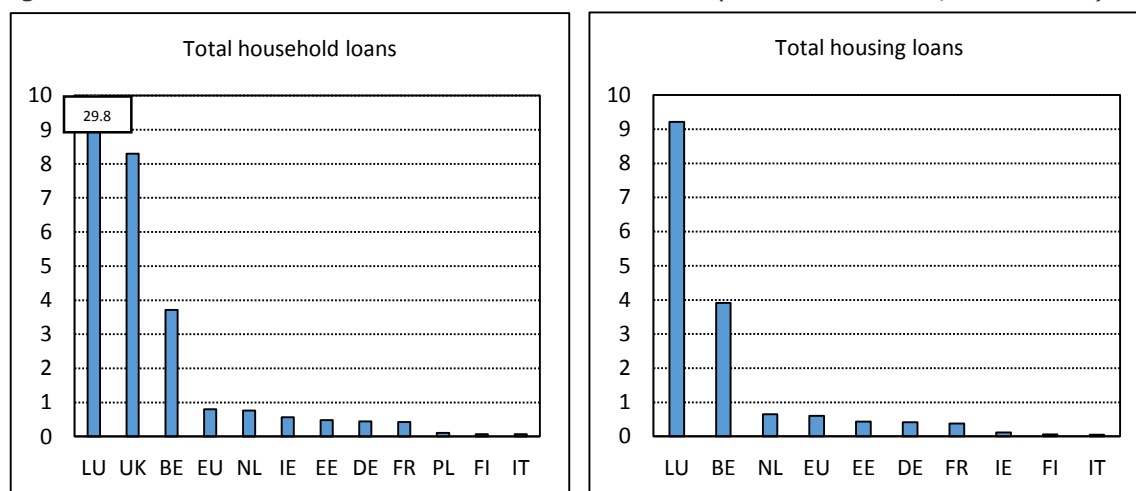
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<sup>159</sup> These statistics do not include cross-border sales of household loans in non-euro area countries. It is noteworthy that the ECB does not provide statistics for cross-border sales of household loans with non-euro area countries.

below the overall figure (9.2% versus 29.8% as shown in Figure 4.3). Given that the stock of housing loans generally represents more than half of household liabilities, the fact that only 9.2% of housing loans are sold on a cross-border basis, whereas almost one third of total outstanding household loans are sold on a cross-border basis implies that most of the cross-border sales of household loans are most likely based on purely financial operations, such as loans for the purchase of bonds or securities.

As regards other countries for which data are available, the picture for housing loans is broadly similar to that for total loans. The share of cross-border sales is very low in the Netherlands (0.7%), Estonia (0.4%), Germany (0.4%), France (0.4%), Ireland (0.1%), Finland (0.1%) and Italy (0.1%).

Figure 4.1 Cross-border activities in household loans (% of total loans, Dec. 2015)



Note: For Poland and the United Kingdom, the graph shows the volume of loans provided to non-residents living in the euro area compared to the volume of loans provided to both residents in the UK (or Poland) and non-residents living in the euro area. The EU average for total household loans includes all countries of the sample except the UK, whereas the EU average for housing loans includes Belgium, Estonia, Finland, France, Germany, Ireland, Italy, Luxembourg and the Netherlands.

Source: Authors' calculations based on 2016 ECB data.

When considered from January 2003, the dynamics of cross-border sales in other euro-area countries vary somewhat across countries (Figure 4.2). The contributing countries can be roughly divided into three groups: one with a high market share of cross-border activities; the other composed of countries with noticeable market shares; and one with shares continuously below 1%. The first one includes Luxembourg and the UK. It is worth noting that the Luxemburgish share has followed a marked downward trend between January 2003 and January 2016, decreasing by more than 28 percentage points over the period. Regarding the UK, as revealed in the figure, this high propensity for cross-border household loans in the UK is likely to be primarily related to investment by non-resident households into UK real estate.

The second subclass contains Belgium and Ireland. Whereas it peaked at around 6-7% in 2006-08, the Belgian share has almost continuously decreased since then, to stand below 4% throughout 2015.

The third group includes Germany, Estonia and Finland, as well as France, Italy, the Netherlands and Poland. Within this group, the market share of cross-border sales in other euro-area countries was almost nothing during the whole period in Finland, Italy and Poland, while it fluctuated close to 1% in the Netherlands and around 0.5% in Estonia, France and Germany.

Figure 4.2 Cross-border household loans (% of total outstanding loans, monthly data, 2003-15)



Notes: For Poland and the United Kingdom, it shows the volume of loans provided to non-residents in the euro area compared to the volume of loans provided to both residents in the UK (or Poland) and non-residents in the euro area. EU-10 is the sample of countries covered by the study, excluding the UK (the share of activities with non-residents living in the euro area).

Source: Authors' calculations based on ECB 2016 data.

#### *Box 4.1 Overseas buyers of UK real estate*

In the UK, the market share of cross-border sales with the euro area has remained much above the EU-28 average in the last 12 years (see Figure 4.2). According to ECB data, the market share of cross-border outstanding housing loans reached on average 6% over the period, fluctuating between a minimum of 3.5% in September 1999 and a maximum of 11.8% in December 2008. Cross-border sales of housing loans have averaged 4.9% of total sales (ranging from a minimum of 2.8% in November 1999 to a maximum of 9.3% in December 2008), thereby contributing a remarkably stable 70% to the whole of cross-border households loans.

Given that housing loans represent significantly more than 70% of total household loans, the cross-border share of other loans is even higher than for housing loans. In line with the consumer credit Directive and the mortgage credit Directive, the ECB's statistics covering loans for housing improvement are included in consumer credit and not mortgage credit. In that context, it is likely that the remaining 30% of cross-border sales also include loans that are directly related to real estate. Households funding their dwellings through cross-border housing loans are likely to need consumer loans to improve the state of the purchased asset.

Different types of households can get involved in cross-border housing loans:

- UK expatriates who decide to purchase a dwelling in their new country of residence and use a mortgage issued by a UK bank to fund partly or fully the purchase;
- foreigners who are residents in the UK and own a dwelling in the UK funded by a non-resident bank; and
- foreigners who are not residents in the UK and own dwelling(s) in the UK for investment purposes and are funded by a UK bank.

As shown in section 4.1.2, the first household type includes notably the significant amount of UK households that are residents and home-owners in Spain. The second type is primarily related to the UK labour market, which is relatively open to foreign workers. However, despite the fact that these two types include numerous home owners, the related potential for cross-border loans is minor in comparison to the third group.

In 2015, the Bank of England emphasised that the outstanding stock of buy-to-let lending has been growing on average by 5.9% on a yearly basis since 2008 (in the same period, the outstanding stock of lending to owner-occupiers has registered only a 0.3% yearly increase on average),<sup>160</sup> partly driven by overseas buyers. Some figures tend to show that a significant share of UK real estate is owned by non-residents for investment purposes, on the back of increasing prices, the absence of restrictions of real estate ownership for overseas investors, reasonable taxes (even though taxes will increase in principle from 2017), etc.

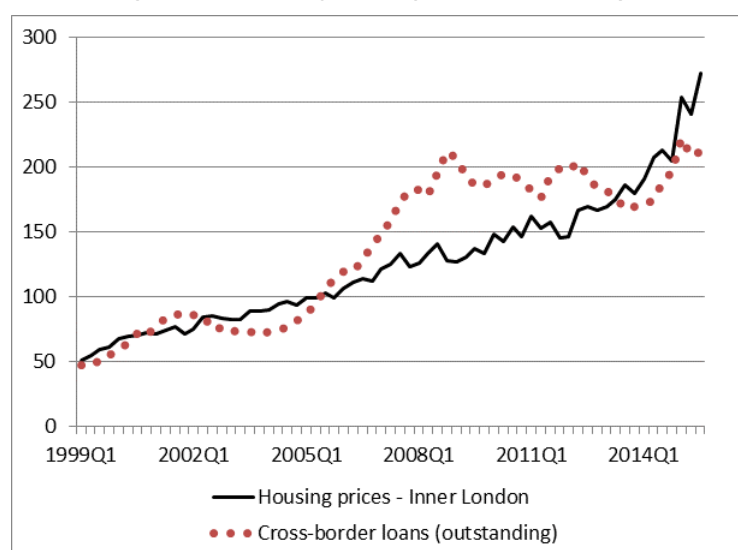
For example, according to Knight Frank (2013), overseas buyers represented broadly 30% of the total purchases in prime central London in 2012, with a significant share coming from the rest of Europe.<sup>161</sup> Considering only the new-building segment, the share of overseas buyers reached 49%. Typical households that make such investments are wealthy and are searching for diversification in their financial portfolio. The purchase of these foreign dwellings by non-residents can be done through different channels, including buy-to-let loans.

<sup>160</sup> The data can be found in the Financial Stability Report of the Bank of England published in December 2015 ([www.bankofengland.co.uk/publications/Documents/fsr/2015/dec.pdf](http://www.bankofengland.co.uk/publications/Documents/fsr/2015/dec.pdf)).

<sup>161</sup> In 2013, Frank Knight published its study on "International Residential Investment in London" (<http://content.knightfrank.com/research/503/documents/en/2013-1217.pdf>).

Detailed figures on the share of cross-border buy-to-let loans in the UK have not been reported in the study. Nevertheless, as shown in the figure below, it seems that over the period 1999-2015, housing prices in inner London and cross-border household loans have followed broadly similar patterns. Such observations might reveal that both time series have interacted with each other over the period: on the one hand, the demand for cross-border housing loans by overseas buyers has been boosted by the continuous growth in housing prices; on the other hand, such demand for cross-border housing loans has raised the demand for real estate in inner London, thereby boosting housing prices in that specific area. Should both interpretations be true, this would mean that the demand for cross-border household loans is sufficiently large to influence a large real estate market such as inner London.

*Figure 4.3 Cross-border outstanding household loans and housing prices in Inner London (2005 = 100, quarterly data, 1999-15)*



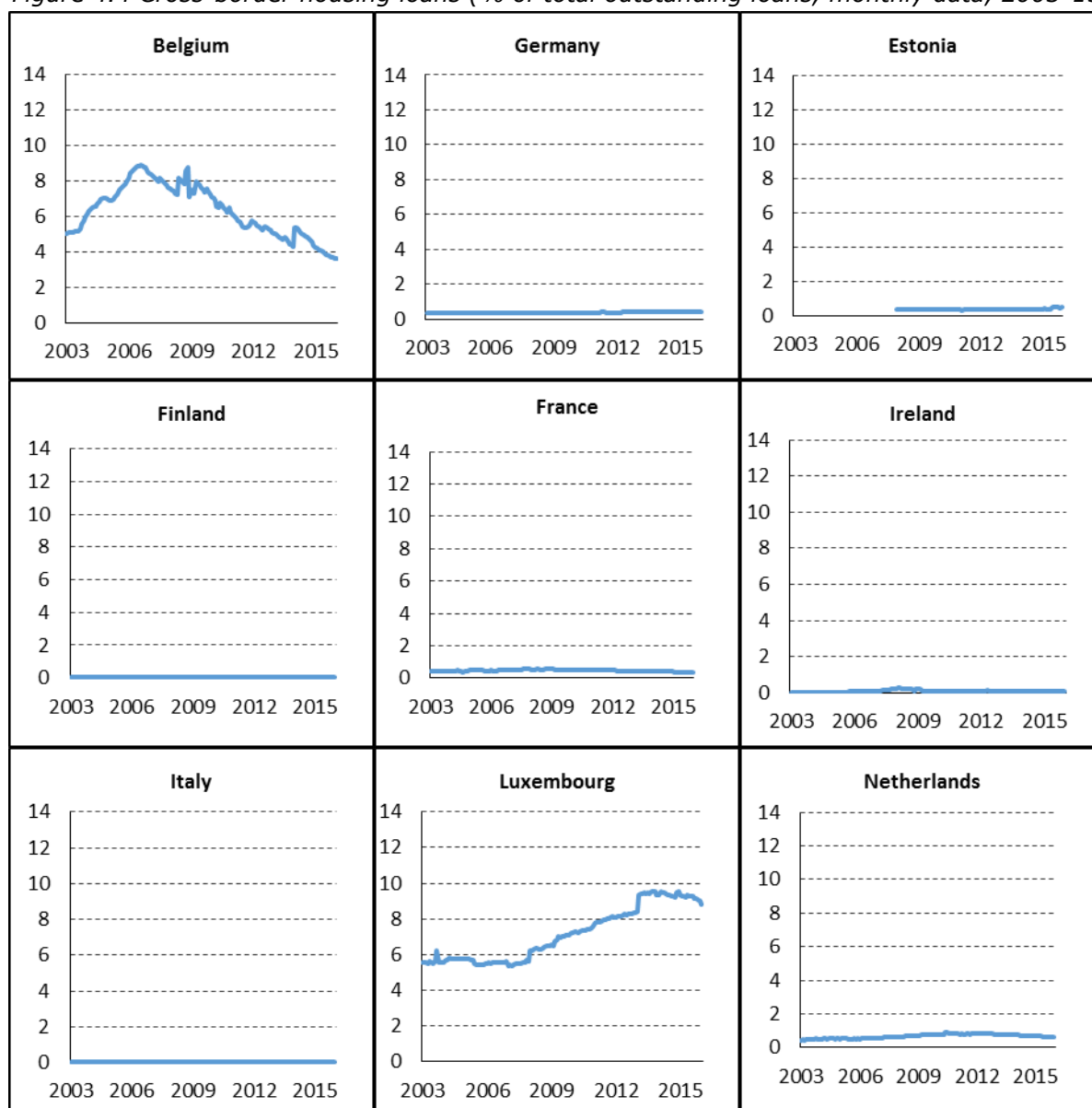
Source: ECB and Land Registry (UK government).

## Housing loans

More specifically on housing loans, for a certain number of countries, the market share of cross-border sales in other euro-area countries mirrors the dynamics observed for total household loans (see Figure 4.4): around 0.5% in Germany, Estonia and France; close to 1% in the Netherlands; and almost nothing in Finland and Italy. The dynamics in Belgium are broadly similar to those for total household loans, but at slightly higher levels. Surprisingly, it seems that for Ireland housing loans have not contributed to the market share of cross-border sales of total household loans. In other words, the noticeable share recorded in Ireland until 2014 for total household loans was almost exclusively composed of cross-border consumer loans and other loans.

Finally, data recorded in Luxembourg confirm the analyses developed above. On one hand, contrary to total household loans, the share of cross-border housing loans has followed an upward trend since 2003. On the other hand, in spite of this almost continuous increase, it has remained much below the share registered for total household loans. In that context, according to these statistics, most cross-border loans in Luxembourg have resulted from purely financial operations.

Figure 4.4 Cross-border housing loans (% of total outstanding loans, monthly data, 2003-15)



Source: ECB data and CEPS calculations.

#### 4.1.1 Types of providers and products

##### Three main types of provider of cross-border loans

There are broadly three main groups of providers that are involved in cross-border household loans:

- banks located in border areas or specialised in cross-border sales,
- specific departments in mainstream banks and
- start-ups whose core business model is primarily based on digital technologies (the research conducted for this study reveals broadly four main types within this group:
  - peer-to-peer platforms
  - peer-to-peer lending with bitcoins
  - mobile technology
  - innovative data solutions for credit scoring.

In general, banks within the first two groups can provide both consumer loans and housing loans on a cross-border basis, whereas the research conducted for the study reveals that companies within the third group so far provide only cross-border consumer loans (excluding one peer-to-peer platform based in Estonia that provides housing loans: EstateGuru). One of the main reasons behind the absence of FinTech cross-border mortgages is simply that overall very few FinTech companies have been developed so far with the aim of providing mortgage loans within countries, due to the complexity of the product (conditions of reimbursement, conditions on interest rates, type of collateral, house valuations etc.) and the quite high amount of funding needed.

Whatever the type of provider, the management of cross-border activities requires very specific skills, especially for housing loans. Among these skills, the providers need to:

- speak several (foreign) languages (or at least speak one foreign language),
- have a good knowledge of the different products available in Europe (or at least be specialised in one foreign market) and
- understand different elements such as differentiation in tax policies, compliance etc. in order to help borrowers as much as possible.<sup>162</sup>

### **Banks located in border areas or specialised in cross-border sales**

All around Europe, different local banks operating in border areas place significant focus on the segment of cross-border commuters. Specific teams within these banks have the necessary skills to handle this segment of consumers and have often developed strong expertise on the two national markets involved (or sometimes three, as is the case for Luxembourg or the Limburg in the Netherlands) and their related characteristics: national language, type of products available on both sides of the border, etc. For example, in France, the typical banks operating in border areas are Banque Paribas, Banque du Léman, Caisse d'Épargne Rhône-Alpes<sup>163</sup> and Caisse d'Épargne Nord France Europe (CENFE).

Some banks that are not necessarily located in border areas can also specialise primarily in cross-border sales of loans, as is the case with Crédit International.<sup>164</sup> The website is available in English, French, Russian and Spanish and according to some banners on the website, the provider can offer housing loans in more than 50 countries.

### **Specific departments in mainstream banks**

Large mainstream banks often have specific teams involved in the sale of consumer and housing loans to non-residents. Often these non-residents are expatriates born in the same country as the bank. For instance, ING and Belfius Bank in Belgium have their own non-resident departments.<sup>165 166</sup>

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<sup>162</sup> Nevertheless, if the single market in retail financial services enters a mature phase in the near future, some pan-European products could emerge and be offered throughout the EU. In that context, providers would primarily need to know about the characteristics of this product. However, language skills would still be required to interact properly with many non-residents.

<sup>163</sup> For additional information, see: [www.jesuisfrontalier.com/](http://www.jesuisfrontalier.com/).

<sup>164</sup> For additional information, see: [www.credit-international.com/fr/](http://www.credit-international.com/fr/).

<sup>165</sup> For additional information, see: [www.ing.be/en/expats/non-resident?tabName=Tab1/](http://www.ing.be/en/expats/non-resident?tabName=Tab1/).

<sup>166</sup> For additional information, see: [www.belfius.be/webapps/fr/selfcare/belfius/comptes/ouvrir/Comment-ouvrir-un-compte-si-jhabite-%C3%A0-l%C3%A9tranger-](http://www.belfius.be/webapps/fr/selfcare/belfius/comptes/ouvrir/Comment-ouvrir-un-compte-si-jhabite-%C3%A0-l%C3%A9tranger-).

Also, mainstream banks such as HSBC (UK) can offer loans to families that wish to establish themselves in the country of the bank but are not yet resident.<sup>167</sup>

Other banks offer housing loans to non-residents who wish to buy a property in the country of residence of the bank. For instance, BNP Paribas International Buyers or Credit Foncier Buying in France” (physical meetings are not mandatory with this latter bank) provide a large number of mortgage products to non-residents who wish to acquire a dwelling in France.<sup>168 169</sup>

Different interviews conducted during the study reveal that it is easier to offer this type of service to European citizens than to non-European ones. For instance, one of the main difficulties mentioned during the interviews for US citizens who wanted to purchase a dwelling in Europe was compliance with regulations such as the Foreign Account Tax Compliance Act (FATCA).

Finally, some banks try to provide loans directly to foreign consumers who reside in their country of birth. For instance, Volksbank Emmerich-Rees eG and VR-Bank Westmünsterland eG offer German mortgages to Dutch customers.<sup>170</sup> The interest rates on these loans can be slightly lower than for conventional housing loans in the Netherlands. The mortgages have the same characteristics as housing loans offered to German customers, but the ‘annuity loans’ are compliant with the Dutch legislation for housing loans (in particular, the interest is tax-deductible). Hence, the Volksbanken only finance 75% of the market value of the house, while in the Netherlands banks provide loans up to 102% of the value.

The German banks are also more focused on re-payments of the loan (e.g. full repayment during the time-period of the loan agreement or before retirement date). The maturity is often 20 or 25 years, whereas 30 years is the common practice in the Netherlands. When the loan is repaid in the first ten years, a fine will be charged. Moreover, the loans are not eligible for the Nationale Hypotheek Garantie (NHG), which provides a state-backed guarantee to the provider of housing loans up to €245,000.<sup>171</sup> The consumers need to pay 1% of the loan amount for this guarantee to the Stichting Waarborgfonds Eigen Woningen (WEW).<sup>172</sup> The banks require customers also to go at least once to Germany to sign the loan agreement that falls under German law. Overall, the large initial contribution and exemption from the NHG makes the loans attractive only for a small group of customers.

The Volksbanken-mortgages are, in the Netherlands, sold and promoted online. Through the website and call centre of the broker, interested customers can make an appointment with an adviser.<sup>173</sup> Finally, the final loan agreement is signed in Germany.

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<sup>167</sup> For additional information, see: [www.expatsbsc.com/1/2/bsbc-expat/products/mortgages-and-lending/residential-mortgages](http://www.expatsbsc.com/1/2/bsbc-expat/products/mortgages-and-lending/residential-mortgages).

<sup>168</sup> For additional information, see: [www.international-buyers.bnpparibas.com/french-mortgage/-](http://www.international-buyers.bnpparibas.com/french-mortgage/-).

<sup>169</sup> For additional information, see: [www.creditfoncier.eu/](http://www.creditfoncier.eu/).

<sup>170</sup> For additional information, see: [www.dervolksbanker.de/kredit---baufinanzierung/duitse-hypothek.html](http://www.dervolksbanker.de/kredit---baufinanzierung/duitse-hypothek.html) and [www.eigenhuis.nl/hypotheken/hypothek-afsluiten/duitse-hypothek/](http://www.eigenhuis.nl/hypotheken/hypothek-afsluiten/duitse-hypothek/).

<sup>171</sup> For additional information, see: [www.nhg.nl/Consument/Wat-is-NHG/](http://www.nhg.nl/Consument/Wat-is-NHG/).

<sup>172</sup> For additional information, see: [www.nhg.nl/Over-NHG/Stichting-WEW/](http://www.nhg.nl/Over-NHG/Stichting-WEW/).

<sup>173</sup> For additional information, see: [www.smartfee.nl/smartfee/](http://www.smartfee.nl/smartfee/).

## **Peer-to-peer platforms**

In parallel, there are several types of FinTech companies that have emerged in recent years and that offer unsecured consumer loans on a cross-border basis.

Some peer-to-peer (P2P) platforms have been developed with the purpose of providing cross-border consumer loans. There are different reasons behind this strategy. Among them, peer-to-peer lending platforms are essentially digital platforms without branches; therefore their expansion across borders can be carried out relatively smoothly.<sup>174</sup> In addition, these platforms that focus on cross-border sales have often been created in small economies and are looking for scale effects.

Among the main platforms that offer cross-border loans, Bondora<sup>175</sup> in Estonia,<sup>176</sup> is available in the 24 languages of the EU28 and openly promotes cross-border personal loans. Since 2009, the company, which is regulated by the Financial Conduct Authority, has processed almost €1 billion of loan applications from prime and near-prime borrowers. According to the website of the company, “more than 13,000 investors from 39 countries have funded more than €52 million in loans and have received over €10.5 million in interest payments”. Many types of investors have been involved, “from individuals investing a few thousands of euros to sophisticated investors investing hundreds of thousands of euros”. One of the main advantages for investors is that loans are funded directly by investors and processing costs are much below those of traditional banking, notably resulting in higher interest rates.

Another peer-to-peer lending platform was founded in Estonia in around 2011 with the purpose of funding short-term and mid-term commercial property loans currently located in Estonia: Estateguru. This is the only peer-to-peer lending platform offering mortgages with cross-border funding that has been identified during the study.

According to the website of the company,<sup>177</sup> in April 2016, there were around 3,500 registered investors from 27 countries. These investors funded 37 projects, with a total investment of €6,140 million and a total value of properties funded at €11,400 million. The average return to investors reached 11.3% and the amount of defaulted loans (more than 45 days in arrears) was none.

In the last year and a half, four other peer-to-peer platforms opened to investors from the European Union, Switzerland and Norway, and others using the euro have been launched in other Baltic states:

- Mintos: Founded in Latvia in January 2015. Some loans are secured by assets and/or buyback guarantee.
- Twino: Launched in Latvia in June 2015. The platform offers opportunities to invest into consumer loans with a buyout guarantee.
- FinBee: Created in August 2015 in Lithuania. This platform is a market place for consumer loans and features a compensation fund.

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<sup>174</sup> Nevertheless, more and more mainstream banks are digitalising their distribution channels on a large scale; therefore, given that the geographical barriers can be removed more easily for them, they should also have greater potential for direct cross-border sales.

<sup>175</sup> For additional information, see: [www.bondora.fi/en/](http://www.bondora.fi/en/).

<sup>176</sup> In line with the rest of the euro area, cross-border loans in Estonia has remained quite low in the last 8 years (around 0.4%-0.5%). Despite the fact that Estonia is a relatively small and opened economy (especially with Finland), the introduction of the euro area has not led to significant increases in the market share of cross-border loans.

<sup>177</sup> For additional information, see: [www.estateguru.co/home/statistics/](http://www.estateguru.co/home/statistics/).

- Viventor: Launched in October 2015 in Latvia. It features loans secured by mortgages and short-term consumer loans, both covered by a buyback guarantee.

A significant number of peer-to-peer platforms with a cross-border approach have also been developed in larger economies:

- Crosslend: Founded in Berlin in September 2015, it is open to investors in the UK, Germany, the Netherlands and Spain.
- Iwoca: Launched in 2011 in the UK, it offers credit facilities to small businesses trading in the UK, Poland, Spain and Germany via an automated lending platform. Noteworthy, Iwoca provides loans of up to GBP 100,000 and automatically assesses risk based on data taken directly from eBay, Amazon, PayPal, Sage Pay, business bank accounts and other online and offline platforms (the model is similar to Kabbage in the US).
- Lendico: Created in 2013 in Germany. Based only on online distribution channels and proprietary technology to reduce costs, it offers business and consumer lending in Spain, Poland, Austria, South Africa, the Netherlands and Brazil.
- TrustBuddy: Founded in 2009 in Sweden, it operated in five European countries, where it offered peer-to-peer financing for SMEs and consumer loans. Despite significant growth, the platform declared bankruptcy in 2015.

### **Peer-to-peer lending with bitcoins**

Some peer-to-peer platforms have been developed with the purpose of providing loans in bitcoins at a global scale. Although it was founded in the US in 2012, the platform BTCJam has bitcoin loans of \$10 million in value with more than 100,000 users in over 200 countries, including Europe.

Typical requests from potential borrowers for such loans can be as followed, for example: Loan purpose (Vacation [holiday to Europe]); amount and rate (£1.0000 @ 5.55%); payment (1st of the month); term (270 days); status (repaid); % funded (38%); time left (13 days); BTCJam Rating (B-).

The company BIT2ME, which was created in Spain in 2011, developed the social peer-to-peer finance network Hive. The network is available at 10,000 ATMs in Spain and 150 banks in 7 countries.

Another peer-to-peer lending platform offering bitcoins was launched in 2013 in Germany: Bitbond. The target group is small businesses, rather than only consumers. By using blockchain technology, the objective is to create the first global market for these types of loan.

### **Mobile technology**

Some specific FinTech companies offering loans have put mobile services at the core of their business models. For instance, in Finland, Ferratum Oyj was created in 2005 and started with fast-loans before becoming a bank. There was a momentum for just such a business as there was a latent need for instant loans and no such service existed online. Ferratum has placed much emphasis on mobile short-term consumer lending and has expanded its operations since 2005 to 23 countries.

Customers can apply for Microloans (varying between €25 and €1,000), PlusLoans (€300 to €3,000), a Credit Limit product (€0 to €2,000) and the secure and flexible e-commerce payment solution Ferbuy (€0 to €2,000). At the end of 2015, Ferratum had

1.2 million active customers and former customers who had been granted one or more loans in the past and 3.7 million total user accounts.

The international development of Ferratum has been partly based on the cross-border provision of services. For example, Ferratum Ltd, one of the subsidiaries of Ferratum Oyj is a licensed credit institution with a banking licence in Malta, which is used through the cross-border provision of services in several EU member states.<sup>178</sup>

### **Innovative data solutions for credit scoring**

In recent years, several business models for household loans have expanded quickly, notably by providing innovative scoring techniques. The objective of these new approaches towards scoring is generally to raise financial inclusion for specific segments of consumers that have low access to loans from mainstream banks. Often, the scoring developed by these companies results from some combination of “big data (including social media data), proprietary self-learning algorithms and automated workflows to acquire, identify and underwrite customers within a very short time”. Some of these companies have quickly developed their activities on a cross-border basis, notably by exploiting market opportunities in terms of lack of data in specific countries.

For instance, Kreditech in Germany aims at making banking much less costly, faster and customer friendly, using primarily automated processes as well as data analytics.<sup>179</sup> It offers several products directly to consumers, including, for instance, Flexinero and Zaimo (long-term loans) in various European countries in which there is no comprehensive database to determine the creditworthiness of customers.<sup>180</sup> Flexinero offers personalised credit lines up to €5,000 in both Spain and Poland.<sup>181</sup> Zaimo offers loans to customers in Spain and Kreditech uses its German license to offer these services abroad.<sup>182</sup> Since its founding, Kreditech has scored more than two million individual loan applications, using up to 20,000 data points per application.

#### **4.1.2 Types of consumers**

Interviews and research conducted in the context of the study reveal that, at present, there are mainly two types of consumer who can consider taking a mortgage or a consumer loan on a cross-border basis: commuters and expatriates. Nevertheless, some specific pockets of consumers who are neither commuters nor expatriates are also more likely to contract loans on a cross-border basis.

#### **Commuters**

In specific areas of the European Union, a significant share of workers commutes every day or weekly to the other side of the border. This is especially the case in highly populated areas where significant economic activities have been developed on

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<sup>178</sup> It is worth noting that, as a result of the international dimension of Ferratum, the company is listed in the Prime Standard Segment of the Frankfurt Stock Exchange and on the SDAX index of the German Stock Exchange. For additional information, see: [www.ferratumgroup.com/business-model](http://www.ferratumgroup.com/business-model).

<sup>179</sup> For additional information, see: [www.kreditech.com/](http://www.kreditech.com/).

<sup>180</sup> See the study by Horvath & Partners, “FinTechs – Attacks on the business models of banks”, July 2014.

<sup>181</sup> For additional information, see: [www.flexinero.es/](http://www.flexinero.es/).

<sup>182</sup> For additional information, see: [www.zaimo.es/](http://www.zaimo.es/).

both sides of the border. As regards the panel covered by the study, these border areas are, for example, the:

- Belgian-Dutch-German border: Limburg-Overijssel-North Brabant-Rhineland-Flanders-Wallonia (according to the Dutch Central Bureau of Statistics (CBS), 16,000 Belgian residents work in Limburg (mainly in Maastricht) and 15,200 in North Brabant, while 10,000 German residents work in Limburg and 9,600 in Overijssel)<sup>183</sup>
- Finnish-Estonian border: (Helsinki-Estonia)<sup>184</sup>
- Franco-German border: Alsace-Baden-Württemberg (for instance, Strasbourg-Kehl-Offenburg)
- Franco-Belgian border: French Flanders-Flanders (for instance, Lille-Kortrijk-Tournai)
- Polish-German border: West Pomerania Region-Mecklenburg Vorpommern<sup>185</sup>

Nevertheless, perhaps the most specific case of border areas with significant flows of commuters is the country of Luxembourg, where the market share of cross-border lending reached a stunning 29.8% in 2015 (while it stood at 58% in 2003). Many workers in Luxembourg are indeed residents of a neighbouring country: while their residences are located in Belgium (in cities such as Arlon), France (especially in Thionville or Metz) or Germany (in particular Trier), they work in Luxembourg and are likely to have their financial wealth partly or entirely managed in financial institutions located in Luxembourg.

Because commuters spend a lot of time in Luxembourg, they need retail financial services for their consumption during lunchtime, and for their leisure activities after work or at the weekend. Commuters also need a current account in Luxembourg because their salaries are only paid out to Luxembourg accounts to avoid transaction fees. Payment and daily banking services are therefore part of an essential package for these commuters. Due to time constraints, commuters appreciate it when a Luxembourg bank can also provide them with different types of loans for their individual projects. Most of the banks in the Greater Region of Luxembourg are not open after office hours or during weekends, making it difficult for commuters to take care of important financial projects. In the context of Luxembourg, the working week is fixed at 40 hours and the traffic is burdensome during rush hours, which encourages commuters to consider local banking service providers.

From a legal point of view, consumer loans can be sold cross-border or at least there is no legal barrier to selling these financial services cross-border from Luxembourg. The Luxembourg Bankers Association (ABBL) published clear information on the inclusion of residents from other EU member states in benefitting from consumer loans emitted by a Luxembourg based company (under the section "Assessment of the consumer's creditworthiness").<sup>186</sup>

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<sup>183</sup> For additional information, see: [www.cbs.nl/en-GB/menu/themas/arbeid-sociale-zekerheid/publicaties/artikelen/archief/2015/80-duizend-werknemers-uit-belgie-en-duitsland.htm](http://www.cbs.nl/en-GB/menu/themas/arbeid-sociale-zekerheid/publicaties/artikelen/archief/2015/80-duizend-werknemers-uit-belgie-en-duitsland.htm).

<sup>184</sup> For additional information, see: [www.citylab.com/commute/2016/01/helsinki-tallinn-rail-tunnel-baltic/423030/](http://www.citylab.com/commute/2016/01/helsinki-tallinn-rail-tunnel-baltic/423030/).

<sup>185</sup> For additional information, see: [www.sb-professionals-project.eu/news/Case-Study-Poland-Germany.pdf](http://www.sb-professionals-project.eu/news/Case-Study-Poland-Germany.pdf).

<sup>186</sup> For additional information, see: [www.abbl.lu/en/financialeducation-introductionpage/financialeducation-adults/consumer-credit-fr](http://www.abbl.lu/en/financialeducation-introductionpage/financialeducation-adults/consumer-credit-fr).

If the consumer resides in a different Member State, the banker will, if necessary, consult the databases of the State in which the consumer is resident. If the professional turns down the credit application after consulting the database, he must inform the consumer of the outcome of such consultation and disclose the name of the database consulted, save where such communication is prohibited by a different law (for example, the law on money laundering and the financing of terrorism) or if it is contrary to the objectives of public order or public security (prevention and detection of criminal offences).

In line with the findings on consumer loans, housing loans can be offered to commuters from Belgium, France and Germany. This is also corroborated by the publication of the following information on the national contact point for citizens in Luxembourg: "Mortgage loans can be contracted with a bank located outside of Luxembourg (and which has its licence to do business within the European Union)."<sup>187</sup>

The Banque et Caisse d'Épargne de l'État Luxembourg (BCEE) also states on its website that housing loans and mortgages can be contracted for apartments or houses located in the Greater Region and for commuters.<sup>188</sup> Similar information can be found on the dedicated websites of BIL and BGL BNP Paribas. Housing loans (mortgages) can be sold cross-border, or at least there is no legal barrier to it.

Important contextual information to add here is that there are fiscal advantages for commuters with contracts for their mortgages in Luxembourg. The amount of interest paid that is deductible from the gross annual income of a commuting household is expected to be higher than what is allowed under French, Belgian or Germany taxation laws. Therefore commuters have an incentive to consider contracting a mortgage or housing loan for their residence in the Greater Region from a Luxembourg-based financial services provider.<sup>189</sup>

Due to the significant number of commuters, Luxembourgish authorities have produced different studies on this specific economic phenomenon and the related financial dimension. For example, a study by the Central Bank of Luxembourg using data from 2010 found that the mortgage debt of commuters differed somewhat across the countries of residence (see Table 4.1).<sup>190</sup> While the mean mortgage debt of all commuters was estimated at €125,000, it stood at a level significantly above this

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<sup>187</sup> For additional information, see:

[www.guichet.public.lu/citoyens/fr/logement/acquisition/aides-capital/garantie-etat/index.html](http://www.guichet.public.lu/citoyens/fr/logement/acquisition/aides-capital/garantie-etat/index.html).

<sup>188</sup> For additional information, see: [www.bcee.lu/en/Private-customers/Loans/Mortgage-loans2](http://www.bcee.lu/en/Private-customers/Loans/Mortgage-loans2).

<sup>189</sup> Coming back to the proxy for the entire retail market for financial and insurance services, various websites are created by financial services providers with the commuters in mind. This fuels the expectation that all types of financial services can be offered cross-border from Luxembourg. The Luxembourg bank BGL BNP Paribas prepared a dedicated website for commuters' universal banking needs, facilitating them to become a customer and access the web banking application ([www.frontaliers-saviezvous.lu/fr/](http://www.frontaliers-saviezvous.lu/fr/)). By doing that, it is arguable that they have adopted digital banking (at least at a basic level). Other major banks offer similar, dedicated internet sites for commuters such as, for example, the BCEE ([www.bcee.lu/en/Private-customers/Cross-border-commuters](http://www.bcee.lu/en/Private-customers/Cross-border-commuters)) or BIL ([www.bil.com/en/individuals/dedicated-offers/cross-border/Pages/index.aspx](http://www.bil.com/en/individuals/dedicated-offers/cross-border/Pages/index.aspx)). In particular on the website of BGL BNP Paribas, consumer loans are clearly mentioned as a possible service for commuters ([www.frontaliers-saviezvous.lu/fr/bgl-bnp-paribas-la-banque-des-frontaliers-francais-au-Luxembourg](http://www.frontaliers-saviezvous.lu/fr/bgl-bnp-paribas-la-banque-des-frontaliers-francais-au-Luxembourg)).

<sup>190</sup> Groupe de travail "Statistiques" (2014) has published broadly similar statistics for 2014 ([www.grande-region.lu/eportal/pages/HomeTemplate.aspx?view=template&id=HTML\\_PUBLICATIONS](http://www.grande-region.lu/eportal/pages/HomeTemplate.aspx?view=template&id=HTML_PUBLICATIONS)).

average for German residents (€144,000) and was broadly similar for French residents (€122,500) and noticeably below this for Belgian residents (€110,500).

In parallel, the dispersion around the mean is significantly higher for cross-border non collateralised loans, which mirror to some extent the amount of consumer credit used by commuters contracted with a Luxembourg based financial services provider.<sup>191</sup> The mean amount for these loans by commuters was estimated at €13,600 (€16,600 for commuters that reside in Germany, €15,700 for commuters that reside in France and €8,400 for commuters that reside in Belgium).

Notably, the mean financial wealth (which gives indications on the importance of current, savings and custody accounts, i.e. investment services) was much above average for commuters residing in Belgium (€83,300) and significantly below average for commuters residing in France (€37,700) and Germany (€54,000). Finally, the mean financial wealth originating from Luxembourg was also much greater for Belgian residents (€49,000) than for French (€17,000) or German (€25,000) residents.

*Table 4.1 Non-resident mortgages in Luxembourg (average in €, 2010)*

|                                    | Residing in<br>Belgium | Residing in<br>France | Residing in<br>Germany | Great Region |
|------------------------------------|------------------------|-----------------------|------------------------|--------------|
| <b>Commuters and residents</b>     |                        |                       |                        |              |
| Number of commuters                | 36,000                 | 75,500                | 37,700                 | 149,200      |
| Total number of residents          | n/a                    | n/a                   | n/a                    | 562,960      |
| <b>Loans</b>                       |                        |                       |                        |              |
| Mortgage debt                      | 110,500                | 122,500               | 144,000                | 125,000      |
| Non-collateralised loans           | 14,000                 | 28,100                | 36,300                 | 26,200       |
| <i>Originating from Luxembourg</i> | 8,400                  | 15,700                | 16,600                 | 13,600       |
| <b>Financial wealth</b>            |                        |                       |                        |              |
| Financial wealth                   | 83,300                 | 37,700                | 54,000                 | 54,600       |
| <i>Originating from Luxembourg</i> | 49,000                 | 17,000                | 25,000                 | 29,900       |

Source: T.Y. Mathä, A. Porpiglia and M. Ziegelmeyer (2012), "Income, wealth and consumption of cross-border commuters to Luxembourg", BCL Working Paper 78, Central Bank of Luxembourg ([www.bcl.lu/fr/publications/cahiers\\_etudes/78/BCLWP078.pdf](http://www.bcl.lu/fr/publications/cahiers_etudes/78/BCLWP078.pdf)).

## Expatriates

The second group of consumers who are likely to ask for mortgage loans or consumer loans on a cross-border basis includes citizens of a country that are resident of another country.

<sup>191</sup> By using the data on the population working as commuters from the different parts of the Greater Region to Luxembourg (Groupe de travail, "Statistiques", 2014), it is possible to estimate the mean value of the cross-border non-collateralised loans and financial wealth. The mortgages for the main residence can be concluded with a Luxembourgish or foreign bank, making them impossible to estimate with the available data.

In 2013, only considering the countries of the sample covered by the study, there were 7.2 million residents born abroad,<sup>192</sup> namely about 2.1% of the total population (see Table 4.2). The total number stood at 8.2 million, including the Spanish residents born in countries of the sample covered by the study. In 2013, foreign communities with more than 150,000 citizens were as follows: there were 1,194 thousand Polish citizens residing in Germany, 650,000 Polish in the United Kingdom, 423,000 Italians in Germany, 400,000 Irish in the United Kingdom, 343,000 Germans in the United Kingdom, 338,000 Italians in France, 301,000 British in Spain, 281,000 British citizens in Ireland, 220,000 Germans in Italy, 218,000 Germans in France, 208,000 French in Spain, 181,000 French in Belgium and 170,000 British citizens in France. The main foreign-born populations in Estonia, Finland, Luxembourg, the Netherlands and Poland were respectively: Finnish citizens (51,000), Estonians (40,000), French citizens (28,000), Germans (121,000) and Germans (84,000).

Table 4.2 Foreign-born population by country of birth (thousands, 2005-13)

| Country of residence | Year | Country of birth |      |      |       |       |       |       |      |       |         |       | Total sample | Change, Total sample (in %) |
|----------------------|------|------------------|------|------|-------|-------|-------|-------|------|-------|---------|-------|--------------|-----------------------------|
|                      |      | BE               | EE   | FI   | FR    | DE    | IE    | IT    | LU   | NL    | PL      | UK    |              |                             |
| BE                   | 2005 |                  |      |      | 159,3 | 83,6  |       | 123,6 | 11,5 | 115,8 | 33,7    | 24,2  |              |                             |
|                      | 2013 |                  |      |      | 180,9 | 82,3  |       | 119,8 | 13,2 | 128,0 | 71,0    | 22,8  | 617,9        | 12,0                        |
| EE                   | 2005 |                  |      |      |       |       |       |       |      |       |         |       |              |                             |
|                      | 2013 | 0,2              |      | 5,4  | 0,8   | 2,0   | 0,1   | 0,9   | 0,0  | 0,3   | 0,8     | 0,7   | 11,0         |                             |
| FI                   | 2005 | 0,3              | 12,6 | 0,0  | 1,4   | 4,6   | 0,3   | 1,3   | 0,0  | 1,0   | 1,5     | 3,5   | 26,5         |                             |
|                      | 2013 | 0,6              | 39,5 |      | 2,2   | 6,4   | 0,6   | 2,2   | 0,1  | 1,4   | 3,8     | 5,3   | 62,0         | 134,2                       |
| FR                   | 2005 | 139,0            |      |      |       | 225,6 |       | 372,3 |      | 37,8  | 101,6   | 148,8 | 1.025,1      |                             |
|                      | 2010 | 148,2            | 1,0  | 3,8  |       | 217,6 | 9,6   | 337,5 | 13,6 | 40,4  | 102,8   | 169,9 | 1.044,1      | 1,9                         |
| DE                   | 2005 | 23,0             | 12,0 | 19,0 | 99,0  |       | 12,0  | 437,0 | 9,0  | 107,0 | 719,0   | 81,0  | 1.518,0      |                             |
|                      | 2013 | 26,0             | 12,0 | 9,0  | 119,0 |       | 12,0  | 423,0 | 21,0 | 136,0 | 1.194,0 | 98,0  | 2.050,0      | 35,0                        |
| ES                   | 2005 | 42,5             | 0,8  | 9,9  | 199,4 | 208,9 | 11,5  | 60,2  | 1,3  | 42,1  | 44,3    | 283,7 | 904,6        |                             |
|                      | 2013 | 42,7             | 1,9  | 12,0 | 208,3 | 194,5 | 15,2  | 100,9 | 1,4  | 47,0  | 64,3    | 300,7 | 989,0        | 9,3                         |
| IE                   | 2002 | 1,1              |      | 0,7  | 6,7   | 8,5   |       | 3,6   | 0,1  | 3,4   | 2,1     | 242,2 | 268,4        |                             |
|                      | 2011 | 1,4              | 2,5  | 0,9  | 9,9   | 12,7  |       | 7,0   | 0,1  | 4,4   | 114,3   | 281,1 | 434,3        | 61,8                        |
| IT                   | 2005 |                  |      |      |       |       |       |       |      |       |         |       | 0,0          |                             |
|                      | 2012 | 46,4             | 1,4  | 3,0  | 136,7 | 220,0 | 4,0   |       | 4,7  | 13,5  | 122,7   | 67,5  | 620,0        |                             |
| LU                   | 2001 | 14,8             | 0,0  | 0,7  | 18,8  | 12,8  | 0,6   | 12,3  |      | 3,3   | 1,0     | 3,2   | 67,5         |                             |
|                      | 2010 | 16,8             | 0,4  | 0,9  | 28,1  | 14,8  | 0,9   | 13,2  |      | 3,5   | 2,9     | 4,2   | 85,8         | 27,1                        |
| NL                   | 2006 | 47,1             |      | 2,4  | 19,7  | 116,9 | 4,4   | 17,7  | 0,9  |       | 30,0    | 46,6  | 285,8        |                             |
|                      | 2013 | 52,8             |      | 2,8  | 23,3  | 120,5 | 5,0   | 23,9  | 1,1  |       | 96,2    | 48,4  | 374,2        | 30,9                        |
| PL                   | 2002 |                  |      |      |       | 98,2  | 0,1   |       |      |       |         | 2,8   | 101,1        |                             |
|                      | 2013 |                  |      |      |       | 84,0  | 8,4   |       |      |       |         | 38,0  | 130,4        | 29,0                        |
| UK                   | 2006 | 23,0             |      |      | 111,0 | 269,0 | 417,0 | 86,0  |      | 49,0  | 229,0   |       | 1.184,0      |                             |
|                      | 2013 | 24,0             |      |      | 128,0 | 343,0 | 400,0 | 142,0 |      | 60,0  | 650,0   |       | 1.747,0      | 47,6                        |

Source: OECD, International Migration Database.

In the countries for which data are available, the number of non-residents born in other countries covered by the study has increased significantly since 2005 in all countries except in France where it stagnated somewhat (+1.9% between 2005 and 2010). Between 2005 and 2013, this population born in other countries in the sample increased by 134% in Finland, 62% in Ireland (2002-11), 48% in the United Kingdom (2006-13), 35% in Germany, 31% in the Netherlands (2006-13), 29% in Poland (2002-13), 27% in Luxembourg (2001-10) and 12% in Belgium. Interestingly, in Spain, the proportion of the population born in other countries (in the sample) increased by 9%.

<sup>192</sup> The total population is the figure published for 2012 instead of 2013. As regards the foreign born population, it refers to 2010 instead of 2013 for France, 2011 instead of 2013 for Ireland, 2012 instead of 2013 for Italy and 2010 instead of 2013 for Luxembourg.

A significant part of this population born in another country of the sample keep strong ties with their country of origin and have bank accounts in their country of birth, as well as good connections with the local banking system where their wealth can be managed. Overall, there are broadly two types of these consumers that can ask for loans on a cross-border basis. The first type includes workers who live abroad and their demand for loans can result from the need to purchase a car, to fund educational fees etc. Should they decide to reside abroad for a long period, these consumers might also decide to purchase a dwelling, hereby contracting mortgages or loans for home improvement. Within the second type, consumers are inactive residents, primarily pensioners, who often purchase a dwelling abroad and decide to reside there most of the year. They can also contract consumer loans for needs similar to the first type of consumer.

In Ireland, reports from the Central Bank of Ireland suggest that some loans have been made to non-resident account holders (who are based both in the euro area and also the non-euro area).<sup>193</sup> The consumer's salary could be getting paid into their non-resident bank account in Ireland or it could be paid in locally in that euro or non-euro country. Overall, cross-border loans to households are a very small percentage of sales for Irish banks with approximately €0.5 billion outstanding at any one time. Non-resident clients of Irish banks have purchased holiday homes, which in the end can become their main residence, and investment properties in the UK, Spain, France and Portugal primarily (as shown in Table 4.2, in 2013, 400,000 Irish citizens were residing in the UK and 15,200 in Spain, whereas 9,600 were French residents in 2010), as well as homes and investment properties in Ireland. The primary channel for these cross-border sales that have accessed loans or mortgages via Irish banks has been through an office where they already have a current or savings account. Consumers have leveraged specialised mortgage providers for holiday homes or investment properties abroad when they have been referred to them by the property developer, or they have possibly searched for them independently via internet search queries.<sup>194</sup>

Typically these types of mortgage have been for Residential Investment Letting (RIL) purchases, in cases where the related loan is obtained for the purchase of residential investment property or a holiday home. Furthermore, there might have been some obtained for Mover purchase. In that case, the loan is drawn down for the purchase of residential property that is expected to be owner-occupied, while at least one of the borrowers has been an owner-occupier (or part owner-occupier) of a residential property in Ireland or elsewhere.

In the United Kingdom, reports from the Bank of England also suggest that some loans have been made to non-resident account holders (who are based inside and outside the euro area).<sup>195</sup> The data are not broken down by business or household lending, but since there is a large population of UK expats abroad, many UK banks have products that specifically cater to expats who have non-resident accounts in the UK (e.g. HSBC).<sup>196</sup>

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<sup>193</sup> Central Bank of Ireland Statistical Release - Money and Banking Statistics – November 2015 ([www.centralbank.ie/polstats/stats/cmab/Documents/2015m11\\_ie\\_monthly\\_statistics.pdf](http://www.centralbank.ie/polstats/stats/cmab/Documents/2015m11_ie_monthly_statistics.pdf)).

<sup>194</sup> An example of an Irish internet platform that helps consumers in their mortgage decisions can be found at [www.mortgages.ie](http://www.mortgages.ie).

<sup>195</sup> For additional information, see: [www.bankofengland.co.uk/statistics/Documents/bankstats/2016/jan/tabb2.5.1.xls](http://www.bankofengland.co.uk/statistics/Documents/bankstats/2016/jan/tabb2.5.1.xls).

<sup>196</sup> For additional information, see: [www.expats.hsbc.com/1/2/hsbc-expat/products/mortgages-and-lending/residential-mortgages](http://www.expats.hsbc.com/1/2/hsbc-expat/products/mortgages-and-lending/residential-mortgages).

As shown in Table 4.2, the euro-area country with the largest UK population was Spain (with more than 300,000 UK citizens in 2013). Furthermore, millions of UK citizens have already visited Spain. In that context, according to the Spanish Colegio de Registradores,<sup>197</sup> UK citizens are responsible for nearly one quarter of all foreign purchases of houses in the last quarter of 2015. Overall, one in five houses sold to foreigners in 2015 was sold to a UK citizen, i.e. approximately 9,400 houses.<sup>198 199</sup>

As regards the funding of these houses, according to Rightmove, 63% of British buyers use personal assets, 23% use mortgages and 4% use equity release. Given that broadly one quarter of these houses are used as primary residence, a significant number of cross-border housing loans are most likely involved.<sup>200</sup>

### **Other types of consumers**

Some segments of consumers are residents in their countries of birth and have never moved to another country but are still interested in cross-border loan purchases. For example, consumers with thin credit profiles often have low access to loans in their own country (see Section 4.2.1). There might be two main reasons behind this. On one hand, the domestic institutional framework does not allow the collection of data on these segments, or the data collected are not exploitable for scoring. On the other hand, these consumers do not have a financial history and, as such, it is relatively difficult for loan providers to collect relevant data to build a credit profile. This includes young households that have not interacted yet with loan providers and new migrants. Some foreign companies with innovative scoring techniques based notably on social media data could get involved with these types of consumers and provide loans on a cross-border basis, should the scoring be favourable.

#### **4.1.3 Conclusion**

Although cross-border sales for both housing and consumer loans have been low in all countries of the sample covered, except in Luxembourg, there is high diversity in the types of consumers and providers that are getting involved in this type of loan activity.

So far, cross-border housing loans are almost exclusively provided by mainstream banks or banks specialised in cross-border areas or cross-border loans, while emerging FinTech companies that offer household loans on a cross-border basis focus primarily on unsecured consumer loans.

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<sup>197</sup> For additional information, see: [www.registradores.org/](http://www.registradores.org/)

<sup>198</sup> The main reasons and incentives for British citizens to purchase a house in Spain were:  
-Bilateral tax agreements that exempt UK homeowners in Spain from double taxation.  
- A favourable euro to pound sterling exchange rate, low property prices, a pleasant climate and convenient flight connections. The older buyers are also interested in the country's good and affordable healthcare system, which is as much as 23% cheaper than in the UK ([www.ifitweremyhome.com/](http://www.ifitweremyhome.com/)).  
-In March 2013, the UK government published their own guide "How to buy property in Spain" with legal advice, information about off-plan purchases, complaint procedures, tax and visa compliance (see [www.gov.UK/guidance/how-to-buy-property-in-spain](http://www.gov.UK/guidance/how-to-buy-property-in-spain)).

<sup>199</sup> Some details on the typical British citizen purchasing properties in Spain are available at [https://tranio.com/spain/analytics/buyer\\_profile\\_meet\\_the\\_british\\_who\\_purchase\\_real\\_estate\\_in\\_spain\\_4784/](https://tranio.com/spain/analytics/buyer_profile_meet_the_british_who_purchase_real_estate_in_spain_4784/).

<sup>200</sup> The vast majority of property buyers (89%) purchase properties in Spain for their own use rather than for investment purposes.

## **4.2 Impact of digitalisation on cross-border activity**

### **4.2.1 (Changes in) providers' behaviour**

#### **Increasing digitalisation of distribution channels: consumer loans vs. housing loans**

Household loans, especially housing loans, are typical financial products that require advice before being purchased. Until recently, this advice was essentially provided on a face-to-face basis in branches of banks or with an intermediary such as a broker, thereby resulting in a marked barrier to cross-border sales. Nevertheless, as shown in Box 4.2, the complete digitalisation of these pre-sale interactions seems feasible for most personal loans in a foreseeable future, albeit at different pace across different countries. Such achievements remain more challenging for mortgage loans (due mainly to the complexity of the related products, and the diversity of intermediaries involved), but not completely unachievable in the longer term. In a context of advice being digitalised on a large scale, significant cross-border sales seem, at first glance, worth considering.<sup>201</sup>

However, as shown for personal loans, despite the rapid digitalisation of the pre-sale and sale phases of the product, a significant share of distribution models follow a hybrid approach, as the interactions of consumers with the products and the providers result from some combination of digital and non-digital elements. For instance, in 2015, the share of consumers using online research and offline purchase for personal loans reached on average 41.1%, while 20.8% combine research offline and purchase online. This framework might depend on the deliberate choice of consumers who are accustomed to switching from online models to offline models and vice-versa. However, the most likely reason behind this hybrid approach is that the industry has not managed so far to propose an effective digitalised distribution chain including pre-sales, sales and post-sales phases.

The business models of many intermediaries and lenders can indeed partly explain this persistent hybrid approach, as they have been developed by combining online with offline channels, especially where housing loans are concerned. For example, in France, the two main housing loans brokers, Meilleurtaux and CAFPI, attract most of their clients through their comparison websites (for information and research) and then transfer them to mortgage brokers, on a face-to-face basis through a wide number of branches or via call centres.<sup>202</sup>

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<sup>201</sup> The study has also identified examples in Italy where cross-border interactions (for advice, the completion of the sale process of a loan etc.) could be based on video-calls (e.g. Skype) supported by co-browsing.

<sup>202</sup> The first interaction with consumers at Meilleurtaux can be done either through their website, where many tools can be used to compare the different mortgage products available on the market, or directly in one of their 250 branches where more than 800 persons are employed. Should one first become aware of a product online, the consumer is then directly transferred to a call centre or to the closest branch, and is then offered mortgage broker services.

The business model of CAFPI has many similarities with Meilleurtaux: a significant share of first information for consumers and first stage research is done online via their website, where different tools are provided such as calculators, simulators, comparison tools, etc., while, at a later stage, the advice is typically conducted with a broker in one of their 200 or so local branches.

More recently, some digital broker platforms have been developed with the aim of offering a complete digital approach to their consumers along the whole distribution chain. The study has identified two of them: Habito in the UK and Cyberprêt in France.<sup>203</sup> The creation of these platforms has been too recent to assess the potential for disruption on the European mortgage market. Nevertheless, as shown in some studies in Northern America, there seems to be a real potential for such platforms to grow in the future.<sup>204</sup> Importantly, the combination of online interactions with specific offline ones such as phone calls and video-calls through Skype should also be particularly well-adapted to cross-border sales and post-sales.<sup>205</sup>

To conclude, the developments observed so far imply that the complete digitalisation of distribution channels could be achieved for the majority of personal loans in the near future, while it would take more time for housing loans. In the medium term, the contribution of digitalisation to furthering cross-border sales of household loans seems therefore to concern, above all, unsecured consumer loans such as personal loans. The expected increase in the use of tablets and smartphones could help accelerate the digitalisation of consumer loans, especially as consumers will have the possibility to connect anywhere, anytime.

*Box 4.2 Differentiation across phases and countries in the digitalisation of distribution channels in the consumer and housing loans markets*

Recent data on the types of distribution channel for housing loans across Europe are less accessible than for personal loans (as analysed above, a personal loan is a type of consumer loan that is granted for personal use, usually unsecured and based on the borrower's integrity and ability to pay). Nevertheless, the European Commission's Eurobarometer provided some statistics on these issues in 2011 for the pre-sale and sale phases.

The share of consumers that did not use any recommendations for their purchase is overall much higher for personal loans than for mortgage loans (respectively 36% versus 25% in the EU-27). This gap is confirmed in all countries covered by the study except in Germany where the share was equal. The gap reached 35 percentage points in the UK, 27 percentage points in the Netherlands and 20 percentage points in Estonia.

These differentiated dynamics can be explained by the differences in the complexity of the product, given that in general the more complex a financial product is, the more consumers need advice before purchasing it. Mortgage loans are typically more complex products than personal loans and are often only obtained once or a couple of times. This greater need for advice makes the complete digitalisation of the pre-sale distribution of mortgages more challenging than with personal loans.

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<sup>203</sup> For more details on these two digital brokers, see [www.habito.com/](http://www.habito.com/) for Habito and [www.cyberpret.com/courtier-immobilier.html](http://www.cyberpret.com/courtier-immobilier.html) for Cyberprêt.

<sup>204</sup> For some survey-based statistics on the digitalisation of mortgage loan distribution channels in the US, see [www.canadianmortgagetrends.com/canadian\\_mortgage\\_trends/2015/03/new-online-mortgage-stats.html](http://www.canadianmortgagetrends.com/canadian_mortgage_trends/2015/03/new-online-mortgage-stats.html).

<sup>205</sup> For instance, the study has identified examples in Italy where cross-border interactions (for advice, the completion of the sale process of a loan, etc.) could be based on video-calls (e.g. Skype) supported by co-browsing.

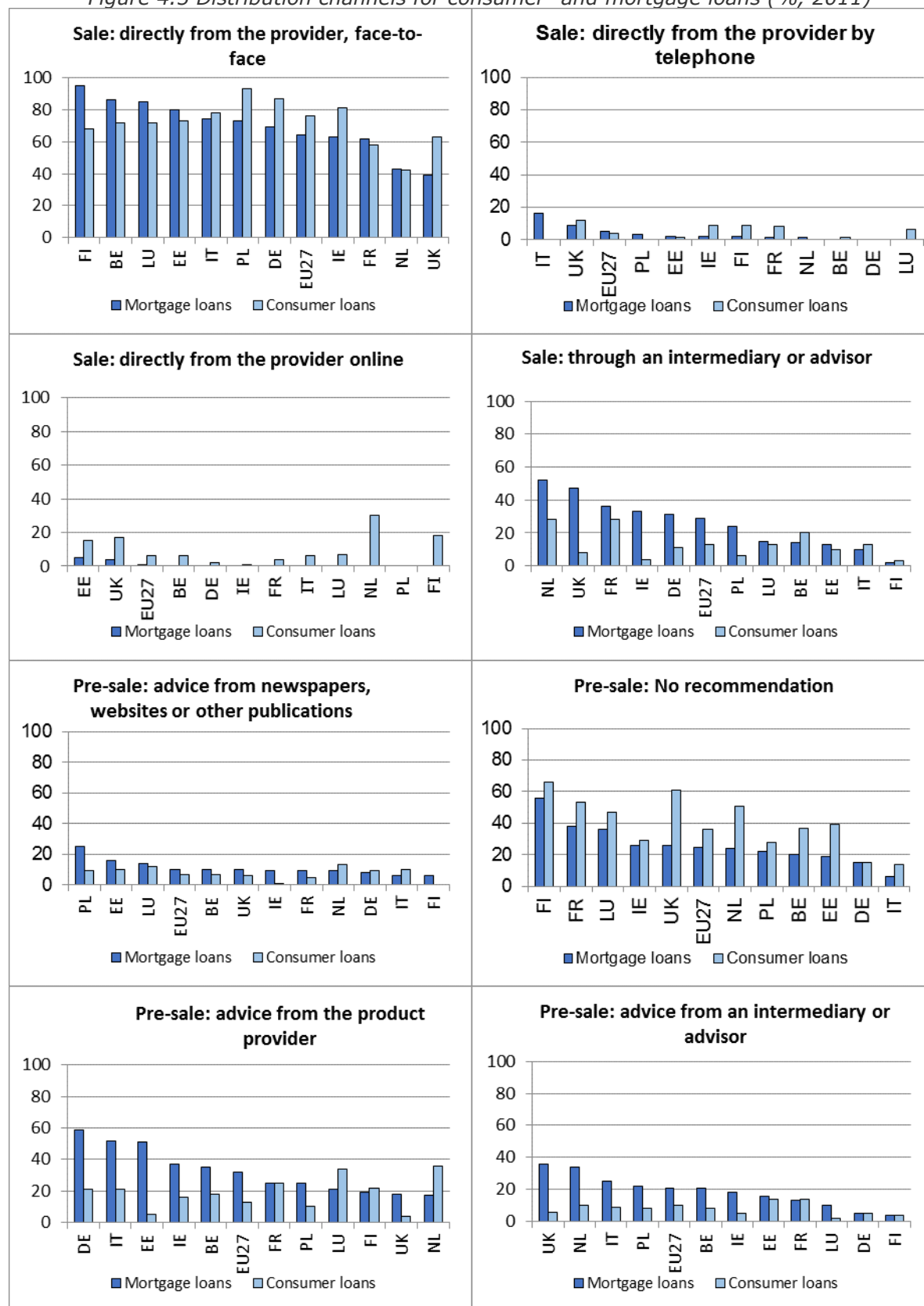
In addition, the stakeholders providing advice on mortgages are more diversified than for personal loans. Admittedly, both personal loans and mortgage loans have a significant share of advice directly by the product provider (32% vs. 38% at EU level); however, the role of the intermediary and advisors is on average much higher for mortgages loans (21%) than for personal loans (10%). This higher diversity of stakeholders providing advice on mortgages again makes the digitalisation of the pre-sale phase more demanding, as more actors might be involved.

As regards the sale phase, except in the Netherlands and the UK, most purchases of mortgages were done directly from the loan provider, face-to-face: 95% in Finland, 86% in Belgium, 85% in Luxembourg, 80% in Estonia, 74% in Italy, 73% in Poland, 69% in Germany, 64% in the EU-27, 63% in Ireland and 62% in France. The low shares recorded in the Netherlands (43%) and in the UK (39%) can be explained by the fact that a significant part of the purchase is done through an intermediary or advisor (52% and 47%, respectively).

Overall, in line with the pre-sale phase, the role of the provider, face-to-face during the purchase phase, was very significant for both personal loans (76% in the EU) and mortgages (64%), whereas the role of the intermediary and advisors is much more important for mortgages (29% in the EU) than for personal loans (13% in the EU). It is worth mentioning that the number of administrative documents required during the signature of a mortgage loan is generally higher than for personal loans. As such, the combination of the higher diversity of stakeholders and higher “documentation constraints” that are typical of the housing loans processes also makes the complete digitalisation of the sale phase more challenging for mortgage loans than for personal loans. As shown in Figure 4.4 below, this might explain why online sale from the provider was non-existent for mortgages in the EU, while it already reached a noticeable 6% on average for personal loans. This latter figure was nonetheless not distributed equally across the countries covered by the study: on one hand, the share of purchase directly from the provider online stood at 30% in the Netherlands, 18% in Finland, 17% in the UK and 15% in Estonia; on the other hand, it reached only 4% in France, 2% in Germany and 1% in Ireland, and was at zero in Poland).

Last but not least, it is worth mentioning that changes in the digitalisation of distribution channels have been so rapid in recent years that more recent data are needed to really appreciate the overall dynamics. This makes particular sense as some specific models of mortgage provision have been very recently developed with the purpose of offering mortgage loans primarily online.

Figure 4.5 Distribution channels for consumer- and mortgage loans (% , 2011)



Source: Euro barometer 2011 of the European Commission.

As regards personal loans, the Google Consumer Barometer Survey (2015) published the findings of its survey on the distribution channels for personal loans in different European countries. According to Google, the unweighted average market share of online and offline channels for personal loans in the countries covered by the study was as follows in 2015:<sup>206</sup>

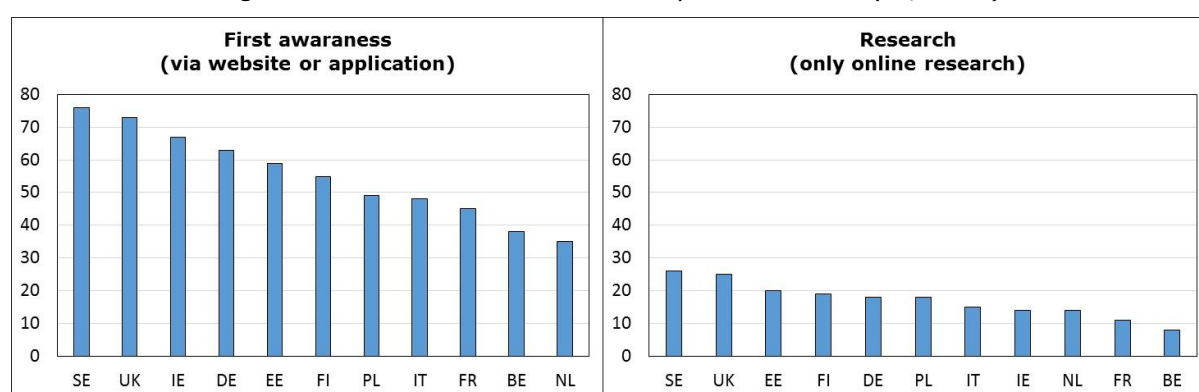
- First-time awareness of consumers (via website or application): 55.2%
- Research (only online research): 17.1%
- Research (only offline research): 19.1%
- Research (compared products/prices/features online): 37.2%
- Research/purchase (research online/purchase offline): 41.1%
- Research/purchase (research offline/purchase online): 20.8%
- Research/purchase (research offline/purchase offline): 51.5%
- Shared purchase experiences on social network(s): 9.1%

Given that broadly one decade ago, online channels were almost non-existent, the digitalisation of the interactions between providers and consumers has been spectacular. These fast developments are mainly due to the growing internet penetration into the habits of the European population at large.<sup>207</sup> Nevertheless, the intensity of the digitalisation of distribution channels varies significantly both across the different countries and the different phases.

For example, regarding the shares of “online first awareness”, “only online research” and “online comparison of products”, Sweden scores remarkably high, while Belgium and France are consistently very low. France and Belgium still score very high for “only offline research” and “research offline and purchase offline”, whereas Estonia, Sweden and the UK reach very low levels.

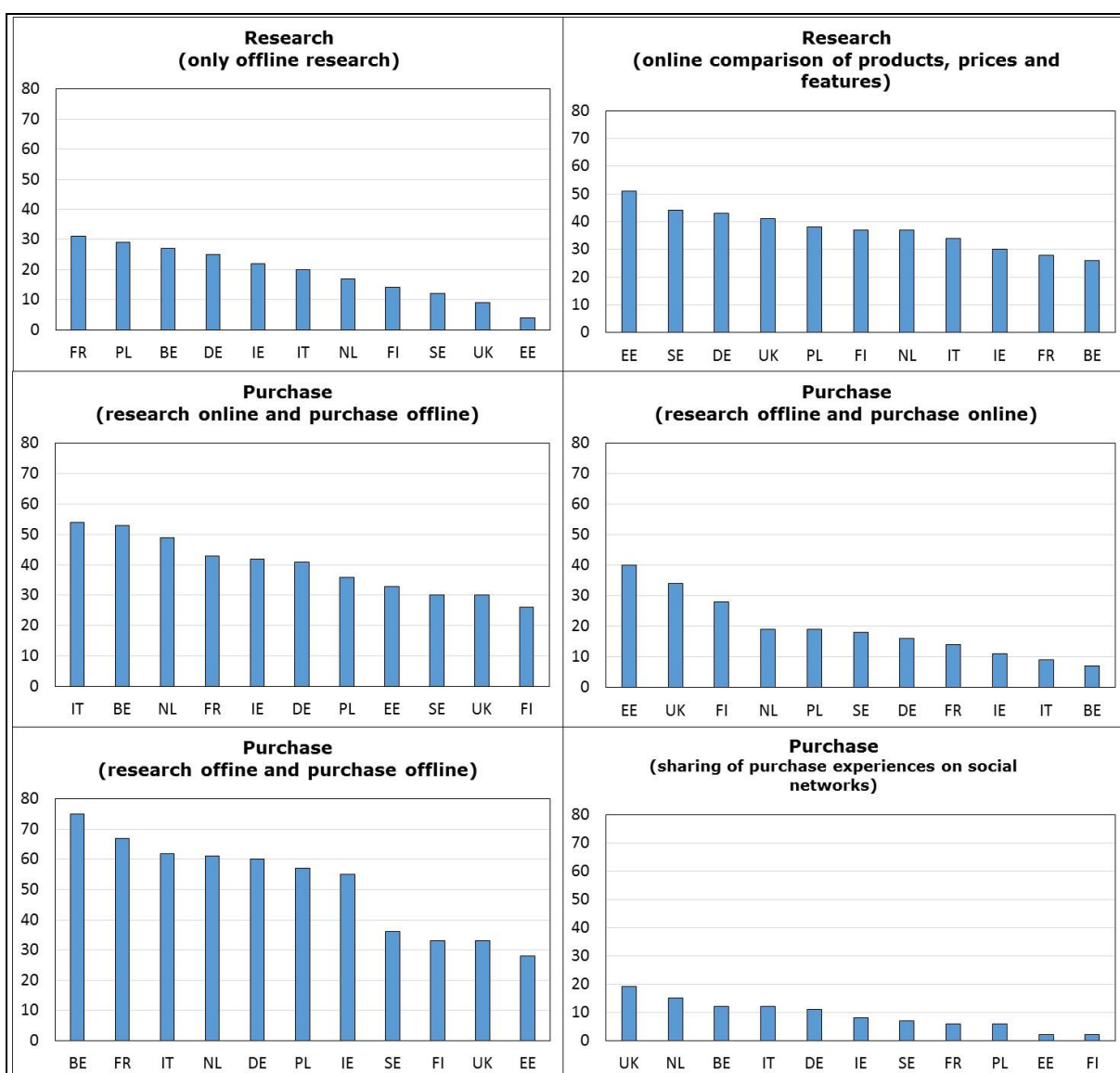
As regards differences across the different phases, the digital market share for “first awareness” is higher than for some elements of the research process. For instance, on average 55.2% of first awareness of the product is made via digital channels, while only 37.2% of consumers will compare products online. The respective market shares reach 67% versus 30% in Ireland, 63% versus 43% in Germany, 73% versus 41% in the UK and 76% versus 44% in Sweden.

Figure 4.6 Distribution channels for personal loans (% , 2015)



<sup>206</sup> As sufficient data are not available for Luxembourg, the country has not been integrated into these charts. In order to have more data on Scandinavia, Sweden has been integrated into the charts.

<sup>207</sup> For example, according to Eurostat, the share of the EU-28 individuals who have never used the internet contracted from 42% in 2006 to 21% in 2013.



Note: Figures on Luxembourg are not available.  
Source: Google Consumer Barometer Survey (2015).

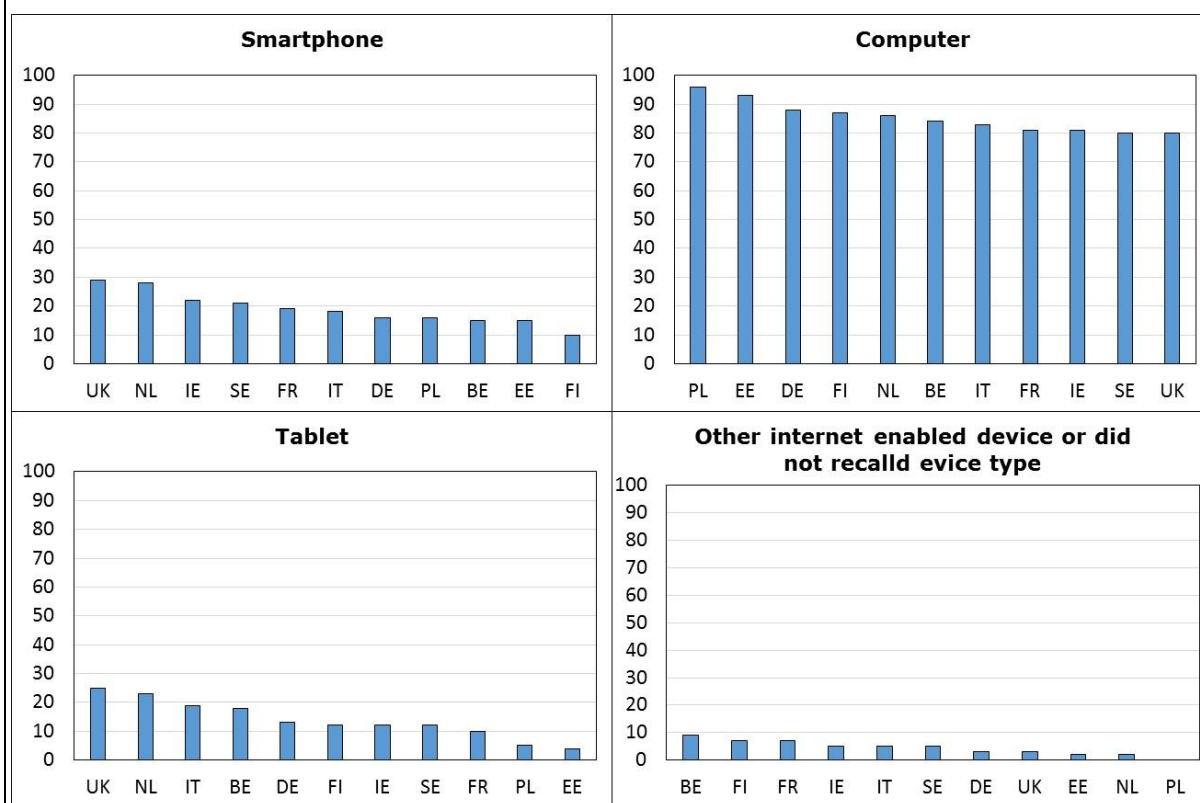
Still according to the Google Consumer Barometer Survey (2015), the most important device used for product research on personal loans remains the computer: on average 85% of the consumers using online distribution channels connected at least once through this device. Due to the still limited number of alternatives, all countries recorded a share above 80%. The corresponding unweighted average for smartphones and tablets stood at only 19% and 14%, respectively.

Nevertheless, only a few years ago tablets and mobile devices were absent in the distribution channels of personal loans. In that context, the growth in the use of these devices has been very pronounced and most likely the related shares will continue to grow at a steady pace in the forthcoming years, especially for smartphones. This potential shift from personal computer towards mobile devices to carry out online activities has been identified by many stakeholders in the study as one of the main drivers of innovation in both the collection of data and their use to improve the efficiency of digital distribution channels, notably through the development of data analytics. In this respect, an increase in mobile connectivity will allow for a better use of data collected via geolocation systems and could help providers know their consumers better when they purchase products, do payments, contract loans, etc.

Developing high-performing mobile applications will therefore be crucial for providers to compete in the coming years.

Importantly, the aggregate figures in percentages by country are all much above 100%, as a result of the hybrid consumer behaviour regarding the use of devices. A significant share of consumers adopt a hybrid approach towards devices, as they use different types during the pre-sale and sales phases.

Figure 4.7 Devices used for product research on personal loans (% , 2015)



Note: Figures on Luxembourg are not available.

Source: Google (2015, Consumer Barometer Survey).

## Convergence in the design of digital interfaces

Should the assumption of completely digitalised distribution channels be respected, questions remain on the differentiation across countries regarding the way these digital interactions are designed. For example, so far comparison websites have almost exclusively focused on their respective domestic market and the digital tools they propose to the consumer have a strong level of "domestic content": domestic language, types of data provided for comparison based on a domestic framework etc.

However, according to many reports, digital elements such as digital layout, digital customer experiences, and so on, have been converging in recent years, both within and across countries, and financial services have been no exception. Convergence in design patterns and user experience results from the typical maturing of innovative technologies, and should continue in forthcoming years. Partly by following cultural conventions that are more and more globally defined, consumers have increasingly similar expectations about the position of the logo, search box etc. Furthermore, this rapid convergence trend is being reinforced by the fast development of mobile

technology. Web design companies who place emphasis on websites and applications for retail financial services (such as household loans) and those who provide solutions in different countries are also participating in this converging trend. For example: UX Design Agency (Latvia, 2012), EBankit (Portugal, 2014), Etronika (Lithuania, 2000) and Backbase (2003, Netherlands). This whole convergence should improve noticeably the accessibility of consumers to foreign websites with broadly similar ways of interacting digitally, and in the end the use of a foreign language might remain the only significant barrier to cross-border demand.

### **Use of structured and unstructured data**

For both consumer and housing loans, providers need data during each phase of product distribution. The use of data is traditionally very important for the marketing of the product (in the pre-sale phase) as well as for approval and pricing (the sale phase). Nevertheless, it is playing an increasing role in the post-sale phase as well, as providers are increasingly focusing on a prevention approach during the repayment phase.

At present mainstream banks are primarily using structured data<sup>208</sup> collected in-house (especially through the other products held by the consumers, such as his current account or his savings accounts) and externally during the different phases of loan provision (especially through credit bureaus).<sup>209</sup> Nevertheless, the marked growth in the volume of unstructured data<sup>210</sup> stored in recent years is generally perceived as a potential game-changer for all retail activities such as providing loans to households, especially as broadly 62% of all digital data stored in 2015 consist of unstructured data created by consumers. Over the last five years, the total amount of unstructured data might have expanded by as much as a tremendous 48% a year, with unstructured data created by consumers being the main engine behind this growth. A significant part of the growth in unstructured data created by consumers comes from their increasing use of social media. For example, according to the Pew Research Centre, the share of the US internet-using adults that use social networking has increased markedly since the early stages of social networking, expanding by almost 70 percentage points from 2005 to 2015.<sup>211</sup>

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<sup>208</sup> These data generally reside in a relational database and as a result, it is sometimes called *relational data*. This type of data can be easily mapped into pre-designed fields. For example, a database designer may set up fields for phone numbers, post codes and credit card numbers that accept a certain number of digits. Structured data have been or can be placed in fields like these. Semi-structured data do not reside in a relational database but does have some organisational properties that make it easier to analyse (such as tags or other markers to separate semantic elements, and enforce hierarchies of records and fields within the data). Examples of semi-structured data might include XML documents and NoSQL databases.

<sup>209</sup> Internal structural data can be collected during the pricing process when the consumer is asked specific questions on his income, the type of his working contract, etc. This data are often combined with external structured data, such as the databases developed by credit bureaus.

<sup>210</sup> Unstructured data are the opposite of structured data and refer to information that does not reside in a traditional row-column database. Unstructured data files often include text and multimedia content. Unstructured data can also be collected both internally and externally. The former can be collected from surveys and market research, call centres, consumer complaints and feedback, emails, text messages etc. The latter concern data from social media such as Facebook, Twitter, Google+, YouTube, LinkedIn, Pinterest, Instagram, blogs, customer reviews, user generated content, etc.

<sup>211</sup> As expected, the 18-29 age group was the first to grow and in mid-2008 two thirds of those of this generation that were connected already used social networking. It took more time for all generations to pass to half of the related online population, but by mid-2015 all segments had at least half of their online population using social networking: 92% of 18-29, 81% of 30-49,

These trends could potentially have a significant impact on the cross-border sales of both consumer and housing loans. Indeed, the inherently fast development of social media data has key advantages for businesses that aim at developing on a cross-border basis all around the EU-28 or even the world: global presence, global standardisation and easy access. A social media platform such as Facebook is relatively standardised at a global scale: the tools, the platforms, the digital interactions and therefore the type of information collected are pretty similar all around the globe, and the development of an algorithm that allows it to process social media data could be applied at an international scale without insurmountable obstacles. As the three main characteristics of big data are often analysed as being volume, velocity and variety, these trends could offer plenty of opportunities for marketing, scoring and even prevention for loan providers to non-residents.

#### *Pre-sales: innovation in the use of data for marketing of loans*

The debate often places much emphasis on how unstructured data such as is produced by social media are affecting and will affect marketing processes in retail activities, such as loans. According to EFMA (2013), in 2013, banks were at an early stage of the use of big data for marketing purposes, but “there was still much to be done”.<sup>212</sup> Before 2013, “social media had been mostly used as a brand communication tool and for corporate social responsibility activities. The push for product sales had been very limited and mostly banks did not see social media as a strong “channel” for product sales in the near future. Nevertheless, one bank predicted that, by 2017, less than 5% of sales would be on social media”.

Several European mainstream banks have been identified in the present study as having used social networks such as Facebook in recent years to acquire new consumers. In the meantime, some mainstream banks are building partnerships with large online companies such as Google or Facebook.<sup>213</sup>

#### *Sales: Innovation in the use of data for scoring*

The key point for better use of data in household loans activities is most likely how credit scoring and prevention of missed repayment could be transformed into the coming years thanks to these new approaches. As analysed above, the market for innovative scoring techniques for credit is growing significantly across Europe and in the rest of the world.

There are two main objectives behind most of the new techniques that are partly or fully based on social media data: on one hand, in many cases, the objective is to compensate for the lack of data available in a specific market (due to the absence of an institutional framework to collect reliable and relevant credit data). On the other hand, the purpose is to raising financial inclusion and to create business opportunities with this approach, especially within the segments of consumers that have traditionally low access to the credit market.

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67% of 50-64 and 56% of 65+. Figures are likely to be broadly similar in Europe, albeit with differences across countries.

<sup>212</sup> The analyses can be found in the “Global Retail Banking Digital Marketing Report” by EFMA (2013) ([www.finextra.com/finextra-downloads/newsdocs/the-global-retail-banking-digital-marketing-report-2013.pdf](http://www.finextra.com/finextra-downloads/newsdocs/the-global-retail-banking-digital-marketing-report-2013.pdf)).

<sup>213</sup> For example, BNP Paribas has already developed partnerships with Facebook, Google, LinkedIn and Twitter ([www.bnpparibas.com/en/news/press-release/bnp-paribas-first-european-bank-partner-facebook-google-linkedin-and-twitter-goal](http://www.bnpparibas.com/en/news/press-release/bnp-paribas-first-european-bank-partner-facebook-google-linkedin-and-twitter-goal)).

The first objective concerns, first of all, emerging economies<sup>214</sup> and a limited number of countries in the EU28. Under the second objective, the European segments of consumers that are targeted by providers of these new types of creditworthiness techniques include (the list is not exhaustive):

- Low income groups;
- Households without permanent working contracts;
- Households with a stable financial situation but with a poor past financial record;
- Households with thin credit profiles (especially young consumers that have never been involved in retail financial services, new migrants, etc.); and
- Households in a potentially fragile financial situation (recent divorcees, etc.).

As stated in the section 4.1.1 on “products”, some lenders such as Kreditech in Germany have quickly developed their activities on a cross-border basis by using innovative scoring techniques based notably on social media data, and by exploiting market opportunities in terms of a lack of data in specific countries. For example, Kreditech provides a significant number of consumer loans in Spain, where the percentage of adults covered by credit databases remains low by European standards: in 2015, according to the World Bank, this coverage reached 49.8% for the public credit registry and 14.1% for the private credit bureau. Many lenders that have not followed a cross-border pattern to expand their loan activities also use new scoring techniques that include using social media data, often by targeting thin-file customers such as millennials and recent immigrants. They have the potential to develop cross-border sales.

Finally, some other start-ups do not directly provide loans, but contribute to shaping new scoring techniques for existing lenders and might have the potential to boost cross-border loans as well. For example, FriendlyScore was created in 2014 in the UK, providing solutions to many types of lenders based on online data sources such as social media, transaction and behavioural data online, and plans to become the “first international social media credit bureau servicing financial institutions”.<sup>215</sup> Big Data Scoring is a cloud-based service that was founded in 2013 and that has offices in Finland, Poland and the UK, as well as in Chile and Indonesia. They build scoring methodologies based on data from publicly available online sources in different European countries.

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<sup>214</sup> Various companies providing scoring techniques aimed at making the best of social media data are located in advanced economies but provide this creditworthiness (with or without loans; when there is a loan, it is often based on a peer-to-peer model) for the emerging middle-class in developing economies that most of the time has poor access to the credit market notably owing to the lack of data. For example, Lenddo was created in 2011 and is currently headquartered in Hong Kong, whereas it provides scoring techniques for lenders in the Philippines, Colombia and Mexico. In Europe, Credible was founded in 2015 in Luxembourg with the objective of raising financial inclusion in the BRICS countries (Brazil, Russia, India, China and South Africa) and the Arab world through the use of alternative credit-scoring combining borrower financial profiling and digital footprints from social media.

<sup>215</sup> More information on the business model and methodologies developed by FriendlyScore can be found in <https://friendlyscore.com/page/about-us>.

*Box 4.3 The increasing use of social media data in credit scoring*

In recent years, an increasing number of companies have developed innovative loan scoring that results from some combination of unstructured data based on social media data, proprietary self-learning algorithms and automated workflows to acquire, identify and underwrite customers within a very short time. As analysed by PricewaterhouseCoopers (PwC) for the US lending market, the use of social media data to refine credit scoring can contribute to personalise scoring and sell other products. For that purpose, the collect of data can focus on different characteristics (the list below is not exhaustive):<sup>216</sup>

- Personal network
- Professional network
- Languages

As regards personal networks, as shown by Chrysanthos et al. (2014),<sup>217</sup> the social network approach to develop credit scoring does not differ significantly from the old days when lenders were providing loans based on who knew the potential borrower in the community or the neighbourhood. Should a sufficient number of households try to manipulate their social network in order to improve their scoring, this phenomenon could have in the end a significantly positive contribution to the financial responsibility of the households concerned.<sup>218</sup>

The use of the network provided by social media data is already used for a significant amount of consumer loans, especially when it concerns the segments of households identified above, and it is likely to expand further in the near future. It could also be increasingly used for specific housing loans that include guarantees from external persons to secure the loan. Due to the increasing difficulty for first time buyers to acquire dwellings in a context of persistent high housing prices,<sup>219</sup> banks have, for example, developed different mortgage products that link the borrower with relatives: the Family Springboard Mortgage by Barclays (2013), and the Family Deposit Mortgage from Market Harborough building society, are two such examples.<sup>220</sup>

<sup>216</sup> See "Is it time for consumer lending to go social? How to strengthen underwriting and grow your customer base with social media data" (2015) by PricewaterhouseCoopers ([www.pwc.com/us/en/consumer-finance/publications/assets/pwc-social-media-in-credit-underwriting-process.pdf](http://www.pwc.com/us/en/consumer-finance/publications/assets/pwc-social-media-in-credit-underwriting-process.pdf)).

<sup>217</sup> Chrysanthos, D., C. Vand den Bulte, Y. Wei and P. Yildirim (2014), "Credit scoring, with social network data", *Marketing Science*.

See: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2475265](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2475265).

<sup>218</sup> According to Chrysanthos et al. (2014), *ibid.*, when the lender can see a group of financially responsible households around the borrower, then the lender has more confidence and a higher belief that the borrower is indeed financially responsible.

<sup>219</sup> Mainly as a result of the significant increases in housing prices recorded in the last 10-15 years, first-time-buyers (FTBs) are increasingly relying on generational transfers to acquire a dwelling. For instance, according to the Council of Mortgage Lenders (CML), in 2011 two-thirds of FTBs in the UK received help from parents when purchasing a house, up from less than one-third in 2005, leaving those who do not have parents or relatives to help with few options other than renting or staying at home.

<sup>220</sup> The scheme allows first-time buyers to get a reasonably competitive mortgage with just a 5% deposit – provided they have a relative willing to put up some of their cash as security. The buyer takes out the mortgage, while their "helper" opens a Barclays Helpful Start savings account linked to the loan. The helper then puts an amount of cash equivalent to a certain % of the property purchase price into the account, which pays a specific amount of interest (Bank of England base rate plus 1.5% in 2013). This means Barclays can lend the buyer 95%, so they only have to come up with a 5% deposit. While these types of deal are very much targeted at

As the number of these mortgage products is likely to grow significantly in the coming years, the use of social media data such as personal network could help to improve underwriting and limit financial risks. Lenders could have access to the financial past and evolution of the relatives that provide the guarantee in order to assess their creditworthiness during the approval phase and even afterwards during the repayment phase. Furthermore, it could help specific segments of households with thin credit files to get access to this type of credit. Nevertheless, such an approach also contains some risks. Persons who are leveraged within the personal network of the borrower to secure a loan for themselves can also be given credit scores. If the borrower fails to reimburse a loan, the credit score of everyone will be negatively affected and their chance to get a loan by themselves could decrease.

The approach that uses professional networks is broadly similar. According to PwC, depending on the professional background and level of income of the members of the professional network of the candidate, the lender could determine if the candidate has strong job stability or significant potential professional ascension in the near future.

Finally, a lender can check the correlation between the use of a specific language and the ability of borrowers to reimburse.<sup>221</sup> For example, the use of information such as the frequency of particular words in posts and other supports of consumers and the application of specific complex algorithms might help predict lending behaviours with increased accuracy (although the causal link might not make sense in many cases).

#### *Sales: Innovation in the use of data for faster scoring*

In a context of growing digitalisation and technological ability, the objective of numerous loan providers to boost the speed of scoring could contribute to further cross-border sales, as it could ease the application process significantly for consumers. This approach could include both consumer loans and housing loans. Nevertheless, given that the whole approval process takes much more time for housing loans, due notably to the involvement of several external stakeholders, the speed of scoring does not play such an important role for potential cross-border sales.

The speed of processing scoring has become a key objective for many emerging business models that aim at offering consumers the loans they need as soon as possible. This approach is especially important for unsecured consumer loans and different start-ups have placed much emphasis on this fast service. These companies often use innovative techniques based on simple structured data to perform these scorings, and they promote the speed of the scoring as a comparative advantage. For instance, on its website, Aire in the UK emphasises that it takes only three minutes to build their credit profiles (with all data provided based on consent),<sup>222</sup> whereas

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first-time buyers, some are also open to those trying to get further up the property ladder; Family Springboard includes such buyers.<sup>220</sup> Other UK banks have developed similar products. For instance, the Family Deposit Mortgage from Market Harborough building society works like the Family Springboard Mortgage.

<sup>221</sup> According to Chrysanthos et al. (2014), op. cit.

<sup>222</sup> Aire is a start-up launched in the UK in 2014 that targets consumers with a "thin-file", namely consumers that do not have much in the way of a financial history in their file: some young consumers such as students, some immigrants and expatriates, some recent divorcees etc. Many of these consumers do not have a credit card, a consumer loan or a housing loan. In that context, these consumers do not create the trail of data that are typically entered into a credit-scoring algorithm. As a result, the credit-scoring bureau generally cannot give a reading

CreamFinance,<sup>223</sup> in Central and Eastern European economies, highlights that scoring, approval and transfer to the bank account can be as fast as 15 minutes.

*Post-sales: Increasing use of data for prevention*

On the provider side, one of the main barriers to cross-border sales of loans is the difficulty in organising a cross-border collection process when difficulties in repayment arise. Given that litigation can be conducted only in one country and the judgement does not systematically apply to the other countries, such situations involve time, money and multiple legal difficulties for both providers and consumers, especially as redress mechanisms and foreclosure procedures differ markedly across countries. This barrier affects both consumer and housing loans, no matter whether they are secured or not. Nevertheless, some digital trends might help overcome this barrier by further emphasising a prevention approach rather than a litigation approach.

Until recently, loan providers and borrowers typically followed four specific steps before entering possible litigation:

- Credit-worthiness is assessed in line with the provisions contained in the CCD and MCD on the obligation of customer creditworthiness for any loans, as well as specific local requirements.<sup>224</sup>
- If the creditworthiness is found to be satisfactory, the lender and the borrower come to an agreement with specific interest rates, duration, monthly repayment, conditions in case of late repayment, etc. and they signed a loan contract.
- Although the creditworthiness assessment may have been performed properly and the repayment schedule was designed in line with the financial resources of the customer, sometimes specific unanticipated events occur on the customer's side, resulting in missed payments and arrears. The lender then initiates a collection process. For specific business models, this collection process is done essentially through call centres, while for others, a debt collector goes directly to the home of the customer (this is especially true for payday loans). The objective is often to restructure the repayment schedule in order for both the lender and the borrower to find a new agreement that might be permanent or temporary.
- The original collection process might not result in a favourable outcome for the lender and a specific litigation process is initiated. This involves the transfer of the file to judicial institutions.

In recent years, some national regulators in the EU have gone beyond the recommendations and provisions included in European directives such as the Consumer Credit Directive (CCD) or the Mortgage Credit Directive (MCD),<sup>225</sup> by

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on their credit. In that context, Aire has developed an algorithm that needs to by understanding some basic information about the consumer through the building of a credit profile.

<sup>223</sup> CreamFinance, founded in 2012 in Latvia, offers products in the Czech Republic, Georgia, Poland, and Slovakia and should soon start in Denmark. At the core of the business model, the company makes consumer finance quick-to-access by using advanced algorithms and machine-learning capabilities to quickly evaluate and score for microloans, instalment loans and credit line. According to the company, the related data model is based on a "smart data" rather than on a "big data" approach. As such, they rely on traditional financial metrics such as a borrower's income and monthly expenses, and the main objective is to have fast transfers to the bank account.

<sup>224</sup> Such a process resulted from the use of some combination of structured data that had been collected in-house with external structural credit data provided by credit bureaus.

<sup>225</sup> For example, see Article 45 in the MCD:

gradually placing the focus on a risk-management approach for over-indebtedness not only before the signature of a loan agreement, but also during the repayment period.<sup>226</sup> Various member states, notably France,<sup>227</sup> have adopted general recommendations on the need for providers to implement processes of detection of potential over-indebted households (projecting into the future) and to organise an appropriate accompanying of the concerned households when necessary.

In that context, an increasing number of lenders are developing early warning systems that identify on a regular basis the likelihood of a customer missing a repayment before it materialise.<sup>228</sup> Should any customer score above specific thresholds, the loan provider uses a specific process to approach the consumer and, if needed and possible, can find a temporary or permanent new agreement to reorganise the payment schedule. Within this framework, lenders are able to identify vulnerable customers before their financial difficulties become insurmountable and, often, to offer personalised solutions where needed, even before initiating the collection phase. In that context, the initiation of a collection phase, often costly in terms of resources for both lenders and borrowers, could be avoided. For difficult situations, other organisations (such as Vroeg Eropaf in the Netherlands)<sup>229</sup> can even be involved to help borrowers and lenders find a pro-active solution.

The overall objective of such a process, which relies on quality microeconomic data and strong algorithms, is to avoid the collection phase and the resulting issues in terms of foreclosure and repossession. The increasing amount and diversity of data available and the growing possibilities in terms of use and algorithms have already contributed to refine this scoring approach, and the efficiency of this system is expected to improve significantly in some parts of Europe in the foreseeable future. In that context, the need for litigation might go down, as both lenders and borrowers could find solutions before initiating a judicial process. Pushing the analyses further, very efficient early warning systems schemes based on reliable data and resulting in very low arrears could encourage lenders to boost their cross-border loans, provided that they have foreign data of sufficient quality and quantity, and the role of collateral might even lose its significance.

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(<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0017&from=EN>).

<sup>226</sup> See Bouyon S. (2015), "Towards a balanced contribution of household credit to the economy", *CEPS-ECRI Task Force Report*, CEPS and ECRI, Brussels, May ([www.ceps.eu/publications/towards-balanced-contribution-household-credit-economy](http://www.ceps.eu/publications/towards-balanced-contribution-household-credit-economy)).

<sup>227</sup> The French government adopted in November 2014 some recommendations requiring financial institutions to implement early warning systems in order to detect potential over-indebtedness during the repayment phase.

See:

[www.legiFrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000029750217&categorieLien=id](http://www.legiFrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000029750217&categorieLien=id)

<sup>228</sup> Some lenders also use a purely voluntary approach where customers can directly inform the lenders of their possible future difficulties through call centres or even digital platforms (the main advantage of the latter is that they are available continuously). The main advantages are that it should contribute to developing confidence between lenders and borrowers, as this approach seems less intrusive than the second one. Nevertheless, it is relatively risky, as a significant share of the future over-indebted are not truly aware of their difficulties. Even if they are aware of them, still a significant share will not voluntarily contact the provider to inform them.

<sup>229</sup> For more details on the business model of Vroeg Eropaf, see [www.bkr.nl/zakelijk/nieuwsbrieven/nieuwsbrief-mei-2015/project-vroeg-eropaf-werpt-vruchten-af/](http://www.bkr.nl/zakelijk/nieuwsbrieven/nieuwsbrief-mei-2015/project-vroeg-eropaf-werpt-vruchten-af/).

At present, these techniques are used for consumer loans rather than for housing loans, due notably to the shorter period of reimbursement needed (thus less data updates). However, increasing efficiency in the implementation of these techniques, entailing lower implementation costs and better detection, could result in extensive use for housing loans too.

*Box 4.4 A typical "data methodology" used for early warning schemes for loans*

Typical preventive scoring covers large samples of households that are typically customers of the lenders. In that context, the provider can collect, in-house, a significant amount of structural data on the financial situation of customers and any other relevant data that is in line with privacy rules. These data are very often combined with external credit data produced by credit bureaus.

This type of scoring often requires, first of all, a criterion of fragility. This can be the risk that a loan will be in arrears for a certain period or simply the risk of entering a collection phase. In addition, the time horizon has to be clearly identified (this type of prevention scoring places the focus on short-term risk; therefore the time horizon could be between three months and nine months). Then, multiple financial variables are used, such as the number of credits or the number of times that the customer has been in a collection phase during a certain period. Specific non-financial variables can also be used, provided that the provider can have access to it. A typical non-financial variable that does not cause significant problems in terms of privacy compliance is the status of the customer on the real estate market (tenant, living with his family, owner who occupies his dwelling, etc.). This variable is commonly used for prevention scoring for consumer loans, as it often proves to be relevant. For each variable, a significant value or threshold can be identified beyond which the customer might be at risk.

The research in the present study reveals that these early warning systems are being developed by lenders in Ireland, France and the UK. In Germany, specific software such as Cawin has been developed to help lenders identify the typical households that may enter over-indebtedness.<sup>230</sup> In many cases, these scorings have contributed to identifying a significant share of the customers for which the defined risk finally materialises within the defined time horizon.

In recent years, there has been more and more research on the different paths to household over-indebtedness and the different factors behind it. Beyond a pure academic approach, such research trends also aim at providing tools to lenders for the purpose of improving the efficiency of the household credit market. This is especially true in the United States where the findings of this research topic contribute to the improvement of preventive scoring.<sup>231</sup>

In Europe, based on the fast growth in microeconomic data, the central banks are also promoting this type of research. For instance, the Banque de France recently published the result of a survey<sup>232</sup> it conducted with a representative sample of households, which identified five main situations that can lead to over-indebtedness:

- Job loss or deteriorating employment situation (23% of the sample);
- Constrained budget (17% of the sample);
- Routine use of credit (14% of the sample);
- Inter-generational assistance (5% of the sample); and

<sup>230</sup> For more details on the software developed by Cawin, see [www.cawin.de/](http://www.cawin.de/).

<sup>231</sup> See, for example, Austin Community College (2014), "Detecting Early Signs of Default Risk", research report ([www.tgslc.org/pdf/Detecting-Early-Signs-of-Default-Risk.pdf](http://www.tgslc.org/pdf/Detecting-Early-Signs-of-Default-Risk.pdf)).

<sup>232</sup> See Bank of France (2015), "Study of paths leading to over-indebtedness", Paris ([www.banque-france.fr/fileadmin/user\\_upload/banque\\_de\\_france/La\\_Banque\\_de\\_France/study-of-paths-leading-to-over-indebtedness.pdf](http://www.banque-france.fr/fileadmin/user_upload/banque_de_france/La_Banque_de_France/study-of-paths-leading-to-over-indebtedness.pdf)).

- Conjunction of significant life events (41% of the sample): for example: job loss, separation, divorce, additional costs and substantial expenditure.

This growing research focus placed on the prevention of over-indebtedness after the signature of the loan contract implies that specific data need to be shared and used. The more refined these early warning schemes are, the more likely it is that loan providers might focus on cross-border sales. However, in parallel, they will need even more data on their customers, and the challenges associated with cross-border exchange of credit data and personal data might rise significantly.

#### **4.2.2 (Changes in) consumers' behaviour**

##### **Two types of borrower in the demand for foreign loans**

Before assessing the related impact of increasing digitalisation on potential cross-border demand for loans, it is necessary to analyse the different types of consumer on the market.

There are traditionally two types of consumer of loans. On the one hand, some consumers do not really compare products before purchasing and typically focus on loan amount, size of payment and how quickly they will have access to funds. Often, this segment of consumers has lower-than-average credit quality, and has an emergency or unplanned need of funds.

On the other hand, some segments of consumers with often higher-than-average credit quality are more thoughtful before purchasing a loan. Typically, they will put together the data and information they can find on the market, and compare the different available options. Before the emergence of digital pre-sale distribution channels, these customers were essentially getting this information on a face-to-face basis (brokers, commercials in banks, etc.) or via specific leaflets. This approach is especially common for mortgage loans, due to the complexity of these products and the high amounts often borrowed.

In a context of rising digitalisation, the differentiation between both groups regarding their potential demand for cross-border loans is ambiguous. Cross-border sales are typically more complex and perceived as more risky than domestic sales. More complex: because they require the analysis of more data, some of it being generally designed with different parameters and languages. (For instance, the data that consumers have to fill in on a comparative website can differ across countries). Perceived as more risky: because the number of unknown parameters is higher.

The first group is typically less risk-averse but, as specified, less prone to analyse data. The second group is more risk-averse, but more prone to analyse data. As a result, the approach to cross-border demand and the motive behind this demand differ across the two groups. Many consumers in the first group are getting increasingly digital, as a growing number of FinTech companies provide loans with innovative scoring techniques and sources of funding and place much emphasis on this type of consumer. Against that background, should these consumers not be able to find local products with mainstream lenders, the demand from them for foreign loans provided by alternative lenders might rise. As developed above, these consumers can be particularly interested in cross-border offers from peer-to-peer lending companies or loan providers such as Kreditech.

On the other hand, admittedly, a significant section of the consumers in the second group have also been increasingly connected to digital tools; however, their objective is to compare available products from mainstream lenders rather than look for alternative types of lenders. For that purpose, they can use the different tools available online such as comparative websites developed by intermediaries or mainstream banks (for example see below the comparison tools from ING Belgium)<sup>233</sup> for the purpose of providing consumers with large amounts of data during their decision process. These websites typically offer simulators and calculators for both consumer and housing loans, and are becoming increasingly popular, especially in countries such as the UK.<sup>234</sup>

In that context, a significant share of these “thoughtful consumers” are getting more and more ‘data knowledgeable’, notably by becoming continuously more familiar with large sets of data that they can exploit in order to optimise their financial decisions. These trends are especially important for housing loans, as the higher complexity of these products requires the processing of more data. Overall, the consumers in this second group are likely to ask for foreign loans provided by foreign mainstream lenders and their objective will be primarily to analyse which type of loan is more profitable, based on statistical criteria.

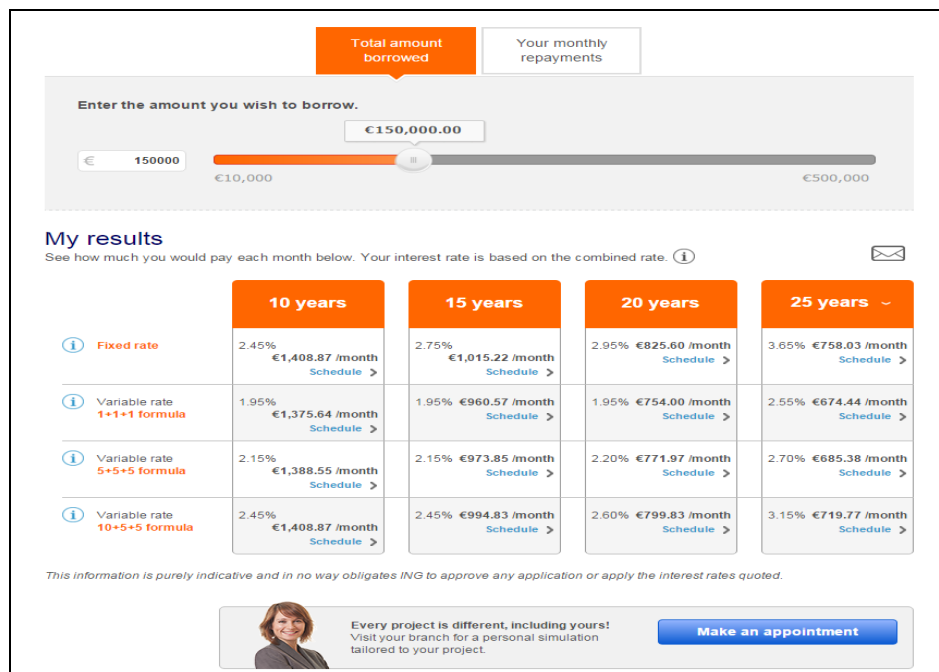
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<sup>233</sup> See for example the ING House Loan Simulator <https://promo.ing.be/loansimulators/>. For vehicles loans, see ([www.ing.be/en/retail/lending/vehicles/](http://www.ing.be/en/retail/lending/vehicles/)) and for personal loans for miscellaneous expenses see ([www.ing.be/en/retail/lending/others/household-spending](http://www.ing.be/en/retail/lending/others/household-spending)).

<sup>234</sup> For example, there are multiple comparison websites used in the UK by consumers reviewing domestic loan pricing (as well as other services). According to Search Engine Watch and the Stickyeyes Intelligence Report that was published in 2014, the UK price comparison websites covered more than 60% of all online traffic in the financial sector. The main UK comparison websites in 2014 were Moneysupermarket (33% of online traffic related to comparison websites), Moneysavingexpert (21%), Tescobank (12%), HSBC (6%), Halifax (5%), Santander (5%), Nationwide (5%), Barclays (5%), Compareandsave (4%) and Money (4%). Other comparison websites include Comparethemarket, Gocompare, Uswitch, Lovemoney and Which. The significant success of Moneysupermarket and Moneysavingexpert (which both cumulate more than half of the traffic) is notably due to their organic search rankings, which have helped them dominate the search rankings for terms related to financial products such as loans. For more information, see: <https://searchenginewatch.com/sew/news/2439438/comparison-sites-dominate-UK-online-financial-services-market>.

These comparison websites incorporate data from all major UK banks and loan providers as well as some of the sites including peer-to-peer lending options. The consumer can select the amount he wants to borrow and the term of the loan. The websites will show him the different loan options available. He can see how much his monthly repayment will be and loans are sorted by repayment amount. All these websites provide comparison services for multiple other products such as car insurance, home insurance, credit card, gas, electricity, digital TV, broadband etc. In Italy, comparison websites have a lower influence on the market than in the UK; nevertheless, they still have a significant impact on retail mortgages and personal loan activities, as respectively 30.4% and 31% of the banking revenues related to these activities have been generated or influenced by online researches for data.

Figure 4.8 Example of online simulators/calculators



Source: ING (2016).

A digital trend that could help both groups of consumers in their search for resident or non-resident loans is the development of forums and social media. Thanks to these new online platforms, consumers have the ability to know about the purchasing experiences of other consumers, in order to build their opinion on a specific banking brand. This is again especially true in the UK, where for example a significant share of consumers of personal loans shares its purchase experiences on social networks. Word of mouth has likely remained the most important channel to know about a banking brand, but it might be gradually more corroborated by testimonials and 'likes'.

Going even further, in recent years, some start-ups have emerged in Europe with the purpose of developing a social networking platform that offers an acquisition channel for banks. For instance, in Poland, customers can connect on the Ybanking platform and when using a bank partnering together with Ybanking, they can get certain benefits from that.<sup>235</sup> Customers are paid for just using the same bank as their friends and relatives. In order to connect, customers have to invite one another to Ybanking and then to the particular bank. It is based on vitality and banks have no acquisition costs. Moreover, customers should be more loyal due to the network effect.

As analysed above, the global nature of these social media and forums could contribute to a rising demand for foreign loans, provided that the foreign language does not prevent consumers from consulting these websites. For the specific case of expatriates or commuters, this should not be an issue. For instance, the Ybanking service, which is offered in the Polish language, is accessible to the large Polish expatriate population around Europe.

<sup>235</sup> More details on the business model developed by Ybanking can be found at <https://ybanking.com/> or at [ww1.fintechforumx.com/show/products/ybanking](http://ww1.fintechforumx.com/show/products/ybanking).

## **New digital methodologies available to help consumers make financial decisions**

For the first group of consumers, as well as for the second group perhaps to a lesser extent, some aspects of digitalisation could reinforce their ability to analyse data when deciding about their loans on a domestic or cross-border basis. Regulators traditionally enhance financial education resulting from seminars at schools etc. as one of the main means to improve the data skills of consumers, which will be more and more needed as loan products become more complex.

However, in parallel, some specific FinTech business models have been developed with the purpose of providing innovative tools to help both consumers and providers better comprehend the financial behaviour of consumers. These companies often target the younger generation, which has in general higher digital literacy, by, for example, bringing machine-driven 'gamification' to offer personalised scenario plays.<sup>236</sup> For instance, AdviceGames is a company launched in the Netherlands in 2011 (and which presently is also in the UK) that aims at transforming consumer activation and engagement by solving behavioural financial questions with predictive intelligence.<sup>237</sup>

### **4.2.3 Remaining barriers**

#### **Remaining barriers to both consumer and housing loans**

*Pre-sales: The difficulty of branding for intermediaries and providers*

One of the main difficulties for any company that intends to sell loans to non-residents in a given foreign country is to build a brand in that country. Should the company target commuters that know well the country of the company and expatriates whose birthplace is shared with the company, then branding will not be a major difficulty. However, if the company targets non-residents who are not commuters and who do not have any connection to the country of the company, then the development of a known brand in this foreign country would be most likely very costly and in the end not profitable, even though these non-residents could be interested in these new products.

A typical example concerns comparative websites. In many of the countries covered by the study, well-established comparative websites are playing an increasing role in advice on products. However, almost all these comparative websites are essentially based within national borders and very few non-resident consumers know about the existence of comparative websites in other countries. Should any of these comparative websites decide to work with non-resident banks, they will most likely need to invest significantly in the marketing of the brand.

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<sup>236</sup> Gamification is the application of typical elements of game playing (e.g. point scoring, competition with others, and rules of play) to other areas of activity, typically as an online marketing technique to encourage engagement with a product or service.

<sup>237</sup> Among its key products that are offered to companies, AdviceGames provides "Games and gamified applications" and "Gabriel, the virtual guardian angel". The former provides personalised game play designed to contribute to reduce unhealthy financial behaviour and to encourage consumers achieve ideal financial goals. The latter aims at guiding and protecting consumers during their financial journey, by calculating the best solutions for the consumer's ever-evolving financial life. Such methods that can use a large set of data can be deployed at the different stages of loans: pre-sale (advice and marketing); sale (scoring) and post-sale (prevention).

One possibility to avoid these investments in branding would be that comparative websites remain within national borders and start comparing foreign products from well-known banks for the residents.

The different interviews and focus groups organised during the study reveal that comparison websites and online brokers have the potential to play a considerable role in the pre-sale phase and sale phase, as well as in the post-sale phase. Consumers increasingly use these online platforms mainly to improve their knowledge on market prices, so to choose the best offer based on their needs or to negotiate renewal.

One of the main barriers to these platforms in boosting cross-border activities is related to the national differences in terms of the initial information that consumers need to provide online in order to start their research. These differences depend on both natural barriers (such as social norms, habits, specific ways of structuring financial products) and structural barriers (such as specific compliance rules).

*Pre-sales, sales and post-sales: Key obstacles to the use of social media data*

One key obstacle to the collection and use of this social media data on a cross-border basis has been the differentiation in the domestic regulations, especially in terms of protection of personal data: what type of consent is needed from the owner of the personal data? To what extent do the lenders have to justify the purposes of the use of the data? As an agreement was found in December 2015 on the Commission's EU data protection reform, there is a high possibility that the differentiation in personal data protection across member states decreases in the coming years.

The reinforcement of the protection of personal data should contribute to a boost in the confidence of consumers towards the use of their data by companies. If specific rules such as the "right to be forgotten and to erasure",<sup>238</sup> easier access to your own data,<sup>239</sup> the right to know when your data have been hacked<sup>240</sup> and a right to data portability<sup>241</sup> were sufficiently harmonised across the EU28, consumers might feel more comfortable to engage in cross-border loans with a scoring partly based on their personal data. Equally, against the backdrop of common standards in the data provided by social media and harmonised protection rules for personal data, some loan providers might find great opportunities to develop cross-border sales, and boost innovation in prevention and scoring models at a European level.

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<sup>238</sup> See Article 17 of the GDPR (General Data Protection Regulation) at <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52012PC0011&from=en>. The "right to be forgotten" means that owners of the personal data can ask that his personal data be erased when he no longer wants his data to be processed, provided that there are no legitimate grounds for retaining it.

<sup>239</sup> See Article 14 of the GDPR at <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52012PC0011&from=en>. In the context of the concept of "easier access to your own data", individuals will have more information on how their data are processed and this information should be available in a clear and understandable way.

<sup>240</sup> See Articles 31 and 32 of the GDPR (<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52012PC0011&from=en>). The "right to know when your data have been hacked" means that for example, companies and organisations must notify the national supervisory authority of serious data breaches as soon as possible so that users can take appropriate measures.

<sup>241</sup> See Article 18 of the regulation of the GDPR (<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52012PC0011&from=en>). The "right to data portability" means it will be easier to transfer your personal data between service providers.

In parallel, regarding the use of this personal data, new norms should emerge regarding the ethics of the algorithms implemented. Admittedly, the personal data collected for marketing, credit scoring or prevention purposes are less sensitive than for sectors such as health insurance; nevertheless, there are still significant specific risks, such as enhanced discrimination or, paradoxically, higher financial exclusion of specific segments of consumers during the scoring phase. As stated by the European Data Protection Supervisor in its Opinion 4/2015,<sup>242</sup> ethics and human dignity remain primordial in the technologies of the future. However, the question remains as to “what extent the application of principles such as fairness and legitimacy to these new developments might be sufficient.”

*Sale and post-sale: Difficulties in using external credit data on a cross-border basis*

Different barriers usually impede the use of external structural credit data on a cross-border basis for the sales of consumer loans or housing loans:

- The institutional design for the collection and publication of external credit data varies significantly across the EU28.
- Differences remain in the coverage of the population.
- The types of data collected vary somewhat across countries.
- The exchange of data on a cross-border basis remains a marginal operation.

Overall, there are four main types of institutional design regarding the collector of credit data in the sample of countries covered by the study (see):

- system with a public credit register: Belgium and France;
- system with a private credit bureau: Estonia, Finland, Ireland, Netherlands, Poland and UK;
- dual system where both public and private credit bureaus operate: Germany and Italy; and
- system with no credit register or bureau: Luxembourg.

According to Pyykkö (2013),<sup>243</sup> a public credit register reports the coverage of individuals and firms with information on their repayment history, unpaid debts, or credit outstanding from the past five years – expressed as a percentage of the adult population. A public credit registry is defined as a database managed by the public sector, usually by the central bank or the superintendent of banks, which collects information on the creditworthiness of borrowers (persons or businesses) in the financial system and makes it available to financial institutions. A private credit bureau is defined as a private firm or non-profit organisation that maintains a database on the creditworthiness of borrowers (persons or businesses) in the financial system and facilitates the exchange of credit information among banks and financial institutions.

As shown in the Figure 4.9, the coverage of the adult population by credit bureaus varies markedly across Europe.

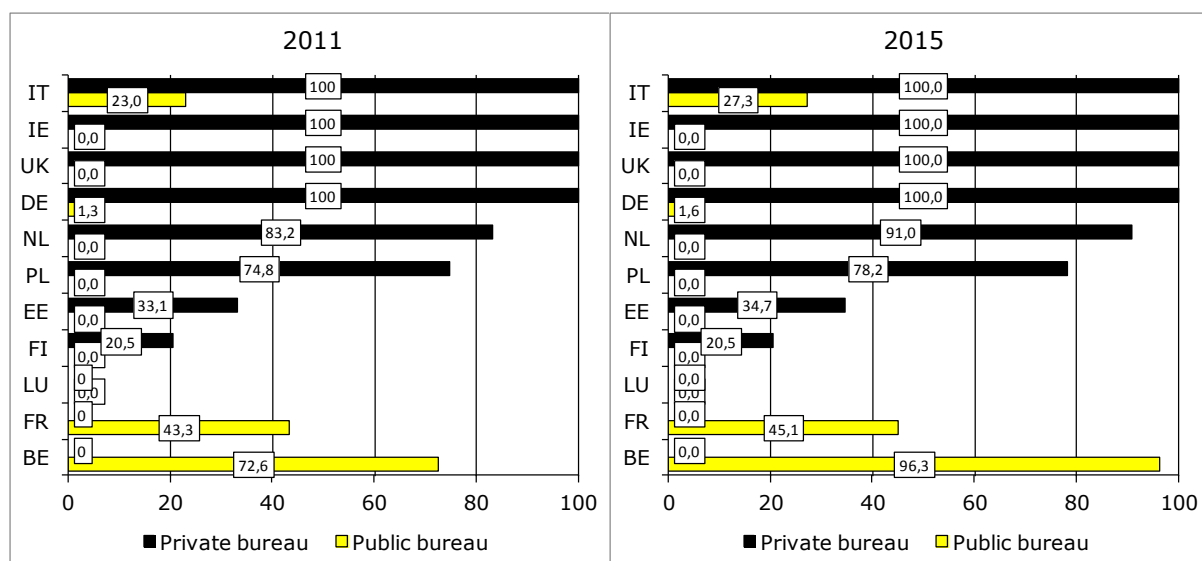
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<sup>242</sup> See Opinion 4/2015 “Towards a new digital ethics Data, dignity and technology” published by the European data protection supervisor in 2015

([https://secure.edps.europa.eu/EDPSWEB/webdav/site/mySite/shared/Documents/Consultation/Opinions/2015/15-09-11\\_Data\\_Ethics\\_EN.pdf](https://secure.edps.europa.eu/EDPSWEB/webdav/site/mySite/shared/Documents/Consultation/Opinions/2015/15-09-11_Data_Ethics_EN.pdf)).

<sup>243</sup> See Pyykkö, E. (2013), “Towards better use of credit reporting in Europe”, *CEPS-ECRI Task Force Report*, CEPS and ECRI, Brussels, September. See: ([http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2329950](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2329950)).

Figure 4.9 Private and public credit bureau coverage (% of adults, 2011 and 2015)



Source: World Bank (2016).<sup>244</sup>

According to the World Bank, in both 2011 and 2015, private credit bureaus in Italy, Ireland, Germany and the UK covered 100% of the adult population. Admittedly, the Dutch and Polish credit bureaus did not cover the whole adult population; however, the share of the covered adult population increased significantly over the 2011-15 period, as it went from 83.2% to 91.0% for the Netherlands and from 74.8% to 78.2% for Poland. On the other hand, the coverage remained low in Estonia (from 33.1% to 34.7%) and Finland (20.5% for both years).

For countries with dual systems (Germany and Italy), the public bureau covered only a small share of the population (broadly 25% for Italy and 1.5% for Germany). This implies that for a specific share of the population, data is available from both a credit bureau and a public bureau. To a certain extent, the credit bureaus are therefore competing.

Finally, in systems with only public credit registers, the French credit collector has increased its coverage tremendously between 2011 (43.3%) and 2015 (96.3%). On the other hand, in Belgium, the coverage has remained noticeably below half of the adult population.

As regards the differences in the types of external data collected, the information contained in Table 4.3 is based on the survey conducted in 2013 by the Association of Consumer Credit Information Suppliers (ACCIS) with credit bureaus in Europe that are members of ACCIS. It covers only Belgium, Germany, Italy, the Netherlands, Poland and the UK. Although the information might need some updating, this has been one of the most comprehensive surveys so far on the diversity of standards and type of credit data collected by the different credit bureaus across Europe.

Basic information on the identity of the consumer is collected in the credit bureaus of these 6 countries. In addition, as highlighted by ACCIS, "little data is captured on the wider family, hereby suggesting that the strong inter-dependence of the finances of spouses or partners and the debts of the financial units are not widely available to be

<sup>244</sup> The detailed data used in these charts can be found here: <http://data.worldbank.org/indicator/IC.CRD.PRVT.ZS>.

considered when making lending decisions. Most credit bureaus are not permitted to link together family data or make it available for use in making lending decisions. It is allowable in just three countries for the financial associations/family links to be held but in only two are lenders allowed to use this information when making decisions".<sup>245</sup>

As analysed above, if unstructured data, such as the those produced by social media, are used on a significant scale in retail financial services in the near future, loan providers might be able to complete structured credit data with data on relatives collected through other channels. Against such a backdrop, they might be able to refine markedly the scoring and approval process, as well as the prevention during the repayment phase. Data such the one collected via social media data could complete credit structured data rather than substitute to it.

The survey conducted by ACCIS helped also to get strong insights on the type of financial data credit bureaus collect across Europe. First of all, it is worth noting that little data seems to be available on the income of consumers, as only the credit bureaus in Poland and the UK provide this data. The publication of data on the wealth of consumers seems to be even less common, as only the credit bureau Experian (IE) provided it in 2012.

Typical information on loans is widely available, notably the limits, the original amount of credit, the outstanding amount, the payment terms of periodicity of repayment, the duration of loan, and the on-time payments. Specific data on arrears and defaults is also accessible in all or most of these six countries, e.g. on: bankruptcy, data on accounts that are settled, data on special payment terms for accounts in difficulty, court judgements, missed payments.

Overall, according to Table 4.3, the published data differs somewhat across these six countries. Nevertheless, this lack of harmonisation in the type of data collected does not seem to be insurmountable for credit providers that wish to develop cross-border sales and use data of foreign credit bureaus to that effect.

One specific dimension that might, however, not appear clearly in this table is that in some countries such as France, the collection of positive data is not allowed, whereas it is common practice in some other countries such as Germany. By positive data, we mean information relating to the financial accounts of an individual, which shows no defaults. In many countries, this may also include some early arrears of less than 60 or 90 days. Negative data concerns information relating to the financial accounts of an individual, which identifies serious arrears of more than 60 or 90 days and generally the commencement of legal action. This may include court action, bankruptcy or possession of property. Providers in a country such as Germany, which uses a significant amount of positive data for the scoring of consumers, might encounter significant difficulties in expanding into France by selling products on a cross-border basis.

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<sup>245</sup> According to ACCIS, "where consumers have any joint financial accounts or relationships with another family member, such as a husband or wife for example, then there is a high likelihood that the behaviour of either can have an impact on the other. This then has a knock on effect on the successful financial management of that unit. Where information about these relationships is not available to the lender there is danger that any decision may not be made using the full range of relevant information".

*Table 4.3 Consumer/borrower identity data and type of data collected by credit bureaus*

| <b>Consumer/borrower identity data</b>                                                                                                                                            | BE | DE | IT | NL | PL | UK |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|----|----|
| Name                                                                                                                                                                              | X  | X  | X  | X  | X  | X  |
| Other or previous name                                                                                                                                                            |    | X  |    | X  | X  | X  |
| Taxpayer or other unique identification number                                                                                                                                    | X  |    | X  |    | X  |    |
| Date of birth                                                                                                                                                                     | X  | X  | X  | X  | X  | X  |
| Gender/Title                                                                                                                                                                      | X  | X  | X  | X  | X  | X  |
| Address(es)                                                                                                                                                                       | X  | X  | X  | X  | X  | X  |
| Financial Associate - Spouse/Partner                                                                                                                                              |    |    |    |    |    | X  |
| Marital status                                                                                                                                                                    |    |    |    |    | X  | X  |
| Others (please describe)                                                                                                                                                          |    |    | X  | X  |    |    |
| Financial Associate - Person with whom have a joint borrowing arrangement                                                                                                         |    |    |    |    |    | X  |
| Bank account, document ID numbers                                                                                                                                                 |    |    | X  |    |    |    |
| Phone number                                                                                                                                                                      |    |    | X  |    |    |    |
| Fathers name/Husband's name                                                                                                                                                       |    |    |    |    |    |    |
|                                                                                                                                                                                   |    |    |    |    |    |    |
| <b>Type of data collected</b>                                                                                                                                                     | BE | DE | IT | NL | PL | UK |
| Income                                                                                                                                                                            |    |    |    |    | X  | X  |
| Asset e.g. shares, property, savings                                                                                                                                              |    |    |    | X  |    |    |
| Limit                                                                                                                                                                             | X  | X  | X  | X  | X  | X  |
| Original amount of credit                                                                                                                                                         | X  | X  | X  | X  | X  | X  |
| Outstanding amount                                                                                                                                                                |    | X  | X  | X  | X  | X  |
| Interest rate or information that rate is preferential                                                                                                                            |    |    |    |    |    | X  |
| Payment terms or periodicity of repayment                                                                                                                                         | X  | X  | X  |    | X  | X  |
| Duration of loan e.G. start & end date                                                                                                                                            | X  | X  | X  | X  | X  | X  |
| On-time payments                                                                                                                                                                  |    | X  | X  |    | X  | X  |
| Presence on rejected cheque list or status code to show cheque or repayment returned                                                                                              |    | X  | X  |    | X  | X  |
| Missed payments                                                                                                                                                                   |    | X  | X  |    | X  | X  |
| Do you hold information on the number of days loan is past due in addition to missed payment                                                                                      |    | X  |    |    | X  |    |
| Do you show data on accounts that are settled                                                                                                                                     |    |    |    |    |    |    |
| *Fully paid                                                                                                                                                                       |    | X  | X  | X  | X  | X  |
| *Partially paid and no further funds expected                                                                                                                                     |    | X  | X  | X  | X  | X  |
| *Written off/default                                                                                                                                                              | X  | X  | X  | X  | X  | X  |
| Do you hold data on special payment terms for accounts in difficulty?                                                                                                             |    | X  | X  | X  | X  | X  |
| Bankruptcy/insolvency data                                                                                                                                                        | X  | X  | X  | X  | X  | X  |
| Court judgements                                                                                                                                                                  |    | X  | X  | X  |    | X  |
| Note Interest rate can be partially calculated from instalment amount                                                                                                             |    | X  |    |    |    |    |
| Special payment terms: Suspension of payment for SMEs, Suspension of mortgage instalments for family. Suspension of payment for people living in the earthquakes - affected areas |    |    | X  |    |    |    |
| Yes, indication for the start of re-financing plan                                                                                                                                |    |    |    |    |    |    |
| Voluntary terminations on car loans, deceased                                                                                                                                     |    |    |    |    |    | X  |

Source: Association of Consumer Credit Information Suppliers (ACCIS), 2013.

Finally, the exchange of financial data on a cross-border basis remains a marginal operation.

*Table 4.4 Credit bureaus share data with or access data from bureaus in other countries*

| Country | Share | Access | If no, what is the reason for not sharing data? E.g. restrictive legislation? Lack of cross-border credit supply/demand? | Between which countries?                                                           | How many requests are there each year? Please indicate by country                                              |
|---------|-------|--------|--------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| BE      | Y     | Y      |                                                                                                                          | Germany, Netherlands (Schufa/BKR)                                                  | 10,000                                                                                                         |
| DE      | Y     | Y      |                                                                                                                          | European countries                                                                 | N/A                                                                                                            |
| IT      | Y     | N      |                                                                                                                          | Netherlands (BKR), Germany (Schufa), Austria (KSV) and Denmark (Debitor Registret) | Approx. 400 - Germany (2011)<br>Approx. 800 - Netherlands (2011)<br>Other countries' agreements are too recent |
| NL      | Y     | N      |                                                                                                                          | Germany (G); Austria (A), Italy (I) and Belgium (B)                                | G: 5,647, A: 212, I: 709 and B: 5,306                                                                          |
| PL      | Y     | Y      | There is a lack of credit supply and demand                                                                              | Germany                                                                            | Just started                                                                                                   |
| UK      | N     | N      | Lack of supply/demand                                                                                                    |                                                                                    |                                                                                                                |

*Note:* The table provides the answer to the question: Does your credit bureau share data with or access data from bureaux in other countries? [Y=Yes/N=No].

*Source:* Association of Consumer Credit Information Suppliers (ACCIS), 2013.

According to the findings of the survey conducted by ACCIS, 43% of responders confirmed that processes for cross-border sharing and access were in place. From the six countries in our sample and covered by ACCIS, Belgium, Germany and Poland had processes for both sharing and access, whereas Italy and the Netherlands had a process only for sharing and the UK had no process at all. Importantly, a lack of demand and differentiation in regulations were the two most common reasons mentioned to explain the low development of cross-border exchange of credit data.

### **Remaining barriers that concern only housing loans**

#### *Pre-sales and sales: Differentiation in taxation for housing loans*

As shown in Figure 4.4, the need for advice is significantly more important for housing loans than for personal loans. The main reason behind this is the complexity of mortgage products.

For example, should a loan provider offer the cross-border sale of housing loans in all European countries, it is relatively difficult for the provider to have a complete knowledge on the diverse taxation systems for housing loans in the EU. Given that governments have differentiated approaches towards home ownership, related interest tax relief policies vary markedly across the EU (from non-existent in Germany and the UK to very active in the Netherlands and Estonia). And, as shown in Table 4.5, these taxation policies also vary markedly over time. Furthermore, benefits entitlements should depend on a large spectrum of criteria (such as the location of the main residence, location of the income tax declaration etc.) and the final decision from the tax authorities is likely to be made on a case-by-case basis.

Against that background, the knowledge required of the adviser and seller needs to be continuously updated, which seems very challenging when dealing with the whole EU. Nevertheless, many consumers involved in cross-border loans would need this information only for the specific country where their tax declarations are supposed to be filled in.

Overall, one possibility would be to digitalise these different elements in a user-friendly way to help both the consumer and the provider understand and integrate these differences in taxes across countries and over time. This digitalisation might cover not only pre-sale distribution channels (through the advice process, which should help consumers appreciate the role of taxation when contracting a housing loan on a cross-border basis), but also post-sale distribution channels (through the development of a tax declaration directly on the website). Although challenging, this approach has already been used by companies operating in other areas such as in savings accounts where taxation policies also differ across the EU (see the German company Raisin).<sup>246</sup>

Table 4.5 Mortgage interest tax relief across selected countries

| Country | Tax relief measures?                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Belgium | Yes. All of the payments (interest, insurance, and capital repayment) can be deducted up to a ceiling of €2,770 for the first 10 years, and €2,080 thereafter. Under the political agreement of December 2011 on the reform of the federal system, mortgage interest deductibility is to be phased out at federal level and this competence transferred to regions as of 2014.                                                                                                              |
| Estonia | Yes. There is an overall limit of €1,920 on tax deduction for interests, education, donations and gifts. This ceiling was reduced in 2013 from a previous limit of €3,196.                                                                                                                                                                                                                                                                                                                  |
| Finland | Yes. Interest is deductible from capital income at 75% (80% in 2013). Beyond that, 30% of the mortgage interest costs exceeding income from capital and 32% for interest related to first homes can be credited against taxes paid on earned income. Deductions credited against earned income are limited to €1,400 for a single taxpayer and up to €2,800 for a married couple, and an additional €400 for each child up to two children.                                                 |
| France  | No. In 2010, subsidised loan schemes were introduced, targeted at first-time buyers, low-income earners, housing shortage areas and purchases of new housing, to replace the repealed tax relief. Between 2007 and 2010 there was a tax credit for equal to 20% of interest payments up to €3,750 per year, increased by €500 per year for each dependent person. The limits were doubled for couples.                                                                                      |
| Germany | No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Ireland | Yes, for loans taken out between 1st January 2004 and before 31st December 2012. The relief is granted as a tax credit, at rates varying between 30% and 20% (depending on the year the loan was taken out) of the interest on qualifying loans for seven years. Mortgage interest relief is restricted to €3,000 for single people and €6,000 for married/widowed taxpayers. The credit rates and the ceilings are higher for first-time homebuyers. The relief can be claimed up to 2017. |
| Italy   | Yes. Interest on mortgage loans for building or buying a principal residence is subject to a tax credit equal to 19% up to a maximum interest payment of €4,000 (i.e. a maximum tax credit of €760).                                                                                                                                                                                                                                                                                        |

<sup>246</sup> More information on the business model of Raisin can be found at [www.raisin.com/](http://www.raisin.com/).

|                |                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Luxembourg     | Yes, with a ceiling of €1,500 per person in the household. This is reduced to €750 after 12 year of occupancy. No deduction is available on second homes. As of 2013, the maximum deduction is being reduced by 50%, i.e. from €672 to €336 per taxpayer valid for each member of the household.                                                                                     |
| Netherlands    | Yes. Mortgage interest payments are fully deductible under the personal income tax system. As of 2013, new mortgages need to be paid off in full (at least as an annuity) within a maximum of 30 years to benefit from the relief. Moreover, the top deductible rate will be reduced gradually by 0.5 percentage points per year over 28 years, i.e. from 52% to 38%. <sup>247</sup> |
| Poland         | No. Loans taken out between 1 January 2002 and 31 December 2006 qualify for deductibility based on older provisions up to 2027.                                                                                                                                                                                                                                                      |
| United Kingdom | No.                                                                                                                                                                                                                                                                                                                                                                                  |

Source: Commission services, OECD (2014).

*Sales: differentiation in the administrative rules for housing loans*

As described above, cross-border housing loans concern four main types of client:

- Expatriates that purchase a primary house in their country of residence and contract the housing loan with a bank in their country of citizenship;
- Citizens that purchase a secondary house in a country different from their country of residence, and contract a housing loan with a non-resident bank located in the same country as the secondary house;
- Residents that purchase a primary house in their country of residence and contract the housing loan with a non-resident bank;
- Commuters that purchase a primary house in their country of residence, and contract a loan from a non-resident bank that is located in the country where they conduct their activities on a regular basis.

<sup>247</sup> Taxation for housing loans in the Netherlands have been structured in a way that it is very attractive to have a relatively high mortgage. The mortgage interest is deductible from the gross income that serves as the base for the income tax calculation. The interest deductibility rules have been changed several times in the past few years, which has reduced the interest that can be deducted for people that obtain their first mortgage. Most of the people that already have a home and, for example, move, are in most cases still under the regime at the time they obtained the first mortgages. The latest revision was implemented in 2013; the interest on mortgages that have been obtained by first-time buyers is fully deductible as long as it is an annuity with a maturity of up to 30 years. The amount one can borrow for a house is capped by the regulator at 102% in 2016 of the appraisal. This will be reduced to 100% in 2018. Traditionally many mortgages are close to the maximum amount, which allows the holder to benefit maximally from the interest deductibility. The low interest rate as well as the possibility for parents to donate up to EUR 100,000 to their children for the purchase of a home have changed this a bit in the most recent years, but the Dutch mortgage debts remain among the highest in the EU. Despite the high mortgages the loss rates are relatively low. On the one hand the Dutch are traditionally very committed to paying the interest, straight forward monetisation of collateral and feel personally liable for any loss on the mortgage that remains, as the interviewees mentioned. On the other hand almost all lower mortgages (purchase price up to EUR 231,132) are protected with a guarantee from the Nationale Hypotheek Garantie (see [www.nhg.nl/](http://www.nhg.nl/)) for which the buyers pay a one-off premium as well as the fact that both a loan to value and loan to income ratios are applied when the mortgages are provided.

Typically, whatever the type of cross-border loan, the completion of a housing loan contract requires many types of documents, and requirements can differ across countries, and be challenging in some of them, especially for non-residents. For instance, according to the European Commission,<sup>248</sup> German lenders and Polish lenders are known to be relatively demanding for proof of income and often require detailed information on employment, self-employment, outgoings, dependent family members etc.

In addition, the consumer generally has to get involved with notaries, the land administration system, etc. and must often provide different related signed or/and certified documents to the mortgage provider in order to negotiate the terms of the loan with the bank. Notaries are involved in the operations in order to ensure the legality of the land transaction and thus reduce the risk of legal actions. According to the European Commission, notaries conduct their work through monopolies that differ across countries: on the execution of sale document (Germany), execution of property transfer (the Netherlands) and registration (Belgium, France, Italy and Luxembourg).

Typically, the interactions with notaries are based on a face-to-face basis, as it is essentially paper-based and this might add to the complexity of the document requirements to complete the mortgage. Indeed, a signature from a notary attesting the availability of the house and whether or not there are prior mortgages on the property is mandatory in several European countries to close a contract.

Nevertheless, some specific innovations might contribute to smoothing significantly these interactions with notaries, as is the case in Estonia. As a reminder, in December 2014, the Estonian government established the “e-residency” status by which non-residents can gain a secure digital identity with which they can use the services provided by the Estonian government.<sup>249</sup> Against that background, the Estonian government decided in May 2015 to partner with Bitnation to offer blockchain notarisation services to e-residents.<sup>250</sup> This approach makes the process much faster and more secure. However, the other condition is that banks accept purely online notarial acts. Digital interoperability both within and across European countries in the retail banking sector is still far from achieved, despite the efforts of the European institutions in that direction, especially through the gradual implementation of the regulation on Electronic identification and trust services for electronic transactions in the internal market (eIDAS, adopted by the co-legislators in July 2014).

Many banks across the EU28 still follow a mainly paper-based operation, resulting in delays in the completion of the housing contract, partly due to the time needed to process paperwork. For example, in Belgium, promotion and advice are admittedly already offered online/mobile for both consumer loans and mortgages; however, when it comes to further negotiation, planning and final signature, this is still done mostly at the branch level and requires a significant amount of time. The online application for loans is not feasible, unless the loan contract was signed at a branch (subject to prior

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<sup>248</sup> The related publication “Cross-border acquisitions of residential property in the EU: problems encountered by citizens” (2016) by the European Commission, DG for Internal Policies can be found at:  
[www.europarl.europa.eu/RegData/etudes/STUD/2016/556936/IPOL\\_STU\(2016\)556936\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2016/556936/IPOL_STU(2016)556936_EN.pdf).

<sup>249</sup> With this system, any company online can use Estonia as a digital residence and have access to local digital services through the e-identity card.

<sup>250</sup> More details on the scheme developed by the Estonian government to offer blockchain notarisation services to e-residents can be found here:  
<https://bitcoinmagazine.com/articles/Estonian-government-partners-with-bitnation-to-offer-blockchain-notarization-services-to-e-residents-1448915243>.

acceptance of your file by the bank), where the details communicated in connection with the application will have been first checked for accuracy and completeness (in particular on the basis of documents provided or yet to be provided).<sup>251</sup> On the other hand, loan applications and approval via the bank website are common. Contract paperwork that needs a signature is posted out after online approval. Credit Unions provide a valuable service to members in their local communities by providing easy access to services at their branches and online.

#### **4.2.4 Conclusion**

So far, most distribution channels for household loans are based on hybrid models that result from some combination of online and offline channels. This is especially true for housing loans, where face-to-face interactions are still widespread owing to the complexity of the product and the need for advice and assistance during all the phases of the product: pre-sale, sale and post-sale. Nevertheless, the complete digitalisation for the distribution of unsecured consumer loans such as personal loans seems achievable within a near future.

Faster scoring techniques should contribute to further cross-border sales of consumer loans. In the meantime, the lack of quality credit data for some segments of consumers in some countries has prompted some FinTech companies to use unstructured data standardised at a global level such as social media data to score these consumers and provide cross-border loans if the scoring is satisfactory. The increasing sophistication of algorithms allow lenders to develop efficient early warning schemes of potential future missed payment, hereby helping both borrowers and lenders find solutions before entering costly and complex cross-border litigation. More and more FinTech tools are also available to boost the financial education of consumers, hereby improving the quality of consumer's financial choices and ability to change of providers even on a cross-border basis.

Nevertheless some barriers to cross-border sales persist and digitalisation could hardly overcome them without policy intervention. The processes to exchange structured credit data across countries remain limited. As regards housing loans, high diversity in taxations and in the administrative rules to complete a mortgage contract still impede on the emergence of a mortgage single market.

### **4.3 Scenarios for cross-border activity**

#### **4.3.1 Scenario 1: Business as usual**

##### **Description**

Overall, the cross-border sales of household loans will remain very low and will continue to affect somewhat the same groups of consumers identified in section 4.1.2, namely:

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<sup>251</sup> Overall, the physical presence of Belgian banks is still very dense when compared with neighbouring countries. The question is whether the financial sector in Belgium will still be able to maintain this unique retail model of brick (an extensive network of branches) & click (a sizeable multi-channel offer) over the next few years. This specific business model means that the cost of banking in relation to turnover (the so-called cost-to-income ratio) is higher in Belgium than elsewhere. It is therefore logical that the low profitability of the sector also exerts pressure on the distribution model and its affordability for the customer.

- Commuters
- Expatriates
- Others, such as households with thin credit profiles or lower credit quality than average and households that wish to purchase a secondary residence abroad

In this scenario, it is assumed that the trends in the number of commuters and expatriates will remain broadly similar. Expatriates who keep strong links with their birthplace and have part of their finances managed in their birth country will continue to consider consumer loans and housing loans issued by providers located in their birth country. Demand for foreign loans will remain higher than average among households with thin credit profiles or lower credit quality than average.<sup>252</sup>

In both cases, companies with innovative scoring techniques such as Kreditech can acquire, identify and underwrite non-resident customers in a short period of time. The other loan providers have also been identified in section 4.1.3.

### **Opportunities**

The main advantage of the 'status-quo' is its low level of risk. As a result of little change in the cross-border dimension, no related legal adjustments should be needed.

Some specific FinTech companies will have the opportunity to acquire a larger market share in the cross-border sales of loans and could perhaps engage further in cross-border housing loans. In the context of a zero-sum game, however, this should be done by acquiring market shares of other providers.

### **Threats**

In the absence of further progress towards a single market for retail financial services, fragmentation will remain at a high level, and will continue to threaten the overall consistency of the euro area and its monetary policy. As highlighted by the ECB in 2014, this will continue to threaten the financial stability of the European economy, despite recent efforts to consolidate the related institutional framework through the banking union. In the event of economic recovery and a restoration of confidence in the banking system to pre-crisis levels, the ensuing ease of access to interbank funding for banks might lead to 'over-lending', which could conceivably create new asset bubbles, such as occurred in the Spanish real estate sector in the years prior to the financial crisis.

In a context of continuous fragmentation, significant differences in the interest rate for a similar credit profile will persist across Europe, thereby impeding to a certain extent the objective of introducing equal practices for all European consumers.

### **Conditions**

Even if some combination of all or part of the conditions enumerated below were to be fulfilled, the volume of cross-border activity will remain very low.

The implementation of the new rules for the protection of personal data (notably the general data protection Regulation or GDPR) will likely not allow significant harmonisation across the EU-28. In that context, persistent costs resulting from the

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<sup>252</sup> As analysed in section 4.2.3, there are two main reasons for people to have a thin credit profile: they are not covered by the local data collector in an appropriate manner and/or they do not have much financial history (e.g. young consumers, new migrants, etc.).

learning process of the different rules and related structural adjustments will discourage banks from selling cross-border loans (see section 4.2.4). On the other hand, continuing fragmentation in rules such as the “right to be forgotten and to erasure”, “easier to access your own data”, the right to know when your data has been hacked and the right to data portability will impair the confidence of consumers towards the use of their data by companies, especially in an international context. In the end, low confidence of consumers will depress demand for foreign loans, thereby reinforcing the depressing effects on cross-border activities.

In case the implementation of the GDPR contributes to further European integration for data protection rules, admittedly loan providers might have greater access to standardised unstructured data such as social media (Google, Facebook, Twitter, etc.). However, to be profitable, this collection of data will need to be combined with algorithms that can make the most of this data for marketing, scoring or prevention. So far, the implementation of scoring techniques based on social-media data remains marginal in the credit market, due to the difficulty of exploiting this type of data in an efficient manner.

Within this scenario 1, the most likely outcome is that only alternative business models that target consumers excluded from mainstream credit markets (owing to thin credit files or lower than average credit quality) could use unstructured data standardised at a global level. Given that a significant number of these so-called credit-constrained consumers are not particularly risk averse, they are more favourable to see potential lenders use their personal data published on social media supports, regardless of the framework for data protection.

On the other hand, it is highly likely that mainstream banks continue to develop their tools only by using some combination of structured data collected in-house directly from their customers (especially through their current accounts) with external data structured by credit bureaus. Provided that the exchange of external credit data across countries will remain limited and that the emergence of a proper single market for current accounts will be deferred (where, for example, consumers could choose to have their salaries paid into a foreign account), mainstream banks will continue focusing primarily on their domestic market.

In line with other segments, the digitalisation of distribution channels will proceed at a steady pace through both website and application channels. Nevertheless, the emergence of a mainstream distribution model that is fully digitalised during the different phases of the product remains hypothetical for housing loans, owing to the complexity of the products (section 4) that require advice, significant documentation, high diversity of intermediaries, the contribution of external bodies in many cases (notaries, land administration, experts for assessing the value of the property, etc.). Therefore, the more complex the product, the more challenging it will be to fully digitalise the complete distribution chain, thereby inhibiting the potential for cross-border loans.

Hybrid distribution models combining for instance online first awareness and online comparison tools, with face-to-face interactions at a later stage (for in-depth advice, sale of the product, etc.) will most likely persist for housing loans and for the most complex consumer loans. Conversely, given the current state of play, full digitalisation on a large scale seems reasonably achievable within the near future for unsecured loans for small amounts, short reimbursement period, scant documentation and the use of simple terms and references.

Within this first scenario, it is highly likely that cross-border housing loans will continue to be primarily handled by specialised banks and specific departments of mainstream banks that target niches consumers and that use hybrid distribution models. On the other hand, FinTech companies are likely to increase their market share of cross-border consumer loans, especially for simpler products destined to consumers with low access to mainstream credit markets.

### **Probability**

Based on the necessary conditions to fulfil, the likelihood that this scenario will occur is 'medium'.

## **4.3.2 Scenario 2: Expansion of cross-border sales in specific pockets of consumers**

### **Description**

As a result of regulatory adjustments and significant changes in the structure of both demand and supply, cross-border loans will increase for the groups of consumers identified in the first scenario, and new pockets of consumers with high potential for cross-border loans will emerge. Such a scenario could be achieved only if new entrants with significant resources, strategic interests and 'international solutions' decide to integrate the loan market. Existing clients of these new entrants could become potential niches for cross-border loans.

### **Opportunities**

The development of such a market with loan products that are designed specifically for non-residents will result in a better financial framework for mobile Europeans and should even contribute somewhat to further mobility of Europeans. In that context, the consistency across all member states of the euro area with higher mobility of labour could be reinforced somewhat.

The arrival of new entrants on the loan market should heighten competition, thereby contributing to more attractive conditions for consumers. For providers, the development of specific demand for cross-border loans should offer more business opportunities.

### **Threats**

To a certain extent, better access to cross-border housing loans could also raise cross-border purchases of dwellings and favour the formation of housing bubbles in regions where non-residents decide to invest significantly.

One significant risk is that the regulatory framework could not keep pace with the evolution of the loan market and its digital transformation. If the regulation is not able to deploy consistent regulations across the different digital layers that operate (data, interoperability, KYC, AML, etc.), risks could arise that consumers would not be adequately protected.

### **Conditions**

One of the main drivers behind scenario 2 is a significant restructuring of the type of loan providers, as the digital transformation operates and contributes to overcome

persistent barriers to the cross-border sale of loans. This dynamics could apply through four distinct channels. Given the higher number of barriers that impede cross-border sales of housing loans, the growth in cross-border sales should be faster for consumer loans, especially unsecured ones.

First of all, mainstream banks that primarily use in-house structured data for their marketing, scoring and prevention could gradually find greater interest in selling consumer and housing loans on a cross-border basis, on the back of the emerging single market for payments and current accounts that provide them with the necessary foreign financial data. Also, more sophisticated algorithms using this data will markedly improve early warning schemes and will help lenders and consumers find a solution before entering a cross-border litigation process that is generally costly and time-consuming. As emphasised in the introduction to this study, however, these traditional providers have to deal with legacy issues such as large local branch networks. Restructuring will take time and some new entrants could take advantage of this.

Contrary to traditional providers, FinTech companies that operate on the loan market do not necessarily need local presence to sell their products. As the entire digitalisation of a significant share of consumer loans could be achieved within a few years, the location of the provider becomes less relevant for that type of product. It should thus become easier to supply consumer loans directly on a cross-border basis instead of developing foreign branches and subsidiaries as has usually been done by traditional lenders in recent decades. Cross-border peer-to-peer models could play a significant role here by improving the matching between demand and supply for funding across the EU-28. The cross-border sale of housing loans on a large scale should take more time, due to the higher complexity of the products (see section 4) and the remaining questions regarding the digitalisation of related processes (notary signature, house valuation, etc.).

Some new actors in other segments of financial services could also develop great interest in providing household loans, based on their comparative advantages. For instance, digital platforms that offer services of payments, current accounts and/or savings account on a pan-European basis could have sufficient financial data to develop a sophisticated marketing campaign, loan scoring and prevention. If existing platforms such as Raisin, Ipagoo, Number26, etc. continue to grow and achieve a 'critical size' in the near future, they might be able to enter the loan market with an adequate funding structure, reliable European financial databases, appropriate algorithms and their existing digital distribution channels. Based on their experience to target consumers that are keener on contracting foreign products, these FinTech companies could develop small-size uncollateralised consumer loans that are specifically designed for these niches. If the process were to be adequately structured, notably regarding the digital interface with consumers (advice, document admissibility, etc.), it could even be possible to offer mortgage loans, provided that these products are sufficiently competitive.

Finally, some companies that are not financial organisations could enter the loan market by offering cross-border services, also based on specific comparative advantages. As emphasised in the segment on payments (see section 2.1.1), the strategic strength of the large technology companies such as (GAFA) is their global borderless vocation, their penetration of the EU market and their positioning as trusted platforms for digital living. All of them have already launched cross-border means of payment (Google Wallet, ApplePay, Facebook Messenger payments and Amazon Payments), thereby collecting financial data that could help develop an offer of loans.

Furthermore, technology companies such as GAFA have access to much more personal data than existing banks and this data can be easily standardised at a European level. In that context, if they are able to adjust their digital interfaces to sell loans, and to develop algorithms and processes that allow them to make the best of this personal data by combining it with typical structured credit data, they could develop efficient marketing and acquisition campaigns, as well as credit-scoring and early-warning schemes. The framework under which data are collected by a social media such as Facebook is relatively standardised at a global scale, and the potential development of an algorithm that allows to process social media data could be applied at an international scale without insurmountable obstacles.

Finally, these technology companies often have extensive brand loyalty, with core customers who could potentially be interested in contracting loans issued by their favourite brands. Provided that such loans are designed with a 'global approach', such cross-border loans could follow an upward trajectory.

In parallel, companies providing innovative scoring techniques could develop quickly in the EU-28 by exploiting market opportunities in terms of lack of data in specific countries and by targeting segments of the population with poor scoring or/and thin files (millennials, recent immigrants, etc.). Scoring companies could propose new ways of scoring individuals at an international level, based notably on social media data, and some sort of international social media credit bureaus servicing financial institutions within and across countries could appear on the market. Also, more sophisticated and faster processes to collect and use data will allow companies to deliver faster credit-scoring.

Another key driver that will shape this scenario 2 concerns the future evolution of the interactions between lenders and borrowers. Four current trends in digital interactions that will continue in the near future could contribute to further cross-border loans within this scenario 2. First of all, companies such as GAFA have several comparative advantages to outperform European mainstream banks in their interactions with consumers. Their relatively low connection with a local network could imply that they would favour a 'purely online' approach of retail financial services, if they decided to expand in these markets. Furthermore, they are having a strong experience in designing multiple digital interfaces with a large range of consumers on a global scale.

Secondly, the gradual shift from personal computers towards mobile to carry out online financial activities can partly explain the fast development of mobile payment and digital wallet services. This shift has been identified as a key driver of innovation in the collection and use of data, especially to improve efficiency of digital distribution channels. Based on this, there will be potential for cross-selling and further diversification in a foreseeable future.

Thirdly, digital elements such as digital layout, digital customer experiences, etc., should continue to converge markedly in the coming years, both within and across countries, and financial services such as consumer loans and housing loans will be no exception. Convergence in design patterns and user experience result from the typical maturing of innovative technologies and, partly by following cultural conventions that are more and more globally defined, consumers have increasingly similar expectations about the position of the logo, search box, etc.

Furthermore, this rapid convergence trend is being reinforced by the fast development of mobiles. Web design companies that place much emphasis on websites and applications for retail financial services such as household loans and that provide solutions in different countries are also participating to this converging trend. This

whole convergence should improve noticeably the accessibility of consumers to foreign websites and applications, with broadly similar ways of interacting digitally resulting in a much faster learning process. In the end, the foreign language might remain the only significant barrier to cross-border demand, if digital interactions are not able to overcome it.

Fourthly, providers will increasingly rely on new technologies that provide efficient security tools in the digital interactions, especially for ensuring reliable authentication and reducing fraud (such as retina scans, technologies that enable loan providers to identify customers only through their behaviour). The internationalisation of the activities of companies offering these solutions could contribute to a convergence in the security systems across Europe and help both providers and consumers get involved in cross-border sales.

Specific regulatory approaches will be necessary to facilitate this scenario 2 and can be organised in two main types.

First of all, digital innovation in products and business models could entail new types of risks for both lenders and borrowers (Bouyon et al., 2014).<sup>253</sup> For example, consumers need to get accustomed to new products and models, and during their learning process, they are more likely to make mistakes in their choices. And this type of risk could be even higher in a cross-border context, especially when different languages are involved. The absence of previous experiences makes strategic decisions within new business models more complicated, hereby contributing to further risks. In that context, regulators should intervene in order to alleviate potential risks. For example, policies could place some emphasis on smart disclosure, the ethics in algorithms, etc. which could be essential in the development of a balanced single market.

In parallel, regulators should continue to ensure a “space of creation” in order to enhance innovation in products and processes. Policymakers should therefore expedite digitalisation in retail financial services rather than attempting to control it. The regulatory strategy will have to define the level of risk which is considered as “acceptable” or “necessary” for innovation to evolve and the single market for loans to develop in a balanced way. Regulatory intervention will depend on the gap between the level of “necessary risk” and the actual level of risk identified or anticipated in the loan sector. This approach will result in a continuous process of back and forth movements between a “wait and see” strategy and “policy action”.

Secondly, a decrease in privacy, financial exclusion of ‘digitally illiterate’ and other high-risk consumers, and cyber-insecurity exemplify the types of risk that could emerge in the new paradigm of the scenario 2. Standardisation across the EU-28 is one possible response to some of these issues. Regulations such as the GDPR and the electronic identification and trust services (eIDAS), aimed at facilitating transparent online consumer experiences without face-to-face verification, are essential in this respect and harmonious implementation should contribute to reinforce the loan single market as much as possible.

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<sup>253</sup> This analysis has been developed in S. Bouyon and K. Lannoo (2015), “Relaunching the European Retail Finance Market Comments on the Commission’s Green Paper”, *ECRI Commentary*, No. 20, 15 December. See: [www.ceps.eu/system/files/No%2020%20Retail%20Financial%20Services-\\_0.pdf](http://www.ceps.eu/system/files/No%2020%20Retail%20Financial%20Services-_0.pdf).

## **Probability**

Based on the necessary conditions to be fulfilled, the likeliness that this scenario will occur is 'medium'. If it does materialise, it should be within 5-10 years.

### **4.3.3 Scenario 3: Integrated EU market**

#### **Description**

The cross-border sale of household loans will become common practice for a large range of consumers and providers. Driven by the fast digitalisation of large parts of the economy, household loans will enter a 'completely digitalised environment'. In particular, this would imply that the use of big data analytics will be generalised, the interactions between lenders and borrowers will be almost entirely digitalised (the branch channel will remain for very specific cases) and technologies such as blockchain could cover an increasing number of processes related to both consumer loans and mortgages, in order to enhance speed and transparency, as well as to reduce fraud. Given that competition will be accrued, almost all business models involved in the sale of household loans will need to be able to handle cross-border sales on a large or minor scale. As regards types of consumers, all segments identified for scenario 2 will be included. In addition, many other types of consumers will be concerned. These other segments could include consumers who have always resided in their birth country and have good and substantial credit profiles.

#### **Opportunities**

In addition to the opportunities identified for scenario 2, the development of a true single market for retail financial services will enhance fair competition in most of Europe and will contribute to converging prices for similar consumer profiles. This latter trend could be interpreted as a reinforcement of the consumer protection.

Furthermore, the development of a true single market for retail financial services should contribute to alleviate systemic financial risk, as funding resources of lenders will be allocated where the demand for loans arises rather than within domestic borders. This new paradigm should help reduce the development of asset bubbles, as happened in Spain in the pre-crisis period, when the increasing access of banks to the interbank market in the context of the euro resulted in sharp decreases in mortgage interest rates in Spain, thereby boosting the amount of loans and the level of housing prices.

Finally, such developments should favour a robust and balanced growth the EU-28, as funding will be better allocated and significant investments will be made by the retail financial sector to get the most from digital technologies.

#### **Threats**

In addition to the threats identified for scenario 2, there will be an increasing risk of a significant gap between regulations and market evolution. While the fast technological developments will result in increasing cross-border demand and supply, domestic regulations will remain too fragmented. In that context, numerous issues might arise, such as inappropriate information disclosure, etc.

## Conditions

In addition to the conditions needed for scenario 2, very specific conditions will be needed for scenario 3 to materialise. Some of these conditions focus primarily on housing loans rather than on consumer loans, as the share of cross-border sales was already significant for consumer loans in scenario 2, whereas some persistent barriers were still impeding the development of the single market for mortgages.

First of all, the consolidation of the single market for payments and current accounts will contribute greatly to the set-up of a single market for both consumer loans and housing loans. As many lenders provide current and savings accounts on a cross-border basis, they will have at their disposal significant amounts of foreign financial data that can help them during all the phases of the foreign loans: marketing, scoring and early-warning schemes.

Secondly, more specifically on the pre-sale phase, some sorts of pan-European comparison databases could emerge in order to provide all consumers with reliable quotations and comparison tools. Such a business model could be developed notably by technology companies such as GAFA due to their resources and their multiple possibilities to handle vast amounts of data online. A reliable comparison database could definitely help consumers in their choices of products on an international basis, thereby boosting fair competition between providers throughout the EU-28. In the end, this should contribute to converging prices for similar profiles.

Thirdly, still in the pre-sales phase, the harmonised implementation of the EU passport regime for credit intermediaries (brokers and comparison websites) across all member states will represent in the long term a significant step forward towards a Single Market for household loans, especially for housing.<sup>254255</sup> The right of free service provision will likely have a marked impact on cross-border activities and competition: the possibility to either establish physical branches in other member states or start operating cross-border through digital channels will help many brokers and agents decrease their dependence on one or a few domestic credit providers. Further freedom in choosing credit providers may also lead intermediaries to develop more independent and comprehensive offers, and to better meet customers' needs. The main challenge for the intermediary will remain the learning process needed to get familiar with the products and structure of the foreign mortgage market. At any rate, a broker from country A that today establishes a branch in country B thanks to the EU passport will certainly be able, in a time horizon of 10-15 years, to serve both markets B and A with offers from either A or B providers.

The contribution of European passports to the set-up of a single market for loans could be reinforced by specific digital initiatives such as found in Estonia. The Estonian model where any purely online loan provider can locate in Estonia, provided that the founder has an Estonian e-residency<sup>256</sup> could be potentially generalised to most of

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<sup>254</sup> More specifically, Article 32 of the mortgage credit Directive allows more credit intermediaries to operate in all the EU once they are licensed in one member state (see <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0017&from=EN>).

<sup>255</sup> The definition of a credit intermediary as a *natural or legal person who provides information and assistance to consumers looking for a mortgage credit and sometimes concludes mortgage agreements on behalf of the lender*, seems to include comparison websites beside brokers and agents (see [http://europa.eu/rapid/press-release\\_MEMO-13-1127\\_en.htm](http://europa.eu/rapid/press-release_MEMO-13-1127_en.htm)).

<sup>256</sup> More details on the structure of the Estonian e-residency can be found at: <https://e-estonia.com/e-residents/about/>.

Europe.<sup>257</sup> Such a structure of the supply will put the different member states into competition in order to offer the best conditions to the suppliers (in terms of taxation, digital facilities, etc.) In the end, the headquarters of a loan provider could be primarily digital, without a physical presence, and this should contribute markedly to the growth of cross-border sales.

Fourthly, for both intermediaries and lenders, interactions with consumers will be almost exclusively digital, as a result notably of the higher digital literacy of new generations. A few branches will persist only for face-to-face meetings specifically requested by some types of consumers. But the vast majority of required meetings will be conducted through mature technologies such as video calls (e.g. Skype calls supported by co-browsing), etc. Such meetings should be needed mainly for housing loans due to their higher complexity. In a cross-border context, lenders should be able to maintain a sufficient amount of skills to interact with non-residents (see section 4.1.1).

For the other interactions, all the steps will be exclusively conducted online via applications or websites: advice, signatures, document admissibility, actions to be taken in case of missed payments, etc. This structure of distribution channels will definitely overcome the geographical barriers for cross-border sales.

Fifthly, the level of education about financial data will be raised and a significant share of consumers (both residents and non-residents) will become familiar with this type of information, by knowing where to find it and how to use it. Digital tools for that purpose will be increasingly available to consumers and will help them better understand their financial behaviour and make appropriate choices. Approaches based on machine-driven 'gamification' to offer personalised scenario plays (such as AdviceGames in the Netherlands, see section 4.2.2) should be successful among new generations and will help them navigate through the increasing volume of data available online (comparison websites/applications, social media, consumer forums, etc.).

Sixthly, a European credit data bureau (under private or public auspices) could emerge by providing standardised credit data for the vast majority of European consumers. Such data could be available for any lenders in the EU-28 and could notably contribute to converging techniques in scoring, thereby reinforcing the possibilities for cross-border sales. In parallel, algorithms aimed at exploiting unstructured data, such as social media data, could enter a mature phase, by combining efficiency and ethics. Based on a combination of social media data and structured financial data, increasingly sophisticated algorithms will contribute to significantly refine marketing campaigns, scoring and prevention of missed payments. Nevertheless, due to the fact that the quality and standardisation of credit data should improve markedly in the coming 10-15 years, personal data produced by social media could be still used primarily for segments of consumers with thin credit files or/and poor access to credit markets.

Seventhly, the main rules that shape the design of applications and websites might be broadly similar all around the world. This would greatly help consumers use foreign websites and applications when they look for foreign loans, as the related learning

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<sup>257</sup> Such a model could first be generalised throughout Nordic countries (Baltic States, Denmark, Finland and Sweden). At a later stage, there might be some potential for this model to develop in the UK and the Netherlands. In the end, it could apply in Central Europe and Southern Europe.

process for consumers who wish to switch providers on a cross-border basis will be reduced markedly.

Eighthly, in parallel to the digitalisation of the loan sector, other non-financial markets that have a direct impact on the mortgage process will also digitalise markedly. For instance, the interactions between the consumer and stakeholders such as notaries, land administration, etc., will be primarily digitalised and the signature of needed documents will be almost exclusively electronic. In parallel, digital interoperability between banks and these different actors, both within and across countries, will be almost complete. This digital evolution in interactions between mortgagees, mortgagors and externally involved stakeholders will result in a considerable reduction in the time needed to complete a mortgage contract, and will definitely overcome the geographical barrier to cross-border sales.

Ninthly, blockchain technologies could enter full growth and standardisation, thereby contributing to transform many elements of the supply chain for consumer and housing loans. Provided that the blockchain will remain open and collaborative, solutions will be still published as open source code libraries (see scenario 3 of Payments for further analysis of the overall contribution of blockchain to financial services). In line with other banking segments, blockchain protocols could open up new dimensions of digital value for the loan segments: authentication, digital contents, etc. The transformation with the most important consequences for the loan markets, especially mortgages, could be the 'smart contracts': the transaction's contractual governance between two or more parties can be verified programmatically via the blockchain instead of via a central arbitrator, rule-maker or gatekeeper. Contracts for consumer credit and mortgage credit could therefore be designed this way, resulting in faster, safer and more transparent processes, no matter where borrowers and lenders are located. Smart contracts could also become a norm for external stakeholders involved in the mortgage process such as notaries. This approach has already been adopted by a country such as Estonia, where a public service that notarises contracts, administrative documents (birth certificates, etc.) on the blockchain was introduced in December 2015 for Estonian e-residents.

To conclude, different changes and trends in digitalisation will markedly affect the loan segments in the coming years. Most of these trends in innovation have already started and will need a certain number of years to mature, thereby contributing to the development of specific scenarios. In line with scenario 2, the contribution of regulators to facilitate the development of a true single market for loans through digitalisation should be based on a holistic approach that covers all the elements analysed in scenarios 2 and 3. The adoption of an overall regulatory roadmap for the digital transformation of the sector could reinforce consistency across the different digital layers (data, security, etc.), resulting in a balanced single market where innovation can develop without altering consumer protection.

### **Probability**

Based on the necessary conditions to be fulfilled, the likelihood that this scenario will occur is low. While scenario 2 could materialise within broadly 5-10 years, scenario 3 could evolve within 10-15 years.

## **5. Car insurance**

This chapter reviews the motor insurance business in Europe and examines what practical measures can be taken to encourage more cross-border business in the context of the European digital single market.

The increasing commoditisation of car insurance and national competition, as well as a significant number of natural disasters in recent years, have pressured insurers to maintain their competitive edge and regain profitability. Digitalisation offers options to both multiline and monoline<sup>258</sup> insurers to maximise sales through product innovation and by expanding geographic coverage into other member states and using digital technology for enhanced consumer engagement. Nevertheless, it does appear that cross-border sales for car insurance is not fulfilling the potential envisaged by a single digital market.

The Motor Insurance Directive 2009/103/EC (MID) contains some developments on cross-border sales. Within this Directive, subscribers to compulsory motor insurance policies in all member states are covered for motoring throughout the EU. Vehicles should be registered in the country of residence of the policy holder and/or vehicle owner and the MID currently affords drivers the ability to take out cross-border insurance cover. Therefore, they may be insured by an insurer established in the country of registration or in any other EU country provided that their registration is in order. However, the Directive does not regulate on issues of civil liability or calculations of compensation awards, which has been left to individual EU countries to determine themselves. The Directive only covers third-party liability and it does not regulate “own damage”, sometimes known as “comprehensive cover”, which is optional insurance cover intended to compensate the driver of the vehicle for injury or for damage to or theft of his vehicle.

One demand side driver is customer perception. The nature of liability insurance is that it is a remedy contingent upon the occurrence of an unpleasant/harmful vehicle-related event. Therefore, consumers are buying into a set of restorative remedies that arise on the occurrence of this event. When choosing an insurance provider consumers consider those that are known, familiar and reputable. Naturally, the consumer tends to feel comfortable with people familiar with his own language and closer to his home. Purchasing motor insurance cross-border on the Internet on the basis of price alone introduces many unknown variables into a potential emergency/liability/claim situation. Furthermore, customers are reluctant because of the differences in national legal and compensation systems and their uncertainty concerning them. They also fear that language or cultural differences may cause difficulties in emergency situations.

Our focus groups reported that providers could benefit much more from digitalisation processes. In addition, consumers would benefit from a wider range of choices and premiums arising from cross-border competition. Many larger insurers tried to enter new markets cross-border but encountered a lack of clarity on the notion of a “general good”<sup>259</sup> and were often obstructed at national regulatory levels, possibly owing to

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<sup>258</sup> “Multiline” is an insurance company that is engaged in more than two fields of insurance. “Monoline” is an insurance company that is engaged in only one field of insurance.

<sup>259</sup> The effect of this principle is to allow a member state to apply its ordinary consumer protection rules to insurance companies as long as these rules do not constitute disguised restrictions on cross-border insurance provision. Matters which fall into the general good in relation to motor insurance include prior notification of the terms of compulsory policies;

nationalist sentiment. According to insurance directives, domestic supervisory authorities are primarily responsible for the supervision of insurance companies operating in another country. However, insurance companies must comply with legislation required by the “general good” principle in the host country where they operate. This public interest clause states that a member state may refuse market access to a new local or foreign insurer, or disallow distribution of a new insurance product, if the allowance of such events is perceived to be against the public interest and it is possible that this is used to restrict competition for the benefit of national insurers.

There may be potential for comparative car insurance websites on a transnational pan-European level to bring clarity to cross-border comparisons of price, insurer and package; it could be an area to explore innovative solutions that can overcome some of the challenges of the lack of transparency as well as national differences. Focus group insurers confirmed that they would be interested in offering cross-border motor insurance if conditions made it economical and profitable to do so, conditions such as concrete business opportunities, increased internet penetration in all member states and harmonisation of insurance guarantee schemes.

On the horizon, enabled by the IT revolution, technology companies are looking to address areas that have not been considered by incumbent insurers. For example, InsurTech – “Technology in Insurance” – organisations are disrupting the status quo. In anticipation, established insurers have created separate innovation incubator spaces and accelerators, often in partnership but separate from their main business, so as not to miss out on digitalisation revolution opportunities in this market. It was generally agreed that increasing competitive pressure from FinTech and InsurTech in the future will force inefficient firms out of the market, leaving only the best and most resilient.

## **5.1 Current cross-border activity**

Complete data on motor insurance that is transacted on a cross-border basis alone is not readily available.<sup>260</sup> Nevertheless, although European legislation permits cross-border motor insurance sales, different stakeholders interviewed for the purpose of the study confirmed that the size of this market is not significant. Motor insurance offers appear to target solely domestic consumption, with very little, if any, targeting cross-border markets. As it currently stands, it would appear to be a niche, non-mainstream product that would require an expert adviser to seek a cross-border motor insurance policy for the consumer who wishes to purchase it. Large multinational insurers expand into new countries under FOE rather than FPS, by using established foreign branches and subsidiaries.<sup>261</sup> Many of these would have been established in conjunction with the merger with or acquisition of a local insurer, as this is one of the fastest ways to acquire local knowledge and expertise when entering a new geographic market.

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uniform no-claims bonus systems for compulsory motor insurance, use of local languages for policies and adherence to professional codes of conduct.

<sup>260</sup> The difficulty in obtaining cross-border insurance data for motor insurance was also mentioned in this report.

<sup>261</sup> Over the years a number of insurance directives have substantially facilitated the cross-border operation of insurance companies within the EU single market, especially the use of the freedoms provided for by the European Treaties, notably the Freedom of Establishment (FOE) through subsidiaries or branches and, to a lesser degree, the Freedom to Provide Services (FPS).

### 5.1.1 Types of providers and products

The basic principle is that each citizen who moves abroad needs to register his car in that new country (typically when the period exceeds 6 months). Drivers need to prove that they have an insurance for the registered car. Should it concern a foreign insurance, rules differ across the EU-28 regarding the possibility to use this foreign insurance. According to "Your Europe", in principle, the foreign insurance can be used if the insurance company has an office in the new country of residence or if it is authorised to provide services in that foreign country.<sup>262</sup>

Noteworthy, commuters do not need to re-register their car in the country where they work as they reside in another country. For the specific case of expatriates who use a company car registered in the country A but who live and do part of their job in B, registration of the car in the country B is not necessary. UK expats in the EU appear to represent a major driver for this market as there are some website helping them in insuring their UK-registered car in other member states. Spain seems to be the major market due to the elevated number of British living there. Typical websites that serve that purpose are Liberty Seguros, Keithmichaels and Hic Insurance.<sup>263</sup>

In parallel, digitalisation has enabled the shift of the research process to the consumer within member state markets. The significant adoption of digital technology and channels, by both providers and consumers, has led to price comparison websites becoming a growing distribution channel and e-platform, as well an important source of information. Nevertheless, the study has not identified any comparison websites that place significant focus on cross-border comparison of products.

Of particularly note, in France some comparison websites have a section dealing with foreigners moving to France. For example, the "Welcome to France" page of the comparative website Assurpeople<sup>264</sup> proposes an online service which offers car insurance solutions to French citizens and foreigners who hold a foreign, French or European license and wish to insure their car in France. It allows for the recognition

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<sup>262</sup> Some information on the car insurance validity in the EU-28 can be found here:

[http://europa.eu/youreurope/citizens/vehicles/insurance/validity/index\\_en.htm](http://europa.eu/youreurope/citizens/vehicles/insurance/validity/index_en.htm).

<sup>263</sup> Thanks to Liberty Seguros (part of the Liberty Mutual Group: [www.libertyexpatriates.es/spain-car-insurance](http://www.libertyexpatriates.es/spain-car-insurance)), Customers can get a quote fully online if their car is registered either in the UK or in Spain, but no restrictions are put on the driver's nationality and residence. They offer total coverage in case of accident, roadside assistance from kilometer zero, and help with processing fines. The Liberty Seguros has start operating in Spain in 2001 through an interactive branchless management model based on service centers, which has then transformed in a multi-channel system based also on insurance agents and direct business units.

Keithmichaels ([www.keithmichaels.co.uk/specialist-car-insurance/expat-car-insurance/](http://www.keithmichaels.co.uk/specialist-car-insurance/expat-car-insurance/)) has a comprehensive section on expat car insurance for British; they have offers for British taking a UK car to Europe, British living abroad with a car in the UK, or British expats returning to the UK. They make clear the difference between simply moving to the EU for a limited time only for which the green card provide basic coverage for up to 3 months, and expats which instead need a more comprehensive coverage and for a long term period. Customers cannot carry out the procedure online but they have to call or email one of the experts available.

Hic Insurance ([www.hertsinsurance.com/expats/](http://www.hertsinsurance.com/expats/)) offers a so-called *green card insurance for expats in the EU*. The main condition to be covered abroad is that the UK-registered car stays abroad for at least 8 months per year, then the company offer a green card insurance for when the client wish to come back in the UK for a limited time period such as vacations. Moreover, they have specific pages for both Spain and Portugal. Yet, the procedure cannot be carried out online and customers have to call for an expert.

<sup>264</sup> In order to have an idea of the service offered, see [www.assurpeople-welcometofrance.com/](http://www.assurpeople-welcometofrance.com/).

and upkeep of 'bonus malus' history gained in another member state and allows them not to lose out on premium discounts, although one practical difficulty arises in that France has a maximum bonus malus cap of 50%. Also, this service is likely to be cross-border only during a very short time, given that it targets primarily drivers that will soon be French residents.

### **5.1.2 Types of consumers**

A typical cross-border insurance purchaser is a commuter who may cross a border frequently for the purpose of work or recreation. An example might be a French, German or Belgian resident who commutes regularly to work in neighbouring Luxembourg and wishes to purchase cover there.

Another type of cross-border consumer is the driver who prefers to purchase the most appropriate cover from another state for driving in his home country, most probably by online transaction. Finally, there is also the holiday homeowner who may wish to have his foreign-based car insured by his usual home insurer.

### **5.1.3 Conclusion**

Cross-border car insurance has not featured significantly in the EU motor insurance market, mainly because large insurers have expanded and already conduct business in desired markets through foreign branches and subsidiaries, typically by acquiring existing foreign insurers.

## **5.2 Impact of digitalisation on cross-border activity**

### **5.2.1 (Changes in) providers' behaviour**

#### **Increasing digitalisation of distribution channels**

Until recently, advice for car insurance was essentially provided on a face-to-face basis, primarily with an intermediary such as a broker, resulting in a marked barrier to cross-border sales. Nevertheless, as shown in Box 5.1, the complete digitalisation of these pre-sale interactions seems feasible for most car insurance products in a foreseeable future, albeit at differing paces across countries.

Despite the rapid digitalisation of the pre-sale and sale phases of the product, a significant share of distribution models follows a hybrid approach, as the interaction of consumers with the products and the providers results from some combination of digital and non-digital elements. For instance, in 2015, 32.8% of consumers used online research and offline purchase for car insurance.<sup>265</sup> While this is a deliberate choice of consumers who are accustomed to switching from online models to offline models and vice-versa, the likely main reason behind it is that the industry has not yet managed to propose an effective digitalised distribution chain including pre-sales, sales and post-sales phases.

To conclude, some countries could achieve complete digitalisation of the pre-sale phase in the near future, but complete digitalisation of the sale and post-sale phases will most likely take more time and will not occur at the same time for all countries,

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<sup>265</sup> However, contrary to products such as personal loans, research offline/purchase online was almost nonexistent.

thereby persistently impeding the potential for further cross-border sales. The expected increase in the use of tablets and smartphones could contribute to accelerating the complete digitalisation of consumer loans, as consumers will have the possibility to connect anytime, anywhere.

*Box 5.1 Differentiation across phases and countries in the digitalisation of distribution channels in car insurance markets*

The 2015 Google Consumer Barometer Survey calculated the unweighted average market shares of online and offline car insurance distribution channels across a sample of European countries.<sup>266</sup>

- First awareness of consumers via website or application: 64.4%
- Research – online research only: 33.3%
- Research – offline research only: 16.9%
- Research – compared products/prices/features online: 63.4%
- Research/purchase – research online/purchase offline: 32.8%
- Research/purchase – research offline/purchase online: 4.7%
- Research/purchase – research offline/purchase offline: 31.5%
- Shared purchase experiences on social network(s): 5.6%

Given that only ten years ago, online channels were almost non-existent, the digitalisation of interactions between providers and consumers has been radical. Nevertheless, the intensity of the digitalisation of distribution channels varies significantly both across countries and phases (pre-sales, sales, post-sales).

For example, regarding the shares of “online first awareness”, “only online research” and “online comparison of products”, the United Kingdom scores remarkably high, while Estonia and Finland are consistently very low.

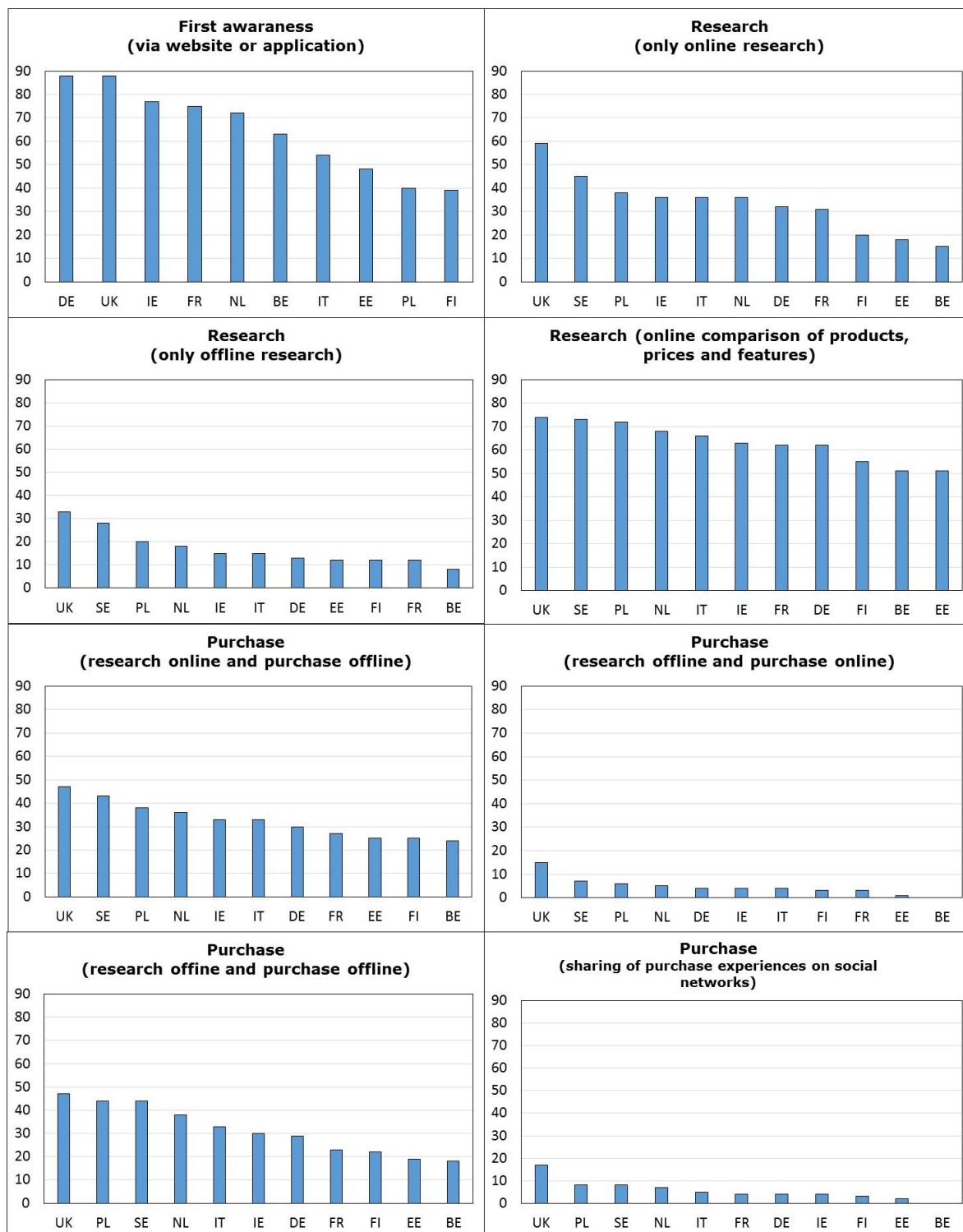
As regards differences across phases, the digital market shares for “first awareness” is higher than for some elements of the research process. For instance, on average 64.4% of the first awareness is done via digital channels, while only 33.3% of consumers will research products only online. The respective market shares reach 88% versus 32% in Germany, 63% versus 15% in Belgium, 75% versus 31% in France and 77% versus 36% in Ireland.

Despite the rapid digitalisation of the sales process, a significant share of consumers still adopt a hybrid behaviour pattern of online versus offline, as their interactions with the products and the providers result from some combination of digital and non-digital elements. For instance, the share of consumers using online research and offline purchase reached on average 32.8%. Nevertheless, only 4.7% will combine offline research and online purchase.

It is worth noting for the countries covered by the study that the pre-sale distribution channels of car insurance have been significantly more digitalised than personal loans. For instance, according to Google, the share of first awareness of consumers via website or application was on average 9.2 percentage points higher for car insurance than for personal loans. The gap is even higher for the share of consumers who research only online (16.2 percentage points) and who compare products/prices/features online (26.2 percentage points).

<sup>266</sup> As there is not sufficient data for Luxembourg, the country has not been integrated into these charts. In order to have more data on Scandinavia, Sweden has been integrated into the charts.

Figure 5.1 Distribution channels for car insurance (% , 2015)



Note: Figures on Luxembourg are not available.

Source: Google Consumer Barometer Survey (2015).

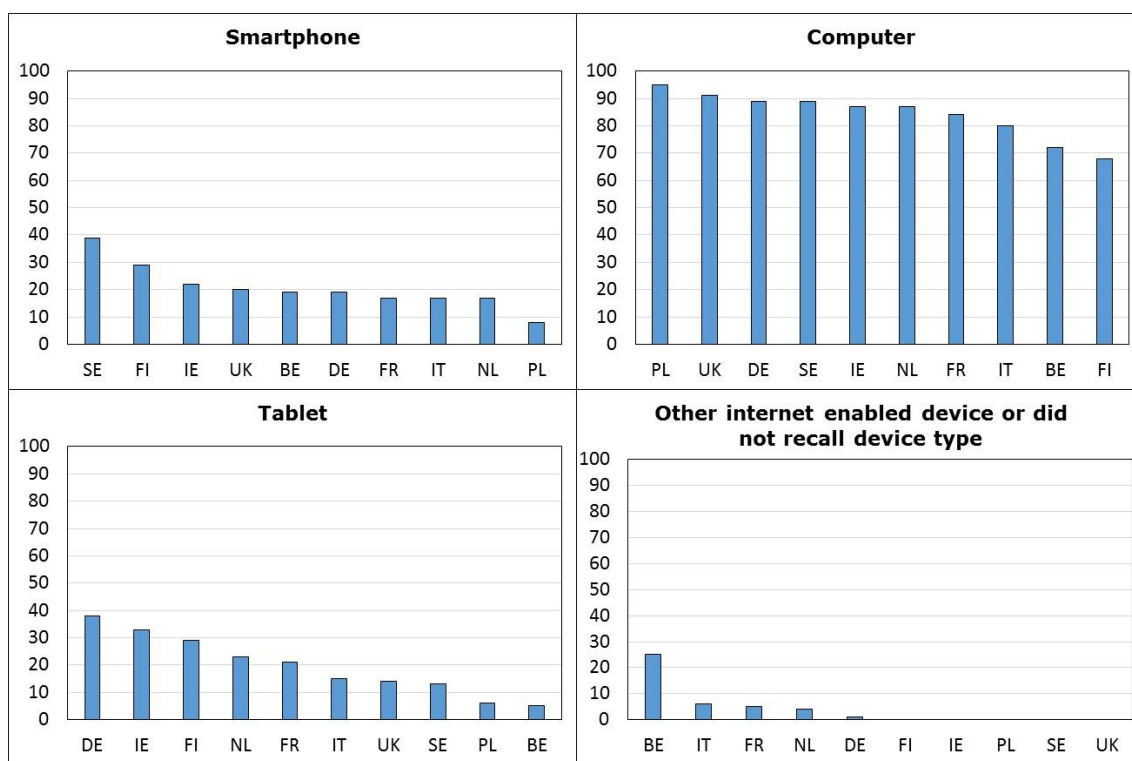
### Computers remain the main device for online research of car insurance

Still, according to the Google Consumer Barometer Survey (2015), the most important device used to connect for research of car insurance products remains the computer: on average 84.2% of the consumers using online research distribution channels connected at least once through this device. Due to the still limited number of alternatives, all countries recorded a share above 80% excluding Poland and Sweden. The corresponding unweighted average for smartphones and tablets stood at only 20.7% and 19.7%, respectively.

Nevertheless, only a few years ago tablets and mobile devices were absent in the distribution channels of car insurance. In that context, the growth in the use of these devices has been very pronounced and most likely the related shares will continue to grow at a steady pace in the forthcoming years, especially for smartphones. This potential shift from personal computer towards mobile devices to carry out online activities has been identified by many stakeholders in the study as one of the main drivers of innovation in both the collection of data and their use to improve the efficiency of digital distribution channels, notably through the development of data analytics. In this respect, an increase in mobile connectivity will allow for a better use of data collected via geolocation systems and could help providers know their consumers better when they purchase car insurance, do payments, etc. Performing mobile applications will be therefore a crucial instrument for providers of car insurance to compete in the coming years.

Noteworthy, for most countries, the aggregate figures in percentages by country are all much above 100%, as a result of the hybrid consumer behaviour regarding the use of devices. A significant share of consumers uses different types of devices during the pre-sale and sales phases.

Figure 5.2 Devices used for product research on car insurance (% , 2015)



Note: Figures on Luxembourg are not available.

Source: Google Consumer Barometer Survey (2015).

## **Diversity in local laws and regulations**

A major finding arising from the focus groups conducted for this study was that supervision by a central European regulatory body (such as with the banking industry) would be welcome in order to drive cohesion and interoperability of insurers, use of data, operational procedures, etc. Another view of the focus groups was that such a body could work to gain agreement on standards for pan-European car insurance services. This would promote transparency for consumers in dealing with foreign insurers. It could also manage a platform that allows comparison across insurance offerings through standardisation and thereby promote brand awareness and verification of good standing among its members.

### *Pre-sales: Country of origin principle*

E-commerce laws in the EU subject all firms to 'country-of-origin' rules. In practical terms, this means that a French-based e-commerce site's terms and conditions should meet the laws of every member state in which consumers can buy its products. For example, if selling in Denmark, firms must give consumers a 14-working-day 'cooling-off' period during which the consumer can change his or her mind about the purchase and return the goods for a refund. The cooling-off period in the UK is only seven working days. So if a UK Internet broker is planning to offer services in other EU states, he must follow the laws of each state. Effectively, it would be illegal to use a website set up in France for French customers to sell to customers in Germany, so a new German website has to be created for German customers. These regulations are new and were brought into force largely to protect consumers when they buy products either over the Internet or by telephone. They derive from the E-commerce, Distance Selling and Electronic Signatures Regulations.

An approach to standardisation has to be established for insurance if there is to be growth in cross-border business. The opt-in approach proposed by the Common European Sales Law (CESL)<sup>267</sup> would appear to be the most expedient to achieve this.

### *Sales*

Insurers have typically relied on data in assessing consumers' risk profiles to calculate premiums. This use of data in insurance is not new, but the extent to which data is collected and analysed has changed dramatically. Equally, the nature of that data is also becoming more complex.<sup>268</sup>

Historically, for example, when buying car insurance, a consumer has been asked to provide structured data about themselves (demographic data) or their vehicles (make, model and year). In addition, insurers leverage their own structured data, such as claims history and profitability analysis, to determine customer risk profile and appropriate pricing. For example, some providers of car insurance do not insure owners of specialised or modified vehicles.

The extent to which such customer profiling violates regulations regarding data protection and privacy is hotly debated, and subject to different cultural influences.

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<sup>267</sup> Common European Sales Law /\* COM/2011/0635 final - 2011/0284 (COD) \*/.

<sup>268</sup> The UK Financial Conduct Authority categorises data as a) generated from devices, b) obtained in the provision of other products and services, and c) available from public sources such as social media. Financial Conduct Authority, Thematic Review TR15/1, Call for Inputs: Big Data in retail general insurance, November 2015.

### **Reluctance of industry to engage in social media channels for customer interaction**

Our focus groups gave some insight into insurers' reluctance to engage in social media, which centres on corporate culture and beliefs. For example, it was stated that the lightning-fast rhythm of social media does not fit the nature of insurance products, and that active communication was considered to be difficult to carry out for an insurance company. Conservatism therefore seems to be the predominating explanatory factor in the lack of awareness of what social media channels represent in terms of customer requirements. Digital age customers demand quality service as much as quality products, and the organisational implications for this transformation are clearly not well understood.

### **Integrate existing products with 'frictionless' digital customer experience**

Price comparison websites, direct sales and introduction of new brands by existing and new (foreign) players are putting pressure on the prices and profitability of non-life insurers. In particular, incumbents have launched new online-only insurance brands that allow them to compete by offering lower fees on price comparison websites, without having to lower the fees on of their traditional brands. This may be accomplished in alliance with InsureTech start-ups initially, but ultimately existing customers of legacy products will expect and demand comparable value, so a more fundamental and co-created redesign of product offerings will be required.

### **Lack of comparability of customer profiles for providers**

Insurance providers have embraced digitalisation technology on Internet platforms through e-commerce portals and internet POS transactions at the front end. At the backend, digital technology is also applied throughout the car insurance transaction process – from using sophisticated data-tracking websites, to social media engagement and automation of administration processes in pre-sales, sales and post sales phases.

Through all these various stages, large amounts of data are collected. For the insurer the capture of customer data both simplifies and adds to the vast body of data that insurers have on their market segment. Website quotes generated by customer self-input data and traditional sales by intermediaries and tele-sales agents help build rich customer profiles. Importantly, such profiles rely on interoperable data sets, which requires significant investment.

An example of the usefulness of such interoperability at a national level is provided in the UK, where the use of a shared data service provided by the Driver Vehicle and Licensing Agency (DVLA) aims to improve accuracy in customer data. Insurer data is integrated with data from MyLicence,<sup>269</sup> a joint initiative between the DVLA, the Department for Transport and the insurance industry. Customers searching for car insurance quotes may be asked to provide their driving licence number (DLN), a unique 16-character sequence displayed on the driving licence. This removes the opportunity for customers to make mistakes when declaring driving history information. The effect of this has been reported to save honest customers an average of £15 on the cost of their car insurance. This means that insurers will need to ask customers fewer questions when they apply for cover, thus speeding up the

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<sup>269</sup> For additional information see: [www.abi.org.uk/Insurance-and-savings/Topics-and-issues/Insurance-industry-access-to-driver-data](http://www.abi.org.uk/Insurance-and-savings/Topics-and-issues/Insurance-industry-access-to-driver-data).

purchasing process for all parties. In addition, this data set provides raw material for rich risk insights.

Data-mining and business analytics provides the insurer with an improved understanding of the business risk pool. Web analytics track customer online behaviour to monitor hotspots and referring sites, page visits, customer visit behaviour, and completed or abandoned transactions. In the Netherlands, big data is considered essential for the pricing of the product and is also used to determine where to find the most attractive customers. Accurate risk profiles can already be composed based on age, gender and address, and from the additional information fields that will be added in future to fine-tune the profiles. The insurer also uses databases (BKR and FRISS) to establish credit worthiness.

As a result, digitally enabled insurers generate rich insights into understanding and predicting their customers' behaviour, needs and preferences. Insurers can therefore offer new products, such as a more basic insurance service that covers exactly what the consumer wants. Many of the basic policies are currently 'overprovided', i.e. they have more cover than the consumer actually wants or wants to pay for. This would benefit those financially excluded to obtain more affordable insurance, e.g. those non-digital consumers or those with weak financial profiles.

It is paramount, nonetheless, that the privacy of customers' personal data is assured and treated in accordance with extant privacy laws. The uses that the collected data will be subject to must be made clear to, and accepted by, the consumer. In telematics, for example, the data feedback is known to influence driver behaviour and obtain better pricing. However, the downside is that data protection legislation imposes duties on the insurer as a data controller; data breaches are subject to severe fines. On the sufficiency of data available for non-residents, confirmation of his or her accident record over the last five years is a critical risk profile example. A point that emerged through the focus groups and interviews was that a common European database with car history, driver address, and frequency and amount of damage claims and damage type would enable fraud detection and an easier pricing of services in other member states.

The key barrier to such comparability is the lack of access to foreign driver information. This is especially relevant as a growing number of people are now migrating for jobs. A point developed in the focus group (in Brussels, 10 March 2016) was that if the authorities in other European countries made their data consultable or, better still, reported it to a central European authority and made it accessible to all insurers, then a much improved risk assessment for international driver profiles could be made.

Arguably, drivers across different jurisdictions would show patterns of risk associated with their nationality, such as respect for, and knowledge of, rules of the road in different jurisdictions, on which side of the road they are accustomed to driving, and experience in urban versus rural environments.

Car insurance pricing is a business of scale. Access to better information of customer profiles will enable better customising of products to specific market segments and ultimately provide better value and choice to the consumer. Common data standards and interoperability regarding driver data is key to opening up the target audience for new offerings to cross-border customers. Notwithstanding the data protection issues surrounding such a repository of data, a pan-European driver database would be the solution for providers to be able to design and market new offerings. Leveraging crowd-sourcing capabilities to improve customer ownership of such data, and starting

with insurers' data on vehicles, other local authorities' open source data could be used (tax, road toll, national roadworthiness testing data, etc.) to construct a cloud-based vehicle fleet repository on a pan-European basis.

Practically, a body of knowledge could be built by a network of experts who know the market and local ecosystems, can assess damage claims, perform on-site inspections, and know reliable experts for repairs.

Another point made was that in addition to a common database, harmonisation of law would facilitate expansion across borders.

### **Diversity in local laws and regulations**

Regulatory standardisation is vital across member states for cross-border business to flourish, and the first step towards such acceptance is establishing 'passporting' type arrangements for insurance products, whereby consumers are protected by country-of-origin regulation. A digitally driven 'opt-in' interface for customers of insurance product portfolios would increase consumer autonomy while standardisation across regulators is improved.

As always, regulation and associated business model impacts are in tight synergy in this industry. Policy-makers must gauge the trade-off between consumer choice and equitable market growth. For example, since the Netherlands' banned commissions on selling complex financial services products, intermediaries do not earn income from product commissions. As result, intermediaries now advise the consumer and are remunerated for their advisory service based on service contracts or hourly advisory rates, etc. There is consolidation in the intermediary market through mergers, acquisitions and partnerships. This will enable the intermediaries to have the necessary scale to adopt more digital solutions to remain competitive.<sup>270</sup>

### **5.2.2 (Changes in) consumers' behaviour**

#### **Cross-border market knowledge**

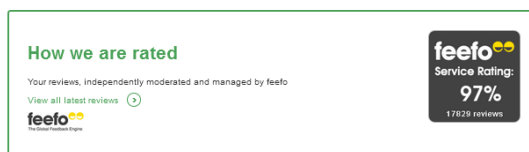
##### *Pre-sales*

Car insurance relationships were traditionally conducted almost exclusively face to face with the insurer or through insurance brokers. Digitalisation catalysed the evolution of the self-informing and self-purchasing customer, challenging the role of the intermediary. While such online behaviour is significant for product awareness and product research (see Box 5.1), this autonomy is not translating to actual sales transacted online. Significantly for this study, there is little evidence that the digital customer is extending his/her product research across borders. It appears that consumers are comfortable switching within their own country on the basis of price alone, but not across borders. This is true even across neighbouring jurisdictions with broadly similar regulatory regimes for motor insurance.

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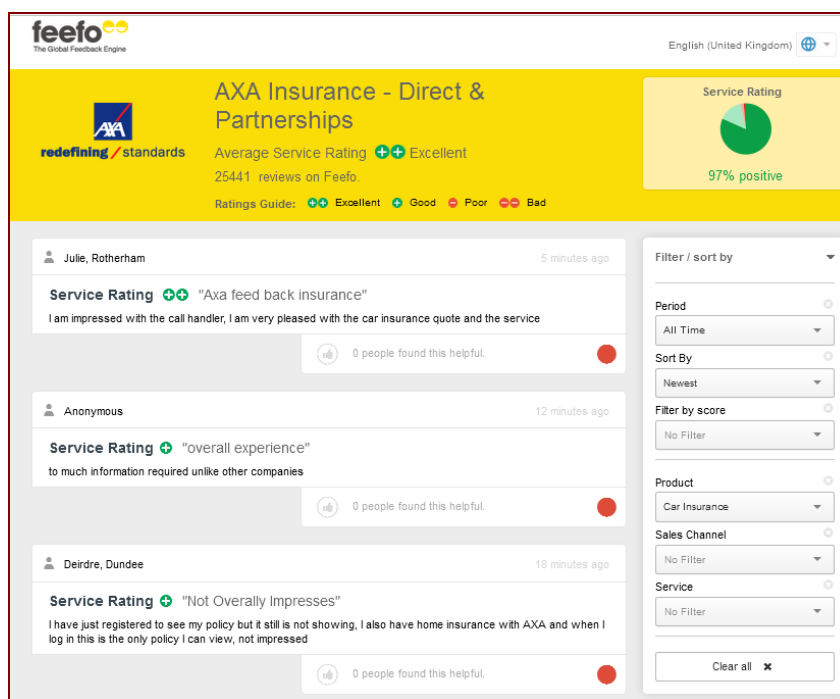
<sup>270</sup> For additional information, see Rabobank (2016), Assurantietussenpersonen ([www.rabobankcijfersentrends.nl/index.cfm?action=branche&branche=Assurantietussenpersonen](http://www.rabobankcijfersentrends.nl/index.cfm?action=branche&branche=Assurantietussenpersonen)).

Figure 5.3 Example of reputation rating



Source: Feefo (2016).

Figure 5.4 Reputation ranking of Axa on Feefo



Source: Feefo (2016).

## Sales

A key barrier to consumers benefitting from comparing products online is the heterogeneous nature of the products themselves, with a competitive pressure among providers to differentiate their offerings from the marketplace. The greater the degree of competition in the market, the more difficulty consumers will have in comparing like for like. The Dutch market for liability insurance and, in particular, car insurance is very competitive, yet the policies are relatively simple and homogeneous, which make them easy to compare.<sup>271</sup> In general, the more complex the product, the larger the share of policies that are sold through intermediaries.

This example needs to be further researched in light of the regulator's role in ensuring comparability. The tension between consumers' desire to compare products, and the providers intent on making products more complex for competitive purposes, needs to be understood in the context of increasing competition across borders in the EU. Economies of scale sought after through the digitalisation of customer experience will

<sup>271</sup> For additional information, see Commissie Verzekeraars (2015), Nieuw leven voor verzekeraars ([www.rijksoverheid.nl/onderwerpen/financiele-sector/inhoud/commissie-verzekeraars/rapport-nieuw-leven-voor-verzekeraars](http://www.rijksoverheid.nl/onderwerpen/financiele-sector/inhoud/commissie-verzekeraars/rapport-nieuw-leven-voor-verzekeraars)).

not be achieved if product differentiation increases value opacity and drives consumers towards offline consultation with intermediaries.

The Dutch insurer in this study's focus group recorded no cross-border sales but does offer coverage for Dutch residents abroad through its subsidiary Eurocross Assistance ([www.eurocross.com](http://www.eurocross.com)), which provides global assistance such as medical assistance or roadside assistance. These facilities could potentially be used from its bases in Europe if it were to sell cross-border. Another Dutch insurer has seen major changes in online sales, with 70-75% of insurance (including car) products now sold online. The entire contractual procedure has been automated and the verification is performed through payments. The invoices have been digitalised and can be paid online. In the next five years it expects that increased car-sharing, as well as the move toward driverless cars, will change the way insurance on cars is sold, most likely in the form of integrating insurance as a package deal with the car. Although such examples suggest an increase in domestic sales online, and increasingly via the mobile channel, there is no evidence that this adaptation to customer mobility will boost cross-border sales.

In the case of the UK and Ireland, two neighbouring jurisdictions sharing language, culture, driver and vehicle characteristics, the existence of comparable insurance products does not drive cross-border sales. Most business is already occurring through branches and subsidiaries located in either country.

Many German insurance brokers are tied to one of the large insurance companies and receive sales commission accordingly. These agents are able to offer discounts to customers that price comparison websites cannot. The reliance on these agents make insurers hesitant to offer direct written policies on the Internet.

When Finland introduced the digital register system in November 2015, 30% of the car insurance business immediately migrated to sales over the Internet. In terms of cross-border sales, a Finnish participant in the focus group noted that it had registered cross-border sales to residents in Russia, Iran, Iraq, Estonia and Somalia. It found the main barriers to be language, customer data and legal issues of identification.

### **Preference for human interaction at key touch points (an omni-channel approach?)**

Polish customers use the Internet for information and comparison (68%)<sup>272</sup> but at the final purchase stage prefer to engage with a sales agent. Poles prefer contact with a "real human being" when seeking final advice before insurance purchase, while 62% of respondents use this channel for post-sale activities such as making a claim or reporting damage. There remains some ambiguity in the data regarding customer desire to leverage the mobile channel to talk directly to an advisor or interact via an app and "depersonalised" process.

One Finnish insurer interviewed during the study reported distribution channel use of nearly 70% via a mobile relationship manager and 15% via the Internet, with other personal contact being 10% at the branch and 5% via call centre. New customers are acquired primarily through car dealers (cross-sell), followed by branches closest to consumers' homes (proximity), and Internet and mobile channels.

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<sup>272</sup> KPMG (2015), Raport Jeden klik do ubezpieczenia. Czy Polacy są gotowi na kanały cyfrowe, December.  
<https://www.kpmg.com/PL/pl/IssuesAndInsights/ArticlesPublications/Documents/2015/12/Raport-Jeden-klik-od-ubezpieczenia-czy-Polacy-s%C4%85-gotowi-na-kana%C5%82y-cyfrowe.pdf>.

In 2015, Dutch customers primarily used information they found themselves (42%) and price comparison websites (38%); especially for young people, family and friends are important sources of information (23%) and for a minority independent advisers are still important (20%). Insurance policies are mostly obtained directly from insurers (50%), followed by independent advisers (24%), price comparison websites (13%) and banks (8%).<sup>273</sup> The share of policies sold via the Internet varies between products. In general, the more complex the product, the larger the share of policies that are sold through intermediaries.

It would appear that the multiple channels satisfy customer requirements for choice and comparability, but ultimately sales are concluded on the more traditional grounds of local relationships. Crucially, these local relationships are perceived to be embellished by the mobile channel.

Online payments can be made 24/7 and in most cases, and consumers have 24/7 access to a dedicated call centre advisor for purchases and accident claims. With transaction time stamping, contract activation can be instantaneous on receipt of electronic payments.

These trends point to an opportunity for the omni-channel approach to wrap a suite of commoditised services into a single customer relationship, emphasising the personal interaction while removing the barrier of locality to those services. This notion of a car insurance portfolio will be explored further in the scenarios section of this chapter.

## **Post-sales**

### **Telematics: Converging forms of driving behaviour across the EU-28**

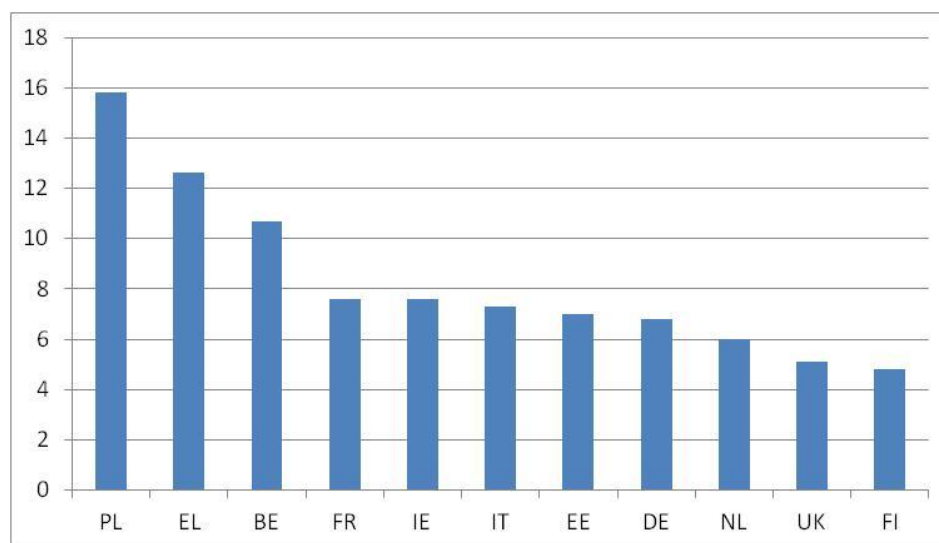
Telematics, smart cities and connected drivers all have the potential to improve driver behaviour for the better, in terms of road safety and vehicle maintenance, which have knock-on effects on policy risk and therefore price (see Box 5.2). By explicitly linking the visibility of an individual's driving performance and his or her premium, he or she is motivated to improve.

This innovative trend could potentially contribute indirectly to further cross-border sales. Should the use of telematics be generalised in the EU-28, it is likely that driving behaviour might converge further in the coming years. As shown in Figure 5.5, according to the United Nations, in 2013 there were still significant differences in the number of fatalities per 100,000 motor vehicles across the EU-28. An overall adoption of telematics could encourage all European drivers to adopt safer driving behaviour, resulting in more consistent driving behaviour across Europe and converging prices. Such convergence in pricing could potentially contribute to raising the demand and supply for cross-border sales, and prompt some international insurance providers to develop pan-European products. Nevertheless, some specific impediments might postpone the convergence of driving behaviour across the EU-28, such as differentiated quality in local roads.

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<sup>273</sup> Verbond van Verzekeraars (2015), Consumentenmonitor 2015: [www.verzekeraars.nl/verzekeringsbranche/cijfers/Paginas/ConsumentenMonitor.aspx](http://www.verzekeraars.nl/verzekeringsbranche/cijfers/Paginas/ConsumentenMonitor.aspx).

Figure 5.5 Road fatalities per 100,000 motor vehicles



Source: United Nations.<sup>274</sup>

To date, telematics has indeed induced changes to the way premiums can be calculated based on driver profile and behaviour (see Box 5.2). Insurers' access to risk profiles is enriched by various new datapoints including vehicle, driver behaviour, geolocation and road conditions. This helps overcome constraints caused by lack of local market knowledge, which is frequently referred to under the KYC principle in this report's scenario section below.

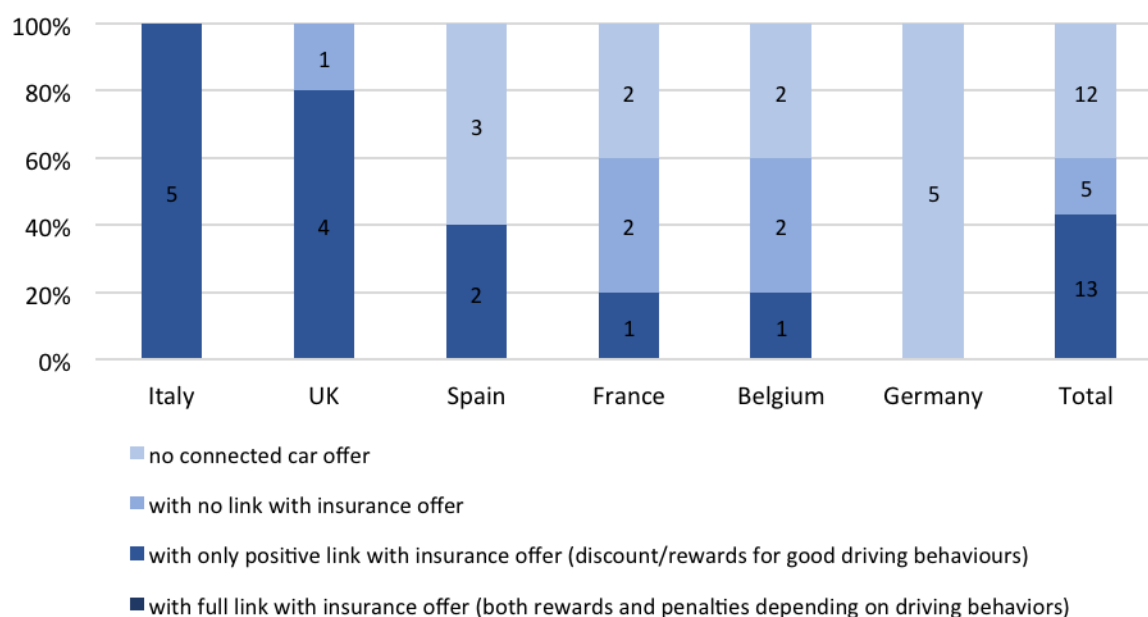
For example, in Italy the installation of data-collection devices, the so-called 'black boxes', in vehicles by domestic car insurance companies represents an important innovation: they increase data collection efficiency and data reliability. Italy has the largest share of 'connected cars' for insurance purposes in Europe: 5% of all motor premiums are based on telematics.<sup>275</sup> High premiums have led many Italian consumers to resort to connected car offers in order to obtain a substantial discount on the insurance price, especially those with a good insurance history who live in high premium regions. A survey conducted by Roland Berger in 2015, involving five large insurers from five member states, revealed that all five insurers offer connected car insurance packages in Italy. This improves the insurance premium, as good driving behaviour earns discounts and rewards.

In addition, black boxes have helped increase competition: 15% of consumers switched companies in 2015, compared to 12% in the previous year. This benefits younger drivers who normally pay much higher premiums.

<sup>274</sup> Related statistics can be found on: [www.worldbank.org/transport/roads/safety.htm](http://www.worldbank.org/transport/roads/safety.htm).

<sup>275</sup> Roland Berger (2015), "Internet of things and insurance": [http://www.rolandberger.be/media/pdf/Roland\\_Berger\\_Internet\\_of\\_Things\\_and\\_insurance\\_20150513.pdf](http://www.rolandberger.be/media/pdf/Roland_Berger_Internet_of_Things_and_insurance_20150513.pdf).

Figure 5.6 Integration level of connected car offers by insurers (November 2014)



Source: "Internet of things and insurance 2015", Roland Berger.

The move towards black boxes has been noted by the Italian Insurance Supervisory Authority (IVASS), and also in the Italian Senate's Market and Competition Bill (no. 2085).<sup>276</sup> The authority reported that in 2014 that installations of black boxes in Italy had grown by 4%. These devices were taken into account in 14% of all car policies initiated during that year.

In addition to more accurate premium assessments in relation to clients' risk profiles, black boxes drastically improve the decision-making capacity of the claims management process by providing real-time data. In the coming years, connecting vehicles to other vehicles, devices and infrastructure should drive more valuable use of time during journeys, as well as reduce the number of accidents when combined with autonomous emergency braking and adaptive cruise control.

#### Box 5.2 What is telematics?

A telematics device (black box) is a small device plugged into the car's on-board diagnostic system port (OBD) and allows the insurer to track the insured's driving. OBD-II, a new standard introduced in the mid-1990s, provides almost complete engine control and also monitors parts of the chassis, body and accessories, as well as the car's diagnostic control network. The device is fitted out of sight, usually behind the dashboard, and captures the driver's unique driving style such as cornering, swerving, braking, speed and acceleration (Figure 5.7 below).

<sup>276</sup> Audizione nell'ambito dell'esame del disegno di legge n.2085, "Legge annuale per il mercato e la concorrenza", IVASS.

<https://www.bancaditalia.it/pubblicazioni/interventi-direttorio/int-dir-2015/rossi-11112015.pdf>.

Figure 5.7 Telematic devices



### How telematics works

Telematics can be either behaviour- or non-behaviour based. There are currently two basic ways to use the telematics device. The one favoured by most major insurers rewards customers for low-risk behaviour and good driving. The other, known as usage-based insurance, charges people for the exact number of miles they drive and the risk they incur. In the behaviour-based example from Igenie below (Figure 5.8), the telematics box collects data on how the car is driven and the data is transmitted to secure servers via mobile networks. Feedback is sent to the driver online or via an app.

Figure 5.8 Illustration of the telematic process



Source: Igenie ([www.tiatechnology.com/en/whats-new/how-telematics-is-shaping-car-insurance/](http://www.tiatechnology.com/en/whats-new/how-telematics-is-shaping-car-insurance/))

The telematics box contains a GPS unit which captures when and where the car is driven, a high frequency motion sensor which captures how the car is driven, and a SIM card which is used to transmit the data. Drivers receive regular feedback online or via an app on how they are driving and the insurer assesses trends and patterns in driving styles. The cost of insurance is reviewed every few months. Discounts are given when the driving is shown to have improved after a fixed period of time.

Insurers have the option to harness decision support and performance monitoring right to the source of the data, which is the consumer. This provides expanded options for businesses to monetise the 'Internet of things' (IoT), as they track consumers' behaviour and anticipate their needs and intentions. Driver evaluations and rewards lead to better driver behaviour.

**Usage-based insurance:** UBI is a behaviour-based insurance model for giving drivers access to cheaper insurance. It disrupts the auto insurance industry because premiums are calculated based on drivers' behaviour, such as Pay as You Drive (PAYD) and Pay How You Drive (PHYD) (see below). This is likely to result in decreasing auto premiums, which will decrease further because only those who think they are less risky than normal, or drive less than normal, will sign up to participate in UBI programmes.

**Pay as You Drive:** PAYD usage-based insurance is attractive to urban residents who do not drive much and who would usually be overpaying for their insurance in proportion to how much they drive. In the US, Metromile ([www.metromile.com/insurance](http://www.metromile.com/insurance)) offers an app that tracks users' driving, monitors engine health, and provides access to car-related data and services. Usually, the device is installed by the policy-holder and remains installed for a fixed number of months. It does not track location and is therefore threatens privacy less.

An example of PAYD in France is offered by the insurer YouDrive ([www.youdrive.fr](http://www.youdrive.fr)), whose model is illustrated below in Figure 5.9.

Figure 5.9. Pay as You Drive



Source: YouDrive (2016).

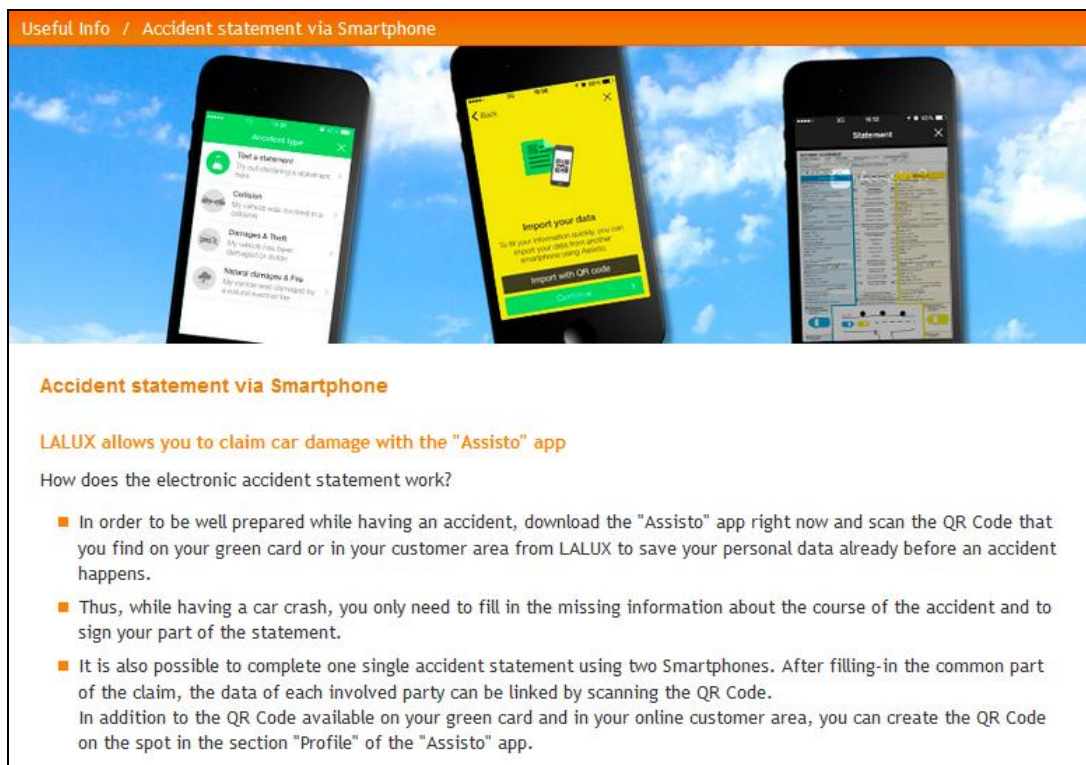
**Pay How You Drive:** Behaviour-based PHYD is more common than PAYD in the UK, where the focus is more on rewarding safe driving rather than on by-the-mile insurance. The assessment of the driving style is usually in four key areas: speed, braking, acceleration and cornering. Other data points taken into account may include location and the length of the drive. The technology provides drivers with feedback on their driving, helping them to improve as a driver, and potentially lowers the cost of their car insurance.

## Claim handling automation

In claims handling, insurers have introduced new technology and systems that improve the customer experience. These range from instant emergency payments to customers and claims apps that are directly accessible by the customer to stream pictures of damaged property directly to their insurer. These make the claims process more efficient and less traumatic for the customer at what is often a very difficult time, by limiting the damage caused by unexpected events and getting the recovery and assistance process started as quickly as possible. This kind of innovation with emerging technology is something insurers will continue to research and develop. Smartphone apps for making claims or managing customer records, such as the one provided by the Luxembourg company Lalux (Figure 5.10), provide pre-registration of

details and allows accident statements and photographs to be delivered by smartphone, speeding up the claims process.

Figure 5.10 Lalux app for registering accidents when they occur



Source: Lalux website.

**Recommendation systems:** Independent recommendations that testify to the insurers' service and claims performance can be obtained via a crowd-sourced rating platform such as Feefo (Figure 5.3). With the commoditisation of insurance quotes, clients will want to know more about the insurer's service and prompt payment reputation. Ratings bring an additional layer of comfort to the decision-making process. In the example below, Axa in the UK has a 97-100% approval rating (Figure 5.7). As more people make recommendations that are added to the data set, the information on reputation becomes more accurate for the consumer. A rating score can be reassuring and thus stimulate cross border trade.

### 5.2.3 Remaining barriers

The previous section discussed the barriers to cross-border sales in car insurance where there is evidence that digitalisation can be successful in addressing the challenges. This section considers some of the other barriers that exist in the cross-border car insurance industry, where there is less scope for a digital solution or alternative.

#### Pre-sales

##### *Relationship distance*

In insurance, a certain level of comfort and trust is essential, especially in the insurer-consumer relationship. These factors make location and distance an important

consideration for the consumer. For example, in case of accident and casualty, victims would naturally prefer the security of dealing with assistance that is familiar. The consumers' local knowledge of his insurer and national suppliers provides reassurance on this point of stress.

On the other hand, less is known about buying an unfamiliar brand from another country, especially if the branding and reputation is not strongly marketed to make an impression. It is inevitable that consumers will be more cautious in dealing with a new foreign entrant, especially if contracts remain as complex as they are. Detailed information may be difficult to obtain, and there is a lack of serviceable information on how to obtain redress in the event of a legal dispute or problem with a product supplied by a foreign firm.

#### *Reducing the cost of regulatory compliance for cross-border business*

Selling cross-border means incurring additional costs to promote the insurer in a new market, because of the differences in national preferences, local laws, languages, culture and market conditions. There is also the need to establish a brand name in a new market and a specific marketing strategy in each and to comply with local market rules. These are typical of the costs of entering into any new geographical markets and are an unavoidable part of doing international business. However, there may be some scope for the relaxation of the more stringent rules on Internet channel promotion that some countries impose and that cause additional compliance difficulties and costs.

#### *E-identity*

Domestic market suppliers, especially state-owned entities, often have a home advantage in the area of identification and verification. Inflexible procedures can deter cross-border business and make it costlier. For example, online brokers have to verify the identity of the client, and often this can only be carried out at that country's local post offices, relevant embassies or public notaries. A solution would be the adoption of a common standard applicable in all countries of acceptable identification and verification. For example, the E-identity verification of an identity card, passport or drivers licence.

#### *Tax relief*

European policy-makers have sought to harmonise fiscal policy differences. However, there are still fiscal treatments which may favour a domestic supplier. There can also be fiscal implications for the consumer that influences policy pricing in another member state. For non-life, the damage claims process is very important and requires deep market knowledge and contacts with experts, which is not always available in the insurance company specialised in one market. There is still a long process to bring about standardisation and harmonisation of fiscal differences that is beyond the scope of this research.

However, as mentioned before, a central body such as the EIOPA, with adequate supervision and enforcement authority, can highlight the differences between countries, as well as operate an independent motor insurance comparison website to

develop cross-border business. This is partly covered in the recast Insurance Distribution Directive 2016/97.<sup>277</sup>

## **Post-sales**

### *Different conduct-of-business regimes*

Differences in laws and procedures create compliance cost challenges in the cross-border context. While certain information is mandatory in one country, it may be optional in another. For example, in the UK the customer is legally required to renew his insurance contract every year and this stimulates the annual search process to 'sign a new contract' and 'go shopping' before renewing an existing contract. This process has led to the creation of many price comparison websites in the UK and Ireland. However, this is not the case in Belgium, where contracts are automatically renewed, even if no notice has been given by the insurer.

Another example is different country systems with regard to license plates. In the Netherlands the licence plate is centrally registered and is tracked when the car is sold. In Belgium the licence plate is attributed to the driver, not the car, and this does not facilitate the history of accidents that is available for insurers.

Conduct of business rules can also be used as a way of preventing other EU firms from setting up business in a given member state. For example, there may be a rule which does not make a contract legally binding unless written in the said member state's language.

In the Netherlands it is possible in practice to only temporarily insure cars with a non-Dutch license plate.<sup>278</sup> The insurance of Dutch cars needs to comply with the Motor Insurance Liability Act<sup>279</sup> (Article 2:5 prescribes having an insurer that is allowed to conduct business in the Netherlands under the Act on Financial Supervision), which prescribes that the insurers need to be allowed to offer the insurance under the Act on Financial Supervision (Article 2:32).<sup>280</sup> This act gives foreign insurers the possibility to offer car insurance in the Netherlands under some specific criteria as specified in Article 4:71 of the Act on Financial Supervision (displayed below). The majority of motor vehicle insurance in the Netherlands is directly written.<sup>281</sup> Hence, in 2014 54.3% of the private insurance policies were directly written, whereas intermediaries were responsible for the sales of 28.4% of the insurance policies and banks for 10.5%. The other channels, including, among others, car dealers, are responsible for 6.7%.

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<sup>277</sup> Directive (EU) 2016/97 of The European Parliament and of The Council of 20 January 2016 on Insurance Distribution (Recast) (<http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32016L0097>).

<sup>278</sup> For additional information, see:

[www.eccbelgie.be/kan-je-je-verzekeren-bij-een-buitenlandse-verzekeringsmaatschappij-s58931.htm](http://www.eccbelgie.be/kan-je-je-verzekeren-bij-een-buitenlandse-verzekeringsmaatschappij-s58931.htm);

[www.independer.nl/autoverzekering/info/service/afsluiten/buitenlands-rijbewijs.aspx](http://www.independer.nl/autoverzekering/info/service/afsluiten/buitenlands-rijbewijs.aspx);

[www.geld.nl/autoverzekering/service/buitenlandse-auto-verzekeren-in-nederland](http://www.geld.nl/autoverzekering/service/buitenlandse-auto-verzekeren-in-nederland).

<sup>279</sup> For additional information, see:

see: [http://wetten.overheid.nl/BWBR0002415/geldigheidsdatum\\_11-02-2016](http://wetten.overheid.nl/BWBR0002415/geldigheidsdatum_11-02-2016).

<sup>280</sup> [www.toezicht.dnb.nl/en/binaries/51-217291.pdf](http://www.toezicht.dnb.nl/en/binaries/51-217291.pdf).

<sup>281</sup> Verbond van verzekeraars (2015), Dutch Insurance Industry in Figures ([www.verzekeraars.nl/verzekeringsbranche/cijfers/Documents/VerzekerdVanCijfers/2015/Dutch%20Insurance%20Industry%20in%20Figures%20\(2015\).pdf](http://www.verzekeraars.nl/verzekeringsbranche/cijfers/Documents/VerzekerdVanCijfers/2015/Dutch%20Insurance%20Industry%20in%20Figures%20(2015).pdf)).

### *'General good' principle deters competition*

The 'general good' principle is used by member states to protect consumers. Cultural differences influence the application of this consumer protection policy, in that they may be applied to deter competition from other member states, because the principle is interpreted in different ways across the EU. In addition, the EU Directive on distance marketing of financial services allows each member state to impose separate national rules on how financial services can be marketed, advertised and distributed. Myriad different rules make it almost impossible to develop pan-EU products which can be sold in all member states.

### *Different legal systems with respect to insurance contract law*

There are 15 to 25 different legal systems in the EU-28, each with different contract and insolvency laws. This inevitably requires compliance with local supervision, consumer protection and accounting standards. The compliance costs may impose an economic burden that outweighs the benefits of cross-border insurance. A report published by the European Commission gives a full consideration of the difficulties that arise with respect to insurance law under the different legal systems.<sup>282</sup>

## **5.2.4 Conclusion**

Changing lifestyles and buying preferences driven by the Internet have affected current models of distribution. Traditional direct channel models of individual agents still exist but are rapidly being displaced by direct Internet sales, which by definition could open up distribution to a cross-border audience.

In parallel, developments in the collection and use of data are changing the way that insurance, particularly car insurance, is marketed, priced and underwritten in the EU. The overriding result is the collection and generation of large amounts of data in all phases of the motor insurance business. Analysed data leads to better market segmentation, increased customer experience and customer-centric product development.

Price transparency, dis-intermediated direct purchase and virtual social community-led bulk purchase will all lead to further commoditisation of motor insurance products, making them more adaptable to a cross-border audience. With increased commoditisation, insurers will have to reinvent their products for digital service platforms.

Such platforms are considered in the next section, where three future scenarios for the development of cross-border motor insurance business are presented.

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<sup>282</sup> European Commission Directorate General for Justice (2014), Final Report of the Commission Expert Group on European Insurance Contract Law:  
[http://ec.europa.eu/justice/contract/files/expert\\_groups/insurance/final\\_report.pdf](http://ec.europa.eu/justice/contract/files/expert_groups/insurance/final_report.pdf).

## 5.3 Scenarios for cross-border activity

### 5.3.1 Scenario 1: Business as usual

#### Description

- Nothing is done by the EU to alleviate obstacles and overcome barriers
- No major changes – cross-border sales are not stimulated

#### Opportunities

As mentioned previously, there does not appear to be evidence of unmet latent demand for cross-border car insurance. It may be that transnational insurance brands provided under FOS have satisfied demand, or consumers are not aware of the cross-border insurance providers, or insurers that do offer cross-border products are not well promoted or well known.

The expansion of cross-border insurance within the EU should remain a market-driven evolution, based upon real demand. The most significant condition for insurers wishing to enter another car insurance market lies in the accurate assessment of the local environment into which they wish to sell. This applies irrespective of whether insurers are transnational or functioning merely on a local basis.

#### Threats

For insurers, the major challenges will continue to be compliance with local laws, liability regimes, law of evidence and other procedural differences. New entrants lack the in-depth knowledge that should be acquired to operate in a market, such as data on accidents, claims settlement practices, average costs of repair, medical services, social security system and prevailing taxation, etc., as well as an awareness of local road safety, driving culture and consumer habits. Another consideration is the challenges arising from the wider local framework such as the saturation and intensity of competition, and whether the pricing structure in view of all this can be competitive but profitable.

#### Conditions

To give digitalisation its due acknowledgement, it has brought many positive changes to the market. However, digitalisation is not currently achieving its full potential to bring about a single digital market. Some of the implementable solutions expressed by the focus groups to enable cross-border trade are reviewed below.

*Competitiveness:* A true single market must be an efficient market, and therefore insurers will not provide cross-border services for any length of time if it is costlier than the local solution. An efficient market will not happen without improved harmonisation and standardisation in a number of important areas.

*Harmonisation, standardisation and interoperability:* The adoption of common or interoperable standards at a European level would help overcome various national differences. One view expressed by the focus group was that improved transparency, such as regarding information on the applicable compensation rules, would help comparison websites feature foreign insurance companies, information which is now practically non-existent.

*Identity:* There is a clear need to encourage the use of common European e-identity systems by national authorities, and a lot of effort must still be made to get customers to supply more of their data uniformly across the states.

*Lack of customer-centricity:* It was noted that consumer satisfaction scores with insurers are at a low level. There appears to be a lack of focus by insurers on customer-centricity in the provision of insurance services. It was felt that customers could be better served through the provision of more choices and better pricing, which are reflective of the true potential of digitalisation. New entrants have a rationale to enter 'underserved' insurance markets where traditional insurers are weak, slow or inattentive. This is shown in the countries where customers are not 'sticky' (i.e. not loyal), where they would readily switch to a new insurer on the basis of premium alone. Another point made was that insurers don't reach out or engage often enough with their customers. Many of the interactions are usually limited to once or twice a year and conversations about obtaining a better price or addressing an issue are customer-led.

*Product complexity:* Products are too complex and should be simplified. Concentrating on making insurance products less complex can speed up the harmonisation process. The aim would be to create simpler insurance products that require less explanation, and therefore less information, rather than more complex products that require more information. In some countries, the high level of complexity means that brokers and agents are seen as trusted advisers, as customers rely on their broker to study the '50 pages' of terms and conditions and then inform them of the important elements accordingly. Consumers would also like more information and transparency around prices online. It was also proposed that what is needed is system reform at a national level in favour of simplification and transparency. For example, simpler products that do not compromise consumer protection are needed to enable cross-border sales. However, intended outcomes of digitalisation need to have a clearly beneficial impact for consumers, and not just the output of a new digital agenda.

*Rating system:* Products have become very complex and consumers need to trust the supplier and know what they stand for, i.e. the reputation and brand of an insurer is important. The focus group's view was that there needs to be some kind of registration or accreditation process for providers of insurance. This will give the consumers some assurance of rating and quality.

*Restrictive practices:* Some countries still have policies and practices that restrict or make it difficult for foreign countries to participate in the market. Relaxing some of the policies identified above, such as impractical verification of identity or security printing requirements, would help reduce some of these obstacles.

*Social Media:* Some organisations in the insurance industry have been too slow to embrace the effectiveness of social media in connecting with the growing audience of Internet users. However, in being too conservative, the industry neglects to fully harness the enormous potential of digitalised media for relationship and reputation building, as well as information dissemination. It fails to fully engage with possible or existing customers by using one of the most effective, and relevant, mediums of today. Websites for targeting customers in foreign countries need to comply with the laws of the member state in which they want to do business and this involves challenges and costs. Social media, however, is a tool that bypasses some of these obstacles and consists of a sphere of many popular data stream push channels used by consumers such as Twitter, Facebook and blogs.

*Improved Data:* One person in the focus group thought that data from a mix of sources, structured as well as unstructured, could vastly improve business intelligence to influence pricing and claims handling. Technology can then be used to mine big data using data analytics solutions with sophisticated algorithms. These are the areas that FinTech and InsurTech companies are exploring in order to find niche segments that are currently underserved by the incumbents.

*Interpretative role for brokers in cross-border insurance:* Brokers can play a major role in cross-border activities by serving as knowledgeable intermediaries between markets. A skilled broker can interpret differences in contracts between countries and guide clients accordingly. But in order to do so, they need correct information and, most important, reasonable access to foreign products. Focus group participants expressed the view that this information is not currently readily available to brokers, and a platform is needed that makes information on products sold in other member states easily available to both insurers and consumers.

*Comparison sites:* To encourage cross-border sales, comparison websites should be able to present pan-European information about insurers and their products. The comparison sites would be more useful and transparent if they offered information on contractual requirements and various policy options to help the consumer to evaluate cross-border providers and products beyond price information alone.

## **Probability**

There is a high probability that this scenario will materialise, as the probability that the status quo remains, and the markets do not expand, is high. Hence, during the focus group, none of the participants forecasted that cross-border car insurance would take off in any major way in the next five years. However, they do believe that digitalisation will help make online domestic car insurance sales more efficient. Internet-enabled customers seek an integrated experience, but the view of the focus group was that incumbent insurers are neither making this a priority nor concentrating on the big data evolution that will enable it. This could turn out to be a costly failure, as agile InsurTech companies are targeting the insurance space and experimenting/sandboxing attractively priced products, unmet customer needs and customer satisfaction. One of these disruptors may yet arrive at an innovative solution that surmounts the policy and natural barriers. Yet even if policy-based barriers can be reduced in the next five years through technology, barriers such as differences in languages, culture and social security systems will still require insurers to develop cross-border expertise. It would be costly to acquire this knowledge, maintain compliance and ensure brand awareness. Instead, the quickest way to enter another EU member state market for cross-border sales would be to acquire a foreign-based company which already has the skill set and knowledge to serve that market.

### **5.3.2 Scenario 2: Expansion in specific pockets**

#### **Description**

- Action is undertaken by the EU to alleviate the obstacles to cross-border sales
- Cross-border sales are stimulated

This scenario involves greater Europe-wide interoperability to enable the allowance benefits previously accrued to be portable, i.e. recognising that citizens who move to other EU countries for longer periods, may have an interest in retaining insurance products they had purchased in the country of their former residence if they have built

up goodwill in the form of benefits earned. An example of such benefits is the no-claims bonus accumulated over the years under the 'bonus-malus system' used in third-party motor liability insurance. Customers may wish to carry over benefits such as bonuses or more favourable terms obtained during the contractual relationship with their previous insurer if they intend to stay longer.

In this scenario, the typical consumers would be working expatriates who are established drivers, mature in driving years, from another member country, who take up expatriate residence in another state for a finite and reasonably lengthy period for the purpose of work. They may expect to return to their home state at a later stage.

During an interview with a representative of one European consumer organisation, it was suggested that there is potential to increase cross-border activities within pockets of the motor sector. However, it would seem that this growth would be contingent first on the existence of certain favourable conditions. For example, a consumer may lose any benefits earned under the 'bonus malus' system if he or she is not able to switch to another provider under the same terms. This may occur where the other member state does not recognise a similar system of bonus points for premium discounts. Furthermore, if the consumer does switch but has had to terminate the contract with the insurer in the previous country, he may be disadvantaged upon his return. Indeed, it is possible that his bonus points are not retained as some insurers may discontinue a consumer's no claims bonus if the contractual relationship has been terminated. In this case, the customer may also wish to keep the old policy if intending to return to the previous country in the foreseeable future.

### **Opportunities**

The opportunities are the same under Scenario 1. However, cross-border sales in this group would also be driven using search engine optimisation (SEO) and analytics for Internet searches commonly made by the target market, and by raising awareness through other channels such as publicity in new expatriate forums, association with relocation agencies and similar collaborations. There are also opportunities for cross-selling other insurance products.

### **Threats**

Similar threats would also be encountered to those under Scenario 1. The primary threat faced by incumbent motor insurance companies would be that new market entrants with nimbler operations may develop solutions that bypass existing barriers to cross-border motor insurance sales. This would allow them to gain first-mover advantage in this sector and capture market share ahead of incumbent insurers.

### **Conditions**

The conditions are the same in Scenario 1 in 5.4.1 above. However, increased EU-wide standardisation of motor insurance practices are likely to be a prerequisite to enable interoperability. An adequately empowered regulatory authority would be ideally placed to drive an acceptable consensus.

A major view of the focus group emerged that regulatory barriers to cross-border activities can be overcome if insurers adopt a more customer-centric approach. The availability of quality IT solutions is not a major obstacle and can help drive increased cross-border sales through big data analytics, as outlined in the previous scenario. However, harmonisation of compliance and tax is a major requirement that needs to be addressed in order to facilitate cross-border activity.

The differences between some domestic motor insurance markets in the EU are quite low, which would lower the barriers to cross-border activity. For instance, language, driving behaviour and road quality are relatively similar in countries such as, respectively, Luxembourg, Belgium, and France; Germany and Austria; and the UK and Ireland. This means that cross-border insurance providers would not need to develop completely different policy offers for the customers within these similar market pockets.

### **Probability**

The probability of this succeeding is less likely than Scenario 1. The reason is that harmonisation and standardisation are lengthy processes that are constrained by entrenched national interests. Furthermore, in the absence of a regulatory authority such as the banking regulatory authority it would be much harder to succeed because of all the obstacles and lack of central coordination and empowered authority to overcome them. However, if the countries mentioned above arrive at mutually acceptable concessions, this may be more feasible.

### **5.3.3 Scenario 3: Integrated EU market**

#### **Description**

The consumer can obtain car insurance from any insurer that he chooses, regardless of their location in Europe. Currently, cross-border sales of car insurance is hindered by the high degree of differences between national markets. For this to be transcended there needs to be increased standardisation of car insurance policies. In this scenario, a fully integrated EU motor insurance market uses a common standard for data collection, customer consent, use and analysis of market data from various sources, such as pan-European motor insurance databases and the Internet of things, connected devices, telematics, and smartphones.

#### **Opportunities**

There is an opportunity for the consumer to benefit from wider range of insurance offerings and receive quotes from a number of different insurance companies once the barriers to cross-border sales are overcome. New and more tailored products can be brought to market also once insurance providers have harnessed the power of big data analytics to commercially exploit collected market data. More product diversity would be possible as a result.

Data captured from the Internet of things (IoT), connected devices, telematics and smartphones can provide feedback to the consumer to encourage better driving behaviour, and reward better driving with lower premiums and other incentives. For instance, these 'pay as you drive' policies can incentivise policy-holders to adopt safer driving behaviour by evaluating their car journey using telematics, i.e. based on criteria such as anticipation, smoothness, pace and calmness.<sup>283</sup> In the longer run, driving abilities in Europe could converge to a better overall standard thanks to increased use of telematics.

Furthermore, intelligent transport systems and telematics that transmit data on driving behaviour could revolutionise road transport, and present insurance providers

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<sup>283</sup> For additional information, see:

<https://play.google.com/store/apps/details?id=com.mydrive.axa.drivesave>.

with an opportunity to develop new products and services for consumers. In addition, better driving standards would ameliorate claim behaviour, leading to sufficient margin for price reduction.

Motor insurers have the opportunity to expand into new markets, whether it is first by car insurance, property insurance or other liability insurance, so as to properly trade in the single European market. On the whole, there is sufficient margin so that new competition can enter the market. However, car insurance is notoriously prone to fraud, therefore a common market framework to tackle this issue is needed. New innovations and technologies to combat fraud (e.g. telematics devices) could also help to lower fraud across member states.

### **Threats**

The main threat presented by digitalisation is the loss of privacy. Insurance sales currently entail paying an economic price, in addition to providing a plethora of personal details. The issue is how far this data can be processed by algorithms to form a customer profile. As a result, the risk arises that many customers will be denied cover if they do not fit a desired or acceptable profile. Therefore, advances in data-processing techniques in the digital age should be matched equally by the development of clear and acceptable usage policies to protect and safeguard the rights of the data subject.

### **Conditions**

*Pan-European databases and integration:* In this scenario, motor insurers would have equal access to a common European insurer's database that interfaces with several other pan-European databases. Specifically, these would include data on e-identity, accident claims, stolen and written off vehicles, and licensed drivers (including learner, suspended and banned drivers). To enable the creation of this pan-European database, member states would be obliged to provide access to their national data. This could be driven by a regulatory and supervisory authority such as that in the banking sector. The integrated data will then assist in filling in data gaps linked to the driver's identity, driving history or the car, etc. Increased data access would speed up administrative processes such as filling in forms if the correct data is held on file, and also cuts down the risk of fraud and non-disclosure. Data analytics reduces the unknowns and unpredictability, which results in better profit margins that are passed to the consumer.

*Standardising new intelligent technologies (open access):* Constant technological innovations, especially in the field of intelligent transport systems and the connected car, are permanently changing the environment in which motor insurers operate. New technologies are enabling vehicle-to-vehicle communication as well as communication between vehicles and the traffic infrastructure. This will generate a vast amount of data and expand the potential of telematics. These technologies should be based on an interoperable, standardised, secure and open-access platforms to ensure fair competition in the market and prevent a monopoly where one company controls the technology.

*Standardising driving practices:* It is also recommended that a common European-wide driving syllabus, test and training programme are developed that includes driving simulators to test all-weather driving and road conditions. By requiring licence-holders to pass a matrix of standard skill tests, it would be possible to reduce the variation in driver characteristics. In addition, these simulators can employ learning algorithms to reinforce practice in weak areas until the driver is successful.

*Multilingual breakdown assistance:* This scenario could also include a pan-European emergency telephone number that could tie in as an ancillary service with the eCall platform, an in-car emergency call system which contacts the 112 emergency number in the event of a car accident. eCall uses in-vehicle sensors which automatically trigger a call to the nearest emergency centre, and sends details, such as accident time and vehicle position. A multilingual services operations centre would also be required to classify the type of incident and forward the caller to their insurer and emergency services.

*Central portal:* Another condition for this scenario would be the implementation of a central consultation and comparison portal for informing insurance providers and customers about national laws, legal remedies and compensations. There should also be tailored portals developed for each member state to help consumers understand and compare the differences between nations in which they wish to purchase insurance. Other helpful information that could be made available to insurers and the drivers through the portal would be contact details for a network of European breakdown, repair and medical aid centres. In-car eCall or smartphone devices could also access this contact information and transfer geolocation data in the case of an accident.

*Encourage strong alliances:* The establishment of cross-border alliances between EU motor insurance companies would enable the market knowledge of highly specialised providers from one country to be leveraged at a pan-European market level, leading to economies of scale and enhanced competences. Strong cross-border alliances are essential, as knowledge of the local market structure and expertise will always be needed; this includes market knowledge on the costs for repairing damages and access to a network of reliable suppliers to fix these damages. Alliances with service providers that specialise in the laws and regulations pertaining to insurance companies in each member state would also be a prerequisite.

## **Probability**

The probability of this scenario is very low in the short term, as the policy barriers that exist will take many years to harmonise or dismantle.

In the meantime, there are practical actions that can be taken to improve cross-border insurance in the face of existing demand-side barriers. For example, motor insurers could increase customer confidence in cross-border insurance products by making multilingual assistance available. Motor insurers could also disseminate better information on available cross-border insurance products, and on product features, advantages and limitations. Another measure would be to prioritise common standards and a pan-European insurance database platform to help make foreign markets more accessible for insurers and improve the quality of products and services that they provide to consumers.

## 6. Property insurance

This chapter focuses on cross-border activity for non-commercial property insurance in the European Union. The first section outlines the current state of cross-border activity in the EU, the second section discusses how current trends in digitalisation have and could contribute to overcome some specific barriers to cross-border sales, and the third section presents three future scenarios for cross-border activity in the EU.

### 6.1 Current cross-border activity

Official statistics on the sale of cross-border property insurance within the European Union are scarce. However, according to an expert group set up by the European Commission to examine barriers to cross-border trade in insurance law across member states, it is estimated that only 2.8% of property insurance policies are offered across EU borders.<sup>284</sup> Some property insurance products cover both domestic activities and activities carried out in other countries; for instance, the five biggest property insurers in Belgium offer household insurance with no geographical limitations applied to the civil liability element within Europe.<sup>285</sup> This means that the property insurance customer continues to receive private liability insurance coverage while located in another EU state for a period of time. Property insurance is not compulsory in every country before taking out a mortgage, but many banking institutions insist on the consumer having it in place.<sup>286</sup>

#### 6.1.1 Types of providers and products

Property insurance that is sold cross-border is predominately aimed at niche markets such as owners of holiday homes in other countries. Also, due to the unique challenges associated with owning holiday homes (public liability for maintenance staff), specialist groups of property insurers such as Intasure<sup>287</sup> in the UK, and Ferienhausversicherung<sup>288</sup> of Germany, and Reale Seguros in Spain<sup>289</sup> offer specialised solutions aimed at holiday home owners, covering aspects such as short-term lettings (which might not otherwise be covered by traditional insurance policies) or periods when the property is unoccupied.

There is demand, however, from customers who are domiciled in one European territory, but also own premises or assets elsewhere.<sup>290</sup> Indeed, firms such as Allianz have established an International Commercial Network to support such customers.

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<sup>284</sup> See estimates presented in Commission press release ([http://europa.eu/rapid/press-release\\_IP-14-194\\_en.htm](http://europa.eu/rapid/press-release_IP-14-194_en.htm)).

<sup>285</sup> Final Report of the Commission's Expert Group on European Insurance Contract Law, DG Justice, European Commission, 2014. ([http://ec.europa.eu/justice/contract/files/expert\\_groups/insurance/final\\_report.pdf](http://ec.europa.eu/justice/contract/files/expert_groups/insurance/final_report.pdf)).

<sup>286</sup> As discussed by Colin Kippen (2012), "Which insurance is compulsory in the UK", blog posting on riskheads.org, 2 May (<http://riskheads.org/compulsory-insurance-uk/>) and Citizens Information, Irish Citizens Information Board. ([www.citizensinformation.ie/en/money\\_and\\_tax/personal\\_finance/insurance/insurance.html](http://www.citizensinformation.ie/en/money_and_tax/personal_finance/insurance/insurance.html)).

<sup>287</sup> For additional information, see: [www.intasure.com](http://www.intasure.com).

<sup>288</sup> For additional information, see: [ferienhaus-versicherungen.eu](http://ferienhaus-versicherungen.eu).

<sup>289</sup> For additional information, see: [www.reale.es/es/seguros-de-hogar/vivienda-vacacional](http://www.reale.es/es/seguros-de-hogar/vivienda-vacacional).

<sup>290</sup> See Final Report of the Commission's Expert Group on European Insurance Contract Law, DG Justice, 2014 op. cit.

Furthermore, Zurich Insurance is operating in many countries of Europe but has no dominant position in any country of Europe (so the reinforcement of the Single Market is interesting for them).

In conclusion, while there are cross-border property insurance offerings available, the demand for these products is currently limited to niche markets. Knowledge of the local market and its structure is key in a cross-border approach to non-life insurance, and digitalisation needs to allow easier access to data from other markets. This will foster a better risk assessment and pricing that can stimulate cross-border trade. Language, social security, risk, liability, etc. are all still regarded as barriers to cross-border sales.

### **6.1.2 Type of consumers**

As outlined in the previous section, cross-border property insurance can theoretically involve any type of customer, but it is more likely to involve expatriates, people who own holiday homes abroad for leisure or investment purposes and clients who have operations, premises or assets outside the country in which they are domiciled.<sup>291</sup> Cross-border commuters have also been identified as a group of potentially 'active' consumers such as "a German national who buys a house and starts living in Belgium but continues working in Germany".<sup>292</sup>

### **6.1.3 Conclusion**

The cross-border activities in the EU for property insurance contracts are still low and limited exclusively to niche customers (holiday home owners, expats) and specialised providers. The high degree of regulation and the need for highly-localised knowledge in each territory makes it difficult for providers to offer such services if they do not operate an EU-wide network with local subsidiaries. Digitalisation offers the opportunity for firms to lower their administration costs, however, and may increase such activities in the future.

## **6.2 Impact of digitalisation on cross-border activity**

### **6.2.1 (Changes in) providers' behaviour**

The collection and use of personal data across the EU are regulated by the Data Protection Directive.<sup>293</sup> Further harmonisation is likely to be introduced by the proposed General Data Protection Act.

The main distribution channels for property insurance include direct channels such as face-to-face, inbound and outbound telephone, online and indirect channels including brokers, price comparison websites and banking institutions.<sup>294</sup>

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<sup>291</sup> Ibid.

<sup>292</sup> Ibid.

<sup>293</sup> See the EU Commission (2016), Overview of data protection rules in the EU, (<http://ec.europa.eu/justice/data-protection/>).

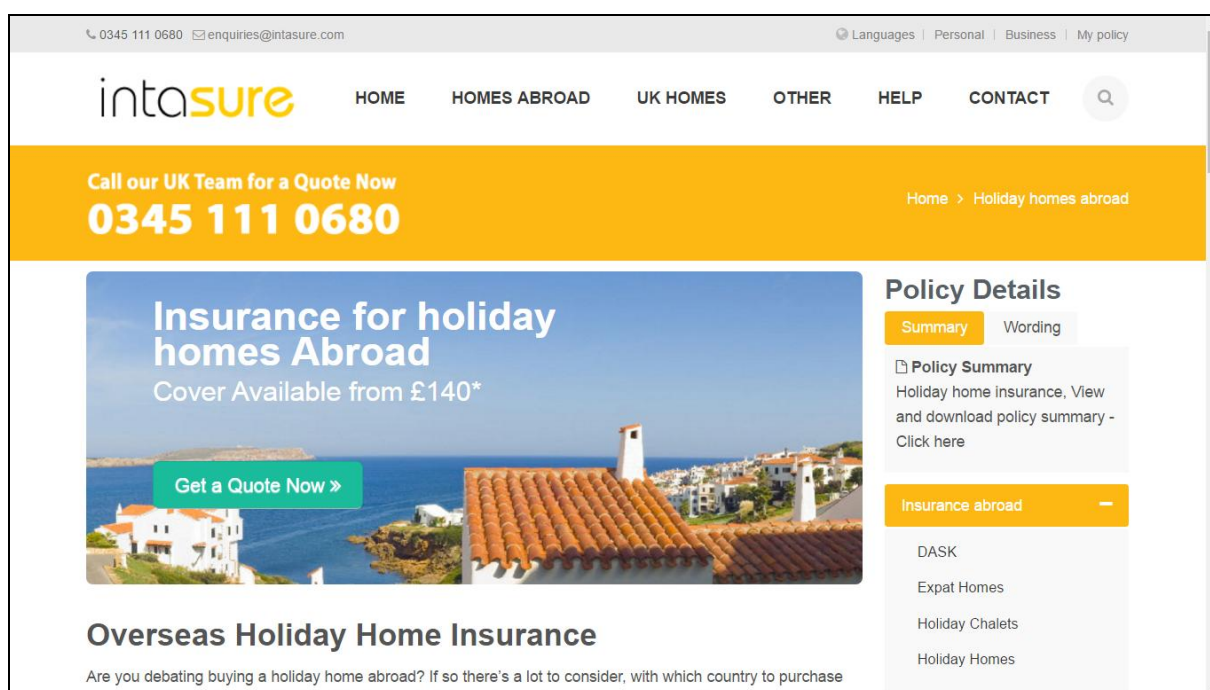
<sup>294</sup> -Finaccord (2012), Table of contents for the "Aggregation Metrics: Consumer Approaches to Online Insurance Comparison Sites in Europe" report ([http://finaccord.com/uk/tables-of-contents\\_html/table-of-contents\\_aggregation-metrics-consumer-approaches-to-online-insurance-comparison-sites-in-europe.htm](http://finaccord.com/uk/tables-of-contents_html/table-of-contents_aggregation-metrics-consumer-approaches-to-online-insurance-comparison-sites-in-europe.htm)).

## Pre-sales

Property insurance providers continue to rely on established distribution channels such as call centres, the company website and brokerage networks to reach out to customers. Many customers still prefer to interact with property insurance providers by phone or face-to-face, but websites are now accepted as the first port of call when researching property insurance offerings and they provide customers with useful information to support their decision-making process. However, the use of mobile platforms during the pre-sales stage remains low in most countries, and the advantages of the channel are poorly exploited.

The last few years have witnessed an increase in the prevalence of digital pre-sales channels for property insurance. Companies are increasingly recognising the importance of establishing a digital presence to reach out to prospective and existing customers. For example, Intasure<sup>295</sup> provides online quotes for overseas property insurance in 43 countries in the Europe, the Middle East and Africa (EMEA) territory. Customers in the UK can request a property insurance quote online for holiday homes, and the company also offers dedicated online support for customers to contact and make sales enquiries, alongside their dedicated sales telephone number.

Figure 6.1 Intasure Holiday Home Insurance Home Page



Source: Intasure website ([www.intasure.com/abroad/index.asp?introducer=200009](http://www.intasure.com/abroad/index.asp?introducer=200009)).

-Finaccord (2012), Series prospectus for the "Aggregation Metrics: Consumer Approaches to Online Insurance Comparison Sites in Europe" report ([http://finaccord.com/documents/rp\\_2013/series\\_prospectus\\_aggregation\\_metrics\\_consumer\\_approaches\\_online\\_insurance\\_comparison\\_sites\\_europe.pdf](http://finaccord.com/documents/rp_2013/series_prospectus_aggregation_metrics_consumer_approaches_online_insurance_comparison_sites_europe.pdf)).

<sup>295</sup> For additional information, see: [www.intasure.com/main.asp](http://www.intasure.com/main.asp).

Figure 6.2 Intasure holiday home insurance quotation form

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Your holiday home insurance quote</b></p> <p>If you own, or are purchasing a holiday home abroad intasure can offer specialist property insurance for buildings and contents cover just for you.</p> <ul style="list-style-type: none"> <li>• Pay by monthly Direct Debit</li> <li>• English documents</li> <li>• UK Based advisors</li> <li>• Covered when unoccupied</li> <li>• Covered when rented out</li> <li>• £5m public liability</li> </ul> <p><a href="#">close</a></p> | <p><b>Property Details</b></p> <p><b>Country</b><br/>Choose Country ▼</p> <p><b>Postcode</b><br/>Postcode</p> <p><b>Type</b><br/>Property type ▼</p> <p><b>Year Built</b><br/>Year built ▼</p> <p><b>Buildings Cover</b><br/>We automatically provide £1m buildings cover. The policy is bedroom rated which means you cannot be under insured - Select number of bedrooms.</p> <p><b>Bedrooms*</b><br/>Bedrooms ▼</p> <p><b>Contents Cover</b><br/>Please select the amount of cover you need if required.</p> <p><b>Sum insured*</b></p> | <p><b>Contact Details</b></p> <p><b>First name*</b><br/>First name</p> <p><b>Last name*</b><br/>Last name</p> <p><b>Telephone*</b><br/>Home/Mobile</p> <p><b>Email*</b><br/>Email</p> <p><b>Correspondence address</b></p> <p><b>House number</b><br/>House name / number</p> <p><b>Street</b><br/>Street name</p> <p><b>Town</b><br/>Town / City</p> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Source: Intasure website  
([www.intasure.com/secure/intasure/holidayhomes.asp?introducer=203331](http://www.intasure.com/secure/intasure/holidayhomes.asp?introducer=203331)).

The majority of property insurance companies have also embraced price comparison websites as a pre-sales channel in countries such as the UK (e.g. [www.comparethemarket.com](http://www.comparethemarket.com), [www.confused.com](http://www.confused.com), [www.moneysupermarket.com](http://www.moneysupermarket.com)), Italy (e.g. [www.6sicuro.it](http://www.6sicuro.it), [www.assicurazione.it](http://www.assicurazione.it), [www.Chiarezza.it](http://www.Chiarezza.it)), Spain (e.g. [www.acierto.com](http://www.acierto.com), [www.Balumba.es](http://www.Balumba.es), [www.seguros.es](http://www.seguros.es)), and Germany (e.g. [www.CHECK24.de](http://www.CHECK24.de), [www.comVERSO.de](http://www.comVERSO.de), [www.Financescout24.de](http://www.Financescout24.de)). Price comparison sites are well established in countries such as the UK and Germany but less common in other nations such as France.<sup>296</sup> In addition, many banking institutions cross-sell property insurance to their customers by bundling the product with mortgage applications; this practice has become increasingly prevalent over the last number of years in domestic market in countries such as Spain.<sup>297</sup>

Digitalisation has helped to lower some, but not all, of the barriers to cross-border activities. Firstly, data analytics can help providers to deliver more accurate quotations to the customer based on an in-depth understanding of the market. For instance, property insurers can analyse a combination of internal and external data sources such as flood prediction maps to develop targeted product offerings and competitive pricing options. Digitalisation also provides property insurers with access to a significant amount of customer data and enables providers to develop an in-depth understanding of diverse market segments. For instance, price comparison websites capture reams of data on customers that offer insights into customers' motivations and preferences online when purchasing property insurance. In addition, collecting

<sup>296</sup> Finaccord (2012), Table of contents of the "Aggregation Metrics: Consumer Approaches to Online Insurance Comparison Sites in Europe" report, ([http://finaccord.com/uk/tables-of-contents\\_html/table-of-contents\\_aggregation-metrics-consumer-approaches-to-online-insurance-comparison-sites-in-europe.htm](http://finaccord.com/uk/tables-of-contents_html/table-of-contents_aggregation-metrics-consumer-approaches-to-online-insurance-comparison-sites-in-europe.htm)), op. cit.

<sup>297</sup> European Parliament (2016), Final report on Cross Border Acquisitions of Residential Property in the EU: Problems Encountered by Citizens, Directorate-General for Internal Policies, European Parliament, PE 556.936, 2016 [www.europarl.europa.eu/RegData/etudes/STUD/2016/556936/IPOL\\_STU\(2016\)556936\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2016/556936/IPOL_STU(2016)556936_EN.pdf).

data from social media could help companies to develop competitive insurance offerings based on an understanding of the behaviour of different demographics. Cookies can also be set on the customer's web browser to track their browsing history and behaviour online, which can allow companies to create targeted marketing campaigns and tailored offerings. Insurance providers can also collect data on customers' personal details such as name and email address using online forms. Furthermore, the data provided by the customer in online forms (i.e. for quotations) can later be checked in order to identify cases of fraudulent claims. This enhances the provider's resilience against fraud and its risk management process.

## **Sales**

Findings from interviews conducted with our focus group of insurance practitioners in the UK and Ireland suggest that if the wholesale and post-sales processes were to be conducted online, the barriers listed below to cross-border sales activities would be partially or fully overcome:

- 1) Geographical distance
- 2) Differences in languages (trust)
- 3) Differences in the existence and the use of e-identification solutions
- 4) Differences in taxes (sales and post-sales; through the use of digital platforms)

Digital channels such as email and social media can be used for distribution purposes in the sales process to transfer scanned paper-based documents such as contracts and policy documentation. However, the finalisation of the contract mostly takes place through offline channels, and further digitalisation of the sales activities has yet to be introduced by most providers. Indirect channels such as brokers, agents and bancassurance partnerships provide a useful point of contact for customers during the sales process and facilitate the paper-based contract process. Increased usage of online channels could greatly expedite the sales process, and improve customers' experience overall when coupled with support from offline channels. Digitalisation in the sales process can drive improved communication and data transfer between the provider and consumer, i.e. access to contracts and policy documentation online.

While insurers have succeeded to a certain extent in digitalising the early stages of the customer decision journey (i.e. pre-sale), many have neglected to implement digital initiatives for supporting customers during the sales, and post-sales stages. Increasing the digitalisation of sales processes could help property insurers improve their operating profit margins considerably. For instance, according to one source,<sup>298</sup> digitalisation initiatives such as rapid product configuration, and the straight-through processing of quotes can potentially "deliver up to 65 percent in cost reduction, a 90 percent reduction in turnaround time on key insurance processes, and improve conversion rates by more than 20 percent". However, many property insurance companies continue to operate without an integrated digital strategy across pre-sales, sales and post-sales stages. According to a survey of 30 leading insurance companies (including property and casualty insurers) in EU and US,<sup>299</sup> 39 percent "had not articulated a digital strategy across the customer decision journey at all". Similarly, Bain Consulting found that only "10% of new P&C premiums flow through online or

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<sup>298</sup> As discussed by Catlin, T., Patiath, P., and Segev, I., (2014), "Insurance Companies' Untapped Digital Opportunity", article posting on <https://hbr.org>, 24th March (<https://hbr.org/2014/03/insurance-companies-untapped-digital-opportunity/>).

<sup>299</sup> Ibid.

mobile sales channels today”, although “many insurers plan to increase that portion substantially” over the next few years.<sup>300</sup>

Property insurers have thus far failed to fully exploit the power of the Big Data, and instead they continue to struggle with managing mountains of paper work, otherwise referred to as ‘Big Paper’.<sup>301</sup> However, unstructured data such as social media data could be used extensively in pricing, approval and prevention and would ameliorate the effects of barriers to cross-border activities, such as differences in databases for past claims and data related to the covered risks.

Increased adoption of data analytics would greatly improve property insurers’ ability to improve the accuracy of their underwriting practices based on an understanding of their customer bases and the surrounding context. Data analytics has the possibility to significantly influence sales activities in property insurance market in the long term. Most big insurance companies have many important analytics projects underway at the moment and while few have been put into production, there has been significant investment in this area. Analysing unstructured data (particularly unstructured data being created on social networking platforms) could help grow property insurance sales in the longer term by equipping providers with the knowledge they need to exploit opportunities and address challenges in the market i.e. pricing practices. However, there are a number of leading challenges identified by insurance practitioners that hinder the adoption of data analytics solutions such as: capturing reliable data, implementing the right solutions to analyse and interpret the data and balancing human judgment with data-driven decision-making.<sup>302</sup>

## **Post-sales**

Digital channels are more prevalent in the post-sales stage and many property insurers offer different forms of customer support online. Customers can avail themselves of online services such as policy administration and claims processing through the company’s website or smartphone app, in addition to the support services offered through existing channels such as call centres and brokers. In addition, providers like KNIP<sup>303</sup> (DE) offer complete mobile- driven management of insurance policies. Routine issues can easily be dealt with online, but customers usually prefer to interact directly with a professional for more complex problems and queries. In particular, the distressing nature of property insurance claims (e.g. fire or flooding damage to a customer’s home) means that customers often need the reassurance that only an insurance professional can provide. Therefore, while digitalisation is no doubt advantageous to the post-sales stage, it is not a substitute for human support. Human support can also be provided from other countries.

Self-service portals are helping to reduce the operating costs of insurers by enabling customers to take the initiative in managing their policies and submitting claims.

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<sup>300</sup> Bain Consulting (2015), “Global Digital Insurance Benchmarking Report 2015, The digital state of the industry”, June 15<sup>th</sup> ([www.bain.com/publications/articles/global-digital-insurance-benchmarking-report-2015.aspx](http://www.bain.com/publications/articles/global-digital-insurance-benchmarking-report-2015.aspx)).

<sup>301</sup> As discussed in Bready (2012), “The Drive to Digitization in Insurance: Turning “Big Paper” into Big Profit”, SMA White Paper ([www.pitneybowes.com/content/dam/pitneybowes/nz/en/legacy/docs/international/uk/software/pdf/white-papers/the-drive-to-digitization-in-insurance.pdf](http://www.pitneybowes.com/content/dam/pitneybowes/nz/en/legacy/docs/international/uk/software/pdf/white-papers/the-drive-to-digitization-in-insurance.pdf)).

<sup>302</sup> See KPMG (2014), “Transforming Insurance Securing competitive advantage”, ([www.kpmg.com/BE/en/IssuesAndInsights/ArticlesPublications/Documents/transforming-insurance.pdf](http://www.kpmg.com/BE/en/IssuesAndInsights/ArticlesPublications/Documents/transforming-insurance.pdf)).

<sup>303</sup> For additional information, see: [www.knip.ch/](http://www.knip.ch/).

Nevertheless, as previously mentioned, the importance of human contact should not be underestimated and call centres and brokers continue to play an integral role in post-sales activities. Looking ahead, there appears to be an increasing appetite among customers for telematics-based home insurance solutions. For instance, a survey conducted by Deloitte showed that 38% of home insurance customers would be willing to track their behaviour and share their data with insurers for a more accurate premium.<sup>304</sup> Telematics have already been applied extensively in the car insurance industry, and their use in the home insurance market could now increase with the advent of Smart Homes and the Internet of Things (IoT) solutions (see Scenario 3).

The management of cross-border claims has been identified as a key challenge for cross-border insurance activities, given its complex and expensive nature.<sup>305</sup> Data and analytics could possibly be very valuable here to assist in the claims phase for fraud detection. Data and analytics can reduce the need of risk assessments, refine pricing and make claim handling more efficient with a combination of different data sources (internal and external). For instance, fraud management processes can be improved using robust data analytic solutions for monitoring customer and property data from online sources such as social media and price comparison websites. Claims data captured by assessors can also be stored in an integrated database to help determine a provider's risk portfolio. In turn, mining the digital data of consumers could help property insurers to increase the accuracy of the policies they underwrite. However, property insurers will need to develop algorithms to analyse this large and complex data set. Furthermore, e-Claim forms can be validated before submission, which helps reduce errors and the cost of claims processing.

Furthermore, the ease of data transfer and communication have been greatly enhanced by modern ICT infrastructure and Cloud Computing services, with these developments in turn providing ample opportunities for cross-border property insurers to establish post-sales operations across multiple locations, e.g. customer support and claim processing. In addition, outsourcing companies and Third Party Administrators (TPA) can be engaged to assume responsibility for the call centre operations and claims processing in another country, thus lowering language and expertise barriers. As a result, data can help to support efficient post-sales activities regardless of location.

### **6.2.2 (Changes in) consumers' behaviour**

#### **Pre-sales**

Digitalisation is obviously advantageous for customers in terms of accessing information and, in particular, pricing. Digitalisation aids customer in gaining an understanding of available property insurance offerings and independent price comparison websites provide customers with a starting point to find cross-border property insurance offerings, and to deal with information overload, which is inherent when researching large bodies of product information. Price comparison websites allow customers to compare an array of domestic product offerings online and find the optimal cover. Price comparison sites collate data from a number of providers, which

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<sup>304</sup> Deloitte (2015), "Insurance Disrupted: General Insurance in a Connected World", ([www2.deloitte.com/content/dam/Deloitte/uk/Documents/financial-services/deloitte-uk-insurance-disrupted.pdf](http://www2.deloitte.com/content/dam/Deloitte/uk/Documents/financial-services/deloitte-uk-insurance-disrupted.pdf) /).

<sup>305</sup> Final Report by Europe Economics (2008), "Retail Insurance Market Study, MARKT/2008/18/H", European Commission, 2008 ([http://ec.europa.eu/finance/insurance/docs/motor/20100302rim\\_en.pdf](http://ec.europa.eu/finance/insurance/docs/motor/20100302rim_en.pdf)).

helps promote competition. Similarly, insurers and customers can also search the websites of national broker networks to identify contact points or potential partnerships. Digitalisation also allows consumers to fill in online forms without the need to physically go to meet an insurance agent or an independent advisor (i.e. broker).<sup>306</sup> Therefore the availability of information online can reduce the opportunity cost for customers to shop around and find competitive quotations online.<sup>307</sup>

Better exchange of data between insurers could possibly make it easier for consumers to switch property insurers when their current property insurance policy is up for renewal, thereby increasing competition. In particular, price comparison websites and provider websites have made it considerably easier for the consumer to compare property insurance quotations (only at the click of a button), which are assessed based on submitted information around the homeowner's property, building construction, and location. The availability of information online means that customers are more empowered,<sup>308</sup> as they are now better able to find different insurance offerings, and compare competitive quotes at their leisure. Better access to the terms and conditions online boosts transparency in the pre-sales stage and means that that customer are less reliant on broker networks to seek advice about purchase cover, resulting in the avoidance of commission charges during the pre-sales phase.<sup>309</sup>

However, price comparison websites are usually limited in scope to a specific country and do not currently lend themselves to cross-border activities. Furthermore, it is important that price comparison sites aim to promote the product offerings of property insurers equally, and established property insurers should not receive special treatment over others.

## **Sales**

Should property insurers fully digitalise their contracting stage, customers could more easily communicate and share data with property insurance providers. In particular, interactions during the sales stage would not be constrained by the location of the customer and provider. For instance, providers could easily transfer contract and policy documentation via secure internet channels. The EU-wide introduction of e-Identification solutions could further enhance sales activities for the customer by allowing them to complete a contract using a digital signature.

Many property insurers, however, have not yet fully embraced digitalisation for all sales activities and, for the most part, the sales process itself takes place offline. The

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<sup>306</sup> The customer can access information at a time and place that is convenient for them and they do not need to schedule meetings with brokers during working days, or contact call centres during normal business hours.

<sup>307</sup> Providers can also utilise the advantages of digitalisation to identify persons who need/want insurance and tailor products to better meet their needs.

<sup>308</sup> European Commission (2015), Green Paper on retail financial services: Better products, more choice, and greater opportunities for consumers and businesses, COM(2015) 630 final, Brussels ([http://ec.europa.eu/finance/consultations/2015/retail-financial-services/docs/green-paper\\_en.pdf](http://ec.europa.eu/finance/consultations/2015/retail-financial-services/docs/green-paper_en.pdf)).

<sup>309</sup> Nevertheless, as pointed out by members of our non-life insurance practitioner focus group consisting of senior executives in leading insurance organizations and advisory firms, some customers still prefer to interact with an intermediary or the insurer directly, in particular non-tech savvy customer groups. This focus group was carried out in the framework of a "Study on the role of digitalisation and innovation in creating a true single market for retail financial services and insurance" commissioned by the European Commission (DG Financial Services, Financial Stability and Capital Markets Union – FISMA).

majority of property insurers have developed capabilities to digitalise aspects of the sales process, such as digitalising drafted contract documentation so that it can be accessed by customers online. However, other activities continue to be carried out on paper. For example, since e-identification is not generally recognised as a means of providing written agreement, customers are instead required to sign a paper-based policy document in order to finalise the contract. This form can of course be scanned in order to digitalise the paper-based contract, but increased manpower is required for carrying out this activity. Furthermore, many customers prefer to contact the call centre or a recommended broker during the sales process in order to receive clarifications and reassurance about their level of cover.<sup>310</sup>

The low rates of digitalisation in property insurance sales has hindered the advancements witnessed in the other pre- and post-sales stages. This limits the efficiency of the sales process as key activities are not streamlined, and customers are not afforded the flexibility to complete sales in a way that is convenient for them. Brokers are also often contracted by customers to potentially negotiate better deals, in particular in countries where it is difficult to compare products online.

### **Post-sales**

Digital portals have vastly improved the efficiency of post-sales activities for customers.<sup>311</sup> The processing of self-service claims and policy management are essential to facilitate efficient post-sales support across numerous geographical locations. For instance, customers can now take the initiative to manage policy- and claim-related issues, using self-service tools. However, human contact is still a necessity for complex and sensitive claims, and not all activities lend themselves to digitalisation, which means that a physical infrastructure is still required to deliver post-sales property insurance activities. Companies therefore need to be able to empathise with their customers to understand where the use of self-service tools is appropriate and where it is not.

Digitalisation has increased the efficiency of claims processing as customers are able to submit claims directly through online portals. Customers are also empowered to manage their policies online and extend or reduce their coverage as required. However, many people still want the physical point of contact during the post-sales stage, and therefore call centres should be provided in tandem with self-service tools.

## **6.2.3 Remaining barriers**

### **Pre-sales: Absence of integrated geocoding and property registry databases**

As identified during interviews with insurance practitioners, EU-wide geocoding and property registry databases could greatly enhance quotation activities in the pre-sales stage by increasing insurers' ability to verify property details across the EU. Currently, the absence of integrated databases creates difficulties for insurance companies when

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<sup>310</sup> Ibid.

<sup>311</sup> The policy administration process has been enhanced by the introduction of self-service portals which allow customers to submit claims for processing and managing their policies online. For instance, a number of providers have invested in these portals, which are also accessible through self-branded smartphone apps. In addition, online portals can enable property insurers to upsell and cross-sell products to existing customers i.e. providing the option to extend their current property insurance policy and enhance their level of coverage, i.e. to include content insurance.

identifying the location of a property in another nation, and authenticating information about the property for risk-management purposes.

### **Pre-sales: Absence of searchable EU-wide intermediary database**

Overall, the barriers to cross-border collection and the use of data during the pre-sales stage is low. Websites provide customers with a location-independent source of information, and modern translation tools, e.g. Google Translate, can help reduce language barriers to some extent. Online tools can also be used to convert prices to the customer's domestic currency, as required. However, the absence of an independent EU-wide price comparison site for insurance inhibits cross-border activity as there is no integrated source of property insurance data. For instance, online aggregation of holiday home insurance offerings from providers such as Intasure<sup>312</sup> (UK), and Ferienhausversicherung<sup>313</sup> (DE) and Reale Seguros (ES),<sup>314</sup> could be one way of increasing cross-border property insurance sales. In addition, there is currently no searchable EU-wide intermediary database, obliging providers to engage with national networks individually to identify partners in order to sell through the indirect distribution channel. Based on the feedback from focus groups involving insurance practitioners, brokers represent a key source of knowledge driving cross-border sales.

### **Sales: Not enough harmonisation in some specific domestic regulations**

The poor availability of accurate and complete data can compromise the underwriting process in cross-border property insurance. Data can be transferred freely across EU member states within the confines of the European Data Protection Directive<sup>315</sup>, however, there remain some differences between data protection laws nationally.<sup>316</sup> For instance, if the data sources used by insurers to determine which homes are at risk of flooding are inaccurate (i.e. flood prediction maps), some households may be denied cover unfairly. In addition, the full benefits of digitalisation have yet to be realised in the sales stage and investment levels in the area continue to remain low. Differences in regulation, standards and taxation schemes (i.e. sales and post-sales taxation) also hinder cross-border sales.

Cross-border property insurance sales are hindered by the diversity of contract laws, regulations and standards across EU countries.<sup>317</sup> While initiatives such as the General Data Protection Act (GDPR) are a move in the right direction, the expertise required to ensure compliance in other areas can be a limiting factor for cross-border sales. Insurance practitioners have also stated in interviews that e-Identification has yet to be integrated into best practice, which further stifles cross-border sales. Another barrier is that some customers may be nervous about signing a contract with a cross-border provider if they do not have offices in the customer's home country or a face-

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<sup>312</sup> For additional information, see: [www.intasure.com](http://www.intasure.com).

<sup>313</sup> For additional information, see: <https://ferienhaus-versicherungen.eu>.

<sup>314</sup> For additional information, see: [www.reale.es/es/seguros-de-hogar/vivienda-vacacional](http://www.reale.es/es/seguros-de-hogar/vivienda-vacacional).

<sup>315</sup> EU Commission (2016), Overview of data protection rules in the EU, (<http://ec.europa.eu/justice/data-protection/>), op. cit.

<sup>316</sup> EU Commission (2012), Proposal for a Regulation of the European Parliament and of the Council on the protection of individuals with regard to the processing of personal data and on the free movement of such data (General Data Protection Regulation), COM(2012) 11 final, Brussels ([http://ec.europa.eu/justice/data-protection/document/review2012/com\\_2012\\_11\\_en.pdf](http://ec.europa.eu/justice/data-protection/document/review2012/com_2012_11_en.pdf)).

<sup>317</sup> Final Report of the Commission's Expert Group on European Insurance Contract Law, DG Justice, European Commission, 2014 ([http://ec.europa.eu/justice/contract/files/expert\\_groups/insurance/final\\_report.pdf](http://ec.europa.eu/justice/contract/files/expert_groups/insurance/final_report.pdf)).

to-face contact. Finally, translators may be required in order to communicate with customers and change contract and policy documentation into the customer's native language.

#### **Post-sales: Need for further open-access databases**

The absence of open-access databases impedes the adoption of Big Data solutions to improve risk management practices in cross-border property insurance. EU-wide crime and meteorology databases could be used to help improve claims management activities and increase underwriting accuracy at the time of renewal. In addition, these data sources could be used to alert users in the event that their property is at risk of damage. Meteorology data could be integrated into a weather warning system that would alert customers if their house was located in an area that is susceptible to harsh weather conditions. This could in turn decrease the number of claims and improve service quality.

#### **Post-sales: Need for language skills**

Digitalisation is changing post-sales interactions with customers but will not help significantly with overcoming all barriers. Human contact is still essential in after-sales services to reassure customers in the event of a claim. However, language barriers can pose a barrier here when call centres are located abroad and staff may only speak the customer's mother tongue as a second or third language. It is essential that post-sales staff are competent in dealing with property insurance claims in an effective manner given their sensitive and highly emotive nature i.e. where a customer has lost valuable possessions after a flood.

#### **Post-sales: Difficulty for insurance providers to handle all the data of a cross-border business**

Additionally, most small and medium sized insurance firms have yet to enter into the Big Data analytics space due to the considerable investment required, and managing large volumes of customer and property data can pose a significant challenge.

Post-sales: Need for partnership

Finally, partnerships are crucial to the success of post-sales cross-border activities; for instance, a foreign network of claims assessors must be enlisted to judge property insurance claims in other nations.

### **6.2.4 Conclusions**

Interactions between consumers and providers have been greatly improved by the digitalisation of a number of activities entailed in the cross-border purchase and sale of property insurance. However, insurers should not rest on their laurels and more can be done to enhance interactions between both parties using technology and data to overcome remaining boundaries.

The cross-border sale of property insurance is currently limited to niche markets such as holiday home owners and expatriates. Digitalisation has brought with it positive changes to both customers and providers and has opened up opportunities for increased levels of cross-border activities. However, not all barriers have been overcome and some still need to be addressed in order to encourage further cross-border activities.

## **6.3 Scenarios for cross-border activity**

### **6.3.1 Scenario 1: Business as usual**

#### **Description**

Cross-border sales in the property insurance market will remain low within the 5 forthcoming years and will be restricted to niche markets such as holiday home insurance, as consumers prefer to deal with domestic insurers to insure their primary house of residence. Although property insurance is not compulsory in every country before taking out a mortgage, many banking institutions nevertheless insist on consumers having it in place.

Cross-border sales will be driven by affluent customers who own a second house in an EU country other than the country in which they ordinarily reside. This group will likely consist of middle-aged professionals, landlords and retirees who have invested in the property market abroad.

#### **Opportunities**

As in other segments, the main advantage of the “status-quo” is its little hazard. Owing to little change in the cross-border dimension, no related legal adjustments should be needed.

Increased digitalisation will open up business opportunities for property insurers and some of them might take further market share for cross-border property insurance. Nevertheless, in a zero sum game, this should be done by acquiring market shares of other insurers.

#### **Threats**

Persistent fragmentation in the market for property insurances will imply that for similar files, the premium can still differ markedly across the EU-28. To a certain extent, this differentiation could be interpreted as counter-productive in terms of consumer protection.

#### **Conditions**

Targeted online marketing campaigns could be undertaken to promote cross-border offerings, and social media and other online communities could help increase trust via word of mouth. This could in turn bring cross-border insurance more into the spotlight and progressively increase its acceptability.

Persistent differentiation in rules across the EU-28 will continue to impede the development of a single market for property insurance. For example, differences in privacy laws will continue to compromise the protection of consumers and will prevent insurers from developing pan-European property insurances. The absence of harmonisation in minimum guarantees and basic coverage across different legal jurisdictions will continue to hinder the demand for cross-border insurances.

Should a company question the possibility to offer cross-border property insurances, differentiation in rules such as taxation schemes (i.e. sales and post-sales taxation) across the member states will require the investment in unique sets of employee skills and expertise across pre-sales, sales and post-sales activities in order to have

sufficient knowledge of these different rules. Such investment could be costly and the cross-border activities little profitable.

Further integration in e-Identification will also be needed to digitalise the contracting process; however, this process should take a few years. The emergence of a single market for property insurance will be achieved if insurers can develop secure online portals for uploading and downloading all required documentation, as well as contracts that are accessible and easy to understand.

### **Probability**

High: unless significant change is introduced, it is likely that the status quo will be maintained. There are few indications to suggest that change will occur organically.

## **6.3.2 Scenario 2: Expansion in specific pockets**

### **Description**

Cross-border peer-to-peer (P2P) insurance represents a novel concept for the property insurance market. It seeks to bring together peer groups from around the EU to form small insurance communities with the purpose of serving niche customer groups with similar risk profiles and generate more competitive prices / unique offerings. Cross-border P2P products would typically be aimed at 'interest groups' with a similar risk profile and are sold through a targeted distribution channel. In contrast to a traditional property insurance schemes, members of a P2P scheme pay premiums in the form of contributions to a common pool which will be used to cover any member claims that arise. The insurance firm then provides services such as claims management, and stop-loss insurance in the event that the pool cannot cover the claims incurred.

In contrast to Scenario 1, increased levels of cross-border activity in the property insurance market would be generated in Scenario 2 by enabling providers to reach additional niche markets. Cross-border P2P insurance could be targeted towards niche markets with similar risk profiles such as customers with holiday homes abroad, customers with a city apartment in another country, security conscious family members with elderly parents that live abroad, or single young professionals that travel extensively with work and whose apartments lie vacant for most of the year. Following the principles of P2P insurance, cross-border insurance companies could also aggregate demand for certain groups that previously couldn't get / had difficulty getting insurance i.e. home owners located in flood risk areas. By managing risk using the P2P model it becomes feasible for the insurance company to potentially take on these groups at affordable price for the consumer.

Firms specialising in data analytics could help property insurers to identify attractive peer groups with similar risk profiles using data sources such as social media to help them build innovative product offerings. GAFA could also be engaged to provide an integrated database with statistics on crime and meteorology data across Europe to support risk management activities across pre-sales, sales, and post-sales stages. Technology firms could also help develop a network for P2P insurers to find and establish partnership across Europe with claim assessors, TPAs, and brokers. Compliance solutions such as CKMS would also be essential as the cross-border P2P insurance model is as yet untested and therefore companies in this novel space could potentially run into unforeseen regulatory and legal challenges without comprehensive compliance support.

## **Opportunities**

P2P property insurance schemes could provide more competitive pricing options to customers. For example, German P2P insurance company FriendSurance asserts that their property insurance customers save up to 33% on their annual premiums under the P2P model.<sup>318</sup> P2P property insurance schemes could also open up opportunities for property insurers to design innovative product offerings that are tailored to niche customer groups. By gaining an in-depth understanding of the risk profile of peer group's using data analytics, it may be possible for insurance firms to form new business models.

The P2P insurance model can allow providers to identify and target new niche customer groups. P2P represents an alternative business model to traditional property insurance, one which is more driven by the needs of unique customer bases. The prominence of online channels such as social media and email referral in attracting new P2P customers, means that providers are also likely to enjoy lower customer acquisition cost than traditional insurers. In addition, brokers constitute a less prominent distribution channel in P2P insurance and therefore less commission fees may be incurred.

## **Threats**

It is essential that P2P property insurance firms invest in cyber security measures to protect sensitive information that may be recorded during the pre-sales and sales stages. Information captured during the registration process could potentially be targeted by website hackers who may seek to exploit this information for illegal purposes. For instance, criminals could try and acquire information on members of a P2P property insurance scheme such as their home address, the value of their property, and personal details. Similarly, privacy is of key concern and the identity and claims data of P2P scheme members should not be revealed at any point, even to members within the same scheme.

While the P2P model can allow insurers to mitigate the risks associated with certain customer groups, the scheme is not inherently risk free. Similar to the case of mortgage backed securities, aggregating high risk customers together could also potentially increase risk overall and lead to financial implications for the insurer. Also it may be difficult to ascertain upfront the risk profile of large groups of customers.

## **Conditions**

Self-service tools should be provided to cater to the needs of different P2P groups. For instance, young professionals that undertake a lot of business travel would need flexible and ubiquitous solutions for managing their policy and claims. It is also necessary to establish an EU wide database of claim assessors to inspect property insurance claims abroad, and TPAs for processing claims across several locations. Without these networks, the performance of post-sales services would likely be subpar due to delays caused by travel and time-zones differences. P2P insurance companies are also expected to provide online administration support in relation to managing the community insurance fund, processing claims, and organising stop-loss insurance. Self-service portals could also be used here to provide visibility around the claim funds available and alert members where any shortfall is expected. Similarly, the P2P insurer should take a proactive approach to preventing fraud by analysing key data sources.

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<sup>318</sup> BlueDun (2014), "Disrupting Insurance with Friendsurance", November 13, 2014, (<http://blue-dun.com/2014/11/13/disrupting-with-friendsurance/>).

Access to transparent and accessible sales documentation online is important to ensure that customers are fully aware of all the terms and conditions of the P2P scheme before finalising the sale. In particular, the differences between traditional insurance and P2P schemes should be highlighted such as information around stop-loss insurance. Furthermore, e-Identification solutions would be useful for authenticating the identity of customers during the contracting process and could increase the efficiency of the stage overall.

Social media data could be used to determine the risk profile of peer groups across Europe and assess their property insurance needs. This would allow property insurers to develop a wide array of insurance offerings to various peer groups that have hitherto been overlooked by incumbent insurance companies. An independent EU-wide P2P insurance comparison website could then be created that allows customers to join niche groups (e.g. Bought By Many's "Holiday Cottage Insurance", or "Insurance for Family Homes"<sup>319</sup>) and receive quotations based on pre-determined rates. Alternatively, customers could form their own insurance community with friends and family members. The availability of an EU wide geo-code and property registry database would help support these cross-border pre-sales activities and improve access to quotations.

To ensure underwriting accuracy, it is essential that insurance companies are able to verify the identity of the customer and the characteristics of their property to determine whether they share a similar risk profile to other member of the P2P scheme. Otherwise, the fundamental principles behind P2P insurance would be compromised and undue risks could be encountered by other members. As outlined in Scenario 1, Know Your Customer (KYC) and Anti-Money Laundering (AML) guidelines should be followed to prevent fraud during the sales stage, and e-Identification could provide further assurances about the customer's identity while also increasing the efficiency of the contracting process. Standardised and accessible contracts would also further improve efficiency levels. Finally, language and cultural barriers will need to be overcome in order to promote cross-border P2P (platform-to-platform) sales.

Providers must first determine whether or not they wish to serve the identified P2P group before completing a sale. Big Data analytics can be used to accurately quantify risk and determine which groups constitute an attractive proposition for the property insurer and those that are too risky. Once this has been established, social media then represents a key distribution channel for promoting awareness of cross-border P2P schemes and ensuring that customers see it as a viable alternative to traditional insurance. Online networks are a key resource for P2P schemes, and referrals are often driven through social media and emails sent between friends and work colleagues. An EU-wide P2P comparison site could also vastly improve cross-border P2P activities, where schemes are collated from across Europe, e.g. FriendSurance in Germany and BoughtbyMany in the UK.

National regulations and contract law may pose obstacles to the introduction of cross-border P2P insurance schemes. Developing a common legal framework for P2P insurance across Europe could help overcome these barriers, but it may be met with some resistance from national bodies where it contradicts existing standards. It is essential that competition between P2P insurance companies and traditional property

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<sup>319</sup> Bought By Many is a members-only service that helps niche customer group to find insurance cover through a P2P model. The company aim to negotiate discounts for their members with a range of insurance companies in the market. See (<https://boughtbymany.com/home-insurance/>).

insurers is promoted and that no impediments exist to setting up cross-border P2P schemes. Shared consumer-complaint redress procedures are also necessary for P2P schemes.

### **Probability**

P2P insurance is already tested in domestic markets, but it has yet to be applied to cross-border activities. The demand among consumers is uncertain and its feasibility is untested.

### **6.3.3 Scenario 3: Integrated EU market**

#### **Description**

The development of an independent website dedicated to providing advice (i.e. FAQs) about cross-border property insurance could help allay customer fears of transacting with insurers in another member state.

In parallel, data collected from Internet of Things (IoT)<sup>320</sup> solutions and Smart Home<sup>321</sup> technology in the customer's home can be used by cross-border property insurers to enhance their customers' experience across the pre-sales, sales, and post-sales stages. IoT can promote changes in the interaction between consumers and providers. For instance, once the customer's consent has been received, the property insurance company could capture data across a range of IoT solutions in the customer's home such as their home security system and fire alarms. This data could then be utilised across various activities such as providing quotations (pre-sale), underwriting (sale) and claims processing (post-sale). The prevalence of IoT solutions is expected to increase over the next few years with Accenture estimating that 69% of householders will have one or more IoT devices installed by 2019.<sup>322</sup>

Property insurance for Smart Home could be targeted at affluent consumers who can afford to purchase houses with in-built technology or to retroactively configure their homes to include IoT solutions. Technologies such as home security systems and flood sensors could be integrated by wealthier consumers, especially owners of properties abroad, e.g. holiday homes that remain unoccupied for most of the year.

The expertise possessed by certain GAFA (acronym used – not always flatteringly – for the four largest US high-tech companies: Google, Apple, Facebook and Amazon) could be exploited to increase the intensity of cross-border property insurance for Smart Home. For example, Samsung's subsidiary 'SmartThings'<sup>323</sup> provides customers with a hub and free app that enables them to add their favourite tech products and control them from any distance, even in another country. The smartphone app enables customers to remotely control their power outlets, turn on their lights and see who is

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<sup>320</sup> Kobe, N. (2015), "What is the internet of things?", *The Guardian*, 6 May 2015 ([www.theguardian.com/technology/2015/may/06/what-is-the-internet-of-things-google](http://www.theguardian.com/technology/2015/may/06/what-is-the-internet-of-things-google)).

<sup>321</sup> Davis, N. and David, R. (2015), "Tech house of the future: take a look around", *The Guardian*, 4 December 2015 ([www.theguardian.com/technology/2015/dec/04/tech-home-future-robots-living-smart](http://www.theguardian.com/technology/2015/dec/04/tech-home-future-robots-living-smart)).

<sup>322</sup> Accenture (2014), "State of the Internet of Things Study", Accenture Newsroom, 19 August 2014 (<https://newsroom.accenture.com/industries/systems-integration-technology/2014-state-of-the-internet-of-things-study-from-accenture-interactive-predicts-69-percent-of-consumers-will-own-an-in-home-iot-device-by-2019.htm>).

<sup>323</sup> For addition information, see: [www.smarththings.com](http://www.smarththings.com).

in their home at any given time, which helps improve security. In the long term, IoT companies could work with insurers to deliver better property insurance analytics from Smart Homes and to support the integration of disparate IoT devices.

## **Opportunities**

The digitalisation of cross-border property insurance activities would increase customers' visibility of product offerings from across Europe and empower them to choose providers based on how well they meet their personal needs. An independent EU-wide price comparison website would provide a one-stop shop for customers to search for diverse product offerings and identify the most competitive pricing options available.

Smart technology may allow property insurers to reduce prices for consumers if IoT lowers their risk and hence the number of property insurance claims submitted. Once shared with the property insurer, Smart Home data also could facilitate simplicity for pre-sales, sales and post-sales processes as customers will not be required to disclose large bodies of information each time they interact with the insurance company. Customers will enjoy enhanced home security too as IoT solutions and post-sales property insurance services will be able to provide early warnings against break-ins, fire, water damage from pipe leaks, etc. For example, AXA France is offering customers with Smart Homes a set of services to improve home security.<sup>324</sup> In addition, sensors could be installed near rivers that could tweet their level every few minutes, and provide "advance warning of downstream floods in time to alert those living in their paths".<sup>325</sup> Property insurers can provide additional support against these risks by monitoring smart home data using analytics.

Increased digitalisation will open up business development opportunities for property insurers. For instance, improving insurers' access to foreign markets will potentially provide them with new sources of revenue. Companies will also be able to trial innovative product offerings and business models in new markets that are well suited to determine their viability. Furthermore, increasing the availability of customer and property data will allow companies to develop more competitive product offerings that better meet the needs of targeted niche markets. There will also be increased opportunities for collaboration between insurance companies and intermediaries across the EU as a result of improved digitalisation. By improving access to foreign markets, digitalisation could potentially help property insurance firms to spread risk across different customer profile groups. For instance, insurers can mitigate underwriting losses in one country with gains earned in another country. This could in turn improve insurers' financial stability in the medium to long term.

The incorporation of smart technologies in post-sales activities may facilitate ease of dealing with customer claims as the information on home security breaches or accidents may become more readily available. Providers will no longer have to collect this information from the customer and instead the data will be transferred automatically. Property insurance providers may be able to form partnerships and collaborate with technology companies in the collection of pre-sales property data leading to stronger risk management capabilities. Finally, property insurers will be

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<sup>324</sup> Sylvain, G. (2015), "AXA France lance une offre destinée aux clients équipés d'objets connectés à la maison" [AXA France launches an offer for customers equipped with objects connected to home], October 19, ([www.aruco.com/2015/10/axa-france-maison-connecte/](http://www.aruco.com/2015/10/axa-france-maison-connecte/)).

<sup>325</sup> Naughton, J., (2015), "Should we be worried if our homes are soon smarter than we are?", Opinion Piece, *The Guardian*, 6 December 2015 ([www.theguardian.com/commentisfree/2015/dec/06/smart-homes-security-risk-internet-of-things](http://www.theguardian.com/commentisfree/2015/dec/06/smart-homes-security-risk-internet-of-things)).

better able to deliver good customer experiences using data analytic solutions to examine the data captured from IoT solutions.

## **Threats**

Privacy issues will be a major issue where smart technology is concerned, as data is continuously being transferred to external servers and companies. For instance, the fact that smart technologies constantly monitor an owner's home may create the impression that companies can spy on their consumers within their homes whenever they wish. In addition, security of personal data collected by smart technologies will be an issue, given the potential for data breaches, and hackers may try to access personal information about home owners. Websites such as 'Please Rob Me'<sup>326</sup> highlight how the public sharing of information on social media accounts, such as Twitter and Foursquare, can be dangerous to home security. Security of personal data collected by insurers via web forms will also create insecurity as there is potential for private data to be accessed via hacking.

*Providers (in terms of data collection/usage):*

The implementation of an independent EU price comparison website could also potentially constitute a threat for providers. For instance, challenges could arise around competition, data protection, data collection (i.e. how would data be collected from private insurers) and control (i.e. who should run the site if there is only one). Moreover, as stressed by some respondents to the Commission's Green Paper on retail financial services,<sup>327</sup> the terms and conditions of each insurance policy are different across a number of domiciles. This could create a challenge for some insurance companies to distribute their product offerings through an EU-wide price comparison site, unless the necessary conditions are in place (see next section).

Providers may encounter legal issues if there is a security breach of a consumer's personal information collected either from their database or smart technology. Transfer of smart home data from tech companies to insurance companies may be problematic as currently there is no standard for connecting different devices. The transfer of data may also have legal implications, and there would likely be strict regulations imposed on insurers in relation to data collected by the smart technologies in the consumer's home.

## **Conditions**

An independent website dedicated to providing advice (i.e. FAQs) about cross-border property insurance could help allay customer fears of transacting with insurers in another member state. Targeted online marketing campaigns could be undertaken to promote cross-border offerings, and social media and other online communities could help increase trust via word of mouth. This could in turn bring cross-border insurance more into the spotlight and increase its acceptability. This independent EU-wide comparison website that could support the cross-border P2P schemes analysed in scenario 2 could be developed by GAFA to help customer identify the most competitive quotations and best coverage on the market.

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<sup>326</sup> For additional information, see [www.pleaserobme.com](http://www.pleaserobme.com).

<sup>327</sup> European Commission (2015), Green Paper on retail financial services: Better products, more choice, and greater opportunities for consumers and businesses, COM(2015) 630 final, Brussels ([http://ec.europa.eu/finance/consultations/2015/retail-financial-services/docs/green-paper\\_en.pdf](http://ec.europa.eu/finance/consultations/2015/retail-financial-services/docs/green-paper_en.pdf)), op. cit.

One means of addressing the competition concerns associated with a proposed EU-wide price comparison site would be for the website to act as an independent online marketplace for price comparison service providers in the EU to compete cross-border. This model would operate in a similar way to e-Commerce platforms such as [www.eBay.com](http://www.eBay.com) or [www.alibaba.com](http://www.alibaba.com), and ensure that competition is promoted and no single entity is able to exert excessive control over the market. Currently, there are many price comparison sites operating across Europe with a domestic focus; an EU-wide platform could lower the barriers for these firms to sell cross-border insurance and open up new market opportunities. However, the customer must be made aware of any differences in the terms and conditions of insurance policy documentation across national borders, a responsibility which would likely fall on both the insurer and the EU-wide price comparison site.

Property insurance companies must provide data feeds and APIs to allow price comparison sites collect information about their product offerings. An agreement must be established where the price comparison site can pull feeds via ftp/http that are pushed by the property insurer. An integrated database of geocodes would also greatly enhance the quotation process and improve the efficiency of the pre-sales process. Increased adoption of data analytics would improve property insurers' ability to provide accurate quotation based on an understanding of their customer bases and the surrounding context. Collecting data from social media could help companies to develop competitive insurance offerings based on an in-depth understanding of the behaviour of different demographics.

Providers will also need to negotiate agreements with intermediary networks across the EU to ensure that they have a presence in the both the direct and indirect distribution channel. EU wide broker database would be essential to help insurers to identify partners that can provide pre-sales support for customers who prefer to engage with insurance-professionals offline. An EU wide database of claims assessors and Third Party Administrators (TPAs) could help increase the efficiency of claims processing across different locations. Post-sales support can be outsourced to foreign countries to overcome language and expertise barriers.

Furthermore, providers will have to deal with different risk profiles and claims behaviour across a multitude of markets, which will require significant investments in data analytics in order to improve the accuracy of underwriting practices. Once an agreement has been reached with third parties, APIs could be developed to pull data from a variety of national databases such as police records (i.e. crime rates), and meteorology reports to support underwriting and risk management processes.

InsurTech firms could then help support providers with cross-border sales activities by delivering Compliance Knowledge Management Systems (CKMS) that provide incumbents and new entrants to the property insurance market with an understanding of the complex regulations, standards and requirements that they would need to aware of when operating in a country. Technology firms specialising in data analytics could provide property insurers with statistics on crime rates, weather warnings (i.e. storms and flooding) across different locations. This would be very useful for risk management purposes and allow insurers to set more accurate quotations. FinTech companies could also develop an EU-wide broker and claim assessor database portal to enable insurers to identify key intermediary groups across geographical locations.

As regards the integration of IoT solutions, a section could be included in online forms for customers to specify which smart technologies they have currently installed in their home; this would allow the insurer to quickly assess the risk of insuring the Smart Home before providing a quotation. Property insurance companies and Smart Home

providers (e.g. Samsung) could also form a partnership in order create targeted marketing strategies using their customer database.

An electronic contracting platform would facilitate the transfer of information for the preparation of cross-border insurance. The platform could provide a means for customers to upload necessary documentation and download supporting material to aid the contracting process. This would help improve compliance and service delivery by ensuring that the customer is fully informed and supported throughout the sales stage.

Wireless communication between IoT solutions and the property insurance provider may facilitate the rapid transfer of post-sales data. For instance, Smart Home solutions could alert the property insurer to any changes in the status of the customer's home security system, and any problems that require fixing. Also the home security system could automatically alert police in the event of a break-in, thus helping to reduce claims. To achieve this level of data transfer, however, fast and secure wireless broadband connections would be required, which remain an issue across some EU countries and rural locations.

The range of smart technologies built into a particular property (e.g. home security systems, sensors, etc.) may allow insurance companies to remotely assess the level of risk involved in insuring a particular property. For instance, this information could be used to calculate quotations by determining whether a customer has a fire alarm installed in their holiday home. If smart-home technologies were linked to the occupants' phone, then data on the occupants' location may also be available which could be used in marketing to home owners by identifying those who have properties at home and abroad.

It is essential that property insurers possess knowledge of IoT technologies in order to understand their customer base and how they can provide support across the pre-sales, sales, and post-sales stages. A dedicated sales team with expertise in the IoT for the home could provide assistance throughout the sales process and guide customers through a smart- home property insurance contract. In addition, the contract and policy documentation will need to include provisions directly related to IoT and how data will be collected for risk-management purposes. The customer should be aware of all contractual issues before finalising the sale.

Data on security breaches could be collected remotely using information from IoT devices such as home security systems. This for instance would allow actuaries to assess the claim with exact details of the time of the security breach and perhaps video footage from inside the house. Also, IoT and other innovative technologies have the potential to overcome location barriers in cross-border property insurance. In the case of assessing damage, drone technology could be leveraged to provide the assessors with a visual image of the damage from a remote location, and data could also be captured from the IoT devices in the home to help with the assessment. As a result, the cross-border insurance offering may build a reputation for catering to the IoT devices in the home market and thus generate demand for property insurance among customers that own smart homes.

IT skills will also be needed, either in-house or outsourced, for integrating connected devices and overcoming data silos in the customer's smart home.<sup>328</sup> Property

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<sup>328</sup> "How smart phones can unlock the mainstream market", blog posting on Knowledge@Wharton, University of Pennsylvania, 29 March 2016

insurance companies may need to liaise with tech companies in the future to enable the transfer of data from smart technologies in the consumer's home to secure databases. Big Data analytics skill sets will be required within property insurance companies to analyse data collected by smart technologies and develop accurate underwriting processes based on this data.

Easing regulatory constraints will be essential to lowering barriers to cross-border activities. Firstly, the harmonisation of national laws could greatly improve the ease at which property insurers carry out cross-border sales. Enhancing access to national data for foreign companies based on a pan European sharing agreement and common data standard would also improve underwriting processes. It is also essential that national bodies across Europe seek to promote of cross-border competition by mitigating the power of monopolies, or duopolies within the domestic property insurance market. This is necessary to ensure that both domestic and foreign firms have equal opportunities to compete for business. Robust cyber-security, privacy and data protection laws will be very important to ensuring that customer can carry out online property insurance transactions online. Furthermore, regulation against financial exclusion (e.g. digitally illiterate users, weakest financial profiles) should be maintained to ensure equal access to property insurance offerings. Increased adoption of Know Your Customer (KYC) and Anti-Money Laundering (AML) guidelines should also be adopted to prevent fraud. The semantic annotation of insurance regulation and standards would enable CKMS suppliers to more easily collate all relevant requirements for cross-border property insurance activities.

A comprehensive communication strategy is needed to explain the terms and conditions for the consumer in the event that cross-border insurance providers collect data via the smart technology in the home. There needs to be clear and simple documentation on what data will be collected about the customer and for what purpose it will be used. This will increase trust between the two parties. Data protection legislation will also apply when handling data from the consumers online. Terms and conditions will need to be agreed by consumers, and regulations need to be put in place to protect the data collected by smart technologies across all areas of the consumer's home. Increased harmonisation of regulation across Europe would reassure customers that the privacy and security of their personal data will be protected throughout.

### **Probability**

**Low:** there are a number of impediments that make this scenario unlikely, and demand for smart home insurance among customers is therefore uncertain.

## **7. Private health insurance**

The objective of this chapter is to discuss the potential for developing cross-border private health insurance services within the European Union. In this study, health insurance services refer to private health insurance (PHI) contracts. Member states allow consumers to append PHI contracts to their public health insurance. Among the member states and PHI service providers, there is a lot of diversity in the types of PHI contracts offered. These contract types may depend on the structure, functioning and quality of the public and private healthcare systems in each Member State and the funding of the public health insurance. Therefore, defining and classifying various PHI contracts is not a straightforward exercise. Furthermore, cross-border healthcare is complex and challenging.<sup>329</sup>

One definition that has been adopted<sup>330</sup> views PHI contracts as insurance that meets the following criteria:

- It is paid for by the consumer (directly or indirectly by his/her employer).
- It is undertaken on a voluntary basis.
- It is available from either private or public providers.

The term private health insurance (PHI) therefore refers to voluntary coverage for consumers, (usually) offered by for-profit companies (but not always) and paid for by the consumers themselves (but sometimes by their employer). An important distinction with regard to public health insurance providers is that PHI does not relate to social security schemes (i.e. social insurance or national insurance funded exclusively through taxes), but rather is provided by an organisation that has a for-profit mission.<sup>331</sup>

Another way to classify PHI and public health insurance schemes is based on the way in which they are funded. Ultimately, the beneficiaries pay for the insurance either in the form of taxes levied on individual earnings, as public health insurance fees or as private health insurance fees. In the first two cases the government collects the funds, whereas in the third case the funds are collected by the organisation that pools the risks, i.e. the private health insurer. The public healthcare system serves all the resident consumers based on their medical needs and the costs are largely covered by the public health insurance scheme. Only a very small share of the actual costs is to be paid by the consumer as an out-of-pocket expense. Similarly, the private healthcare providers offer services to consumers based on their medical needs, but the costs are covered by their PHI contracts and out-of-pocket payments. The out-of-pocket payments refer to the amount that must be advanced by consumers when the costs exceed the insurance coverage. Hence, private health insurance is bought to cover the costs borne by the use of private health services either in the country of residence or abroad.

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<sup>329</sup> Wilmar M., W. Palm, J. Figueras, K. Ernst and E. van Ginneken (eds) (2011), "Cross-border health care in the European Union: Mapping and analyzing practices and policies", Observatory Studies Series No. 22, European Observatory on Health Systems and Policies ([www.euro.who.int/\\_\\_data/assets/pdf\\_file/0004/135994/e94875.pdf](http://www.euro.who.int/__data/assets/pdf_file/0004/135994/e94875.pdf)).

<sup>330</sup> Thomson S. and E. Mossialos (2009), "Private health insurance in the European Union", Final report prepared for the European Commission, Directorate General for Employment, Social Affairs and Equal Opportunities (<http://ec.europa.eu/social/BlobServlet?docId=3211&langId=en>).

<sup>331</sup> Ibid.

## **7.1 Current cross-border activity**

The provision of cross-border healthcare services in the European Union is framed by Directive 2011/24/EU of the European Parliament and of the Council of 9 March 2011 on the application of patients' rights in cross-border healthcare<sup>332</sup> and the coordination of the national social security systems is organised by Regulation (EC) No 883/2004 of the European Parliament and of the Council of 29 April 2004 on the coordination of social security systems<sup>333</sup> with the Implementing Regulation (EC) No 987/2009 of the European Parliament and of the Council of 16 September 2009 laying down the procedure for implementing Regulation (EC) No 883/2004 on the coordination of social security systems.<sup>334</sup>

All EU residents are entitled to the European Health Insurance Card (EHIC), which covers emergency treatment during short stays abroad. It does not cover going abroad for medical treatment. EU residents are free to seek and use also non-emergency healthcare services abroad. It is possible to seek services of both primary healthcare and specialised medical care as well as receive treatment for a chronic condition. Depending on the Member State and type of treatment, the treatment-seeker may need to notify in advance the public health insurer or other authorities of his/her country of residence. The consumer pays for the healthcare service on the spot and afterwards the public health insurer reimburses the costs of treatment given in an EU or EEA country, or in Switzerland.

EU residents can use the local public healthcare services of another EU country in the same way as the residents of the country in question. Providers of statutory healthcare services operating in an EU country are required to accept clients from another EU country seeking treatment. However, an EU country is not obliged to offer the following health services to clients seeking treatment from abroad: long-term care and other services aimed at providing support to an individual in ordinary daily activities, organ transplants and vaccines and vaccination programmes.<sup>335</sup> Providers of healthcare services in EEA (European Economic Area) countries and Switzerland decide independently on whether to accept clients from abroad for treatment.

This change in regulation called for the creation of the Electronic Exchange of Social Security Information (EESSI), a specific IT system that supports the different social security bodies across the EU in safe, secure and fast exchange of information. The benefits for the consumers are a faster claims management and payment of entitled benefits. Public administrations will gain in time and efficiency when using structured documents through more standardised, verifiable flows of information.<sup>336</sup> The role of private health insurers is to cover:

- costs not reimbursed by the public health insurance,
- a wider range of health services and
- healthcare offered by private healthcare service providers.

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<sup>332</sup> OJ L 88 of 4.4.2011

(<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32011L0024&from=EN>).

<sup>333</sup> OJ L 166 of 30.4.2004

(<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2004:166:0001:0123:en:PDF>).

<sup>334</sup> OJ L 284 of 30.10.2009

(<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:284:0001:0042:en:PDF>).

<sup>335</sup> For additional information, see: [www.choosehealthcare.fi/health-services-abroad/seeking-treatment-abroad/](http://www.choosehealthcare.fi/health-services-abroad/seeking-treatment-abroad/).

<sup>336</sup> For additional information, see: <http://ec.europa.eu/social/main.jsp?catId=869&langId=en>.

There are few or no official statistics available on cross-border PHI contracts in the European Union. The majority of the health information systems in the member states do not identify consumers (patients) by their nationality. However, there seems to be a positive evolution in the number of consumers who show interest in cross-border care. Data collected by a German sickness fund showed that their customers travelling abroad for health services grew from 7% in 2003 to almost 40% in 2008 (company survey research).<sup>337</sup> However, the phenomenon of cross-border PHI contracts remains something rather exceptional because the public health insurance schemes are often more than sufficient in terms of breadth of coverage and reimbursement rate. Some member states offer all-encompassing public health insurance, whilst other Member states offer a mixed system of public and private health insurances.

In addition, one of the persistent barriers to cross-border health insurance resides in the diversity of models of PHI contracts across the EU-28. As shown in Box 7.1, this diversity can concern both the content of the contract, e.g. breadth of coverage or reimbursement rate, and possible characteristics of the providers. In that context, the learning process for non-residents to become accustomed with foreign contracts might be too high, especially if the contracts are drafted in foreign languages.

#### *Box 7.1 Different types of PHI contracts*

PHI contracts can be classified by their breadth of coverage and their eligibility (complementarity to) for public health insurance.<sup>338</sup> The full set of possible coverage for the different types of possible health services is extensive. Not every PHI has the same breadth or reimbursement rate due to the differences in public health insurance conditions.

A more recent classification<sup>339</sup> describes and defines three different types of contracts.

The first category is called *Substitutive PHI contracts*. They provide similar coverage as the public health insurance. These contracts are for those consumers who either are not eligible to public health insurance scheme due to personal features (e.g. annual income or age) or have opted out from the public insurance scheme. This type of contract therefore substitutes for the public health insurance offered in that Member State. Besides substituting public insurance, these PHI contracts can also include additional coverage and hence require higher premiums. Examples of these contracts can be found in the Netherlands and Germany.

The secondly category is the Complementary PHI contracts where cost-sharing mechanisms with the public insurance are set up, i.e. private insurance covers services that are only partly covered by the public insurance. Therefore, this type of contract aims at filling gaps in the coverage and increasing the reimbursement rate of the public health insurance scheme. Certain medical services are excluded or are insufficiently covered by the public system because of their higher costs or elective nature. Complementary PHI contracts aim to improve access to health services. Examples of these contracts can be found in Finland, France and Luxembourg.

<sup>337</sup> See K. Footman (2014), "Cross-border health care in Europe, WHO Policy Summary", No. 14 ([www.euro.who.int/\\_\\_data/assets/pdf\\_file/0009/263538/Cross-border-health-care-in-Europe-Eng.pdf?ua=1](http://www.euro.who.int/__data/assets/pdf_file/0009/263538/Cross-border-health-care-in-Europe-Eng.pdf?ua=1)).

<sup>338</sup> OECD (2004), Proposal for taxonomy of health insurance ([www.oecd.org/els/health-systems/31916207.pdf](http://www.oecd.org/els/health-systems/31916207.pdf)).

<sup>339</sup> T. Foubister et al. (2006), "Private medical insurance in the United Kingdom" ([www.euro.who.int/\\_\\_data/assets/pdf\\_file/0007/98422/Private\\_Medical\\_Insurance\\_UK.pdf](http://www.euro.who.int/__data/assets/pdf_file/0007/98422/Private_Medical_Insurance_UK.pdf)).

The third category is *Supplementary PHI contracts*, which focus on those services that are not covered at all by the public insurance (e.g. expensive treatments and higher-risk surgeries) or that are currently known for their lower levels of patient satisfaction under this public insurance scheme. The consumers opting for this type of contract are willing to pay higher premiums to get access to better care that can surpass the compulsory contributions they make to the public system. Consumers have a greater choice in the possible providers (usually health private providers) and can avoid possible waiting lists for similar publicly-financed care or treatments. Importantly, these consumers retain their full rights to the public insurance scheme while contracting the supplementary PHI. Therefore, the supplementary PHI contracts do not aim at improving the general access to health services or reducing the costs for all the contributors to the public insurance scheme. Examples of these contracts are commonly found in the United Kingdom.

As indicated in the introduction, PHI contracts can be offered by private and public companies. We use the term “providers” to refer to the risk-pooling entities and not the health services providers. These risk-pooling entities can have different forms and they can be classified by using purely private and purely publicly funded contracts (i.e. national public scheme) as two ends of a continuum.<sup>340</sup> The risk-pooling organisations fall into five categories as follows:

- for profit & private
- for profit & community-based
- not-for-profit & private
- not-for-profit & community-based
- for profit & public

Community-based entities refer to the pooling of risks between the healthy and the sick within a specific group.

PHIs can be classified by their legal status and these categories include mutual and providential associations, commercial companies, statutory health insurance funds and employers. The for-profit status of the commercial companies is the most common one, while mutuals, providential associations and employers usually organise PHIs on a non-profit basis. The legal status is very relevant as it affects business practices and cross-border operations. Cross-country differences in tax systems are very important for the risk-poolers of PHI contracts. Some of the risk pooling entities are also uniquely specialised in the provision of PHI contracts whilst others also offer different non-life insurances.<sup>341</sup>

### 7.1.1 Types of providers and products

The growing market of expatriates is currently served by several online health insurance providers which operate globally. Typically, these providers virtually cover all regions of the globe and include *inter alia* some companies headquartered in the EU (almost exclusively in the UK):

- [www.bupaglobal.com](http://www.bupaglobal.com) (UK)
- [www.healthcareinternational.com](http://www.healthcareinternational.com) (UK)
- [www.cignaglobal.com](http://www.cignaglobal.com) (UK)

<sup>340</sup> World Health Organisation (2004), Private Health Insurance: Implications developing countries, ([www.who.int/health\\_financing/documents/dp\\_e\\_04\\_3-private\\_h\\_insurance.pdf](http://www.who.int/health_financing/documents/dp_e_04_3-private_h_insurance.pdf)).

<sup>341</sup> An overview of the providers in several Member States can be found in pp. 38-39 of S. Thomson and E. Mossialos (2009), “Private health insurance in the European Union”, Final report prepared for the European Commission, Directorate General for Employment, Social Affairs and Equal Opportunities (<http://ec.europa.eu/social/BlobServlet?docId=3211&langId=en>).

- [www.imgeurope.co.ukinsurance](http://www.imgeurope.co.ukinsurance) (UK)
- [www.clements.com](http://www.clements.com) (UK)
- [www.foyerglobalhealth.com](http://www.foyerglobalhealth.com) (Luxembourg)

In line with providers on other segments covered by the study (such as on the mortgage market), these platforms have adopted hybrid models, combining online channels and offline channels. Typically, consumers can get provisional quotes directly online.<sup>342</sup> Should they be satisfied with these quotes, they will be contacted by an adviser, either by phone or through email, in order to fine-tune the coverage based on the medical history and thus give the final quote. These platforms have at their disposal significant skills and resources to respond to the needs of their consumers on an international basis, as they are active all around the world and can offer 24/7 helpline of experts and advisers in over 170 languages. Furthermore, customers can manage all their claims at any time and everywhere on through the web.

### **7.1.2 Type of consumers**

Typically, consumers buying the different PHI contracts have high disposable incomes. This specifically applies to the substitutive and supplementary PHI contracts where the individual consumer wants to pay more to receive better health services. The money spent on the public insurance scheme will be used to partly finance their substitutive PHI. Past research has identified other factors affecting PHI purchase, these include age, gender, health status, type of employer and employment status, marital status, household composition, educational status and area of residence.<sup>343</sup>

The cross-border consumers interested in PHI contracts have a specific need and/or a higher willingness to pay for such contracts. This need will depend on the public insurance scheme available in their country of residence and their past experiences (expectations) regarding health services in (from) another Member State. The consumer might perceive the available public scheme as insufficient or have no access rights to this public scheme. Consumers with a higher willingness to pay for better, more convenient, extended coverage with high reimbursements could be interested in the different PHI contracts. Therefore the typical profiles of consumers who might be involved in cross-border sales are individuals moving abroad for a short period of time on a continuous basis to the same destination (commuters) or a long period of time and hence are more familiar with one specific health system that they want to keep using (for example, consumers who retire abroad). Another customer profile could be tourists staying abroad for a longer period or professionals travelling frequently abroad. Finally, it is also possible that consumers cross the borders only to receive similar or better health services than in their current country of residence (i.e. cross-border patient mobility).

Firstly, the expatriate community is a known customer segment for this type of contract. Based on the interviews, health insurance policies sold cross-border are often targeted to the expatriate communities. These persons reside in a country other than their country of origin and for various reasons tend to prefer to have additional insurance. The expatriates may not be aware of the functioning of the healthcare system of the country of residence, which makes seeking treatment difficult. Moreover, they might not speak the language mostly used in the healthcare system or

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<sup>342</sup> Coverage plans are all modular and leave some degree of freedom to customers when they tailor the offer to their specific needs.

<sup>343</sup> See *ibid.* (pp. 31-33) for a more detailed breakdown of the different characteristics of consumers who are buying PHI contracts per member state.

do not trust the local (public) healthcare system (health insurance is the segment covered by the study where trust of consumers is the most important). As such, expatriates may be more likely to buy additional health insurance coverage in order to be able to choose the private health-service providers over the public alternatives. Moreover, PHI contracts may be seen to be easier to use when health services are obtained abroad.

It is possible that residents (including expatriates in a given Member State) want to contract health insurance services from a foreign provider when these can offer the same coverage at a lower price. Concrete examples of this situation were not found, however, as in many member states the residents contribute to a compulsory social insurance scheme that (sometimes fully) covers a lot of medical consultations and treatments.

Another PHI consumer group consists of frequent travellers for whom there exists specific travel health insurance, and the EHIC also provides coverage in emergencies. Due to the highly personal and technical nature of health insurance contracts, the companies offering them cross-border are highly specialised. The skills and knowledge they have of a national market are made available through cooperation agreements with insurers from the target markets (Member State). These local partners, which have the market knowledge and understand its health system, are essential in the service provision to cross-border customers. These specialists are also essential for the claims management process itself, which is different from one Member State to another.

Thirdly, it is also possible that consumers cross the borders only to receive health services in another Member State (i.e. cross-border patient mobility). The average consumer is still not very keen receiving treatment outside his country of residence, far from their home and family, with possible language barriers while having to go through unknown administrative procedures. Those consumers moving out of their country of residence either seeks planned treatments when these are perceived to be better, more available (e.g. shorter waiting lists), simply cheaper or closer to their home (e.g. border regions between member states).<sup>344</sup>

A person's likelihood to seek treatment abroad is affected by systemic and personal factors. Systemic factors, such as quantity, quality and price of healthcare services in the country of residence, were discussed above. The personal factors are related to physical condition, emergency and nature of the treatment needed, financial resources, willingness to travel, language skills, need for accompanying person and alternative costs arising from the time spent in travel, and treatment for the patient and the accompanying person (if needed). In elective treatments, the customer first pays all the costs out-of-his/her-pocket and only later is reimbursed by the public or private health insurer. This feature may affect broad usage of healthcare service abroad since the true costs of treatment, such as surgeries, are high. Moreover, some conditions may require controls or additional therapy after the primary treatment and it may be uncertain whether the country of residence offers these treatments.

It is expected that the cross-border development will be oriented towards non-urgent elective surgeries. At present, cross-border health services remain more the exception than the rule, due to cultural, linguistic and health system differences. More important for cross-border customer flows will be the way in which the healthcare providers are

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<sup>344</sup> See Footman. et al. (2014), op. cit. ([www.euro.who.int/\\_\\_data/assets/pdf\\_file/0009/263538/Cross-border-health-care-in-Europe-Eng.pdf?ua=1](http://www.euro.who.int/__data/assets/pdf_file/0009/263538/Cross-border-health-care-in-Europe-Eng.pdf?ua=1)).

contracted. The EU Directive on Cross-border Health<sup>345</sup> does enlarge the healthcare coverage to the entire EU, but some conditions still apply. However, this Directive will support the choices that consumers can make and likely stimulate competition among the health providers across member states.<sup>346</sup> Growth in the border-crossing customer group may increase supply of private health services in some countries. Heightened competition may improve quality, lower prices and make service contracts more favourable for the customers. In addition, as the linkage between private healthcare insurers and hospitals strengthens, it might be possible to see hospitals owned by insurers.<sup>347</sup>

The cross-border activities for health insurance contracts remain rather scarce despite a steady growth in international trade in health services, due to rising healthcare costs and insufficient coverage by the national (public) insurance schemes. Although most consumers want to be treated in their country of residence, technological advances will continue to stimulate this growth (e.g. follow-up from home, shorter waiting times, better quality of care or the increase of internet use to search medical information, telemedicine).

There are several regional cross-border arrangements between Belgium, the Netherlands, France and Spain and between some Nordic countries, in providing healthcare. It is not uncommon for UK residents to travel to Spain for certain medical treatments (i.e. medical tourism).<sup>348</sup> However, the consumer group using healthcare services abroad is small and they are niche types of customers, such as expatriates or cross-border workers. The high degree of technicality in the service provision and consumption (i.e. social law, national health systems, presence or absence of a national health scheme) does not increase insurance companies' willingness to operate in the business. If they do use digitalisation to enter a foreign market, the insurer will rely on a strong local partner for acquiring the necessary information on regulations, standards and the market.

Despite the EU framework (Directive 2011/24/EU),<sup>349</sup> experts expect that it will affect the national health policies and system rather than stimulating cross-border consumption of health services.<sup>350</sup>

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<sup>345</sup> OJ L 88/45 of 4.4.2011

(<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32011L0024&from=EN>).

<sup>346</sup> Wilmar et al. (2011), op. cit.

([www.euro.who.int/\\_\\_data/assets/pdf\\_file/0004/135994/e94875.pdf](http://www.euro.who.int/__data/assets/pdf_file/0004/135994/e94875.pdf)).

<sup>347</sup> "Investigating policy options regarding competition among providers of health care services in EU Member States", preliminary report of the Expert Panel on effective ways of investing in Health (EXPH), 17 February 2015 ([http://ec.europa.eu/health/expert\\_panel/opinions/docs/007\\_competition\\_healthcare\\_providers\\_en.pdf](http://ec.europa.eu/health/expert_panel/opinions/docs/007_competition_healthcare_providers_en.pdf)).

<sup>348</sup> OECD, WHO & Eurostat (2011), *A System of Health Accounts*, 2011 edition, Paris: OECD Publishing, DOI:10.1787/9789264116016-en , p. 274.

<sup>349</sup> OJ L 88/45 of 4.4.2011

(<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32011L0024&from=EN>)

<sup>350</sup> Footman, K. et al. (2014), Cross-border health care in Europe, WHO Policy Summary 14 ([www.euro.who.int/\\_\\_data/assets/pdf\\_file/0009/263538/Cross-border-health-care-in-Europe-Eng.pdf?ua=1](http://www.euro.who.int/__data/assets/pdf_file/0009/263538/Cross-border-health-care-in-Europe-Eng.pdf?ua=1)).

### **7.1.3 Conclusion**

The overall cross-border provision and interest for private health insurance remains low. Most consumers are not considering the acquisition of a PHI from a provider that is located in another Member State because they have a preference to receive health services in their home country. There is an important political element in the cross-border PHI development because it also implies increasing the competition in healthcare services and between national health systems.

## **7.2 Impact of digitalisation on cross-border activity**

### **7.2.1 (Changes in) providers' behaviour**

Within the health insurance industry, digitalisation has helped to overcome national barriers because specialist providers are emerging or are already present, offering the needed market knowledge (i.e. health system, social laws, pricing of treatments and claims/reimbursement procedures) to interested foreign insurance companies. There is need to establish a partnership to coordinate the service offered to the consumer. However the insurers also have the option to use their right of freedom of establishment instead of the right of freedom of services. Several insurers still choose to buy a local insurer or one of the health specialists rather than cooperating with them. The insurers can prefer to own the data and the sources rather than coordinating with another partner that keeps data up to date.

#### **Pre-sales**

In line with products such as housing loans, health insurance requires a significant amount of advice before being purchased. More specifically to health insurance, the amount of personal and sensitive information to be disclosed is much higher than for any other segment covered by the study. In that context, until recently, the advice and the administrative processes were done almost exclusively with intermediaries such as a broker, on a face-to-face basis. Cross-border pre-sales and sales of these products have been therefore quite difficult.

Nevertheless, in recent years, some parts of the pre-sale distribution channels have been gradually digitalised, especially during the initial research stage. Consumers tend to collect a lot of information online before meeting a broker, and insurers are increasingly trying to make it easy for consumers to inform themselves and transfer more easily basic personal data that is needed for making an online price quote.<sup>351</sup> Cross-border pre-sales of health insurance seem to be increasingly achievable on a large scale.

In Luxembourg, for example, there is a cross-border health insurance provider called Foyer Global Health.<sup>352</sup> This insurance is offered by one of the main insurers on the market and its contracts are open to all non-residents. The insurance company created a dedicated website where price quotations are made available with a simulation tool. The different products are also detailed and explained, providing interesting information for prospective consumers.

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<sup>351</sup> As a consequence, the use of the call centres in the pre-sales phase has markedly declined.

<sup>352</sup> For additional information, see [www.foyerglobalhealth.com/](http://www.foyerglobalhealth.com/).

As regards the near future, the overall perception of the stakeholders interviewed for this study is that most insurers aim at digitalising a larger part of their distribution channels. The use of mobile applications for health insurance is so far in its infancy compared to the increased use of dedicated websites, and insurers are expected to focus first of all on the development of online channels. The pre-sales phases are the first target to meet that objective. However, most insurers continue to find their traditional distribution channels as their key channels, a fact that will keep playing a vital role in the overall digital multi-channel strategy. For example, nearly 40% of the consumers reported positive experiences with their agents, 30% for brokers and internet but so far social media are the least attractive in terms of customer experience.<sup>353</sup>

Through these digital platforms, insurers can collect a large amount of data up front and use this data in their pre-screening processes. The data provided by the customer will be checked with internal databases and fraud detection procedures. The information declared by the customer who is potentially interested in the PHI is very relevant for the insurance company. The use of public databases and unstructured data can clearly contribute to a better pre-screening of the interested consumer. However the current data protection regulations and misalignment of consumer preferences to share their health data, does not fully allow this technological opportunity to be fully exploited, especially on a cross-border basis. Therefore the insurers keep relying on their agents and experts to assess the checklists that are filled in by the consumer (e.g. through a web portal with a dedicated log-in).

## **Sales**

The digital sales of health insurance contracts are possible but not widespread across member states due to the issues with the identification of the customer and the signature of the contract. In many cases, the website is an important channel for the pre-sales but the actual sales will involve paper documents (which could potentially be scanned and sent back by email or regular mail). These papers could be potentially scanned and sent back by email or regular mails. However, partly due to the sensitivity of the personal data that are used for the calculation of the premiums and risk profiling of the consumer, both consumers and insurers/intermediaries generally need face-to-face interactions. The need for trust and informal exchanges is indeed very important in the sale of health insurance contracts: owing to privacy concerns, consumers need to be reassured of the correct use of their personal data, whereas providers/intermediaries typically need personal contact in order to verify consumers' declarations. This demand for face-to-face interactions markedly impedes the opportunities for cross-border sales.

Nevertheless, insurers have long recognised the need to either reduce their dependence on independent brokers or reinforce the sales efficiency of these brokers to ensure a sufficient inflow of new customers. Digitalisation has helped somewhat to achieve these objectives, notably through the creation of digital channels that reduce the need of a full paper trail process.<sup>354</sup> The focus of these new digital channels has

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<sup>353</sup> See Capgemini and Efma (2015), "World Insurance Report" ([www.be.capgemini.com/thought-leadership/world-insurance-report-2015](http://www.be.capgemini.com/thought-leadership/world-insurance-report-2015)).

<sup>354</sup> Many investments in digitalisation by insurers still focus on increasing efficiencies and generating sales through their existing channels, by digitising established operational models and building up the required competences to offer more tailored (i.e. customer-centric) contracts. According to the "Accenture Digital Innovation Survey" from 2014 ([www.accenture.com/us-en/\\_acnmedia/Accenture/Conversion-Assets/LandingPage/Documents/3/Accenture-Digital-Innovation-Survey-2014.pdf](http://www.accenture.com/us-en/_acnmedia/Accenture/Conversion-Assets/LandingPage/Documents/3/Accenture-Digital-Innovation-Survey-2014.pdf)), these investments are supporting agents and

shifted from a purely back office orientation (serving the insurers' own needs) towards a strong support for the front office operations at the broker's desk (serving the brokers' needs). The ongoing digitalisation clearly pushes more towards direct insurance sales since the customer's needs become more the focal point of attention for continued investments into innovation through digitalisation. Sufficient e-commerce and online sales adoption by consumers will complement the growth of these new distribution models that are borderless and without the need of a broker that has a blocking position. In many member states the broker is still the main contact point for new consumers (and hence potential new revenues). Reducing this dependence through digitalisation opens up new possible contact points for new customers, even from other member states.

An extensive use of data analytics to generate customised contracts by crossing the data declared by the consumer with the public databases would allow both parties to gain in time and possible in service. Faster processes for that matter could contribute to a more appropriate framework for cross-border sales. However, this coupling of internal and external databases to cross consumer and provider data is not yet possible or at least would be very challenging to put into place, especially in an international context, for several reasons. In the first place, such reliable, external databases do not really exist. Secondly the creation of a "mineable" internal database from unstructured and structured customer data would require significant integration efforts (which many providers are reluctant to take). However the interviews and focus groups pointed out that these projects are being set up in the large, international insurance groups to build the required capabilities to allow big data analytics and true business intelligence.

Overall, with the significant amount of innovation that is being produced outside the boundaries of the insurance firms and by more agile, high-technology start-ups (e.g. InsurTech), more and more established insurance companies are disposed to cooperate with these new players. This requires the insurance companies to actively engage with the 'ecosystem' of their external partners. The use of smart wearable devices (e.g. watches or smartphones) and the surge in health-monitoring applications pave the way towards a more accurate follow up of the consumer and his contract. This trend will also have its implications for the pre-sales phase of future contracts, as the data that was collected by the applications could be willingly shared to speed up the quotation process and contract emission. But, as analysed previously, these mobile channels are still growing and websites are clearly more important now for the administration of consumers' contract and claims.

The call centre and/or the agent/broker are still the most important channels for the post-sales activities related to crisis moments and situations of dire need (e.g. accidents and highly complex surgery/treatment).

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brokers, where the insurers expect it to foster cross-selling and scaling up sales. The objective to actively enter new markets with the help of digitalisation remains rather the exception than the rule. Although the digitalisation contributes to targeting the new markets, their active engagement is still very limited. For example, according to KPMG in its "A new world of opportunity: the insurance innovation imperative" (2015) ([www.kpmg.com/CN/en/IssuesAndInsights/ArticlesPublications/Documents/A-New-World-of-Opportunity-insurance-innovation-O-201509.pdf](http://www.kpmg.com/CN/en/IssuesAndInsights/ArticlesPublications/Documents/A-New-World-of-Opportunity-insurance-innovation-O-201509.pdf)), 54% of the insurance companies contemplate entering new markets but only 8% has as a clearly aligned innovation strategy for entering the new markets.

## **Post-sales**

An increasing number of insurance companies allow customers to have dedicated access to their administrative customer profiles and contracts that are registered with the insurance company. This could potentially reduce the importance of the broker in the management of the relationship with the customers after the signature of the contract, especially as customers are increasingly empowered by digital solutions to make changes to their administrative profile whenever they deem it necessary, or the insurance company contacts the customer directly to update his data.<sup>355</sup> Because of the direct access to the registered customer, more targeted interactions could be fostered, allowing better follow-up with the customer by insurers, as insurers might stimulate the consumer to send an email directly to them instead of the broker.

From a cross-border perspective, possible language issues could also be handled by using email communication or other social media to engage with the known customer base. Well-trained personnel at call centres are needed to be available for a consumer in need.

Similarly to the pre-sale phase, the data provided by the customer cannot always be used because of the data protection regulations and the unwillingness of the consumer to share their personal health data with the insurer. Theoretically the unstructured data from customers could be linked with the current service offers, to generate new leads and opportunities that could interest the consumer. But this targeted, personalised service and customer engagement are currently not always possible. At the same time the insurers are (generally speaking) not yet ready to fully reap the benefits from customer data integration and true Big Data analytics.

### **7.2.2 (Changes in) consumers' behaviour**

#### **Pre-sales**

Consumers are more and more demanding when considering whether to buy a new insurance contract, whether from a digital channel or from a more traditional distribution channel. The increasing internet penetration and use of mobile data across the European Union encourages savvy consumers to inquire about the health contracts that are available and to explore various online forums and blogs containing postings by consumers who actually have experience with these types of contracts. Digitalisation is a clear advantage for the pre-sales activities of health insurance contracts as it allows consumers to fill in online forms without the need to go see an insurance agent or an independent advisor (i.e. broker). Whilst in the past contract information had to be accessed by using a personal channel (e.g. agent or independent broker), now consumers can explore many different sources of information on those contracts as well as their potential providers. It is definitely easier for the consumer to inquire about possible foreign providers of PHI contracts.

In addition, consumers have a better view of the available products, their advantages and a first indication of their price levels. The websites are available when the consumer desires to invest time in looking up more information. Consumers indeed benefit from the 24/7 approach of digital channels and can search for information and

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<sup>355</sup> Because the different web portals also have dedicated 'self-service' areas, customers can take care of their own administration from a distance. This is a clear advantage for both the consumer and the insurers, as the need for an agent or broker is eliminated. The physical barriers for cross-border trade have therefore been significantly reduced.

learn about other consumers' experiences whenever is convenient. This addresses one of the main barriers for most consumers: the fixed available hours of agents/brokers, which are not aligned to the working schedule of most consumers. Convenience and ease of use are key in the adoption of digitalisation by consumers and overcome geographical and other barriers to cross-border trade.

A hurdle for PHI contracts is the need for basic information regarding the contract itself. Because health services are of vital importance to consumers, clear and concise information regarding the coverage and procedures is expected before they will consider buying the contract. The extensive use of websites, especially selectively created product-centred websites, has lowered the information barriers for consumers in a cross-border context. The overall growth of blogs, specialist websites, forums and even social media supports the consumer in meeting his initial information needs. However the websites do not always show clear prices after the consumer has provided his data. This is explained by the need to verify all the information and categorise the consumer on the basis of a risk profile.

In the pre-sales phase, consumers are empowered decision-makers through digitalisation. The amount of information they can access before selecting a product fosters well-informed consumers. This trend has been going on for several years and consumers want to be able to ask almost on anything during the pre-sale phase.

The advantages for consumers in the sales phase are still mitigated by the need to sign physical documents and meet an expert to verify their health situation. The personal character of all these types of data does not always complement well with the more open access to contract information. Trust remains a critical element because the consumers' health is involved.

Consumer empowerment through digitalisation allows them to be more selective on the time and place where they manage their contract and their claims. This is a clear benefit in the post-sales phase.

### **7.2.3 Remaining barriers**

#### **Pre-sales**

Due to the very personal character of health services and the overall importance of the independent broker in the acquisition and management of new customers, many consumers still appreciate a personal channel that answers their questions.<sup>356</sup> Digitalisation certainly supports getting in touch, but the trust-building process when acquiring new customers is still an important human interaction. Therefore, some form of cultural and geographical barriers persists for the cross-border expansion of PHI contracts. In general, the digitalisation of many services in the economy and the growth of positive (and negative) experiences with these channels will contribute to its modest development.

There are almost no persistent cross-border barriers to the collection and use of customer-declared data, because the insurers want to provide clear, informative websites whilst the consumer wants to read these websites. Language barriers are still present, but these can be managed quite easily through the involvement of professional translators.

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<sup>356</sup> See Wilmar et al. (2011), op. cit., p. 143.

The actual willingness of a consumer to look for a cross-border health insurance policy is a more persistent barrier in itself (i.e. trust). Most member states have a national health insurance scheme in place, and the majority of the consumers are not actively seeking a PHI contract. The idea to consider foreign insurance companies is also not among the first thoughts of consumers and often they are not knowledgeable about foreign health systems. These barriers are hard to overcome but technology is expected to keep the pressure on those barriers because the new technological solutions and innovations will facilitate better information searches and easier contact with health experts (e.g. access to an online agenda of a health-service provider working with an insurer, which makes it easy to book an appointment). Those who do consider taking a cross-border health insurance, usually have a specific situation that pushes them to consider health insurance from abroad (e.g. expatriates and possibly cross-border workers). Or they have had (heard of) good experiences with the foreign health system and possible a foreign PHI contract provider.

## **Sales**

Digitalisation has a lot to offer to complete the buying experience of consumers. Administrative hurdles remain, however, because in many countries there is still need for a signature on a physical document (as opposed to a digital signature where the consumer can print his insurance policy and proceed to payment). There are also significant differences between member states with regard to the adoption of direct insurance. In addition, consumers are also not actively looking to buy health insurance abroad due to the presence of many national alternatives.

Digitalisation cannot take care of the fiscal implications linked to PHI contracts in different member states. There the personal advice from a broker clearly offers value to the consumer, unless the direct sales channel takes into account the country specificities. A report<sup>357</sup> from 2009 found, on the one hand, that tax incentives can be aimed at individual consumers (e.g. in Germany, Ireland, Luxembourg and Romania), groups of consumers (e.g. in Belgium, Denmark, Finland, Latvia, Spain and Sweden) or both (in Austria, Bulgaria, Greece, Italy, Portugal and Slovenia). On the other hand, certain member states do not offer any fiscal incentives to purchase PHI contracts (e.g. the Czech Republic, Estonia, Norway, Poland and the UK). The fiscal measures can also be oriented towards creating no particular incentive for PHI contracts because the tax relief applies to all forms of insurance premiums (as in e.g. Germany and Romania). Finally there are also tax disincentives in certain member states (e.g. in Estonia, Lithuania, Poland and the UK).

The health insurers are sometimes hesitant to enter new markets as knowledge of the market structure is vital for any non-life insurance business. The insurance companies need to build up this deep market knowledge and possibly build a brand name because they are unknown on the foreign market. A known brand name is important for inspiring consumers' trust and confidence, especially when their personal health is concerned.

## **Post-sales**

The complete digitalisation of the health claims management process via portals remains hypothetical, given that fraud in health claims is still quite significant, with

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<sup>357</sup> See Thomson & Mossialos (2009), op. cit.

possible adverse impacts on consumers.<sup>358</sup> For example, according to the President of EHFCN (European Healthcare Fraud and Corruption Network):

Healthcare fraud, waste and corruption are serious problems with a staggering price tag estimated between €30 billion and €100 billion annually in the European Union alone. Every euro lost to fraud, waste and corruption means someone, somewhere is not getting the treatment they need, they are ill for longer, and in some cases they simply die unnecessarily. Make no mistake – healthcare fraud kills.<sup>359</sup>

In addition and of particular pertinence to the health insurance sector, the insurer will have to foresee teams of specialists dedicated to handling distraught customers in need of reassurance. To meet such needs, digitalisation does not offer any new solutions. Self-servicing is possible and desirable for the administrative matters related to the contract but support will always be needed in high-stress situations being experienced by the consumer abroad.<sup>360</sup> Because this type of insurance concerns the health of the consumer, his life could be changed forever, a more personal channel to talk to and to be reassured, remains very valuable and an integral part of the customer engagement. However, new technological solutions such as web conferencing and social media could definitely satisfy fully (or at least partly) these customers' need to connect and share their story. Here again the importance of trust plays a major role and this trust must be conveyed, possibly with digital solutions but certainly not exclusively.

The nature of health insurance makes it very challenging to fully digitalise the entire sales experience, including post-sale. Many follow-up and administrative exchanges could be digitalised, but often a more personal approach is believed to be more beneficial to follow up the consumer who received specialised care.

In addition, the differences in applicable rates for medical services and doctors differ between member states. This can pose an issue during the claims management process as the foreign PHI provider might not know all the pricing practices.

The collection and updating of consumers' personal health data remain difficult activities. In many member states, there is the professional and medical obligation to respect the confidentiality of doctors' and patient data. The consumer must therefore willingly disclose his personal health-related information, which can be viewed as an intrusion to one's right to privacy. Therefore the automated updating and collection of medical data, following claims for example, remain debatable issues in a cross-border context.

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<sup>358</sup> Ecorys (2013), "Study on Corruption in the Healthcare Sector" (2013), report commissioned by the European Commission, Directorate-General Home Affairs, October ([www.ehfcn.org/images/EHFCN/Documents/EHFCN\\_ECORYS\\_20131219\\_study\\_on\\_corruption\\_in\\_the\\_healthcare\\_sector\\_en.pdf](http://www.ehfcn.org/images/EHFCN/Documents/EHFCN_ECORYS_20131219_study_on_corruption_in_the_healthcare_sector_en.pdf) ).

<sup>359</sup> For additional information, see: [www.aim-mutual.org/fileadmin/Communication/press\\_releases/2014/Press\\_Release\\_MoU\\_AIM\\_-\\_EHFCN.pdf](http://www.aim-mutual.org/fileadmin/Communication/press_releases/2014/Press_Release_MoU_AIM_-_EHFCN.pdf).

<sup>360</sup> Some companies are trying to offer full post-sale coverage with regard to the contract and claims management of a health insurance contract. Again, this is a time saver for the consumer who does not have to visit a branch in person, but due to the personal character of health insurance, there is still a need for strong support from another human actor in case there are serious injuries. The call centre or the agent/broker retains an important role for the post-sales phase of health insurance contracts.

#### **7.2.4 Conclusion**

The overall investments made in the use of websites to digitalise the front end of providing PHI have improved the availability of PHI contracts for consumers. The digitalisation of the business processes associated with the PHI service provision further supports the reduction of costs and time savings. In the first place these advantages and developments benefit the independent brokers and the insurers themselves but these benefits are increasingly being transferred to the consumers. However, PHI contracts require significant customer engagement by personal and digital channels, since trust is needed. Therefore the cross-border PHI contracts still face significant barriers to distribution and customer interest.

The collection and use of customer data are reported and recognised to offer many new possibilities to provide insurance services to consumers. In the context of PHI contracts, however, the data deal with private information and most consumers are not willing to share this data with insurance providers (or any other entity). Customer habits and privacy regulations inhibit partly the potential of digitalisation to lift geographical barriers to cross-border trade in PHI contracts. Consumers must come to understand that sharing their data with the insurer could potentially bring: better follow-up, more interaction, more possibilities for allowing prevention and better support services for a lower price. The customer should gradually consider his data as a resource that has a cost and if this resource is made available freely, then the insurers avoid these costs, justifying a lower premium for that consumer.

### **7.3 Scenarios for cross-border activity**

#### **7.3.1 Scenario 1: Business as usual**

##### **Description**

The cross-border sale of health insurance, as with any other health issues within the EU, remains very fragmented, constrained by national preferences and different health systems. Some countries offer public health insurance that is compulsory for the consumer. Depending on the country, there is a mix of alternative PHI schemes that complement the public schemes. In some countries public health insurance is all-encompassing and covers almost any type of expense or care. In general PHI schemes are not being viewed or categorised as a commodity service for the consumer, but rather an exclusive or value-adding service.

The main source of growth for cross-border sales of health insurance will be niche customer segments such as expatriates, cross-border workers who could be interested in a PHI or (medical) tourism.

For cross-border health insurance, specific InsurTech companies could provide the required expertise to consolidate the different health systems data and their functioning. This could facilitate access to better knowledge on the differences between countries and cooperate with the start-up to develop market entry. Besides the InsurTech companies, GAFA could also be a partner to follow up the consumer and collect/analyse his health data to have a more updated view on his health. This would of course require solving the confidentiality and privacy concerns related to these practices. The wearable device and integration of different Health applications offer an opportunity to have a more fine-grained view on health data from an individual.

## **Opportunities**

In this scenario it is not expected that there will be significant growth of cross-border sales of health insurance. Therefore the opportunity itself remains largely unexplored and it is expected that prices will not be undergoing a rebalance. Digitalisation will help cross-border developments by pointing out the differences in national laws and regulations that must be dealt with in order to provide the service itself. As such digitalisation has great potential to foster transparency and comparison of the different details in the legal frameworks across member states. This could in itself be used as input to prepare more streamlined proposals for a pan-European coordination framework for customer data, its sharing, and the modalities of different (health) insurance contracts. Because of the significant differences in national legislation, the cost of fully adapting cross-border operations is perceived to be high, coupled with the need to build the brand in the new market.

In this scenario, the business opportunities will remain rather poor due to the lack of a true growth of cross-border health insurance through digitalisation. As such, competition within a Member State is not expected to be disrupted significantly due to a lack of entrants.

It could be a possibility that the tremendous uptake of wearable devices and health applications for mobile/smartphones actually triggers the interest of health insurers to consider working more with these providers. In that way, they would also develop new capabilities to deal with Big Data analytics from personal health devices.

## **Threats**

In this scenario, the changes in risks are limited since no real evolution is expected. The privacy concerns related to personal health data remain major barriers to a true cross-border development of health insurance. Consumer rights associations have already expressed their concerns regarding the use of such private data and the (possible) "prerequisite" to use wearable devices to obtain a new health insurance policy in the first place. Therefore there is a risk of exclusion of consumers who are either refusing to make available private data through other means than their own declarations. On the other hand, more data are always being added and required by new regulations, for example Directive 2009/138/EC<sup>361</sup> (Solvency II), is pushing insurance companies to actively do something with that data. Better data availability can also result in higher premiums for certain consumers compared to the situation before the availability of such data. This means that digitalisation can have social policy implications.

The main problem (i.e. perceived issue) from the perspective of health insurance companies is the fragmentation from the different national markets. Coping with these legal differences requires an investment in time and resources to devise products that can be sold on the market of another Member State. Even if the insurance companies manage to create a sellable product (from a legal point of view), the consumers must be made aware of its availability. This would require building a new brand or reinforcing an existing brand through targeted marketing campaigns. Once this phase has also been considered, health insurance requires detailed knowledge of the local health market to facilitate the claims management processes and other post-sales administrative activities. This knowledge must also be built up, requiring again new

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<sup>361</sup> OJ L335/1 of 17.12.2009

(<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32009L0138&from=EN>).

funds and time (and hence the preferred option to buy another entity in the Member State of expansion).

### **Conditions**

Online or from-a-distance customer identification could be beneficial for cross-border insurance services in general and hence also for health insurance. Big Data is partly a solution to these aspects but the private nature of the data requires sufficient levels of protection and explicit consumer consent. The fully digital process of pre-sales, sales or post-sales will benefit health insurance contracts, but there is still a need for a personal channel, especially for the post-sales phase. Some insurers will use Big Data and customer-declared information to speed up the pre-sales phase while reducing the time needed for the actual sales. The pre-sales and sales itself can be fully digitalised, provided that identification and signature of the contract would be possible online or from a distance (as indicated above).

Most insurers want to optimise their processes and favour a straight-through processing (STO) of the contract's lifecycle. These cost and time savings can be passed on to the consumers through digitalisation. The health systems and their different practices across the EU could become less opaque with the use of a central identification database and big data analytics from customer health data. However, it is generally accepted that the sensitive nature of these data will prove difficult to solve completely in a five-year time frame. The attitude of the consumers must also allow a voluntary sharing of private data and also for the purpose of buying cross-border health insurance. Storage of these personal data is a critical element (which territory is allowed to store foreign customer private data, for how long will this sensitive data be available, to whom and for which purposes?). Because the sensitive data of other nationals at stake, different member states are not expected to agree rapidly on a common coordination agreement around health data for commercial purposes.

Digitalisation for health (insurance) services could overcome structural barriers between member states, but the critical points remain the need for a common framework for private data coordination/consultation (i.e. open data governance), a single e-identification/e-signature solution, coupled with the current lack of consumer interest in this type of insurance from a foreign company.

Interactions with customers in the post-sales phase through digitalisation can reduce the administrative burden. However certain claims, especially related to health conditions, will need to be reviewed by medical experts. This review is still mostly done by using a paper trail and digitalisation could possibly include broader 'e-Health' systems.<sup>362</sup> However, this evolution is not expected to happen in five years' time, but the cross-border sale of health insurance should benefit from a more streamlined data exchange between the different national health systems. That would facilitate a more efficient cross-border claims management process. Often the issue with non-life insurances is the need for deep market knowledge on applicable prices, suppliers and national regulations. With an e-Health system on a pan-European scale, the checks and information exchanges that are required for effective/efficient claims management could be made easier (i.e. more accessible health data and experts who check the declarations to reduce fraud). The entire follow-up of the customer (i.e. health patient) could therefore be improved, benefitting the care the customer receives but also the claims management. Cross-border health insurance could therefore become

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<sup>362</sup> COM(2012)0736 final of 6.12.2012, Health Action Plan 2012-2020 - Innovative healthcare for the 21st century (<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52012DC0736&from=EN>).

less cumbersome and that could attract insurance providers. But again this evolution is not expected to materialise in the next five years.

The interoperability between member states is essential for the success of the integrated, single market for PHI. Digitalisation could definitely contribute to a more integrated market by facilitating a common identification of consumers and supporting the use of time-stamped, digital signatures. Interoperability between the service providers should focus on database integration and the provision of a commonly recognised service offering customer data (with clear consent and revoking procedures). The digital world is not safe from malicious persons and those with a criminal intent. Therefore an important pillar (besides identification of the consumers) of a common framework is above all, information security and technical protection of data. Digitalisation efforts will be thwarted by security breaches and leaking of personal data. Trust in digitalisation is vital; consumers must believe that the digital solutions are at least as safe as the traditional procedures, even safer. This must be guaranteed by advanced technical solutions because failures will be costly to the reputation of the provider and the insurance company, but also to the overall perception of digital services offers to consumers. New technology needs to be adopted by a large community of users (consumers in this case) to gain traction and instigate more providers to invest in its applications. Organised crime often targets technology used by a large community of users, to exploit its weaknesses. Therefore information security policies and encryption of data will need to be of high standard to protect consumers and providers.

At present there is limited willingness of consumers to buy health insurance abroad. The reasons for this are various, ranging from being under-informed to simply not trusting the foreign provider. As mentioned before, many member states have compulsory public health insurance paid for through social security contributions. Therefore many consumers do not think of the possibility to contract a complementary PHI from a company in another Member State. To this must be added the generally slow take-up of e-commerce, reflecting the habits of consumers. There are significant differences across member states, which inhibit the creation of synergies for developing cross-border health insurance through digitalisation.

The suppliers, i.e. insurance companies, are aware of the possibility to do cross-border business with consumers in other member states. Often the regulatory differences are cited as barriers, coupled with the need to know the market. Therefore insurance companies prefer to use the freedom of establishment to grow in another Member State. Companies are bought entirely and from there, new operations are centralised and services delivered. The freedom to provide services, by using an EU passport for the insurance services, is not yet seen as the most desirable approach to grow cross-border.

Based on the working groups and interviews, the need to know the local language in order to provide services was not deemed to be a significant barrier. Language skills can be bought and call centres can be created to provide the required language skills. In health insurance it is expected to be more relevant than with other non-life insurance, due to the personal and private character of the information that is being exchanged between the consumers and the providers. Health information is also more complicated to translate as the vocabulary is usually not among the most used set of words and concepts. Medical experts also communicate by using an expert language that is understood between peers, in essence not adding any new language barriers.

## **Probability**

The probability of this scenario materialising is high because the digitalisation of PHI contracts cannot (yet) bring down the most important barriers to cross-border trade in health services. These barriers are related to the current consumer preferences not to share their (health) data and the lack of trust in foreign PHI providers. Additionally, consumers prefer to receive treatment in their country of residence, as close as possible to their home and in their mother tongue.<sup>363</sup> On the other hand, the strong presence of brokers in the distribution process requires insurers to convince these brokers to acquire customers for their PHI contracts. Here the established commercial contacts and incentives of the brokers with the resident PHI providers could act as a competition barrier. On the other hand, the Directive on Cross-Border Health (Directive 2011/24/EU)<sup>364</sup> takes care of the legal framework within the European Union, a priori reducing the need for cross-border PHI contracts per se. Additionally, the growing ethnic diversity in the European Union will not relax the need for language skills during the provision of cross-border services, to foster the needed trust from the consumer.

### **7.3.2 Scenario 2: Expansion in specific pockets**

#### **Description**

In this scenario, health insurers expand slowly into other member states' markets, located in specific geographical areas or targeting niche customers in other member states (expatriates, cross-border workers or consumers living in border regions). This means that they are familiar with the possibilities to deal with the divergences in national legislation and regulations of health insurance contracts. They have identified a clear need and target customer who is active in the other Member State, building their internal capabilities to service these customers in the different member states by using digital service solutions. There has been cross-border cooperation between healthcare providers in the border regions of several member states, but the instances are generally difficult, although advantageous to the consumers.<sup>365</sup> These positive experiences could also foster interest in PHI contracts on the part of those consumers in that border region.

There are no significant differences with regard to age and cross-border health insurance contracts. As mentioned before, PHI contracts tend to be sold to consumers with higher disposable income.

The established health insurance providers cooperate with other health providers from abroad, private companies or InsurTech to handle the divergences in national legislation and regulations while providing health services. These are coupled with the own internal investments to create new, digital distribution and information channels to the new markets in other member states.

#### **Opportunities**

Because there is increased competition and a better access to data, an overall reduction in prices can be expected. Digitalisation will permit a better comparison of

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<sup>363</sup> Footman et al. (2014), op. cit.

<sup>364</sup> OJ L 88/45 of 4.4.2011

(<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32011L0024&from=EN>).

<sup>365</sup> Footman et al. (2014), op. cit.

health contracts (pre-sales) and common e-signature/e-Identification will benefit opening new contracts.

Because of the slow growth of cross-border health insurance contracts, due to the selective expansion (pockets), competition will not be affected seriously. However new entrants into the market are always being watched, creating pressures on established actors to reinforce their digital presence and offers to compete with the new entrant.

### **Threats**

Consumers in those pocket markets will have a greater variety of health insurance contracts to choose from. Their data could be used without their consent and processed in another Member State. Due to some legislative divergences, issues with claims and minimum guarantees could emerge.

The health insurance company needs to prepare very well before entering the market, to be sure that the contract is sellable in that Member State's market and that the minimum requirements from the new market are met. There is hence a financial risk for the health insurer, which needs to be analysed up front.

### **Conditions**

The probability of a business as usual scenario could be reduced if the public insurance schemes in member states become less attractive due to rising healthcare costs and lower fiscal revenues due to economic turbulences. These could create a downgrading of public insurance coverage and the overall quality of public care to consumers. This situation could induce more consumers to consider supplementary or complementary PHI contracts. If the member states would introduce more opt-out clauses to the public health insurance scheme (e.g. as has been done in the Netherlands and in Germany), interest in substitutive PHI contracts could also be stimulated. In those cases, digitalisation of the PHI contracts and their distribution might attract cross-border attention from foreign providers that offer interesting packages (i.e. health services that are cheaper, more available or of better quality than the ones offered in the country of residence of the consumer) or attract a growing pool of potential cross-border customers. However, this evolution remains unlikely as national health systems adapt very slowly, and competition in healthcare systems is heavily debated without clear conclusions.<sup>366</sup>

The probability of the first scenario could also be reduced if the acceptance of digital solutions for meeting with health professionals and insurance providers increases quickly over the coming five years. But the nature of PHI contracts, in which the extremely personal context requires complete trust, does not make significant cross-border developments in PHI contract distribution a very likely evolution.

Another way to reduce the probability of the scenario would be foster the use of digital solutions for healthcare professionals in general. If the healthcare professionals themselves leverage the technology to reinforce the pre-sales phases (e.g. actively starting to promote and use video conferencing with customers) and develop good foreign language skills in their profession, then their services could be perceived as more trustworthy and easily accessible from another Member State. This combination could lower the perceived barrier of the cross-border consumers that they cannot be

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<sup>366</sup> See "Investigating policy options regarding competition among providers of health care services in EU Member States", op. cit.

served in their own language and would need much time to physically visit healthcare professionals in another Member State.

Investment in the development of fully digital solutions requires the checking of data that are provided by the customer. This could be achieved by using big data analytics algorithms to speed up the pre-screening of the customer. This requires attention to the storage of data from consumers in other member states, which needs to be approved.

Health insurer must have a good understanding of the differences between member states' health systems. Cooperation with InsurTech and other providers of data could provide part of that knowledge while the insurance company is becoming active in the new market. A recognised common identification and digital signature are good initiatives to support their development of pockets, in combination with paperless contract processes. Regarding claims management, InsurTech or other private companies are needed to supply this specific knowledge and to support the health insurance company in its organisational learning efforts.

In its expansion to specific pockets in other member states, a health insurance company will certainly benefit from a common identifier system, but the company could develop its own standards and structures. This could be costly but by focusing on niche markets, digitalisation of the distribution channels could help reduce these costs. By developing its own standards, it could gain a competitive advantage, but more markets will be needed to realise the economies of scale and possible economies of scope. These standards would of course require state-of-the-art information security management to avoid reputational damage.

When health insurers decide to move forward by targeting pockets in other member states, they will need to invest a lot to meet the technical, marketing and legal requirements. The insurance company could try to limit these by focusing on a neighbouring market and expand in a later stage. Furthermore there are cases where the health providers themselves take initiatives for cross-border cooperation and deliver cross-border services. The PHI providers could decide to be part of these initiatives to better know the other markets and learn to deal with possible differences in legislation and health systems. This knowledge could also be used to devise the required PHI products that offer the best potential for those niche, cross-border markets where consumers could have a clearer need to be met (compared to consumers living more in the centre of a Member State and further away from borders). Therefore insurers are generally favourably disposed to be involved in (or observe) this type of cross-border cooperation.<sup>367</sup> However there have been reports on the possible failures and challenges of this health cooperation in the border regions. Past research<sup>368</sup> enumerated the prerequisites to initiating and maintaining cross-border collaboration in healthcare.

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<sup>367</sup> Footman et al. (2014), op. cit.

<sup>368</sup> I. Glinos (2013), "Hospitals and borders: Seven case studies on cross-border collaboration", *EUROHEALTH*, Vol. 19, No. 4, p. 42 ([www.lse.ac.uk/LSEHealthAndSocialCare/pdf/eurohealth/EuroHealth19-4-Web-121213.pdf](http://www.lse.ac.uk/LSEHealthAndSocialCare/pdf/eurohealth/EuroHealth19-4-Web-121213.pdf)).

Table 7.1 Prerequisites for cross-border health cooperation

|                                                                |                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>An objective, local need for cross-border collaboration</b> | This activates and motivates partners and justifies collaboration to external actors. The need usually stems from patients who require access to care locally, or in some case, that of border-region hospitals seeking health professionals to fill vacancies. If the need changes or disappears, the rationale for collaboration may do so too. |
| <b>Committed individuals</b>                                   | Collaboration is unlikely to take off without the involvement of 'militants' who believe in the cause, push collaboration forward, invest time/effort and take risks. If frontrunners leave, collaboration is less likely to continue.                                                                                                            |
| <b>Shared interests among partners</b>                         | While partners inevitably have different and varied interests, these must not be conflicting. If interests clash, collaboration can quickly transform into competition. Where interests change, partners re-assess their involvement in collaboration.                                                                                            |
| <b>Support from external actors</b>                            | This can be passive, meaning that actors do not obstruct collaboration, or active. Active support usually stems from three sources: i) the community and stakeholders affected by cross-border collaboration (such as local doctors), ii) public authorities that are not partners in the collaboration and iii) funding institutions.            |
| <b>A suitable governance structure</b>                         | This should be as simple as possible within the particularities of the border region and the purpose of the collaboration. Whether partners choose a relational, contractual or ownership-based approach to governance, it has to suit the institutions, rules and interests of the health systems involved.                                      |

Source: Footman et al. (2014), op. cit.

Important lessons from these cases on cross-border cooperation between healthcare providers are useful from the point of view of potential cross-border PHI contract providers. It was found that domestic health systems and solutions (hence also national digital solutions) inhibit this cooperation. Domestic incentives and constraints from the national health system are prevalent (e.g. the need to ask the permission of national authorities for derogations that are needed to bridge differences between the systems). This means that important actors in the cross-border healthcare system do not share positive experiences from providing cross-border services, which implies that consumers could also have had less positive experiences. In combination, these experience will reinforce the perceived problems with cross-border health services (e.g. language, complexity, lower quality, etc.).<sup>369</sup>

### Probability

The probability of this scenario materialising is medium because the balance between opportunities and risks for cross-border PHI developments (through digitalisation) are too mitigated. The bottom-line problem with PHI remains the lack of general consumer interest, aside from certain niches that could flourish (e.g. inhabitants from border regions and expatriates). When consumers do get involved in cross-border health services, their experiences are not always positive due to the difficulties of cooperation between the health service providers themselves. These difficulties originate from the differences in national systems and the established (digital) solutions. However there could be a positive trend in the planned medical care visits abroad by consumers, but this phenomenon remains the exception to the rule.

<sup>369</sup> Glinos (2013), op. cit.

The probability of this scenario could be improved by the dissemination of very successful examples of cross-border customer care. This could stimulate the larger market to be less cautious vis-à-vis health services from abroad (i.e. the perception that care is of lower quality, too far away or too complex). If consumers get a PHI contract through digital channels, which are also coupled to digital solutions that actually take care of all the administrative steps in the cross-border care process with the providers, then this would be a powerful argument for selling PHI contracts cross-border.

In general more demand for PHI contracts will expand the cross-border interest for health services. This increase in demand will likely stem from insufficient coverage from the public contract or the absence of quality care in the Member State of residence. If these conditions are missing, digitalisation must focus on coupling insurers with the healthcare providers to ensure smooth customer-oriented processes that are able to service in the language of preference of the consumer. By focusing on the specific niches such as border regions, the required set of language skills could be limited and more easily manageable.

However, digital solutions could also be used to connect the consumers' registered general practitioner with the care provided abroad (e.g. web conferencing where the GP participates in the preparations and follow-up of the treatments abroad). This could support the need for trust and reduce the risk that the quality of care abroad is perceived by the consumer as lower than in the home country. Monitoring through digital solutions is another development that could influence positively the perceived barriers to cross-border healthcare and hence the initial need for a PHI contract that covers the intervention and the required travelling. Therefore, telemedicine<sup>370</sup> is a potentially very rewarding and complementary technological development to digital distribution channels. Coupled with the more easily accessible and analysable data from customers, it could foster cross-border growth of healthcare and possibly the needed PHI contracts to deal with the required costs (of which some are not covered by the public health scheme in the country of residence).

### **7.3.3 Scenario 3: Integrated EU market**

#### **Description**

In the scenario of an integrated EU market for insurance services, any type of consumer could contract a PHI from different providers across member states. Due to the characteristics of the PHI contract, the main interested consumer will remain wealthier ones, who are used to being mobile and who are interested in receiving the best possible care anywhere in the European Union. The providers in this integrated EU market would be health insurers, InsurTech companies and the health providers in the different member states.

#### **Opportunities**

The efforts in the European Union towards eHealth<sup>371</sup> and related e-identification or e-signatures of consumers will help reduce the geographical and administrative barriers

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<sup>370</sup> World Health Organization (2010), "Telemedicine: opportunities and developments in Member States: Report on the second global survey on eHealth", *Global Observatory for eHealth Series* – Vol. 2 ([http://apps.who.int/iris/bitstream/10665/44497/1/9789241564144\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/44497/1/9789241564144_eng.pdf)).

<sup>371</sup> COM(2012)0736 final of 6.12.2012, Health Action Plan 2012-2020 - Innovative healthcare for the 21st century (<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52012DC0736&from=EN>).

to cross-border PHI contracts and the actual provision of health services with a smoother and more effective cross-border process. The market potential and expected growth is high if this integrated eHealth data and associated digital processes for cross-border care will be implemented. However the above-mentioned legal and technological barriers in health (but also in providing insurance) remain important and can only be reduced with better technological interoperability (e.g. unique digital process for consumers to receive cross-border health that is covered by their PHI).<sup>372</sup>

It can be expected that the increased competition in cross-border healthcare will lead to lower prices in PHI contracts. But the effects on the quality of care and the overall benefits for consumers from competition in the healthcare market remain ambiguous.<sup>373</sup> If digitalisation and a single market exist for PHI contracts, then more providers could also decide to launch themselves in this activity. Possibly buying InsurTech companies that offer cross-border technological solutions for the service provision itself. The effects on the financial stability from cross-border sales in PHI contracts remain unclear, but probably the effects on member states' health budget would become more visible when more consumers would be contracting and benefitting from PHI coverage.

### **Threats**

No specific threat has been identified should this scenario materialise.

### **Conditions**

The data of the (patient) consumer could be collected through an integrated health system (eHealth<sup>374</sup> and even mHealth<sup>375</sup>) and/or by consumers' wearable device(s). Digitalisation needs to tackle the needed information flows between member states to offer good care and facilitate the information search of PHI contracts that cover the required care in the other Member State. It could also support the digital sale of the PHI contract by facilitating the automatic filling in of the required customer and health information, requiring the consumer to simply review and validate the data. Post-sales activities could be tremendously improved by digitalised solutions around telemedicine where its follow-up could provide the insurers with even more health data to better price the risk. This newly integrated acquisition of customer data would allow the optimisation of the PHI coverage needed and even the formulation of new commercial opportunities. This could tackle an important barrier for the insurers to get access to reliable health data and build knowledge on the different types of treatments that they could cover, where the healthcare quality is better (Member State) and be closer to the consumer to ensure sufficient prevention.

Database integration and interoperability are hence very important in the creation of a true Single Market for health insurances services. Because the health data are private, possible differences in the data protection rules need to be tackled as well. However, the digitalisation could offer solutions to these differences by stimulating transparency

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<sup>372</sup> Ibid.

<sup>373</sup> "Preliminary report on Investigating policy options regarding competition among providers of health care services in EU Member States", op. cit.

<sup>374</sup> COM(2012)0736 final of 6.12.2012, Health Action Plan 2012-2020 - Innovative healthcare for the 21st century (<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52012DC0736&from=EN>).

<sup>375</sup> World Health Organisation (2011), mHealth: New horizons for health through mobile technologies: second global survey on eHealth, *Global Observatory for eHealth Series* – Vol. 3 ([www.who.int/goe/publications/goe\\_mhealth\\_web.pdf?ua=1](http://www.who.int/goe/publications/goe_mhealth_web.pdf?ua=1)).

on the existing differences in the member states, further contributing to the needed governance discussions around private data consent by consumers and their processing for better service provision.

Customer identification through a common database can generally be supported through digitalisation. If this is associated with an online process, customers could have easier access to information and the insurance products. This process should be paperless but this will require further elaboration of the digital acceptance of e-signature solutions (and different types exist between member states). The actual sales of the PHI could be fully digital, where the personal contact will be replaced by a mobile application or a web conferencing system that is easily accessible. This will accelerate the minimum level of personal interaction needed because the PHI deals with the personal health of the consumer. The need for local call centres will remain important as the personal contact (even through digital solutions) remains important for most consumers who receive health services. Specifically the use of telemedicine and health applications could support the need for personal contact but through digital channels to tackle the geographical distances. However, it will not be possible to overcome all structural barriers (e.g. legal differences and established technological solutions).

A better integrated financial market therefore requires interoperability between the member states as a foundational element. The differences in technical standards are also reported to cause issues (e.g. prescription of the medical product names versus the use of the molecule in the prescriptions). Information security of the various solutions is also critical and needs to ensure the trust that consumers put into the digital solutions. Consumers are usually not aware of or interested in the cross-border provision of PHI contracts. The insurers on the other hand are aware of the possibilities to offer cross-border PHI contracts but do not actively engage in its development due to the perceived legal and administrative barriers. Digital solutions that are interoperable between member states could stimulate the insurers to consider investing in a market development strategy for PHI cross-border sales.

### **Probability**

The probability of this scenario materialising is low because the structural barriers (e.g. differences in legislation, only selected groups of consumers need/want to consider this type of insurance service and incompatibilities between established national digital solutions) inhibit a true single market for cross-border health insurance services in the next five years.

The probability of this scenario could be improved by reducing the differences between the public health insurance schemes across member states, but this is more unlikely due to the strong political climate around social security, tax incentives and the national health system itself. To that must be added the need for consumers to view PHI contracts as something positive, to have trust in them (this can be missing in the provision of private health services in different member states) and be able to financially afford private healthcare. In many different member states, the private health infrastructure itself is not well developed or oriented towards welcoming cross-border health consumers. The insurers are also not really motivated and interested in developing cross-border health services.<sup>376</sup>

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<sup>376</sup> Thomson & Mossialos (2009), op. cit.



## **8. Conclusion**

### **Current cross-border activities**

The direct cross-border sales of retail financial services and non-life insurance remain very low. Notwithstanding varying market shares of cross-border sales across the 11 selected countries and the six selected sectors, Luxembourg is the main exception with a vast demand for products issued abroad, mostly purchased by commuters. There is also a high cross-border share in the UK for household loans, mirroring the significant volume of UK real estate purchased by overseas investors.

A diverse range of product types and providers have been involved in cross-border sales. Some are local banks or insurers that essentially focus on border areas, thereby responding to the demand for products by commuters. Some mainstream insurers or banks have built specialised departments dedicated to cross-border sales. On the other hand, there are many banks and insurers that offer their products indirectly to non-residents from their home-country using subsidiaries and branches in the host countries.

Many FinTechs are trying to overcome the existing barriers to offer their products via cross-border sales with software solutions and without local establishments. In fact, a large number of FinTech providers already offer their products cross-border or provide their customers with access to financial services in other countries. These FinTechs are primarily active in the payments instruments, as shown by the business model developed by companies such as PayPal, Klarna and TransferWise. Some cross-border offerings by FinTechs are also available in other banking segments: for instance, Ipagoo and Number26 provide current accounts in several EU countries, whereas Raisin and Savedo offer access to foreign savings accounts, Kreditech and Bondora sell cross-border consumer loans and Estateguru mortgage loans.

Younger and high-income consumers have been perceived to be strong adopters of cross-border payment instruments. Commuters, expatriates and tourists have been identified as relatively exposed groups to cross-border sales of current/savings accounts and housing/consumer loans. However, other specific niches of consumers who are residents in their country of birth and are not particularly mobile have also been involved in cross-border sales to a noticeable extent. For instance, households with thin credit profiles (due to a lack of financial history such as is the case for young households, recent migrants, etc. or simply to a lack of structured credit data collected by credit registers in the country) are more likely to contract foreign consumer loans with providers using innovative scoring techniques based notably on data with international standards (such as social media data).

Demand for cross-border non-life insurance policies is also higher for commuters and expatriates. Furthermore, holiday home-owners with properties located in another country are more likely to ask for cross-border property insurance, whereas frequent travellers and consumers who go abroad for healthcare purposes might be interested in purchasing cross-border private health insurance coverage.

### **Impact of digitalisation on cross-border activities**

*Geographical distance can be overcome for certain products*

Digitalisation is changing the interaction between consumers and providers, and is essential in order to remove some of the barriers to the creation of cross-border

markets. Although the digitalisation of distribution channels has increased significantly in recent years, its level still differs markedly across countries, types of products and phases. On the one hand, online first awareness has imposed itself as a new norm for many countries and products. On the other hand, consumers and providers often adopt hybrid models at later stages, by combining online and offline channels during the research and purchase of products. Digitalisation of the entire distribution chain is common in several countries for payments and current/saving accounts, whereas this objective appears unachievable in the near future for the other products covered by the study.

More specifically, the more complex the financial product is, the more data consumers might need in order to finalise their purchase decision and the more they need help and advice from a physical person to process this data in an appropriate way. When the product, for example, needs to be tailored to someone's personal situation and the documentation needs to be processed, direct advice is much valued. Also, direct advice is often required when a major mishap strikes, such as a fire or car accident.

The need for human contact is especially true for mortgage loans and health insurance, thereby markedly impeding the development of cross-border sales of these products. However, existing and emerging technologies can (and will) help digitalise this interaction (for instance, through multilingual video calls supported by co-browsing, etc.). Furthermore, an increasing number of FinTechs and InsurTechs are developing innovative applications to assist consumers with their financial decisions and handling of claims, notably by providing relevant and customised data. Finally, increasing digital education of consumers and converging digital interfaces across Europe can help providers and consumers get involved in cross-border sales, as the related learning process for consumers who wish to replace their provider with a foreign one might not be a relevant barrier anymore.

#### *Persistent paper-based processes for certain products*

Persistent paper-based processes in different European markets still hinder cross-border businesses. This is especially true for mortgage loans and health insurance where the number of required documents to complete the contract is generally more important and face-to-face interactions with external stakeholders are often preferred. Nevertheless, some specific technological innovations such as those based on blockchain have a strong potential to transform contracts to make them in principle faster, safer and more transparent.

#### *Contribution of big data analytics to the emergence of a single market*

More sophisticated and faster processes for collecting and using data are gradually impacting the different phases of products and could also raise cross-border sales. For instance, one of the main barriers to cross-border activities is handling cross-border claims and legal actions in case of missed payments. If the increasing focus placed by many algorithms on prevention (early warning schemes for credit repayment, and early detection of fraud and enhanced preventive behaviour of consumers for non-life insurance through the use of the data collected via connected, wearable objects) brings an appropriate response, providers and consumers could find solutions before entering into costly and complex (cross-border) litigation.

In parallel, the tremendous increase in unstructured data created by online activity of consumers (especially through social media) might potentially reduce somewhat the importance of structured data for both retail financial services and non-life insurance. Given that the three main characteristics of big data are typically its volume, velocity and variety, its fast growth should offer plenty of opportunities for all the phases and product segments covered by the study: marketing and acquisition, authentication,

credit-scoring, insurance-pricing, prevention schemes, etc. The global presence, global standardisation and easy access to social media data may also ease cross-border offerings. Some FinTech providers of consumer loans are already using this type of data to assess the creditworthiness of non-resident consumers with low access to credit in their own countries.

Finally, in a context of fast digitalisation of the pre-sales phase, the amount of data at the disposal of consumers to shape their purchase decisions is growing at a steady pace. Most of the data can be easily found online, notably through websites that provide comparative evaluations. Consumers also have access to an increasing number of innovative online tools to enhance their ability to handle these vast amounts of data, thereby contributing to more prudent financial and insurance choices.

#### *Remaining barriers*

Switching levels have remained low for most banking and non-life insurance products. This inertia especially mirrors a lack of trust among consumers, for example for switching from existing card schemes to newer online and mobile payment products. Low switching levels make it difficult for new entrants to rapidly acquire significant market shares, especially on a cross-border basis.

For the time being, structured data remains essential for providers. However, databases of credit registers, as well as of past car and housing insurance claims, are still fragmented, and the standards and terminology are somewhat inconsistent across countries. Some processes for cross-border sharing and access are already in place for certain countries but remain limited. Scoring and pricing of non-residents therefore remain difficult. In parallel, consumers have little access to the foreign data that are needed to compare foreign with domestic products. The most common explanations provided for this are that most of the comparative websites are predominantly domestic, most cross-border products are not tailored for the local market and there is a lack of willingness especially on the part of commercial comparative websites to promote products for which they are not remunerated.<sup>377</sup>

Furthermore, the lack of interoperability between providers, consumers and other stakeholders, both within and across countries, still impedes the emergence of a single market. For instance, the complete digitalisation of housing loans (especially the pre-sales and sale phases) and health insurance (especially the sales and post-sales phases) also depends on the degree of digitalisation achieved by actors as diverse as brokers, notaries, land administration, agents, doctors, tax authorities, etc.

Last but not least, insufficient harmonisation in some rules such as data protection, electronic signature, etc. discourages providers from engaging in cross-border sales. The poor consistency over time and across member states in taxation rules might also hinder cross-border sales of housing loans, savings accounts and even property and car insurance.

## **Scenarios**

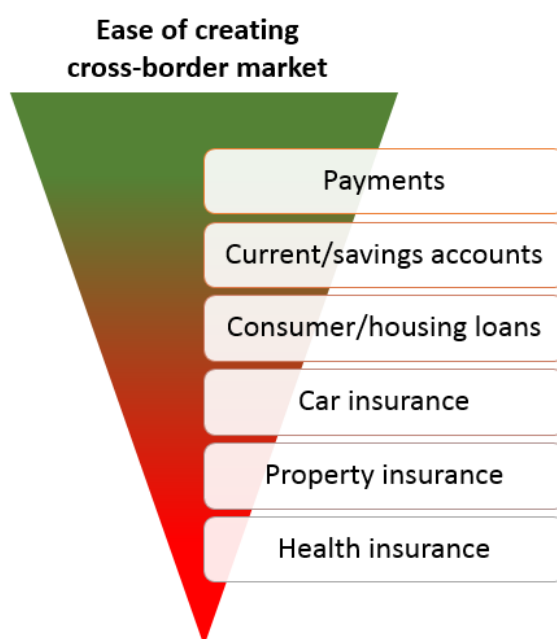
Summarising the findings of scenarios, there is the highest likelihood and potential to create a broad and deep cross-border market for payments and to a lesser extent for

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<sup>377</sup> One can expect the most changes on this front from the FinTechs, with new business models that allow customers both to compare and purchase cross-border products, such as those already available for savings accounts.

current and savings accounts, partly owing to fast technological transformation. Secondly, a broad cross-border market is less likely for consumer and housing loans, car insurance and property insurance. Nevertheless, cross-border sales expansion for certain groups of consumers seems to be feasible in these markets too, but certain conditions need to be fulfilled. Finally, there is a very low probability that cross-border sales will become substantial for health insurance, mainly due to the strong intervention from national governments, and large differences in funding structures and health consumption across countries.

Figure 8.1 Potential for cross-border markets across retail financial segments



Source: Authors' elaborations.

The key conditions for each scenario to materialise are outlined below. It is worth noting that although there are similarities, important differences can be observed in these conditions across sectors.

#### *Scenario 1: Business as usual*

There is a high probability that the share of cross-border activities will remain broadly similar. Lasting fragmentation in rules across the EU-28 will continue to deter both consumers and providers from entering the cross-border market. In addition, if hybrid distribution models, including face-to-face interactions, persist for a significant share of products, the barrier of geographical distance will not be completely removed. The poor access of providers to data of non-residents, combined with the difficulty of consumers to obtain reliable data to compare products on a cross-border basis, will reinforce the status-quo.

#### *Scenario 2: Development of cross-border sales in specific niches of consumers*

The number of niches of consumers who ask for cross-border products could increase significantly in the next 5 to 10 years, if specific conditions are fulfilled. First of all, the global convergence in security tools and the design of applications/websites should enhance the confidence of some consumers in engaging further in cross-border sales, especially those who are more inclined to switch providers. Converging design that will be increasingly adapted to lifestyle requirements and will place the focus on a

customer's experience culture rather than on a product culture should result in a decreasing need for face-to-face interaction.

The structure of the supply will change significantly within this Scenario 2, provided that suppliers have sufficient skills at their disposal to develop cross-border activities, e.g. knowledge of foreign languages. The acquisition of innovative FinTech and InsurTech by 'traditional providers' will help them accelerate their digital transformation. Furthermore, service innovation in products as diverse as money transfers, current accounts, savings accounts and consumer loans will be integrated into virtual offerings, with interoperability becoming a competitive advantage. In that context, if, for example, the single market for payments and current accounts emerges, mainstream banks could easily collect foreign financial data for the credit scoring of non-residents, by selling accounts to non-residents. Nevertheless, banks and insurers will most likely be still going through the restructuring of their distribution networks, which new entrants could take advantage of.

If there are no significant adverse regulatory changes, FinTech and InsurTech companies that already provide cross-border services could grow rapidly (especially peer-to-peer models for consumer loans and property insurance). Other FinTechs could also enhance cross-selling strategies: for instance, those that provide cross-border means of payments and/or current/savings accounts (Number26, Ipagoo, Raisin, etc.) could benefit from the emerging single market in these products and bring their existing customers to the cross-border loan market. Finally, based on their existing products, such as mobile payments, and the use of adequate algorithms that can take full advantage of their large amounts of personal data, technology companies such as GAFA (Google, Apple, Facebook and Amazon) could also enter the savings and loans market with global solutions for their existing clients.

In order to facilitate the emergence of niches of consumers that do cross-border sales, regulators should continue to reinforce the harmonisation in rules over the EU-28 as much as it is possible. In parallel, policymakers should maintain sufficient room for the development of innovative processes and products. Regulators could also take several specific measures, especially to promote the cross-border sales of simple products. For example, they could encourage the opening of current and savings accounts on a cross-border basis by insisting on the inclusion of the accounts in the results of comparison tools.

*Scenario 3: EU integrated market – the vast majority of consumers can engage in cross-border sales*

Overall, the emergence of a true single market seems within the realm of possibility for payments, current accounts, savings accounts and unsecured consumer loans in 10 to 15 years. The probability that such a single market will materialise, however, will be lower for housing loans, car insurance, property insurance and health insurance. The preconditions for Scenario 2 to evolve as well as a significant number of other conditions will be necessary to achieve this.

On the data side, the development of standardised pan-European databases aimed at conducting adequate scoring and pricing of any European citizen will be essential. Priority should be placed on the development of a pan-European credit bureau (and perhaps a centralised bureau for social media credit data as well), pan-European databases for property insurance (one for past claims, one for the risk of flood, etc.) and a pan-European car insurance database to verify driver identity, accident claims, stolen or written-off vehicles and licence plates, etc. European integrated health systems to collect consumer data will be required for the single health insurance market, although this is a little unlikely due to the sensitive character of health data.

Based on standardised data at European level, the increasing sophistication of algorithms will allow providers to perform adequate marketing campaigns, scoring, pricing and prevention for the case of cross-border products. In parallel, the development of comparative pan-European databases by companies such as GAFA, combined with the increasing digital and financial literacy of consumers, could boost demand for cross-border products.

The harmonised implementation in passports for intermediaries, as well as the multiplication of digital initiatives, such as the e-identity tools in Estonia, would make the physical location of many brokers, agents, lenders and insurers of little importance, thereby multiplying the possibilities of cross-border offers. For housing loans and health insurance, the significant digitalisation of the processes of external actors such as notaries, land administration and doctors, combined with high interoperability between consumers, providers and these external actors will make the complete digitalisation of the distribution of these products feasible. This digitalisation will be notably driven by the level of maturity of technologies such as video calls and telemedicine. These technological developments will need to be accompanied by further measures aimed at ensuring the legitimacy and full interoperability between the different stakeholders involved, both within and across countries.

Some other existing technologies could enter full growth and standardisation, thereby also contributing to the development of a single market. For example, contracts for all the products covered by the study could be designed as 'smart contracts', which can be verified programmatically via the blockchain, resulting in faster, safer and more transparent processes, regardless of where consumers, providers and other stakeholders are located. Some initiatives already exist such as in Estonia, where the government introduced in 2015 a public service that notaries contract on the blockchain for e-residents. An integrated EU market for property and car insurance coverage will be also boosted by the rapid development of the Internet of Things (IoT): vehicle telematics, smart home solutions, etc. If the related data are easily available on a cross-border basis, the quality of cross-border pricing could be significantly improved.

Overall, due to the high number of elements and conditions related to scenarios 2 and 3, regulators will need to adopt a holistic approach to facilitate the emergence of a true single market for retail financial services and non-life insurance services, by ensuring consistency across the different digital layers (data protection, security, authentication, interoperability, etc.). Nevertheless, numerous policies that could facilitate the emergence of this single market are not contained in the digital agenda and should also be taken into consideration, notably the need to supervise banks exclusively at a centralised European level.

In addition, regulators should continue to reinforce the harmonisation in rules over the 28 member states of the EU in various areas of non-financial legislation, including insolvency and liability laws. In parallel, policy-makers should ensure that there is sufficient room for the development of innovative processes and products.

## Annex 1. Number of interviews by segment and country

| Country        | Banks     | Insurers  | Brokers/agents | Other financials | Tech companies | FinTechs  | Supervisors | Regulators | Total     |
|----------------|-----------|-----------|----------------|------------------|----------------|-----------|-------------|------------|-----------|
| Belgium        | 4         | 3         | 1              | 2                | ..             | ..        | ..          | ..         | <b>10</b> |
| Estonia        | 3         | 1         | 3              | ..               | ..             | ..        | ..          | 2          | <b>9</b>  |
| Finland        | 2         | 1         | 4              | ..               | ..             | ..        | ..          | 2          | <b>9</b>  |
| France         | 1         | 2         | 2              | ..               | ..             | 3         | 1           | 1          | <b>10</b> |
| Germany        | 1         | ..        | ..             | 1                | ..             | 3         | 1           | 1          | <b>7</b>  |
| Ireland        | 5         | ..        | ..             | ..               | ..             | ..        | ..          | 2          | <b>7</b>  |
| Italy          | 4         | 1         | 1              | 1                | ..             | 1         | ..          | 2          | <b>10</b> |
| Luxembourg     | 1         | 1         | ..             | ..               | ..             | 2         | ..          | 3          | <b>7</b>  |
| Netherlands    | 2         | 1         | ..             | 2                | ..             | 1         | 1           | 1          | <b>8</b>  |
| Poland         | 4         | ..        | 4              | ..               | ..             | ..        | ..          | 1          | <b>9</b>  |
| United Kingdom | 2         | ..        | ..             | 2                | 2              | ..        | ..          | 1          | <b>7</b>  |
| <b>Total</b>   | <b>29</b> | <b>10</b> | <b>15</b>      | <b>8</b>         | <b>2</b>       | <b>10</b> | <b>3</b>    | <b>16</b>  | <b>93</b> |

## **Annex 2. List of participants in the focus groups**

### **Focus Group I, CEPS (Brussels, Belgium), 10 March 2016**

#### **Retail financial services (12 participants)**

- **Farid Aliyev**, Senior Financial Services Officer, BEUC
- **Mathilde Bonneau**, Manager Government Relations EMEA, PayPal
- **Russell Burke**, Senior Advisor, Consumer Protection Directorate, Central Bank of Ireland
- **Anne Chauviré**, Chargée d'affaires publiques, Direction des relations institutionnelles, BNP Paribas Personal Finance
- **Mario Comana**, Full Professor, Banking and Financial Institutions, LUISS Guido Carli Univ.
- **Aymeril Hoang**, Group Head of Innovation, Société Générale
- **Manuel de Miguel**, Subdirector General, Banesto, Banco Santander
- **Luke Olbrich**, Head of EMEA, Core Global Payments, PayPal
- **Christian Schaette**, Knowledge Expert in Financial Institutions, McKinsey & Company
- **Maurizio Sella**, Founder & Chairman, Smartika Spa
- **Michael Stephan**, COO/Founder, Raisin
- **Greg Van Elsen**, Financial Services Officer, BEUC

**Focus Group II, CEPS (Brussels, Belgium), 10 March 2016**

**Insurance (13 participants)**

- **Farid Aliyev**, Senior Financial Services Officer, BEUC
- **Louis De Broglie**, Co-fondateur, InsPeer
- **Russell Burke**, Senior Advisor, Consumer Protection Directorate, Central Bank of Ireland
- **Mary Condon**, Director of Finance and Compliance, Laya Healthcare
- **Jean-Paul Coteur**, Coordinateur assurances, Test-achats
- **Catherine Deslandes**, Directeur Adjoint des Affaires Juridiques et Fiscales, Assurance, Société Générale
- **Floris Goyens**, Head European Affairs, Health, Reinsurance and medical experts, Assuralia
- **Sebastian Herfurth**, Founder and CEO, Friendsurance
- **Stéphane de Maupeou**, Senior Policy Advisor in International and European Affairs, Fédération Française des Sociétés d'Assurance
- **Lenka de Mauro**, Policy Advisor, Gesamtverband der Deutschen Versicherungswirtschaft (GDV)
- **Kathleen Moriarty**, Finance Risk and Compliance Manager, Laya Healthcare
- **Mari Pekonen-Ranta**, Head of EU Public Affairs, Federation of Finnish Financial Services
- **Roberto Signorini**, Head of International Relationship, ANIA

**Focus Group III, London Capital Club (London, UK), 22 March 2016**

**Retail financial services (18 participants)**

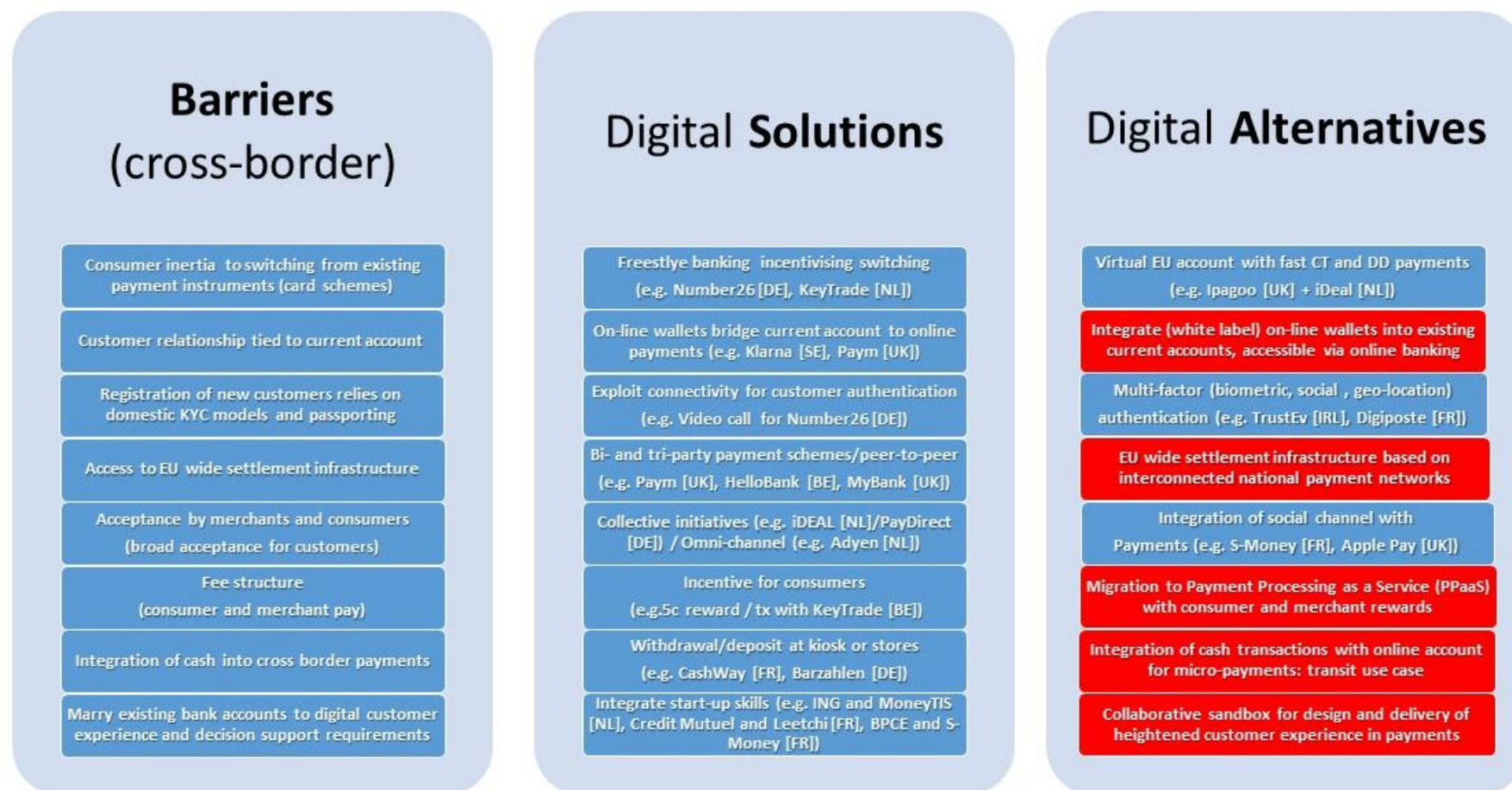
- **Russell Burke**, Senior Advisor, Consumer Protection Directorate, Central Bank of Ireland
- **Amy Chalfern**, Global Director, Service and Delivery at Decision Analytics, Experian
- **Anthony Elliot**, Chief Executive, Fairbanking Foundation
- **James Etherington**, Head of Investor Relations, 4Finance
- **Christine Farnish**, Chairman, P2P Association
- **Helen Gardner**, Economist, Oxera Consulting
- **Keith Gold**, Independent Consultant
- **Stephen Holmes**, CTO Digital Banking Lab, Polaris Financial Technology
- **Colm Lyon**, Chief Executive, Fire Financial Service
- **Patrick Mang**, Innovation Strategy Lead, HSBC
- **Hakim Mendjeli**, Independent Consultant
- **Niamh Murphy**, Head of Consumer Banking, Banking and Payments Federation of Ireland
- **Carlos Sanchez**, Chief Executive, Orwell Group
- **Mark Tilden**, Head of UK Practice, Ares & co
- **Alastair Tyler**, Advisor, ifs University College
- **Nick Senechal**, Strategy Lead, VocaLink
- **Naresh Vyas**, Head of Solutions, Royal Bank of Scotland
- **Ben Wilson**, Head of Policy & Public Affairs, VocaLink

**Focus Group IV, London Capital Club (London, UK), 22 March 2016**

**Insurance (12 participants)**

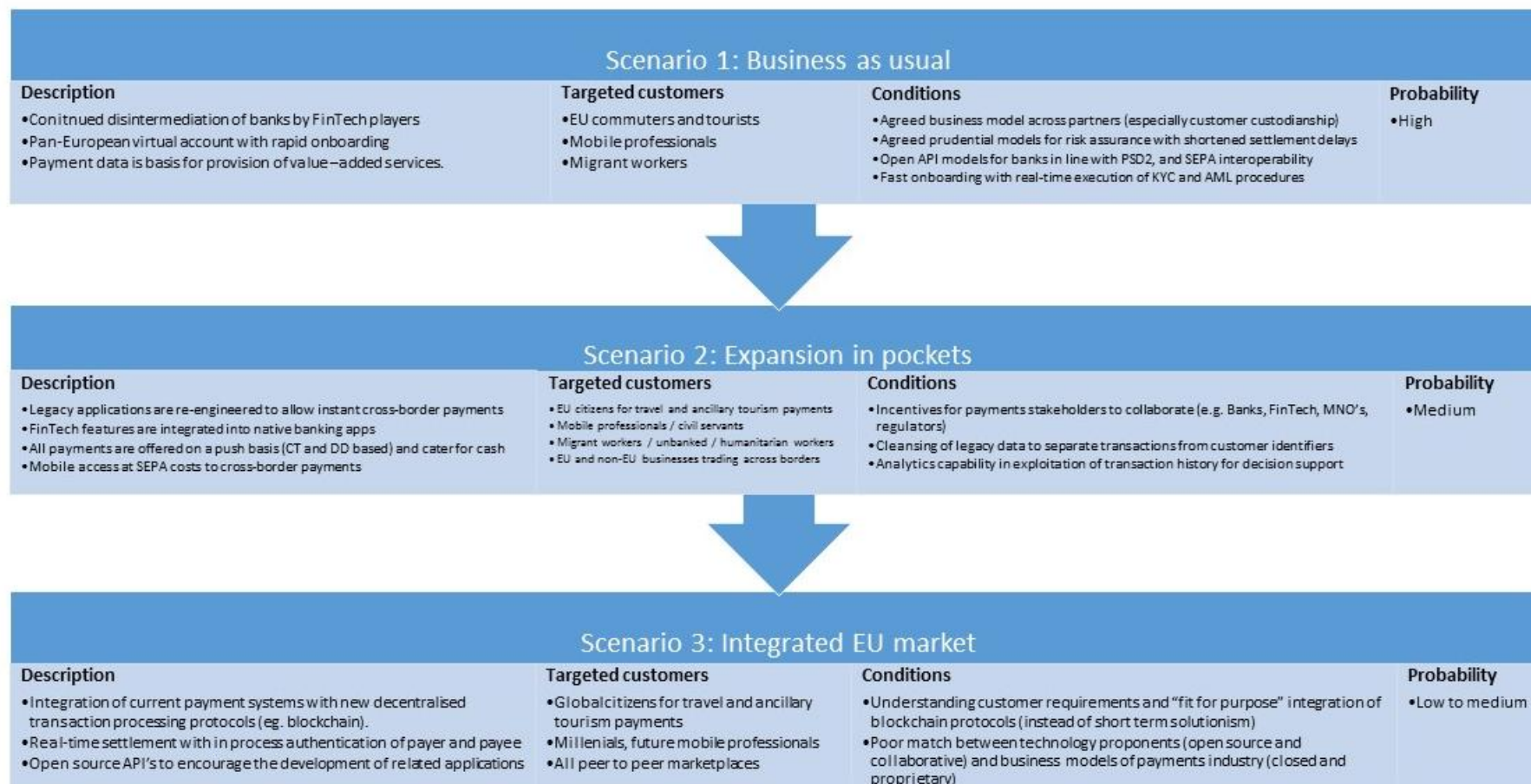
- **Andreas Bachofner**, Director, Shire Partnership
- **Carlo Bewersdorf**, Global Head of Digital Business, Allianz
- **Russell Burke**, Senior Advisor, Consumer Protection Directorate, Central Bank of Ireland
- **Ian Emond**, Policy Adviser, European Affairs, ABI
- **Christine Farnish**, Chairman, P2P Association
- **Helen Gardner**, Economist, Oxera Consulting
- **Adam Levitt**, Global Head, Insurance Industry, Ashurst
- **Sue Milton**, Managing Director, SSM Governance Associates
- **Steven McEwan**, Partner, Hogan Lovells
- **Isobel McIntosh**, EU and ESA Policy/European Affairs Team/Markets Policy & International, FCA

### Annex 3. Payments: barriers to cross border sales, digital solutions and alternatives<sup>378</sup>

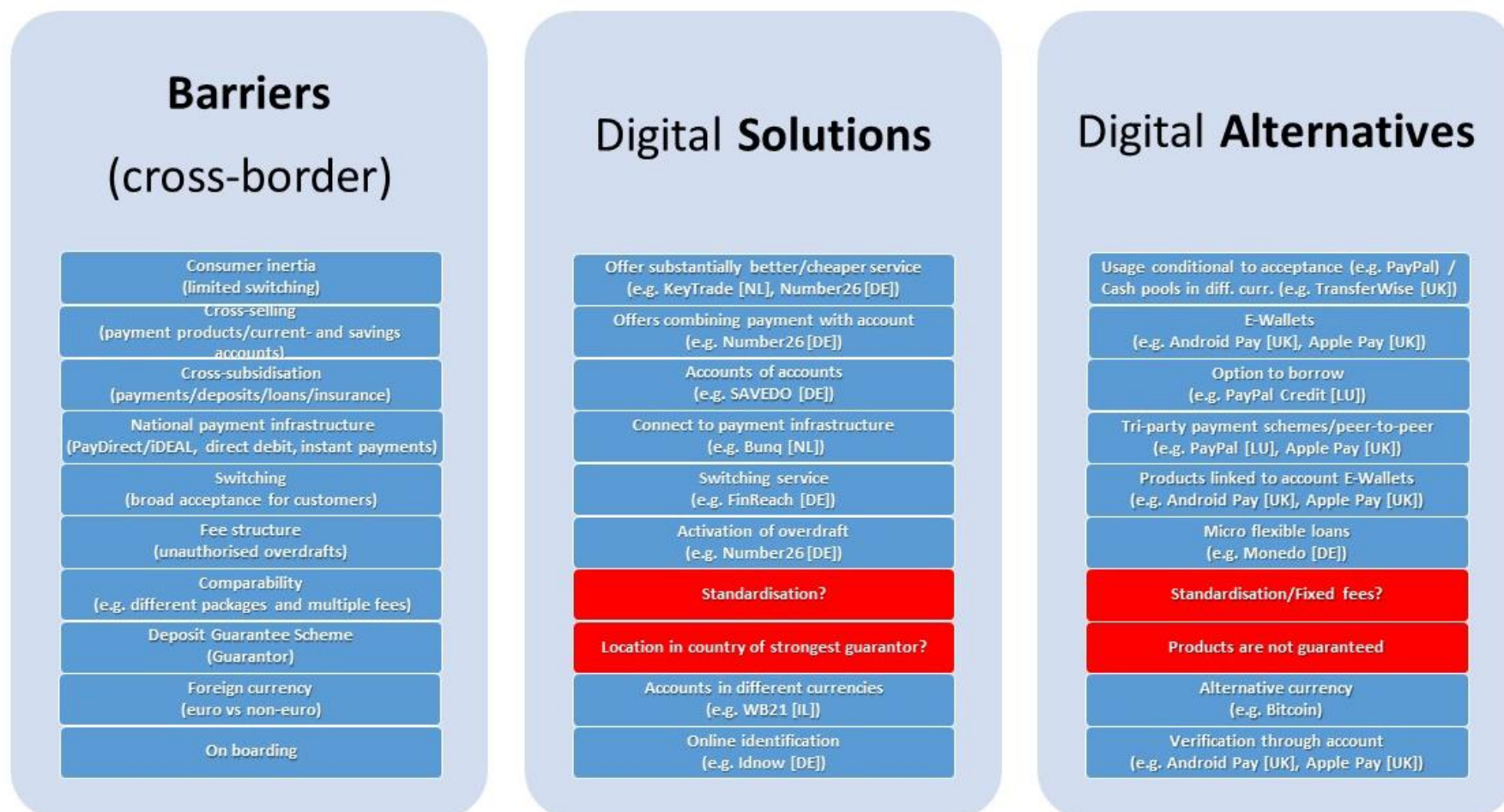


<sup>378</sup> The colour "red" implies that the study has not identified any existing concrete examples for the related digital solution or alternative.

## Annex 4. Payments: summary of scenarios

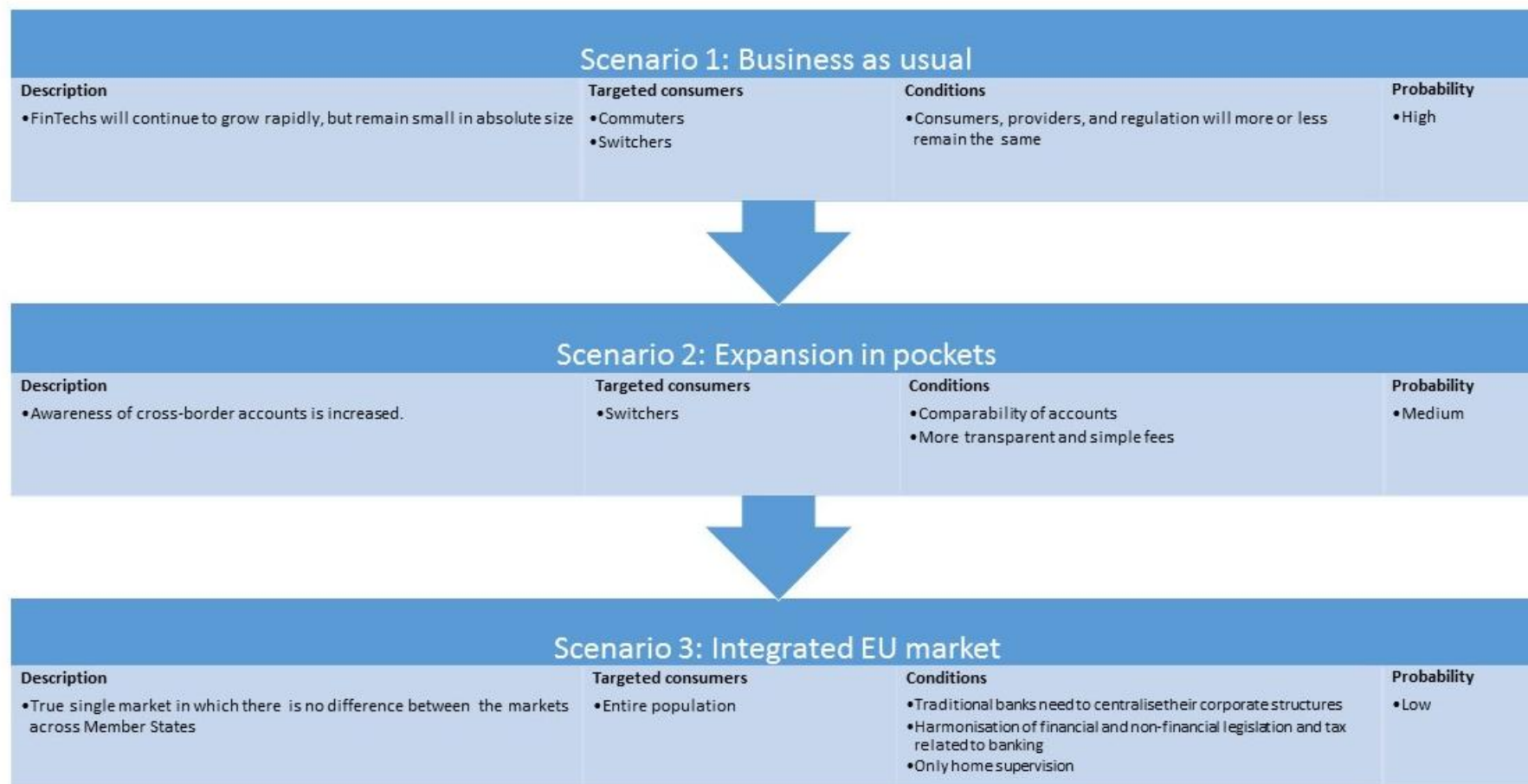


## Annex 5. Current- and savings accounts: barriers to cross border sales, digital solutions and alternatives<sup>379</sup>

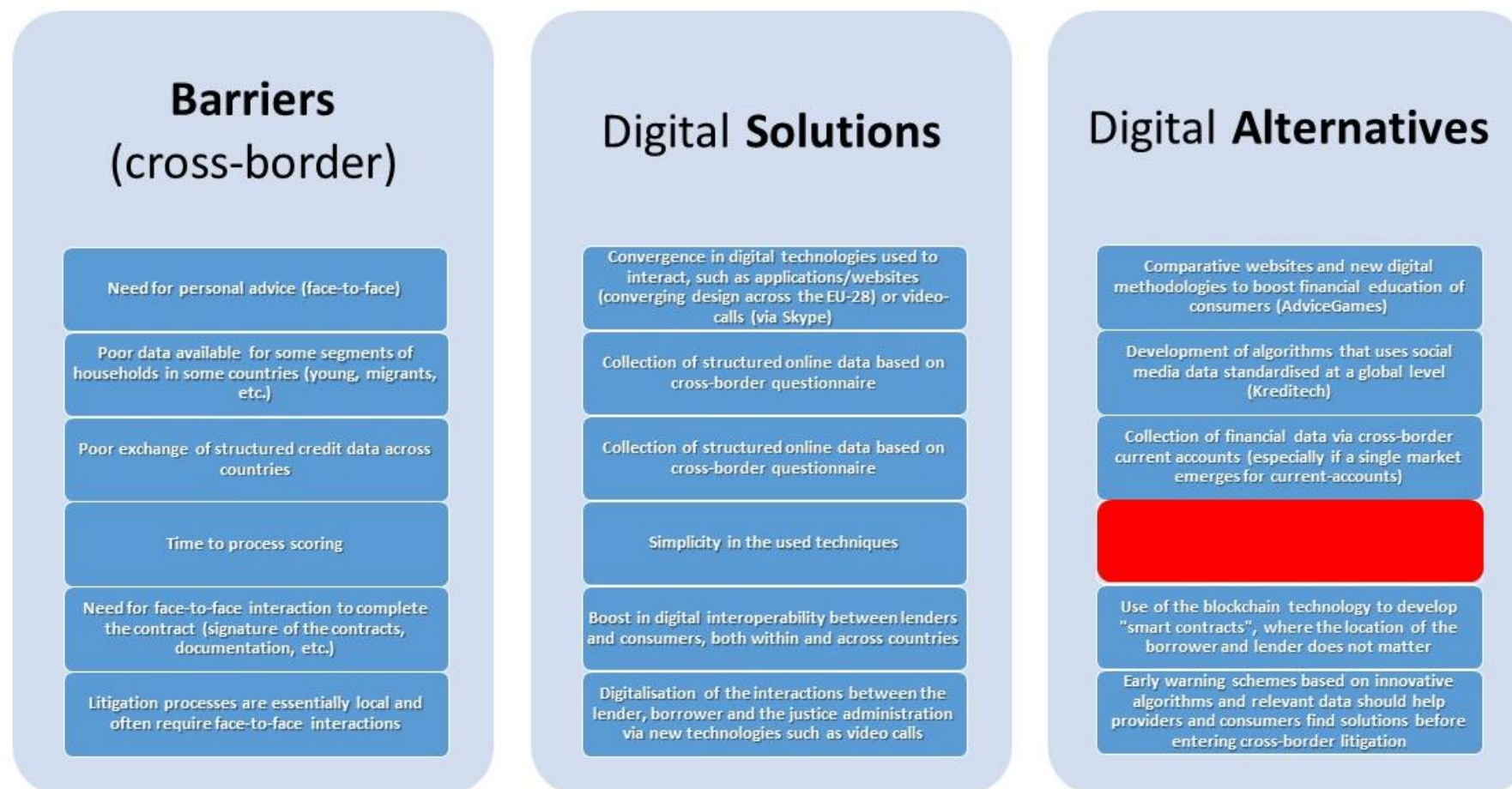


<sup>379</sup> The colour "red" implies that the study has not identified any existing concrete examples for the related digital solution or alternative.

## Annex 6. Current- and savings accounts: summary of scenarios

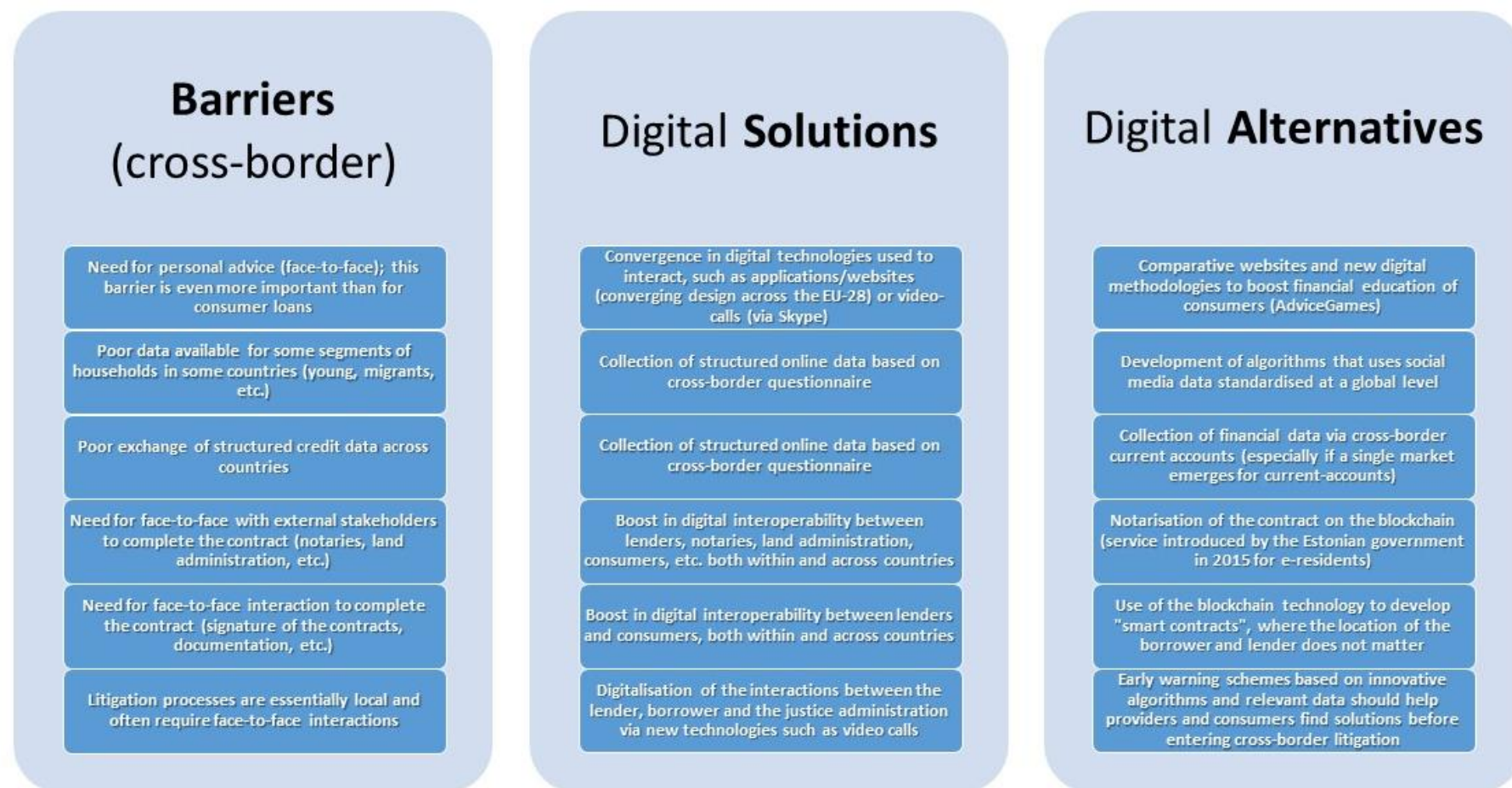


## Annex 7. Consumer loans: barriers to cross border sales, digital solutions and alternatives<sup>380</sup>



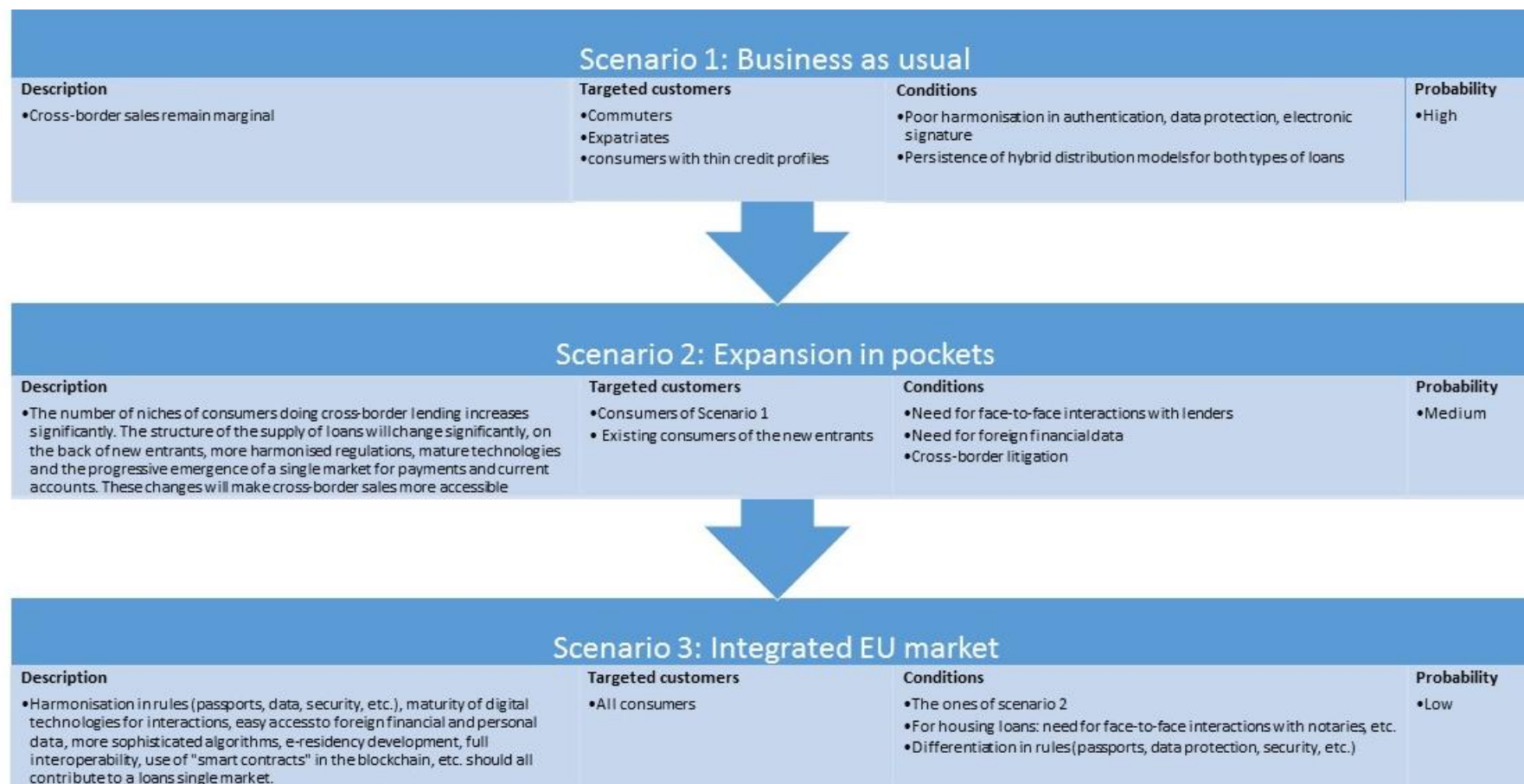
<sup>380</sup> The colour "red" implies that the study has not identified any existing concrete examples for the related digital solution or alternative.

## Annex 8. Housing loans: barriers to cross border sales, digital solutions and alternatives<sup>381</sup>

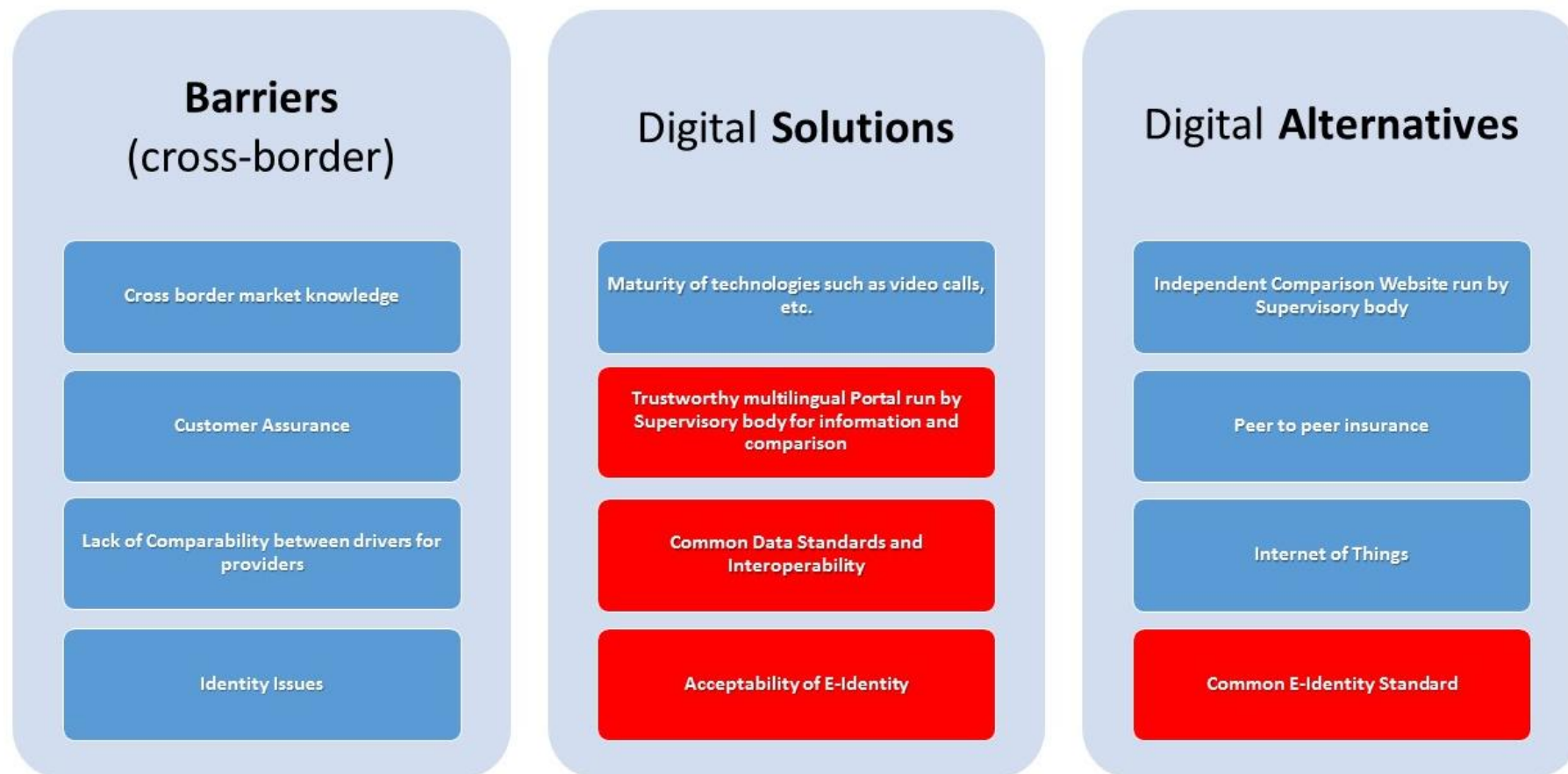


<sup>381</sup> The colour "red" implies that the study has not identified any existing concrete examples for the related digital solution or alternative.

## Annex 9. Consumer and housing loans: summary of scenarios

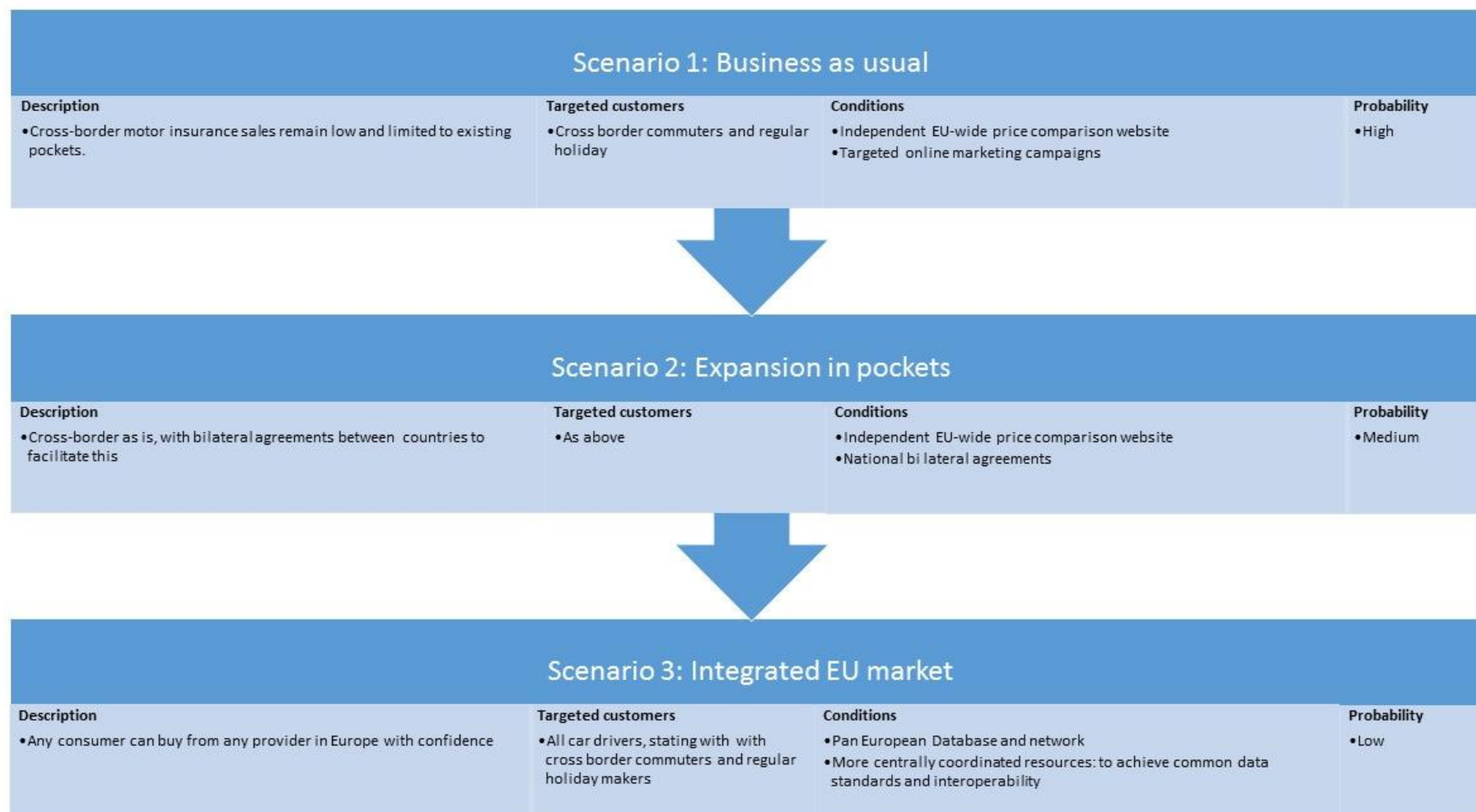


## Annex 10. Car insurance: barriers to cross-border sales, digital solutions and alternatives<sup>382</sup>

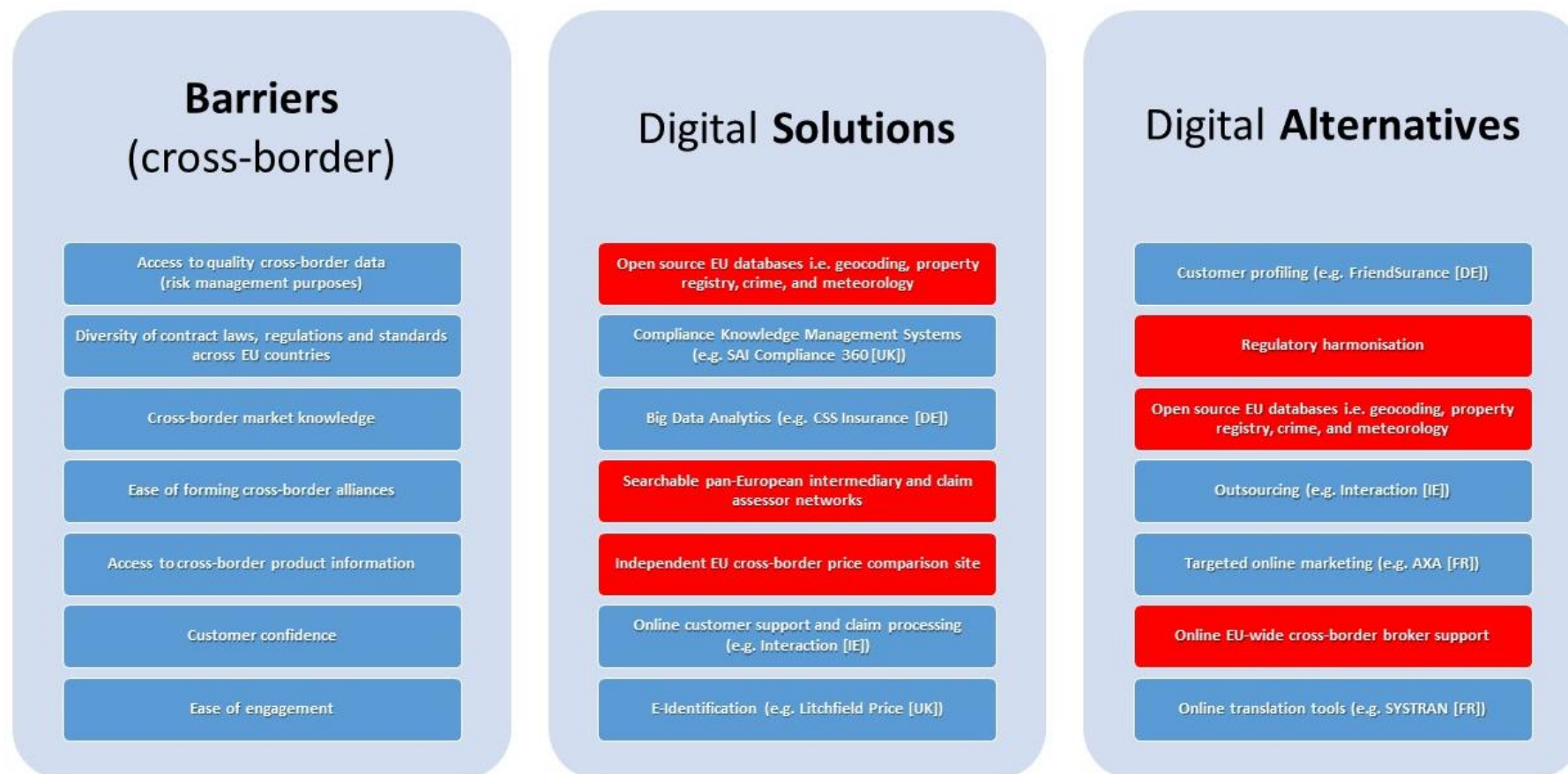


<sup>382</sup> The colour "red" implies that the study has not identified any existing concrete examples for the related digital solution or alternative.

## Annex 11. Car insurance: summary of scenarios

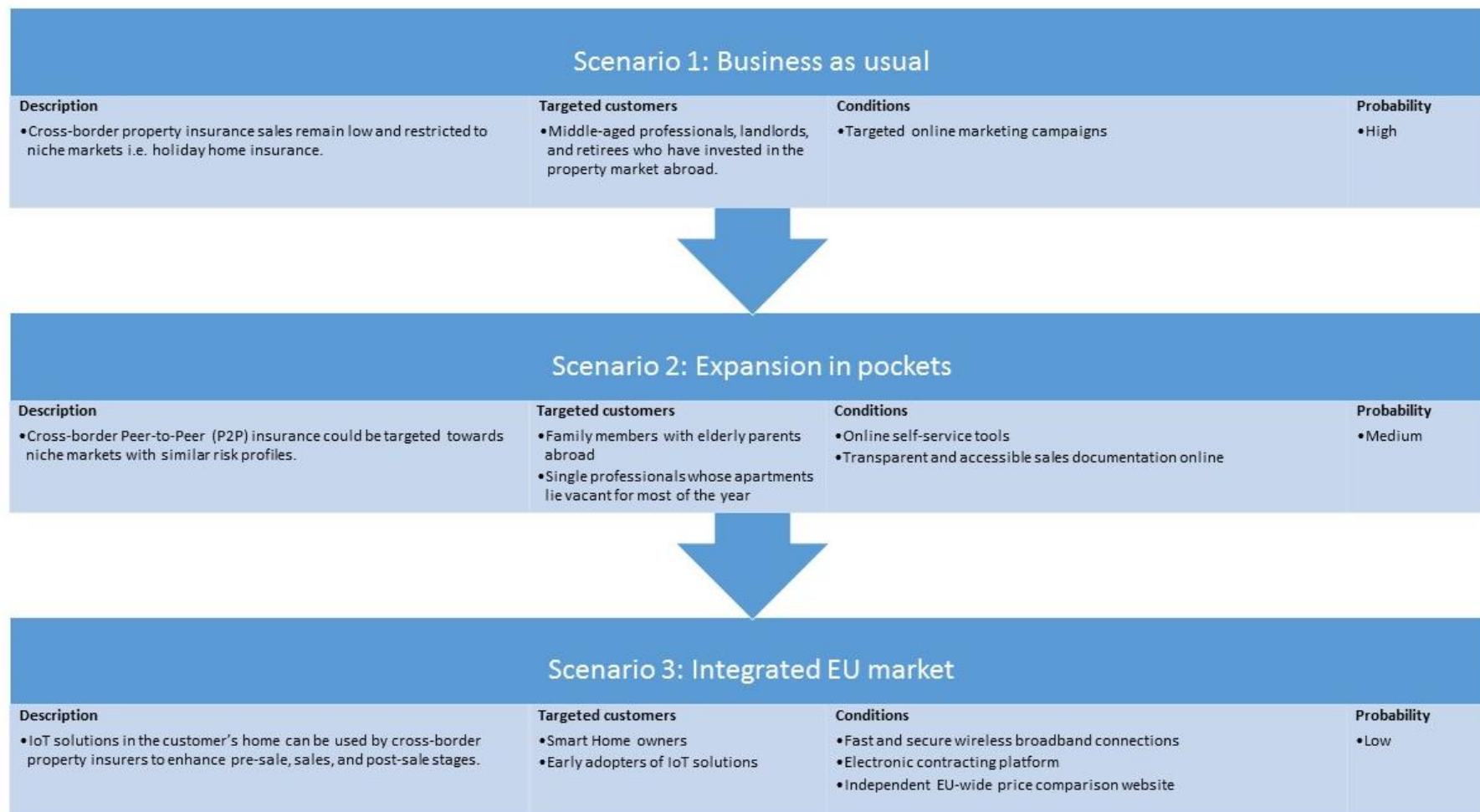


## Annex 12. Property insurance: barriers to cross border sales, digital solutions and alternatives<sup>383</sup>

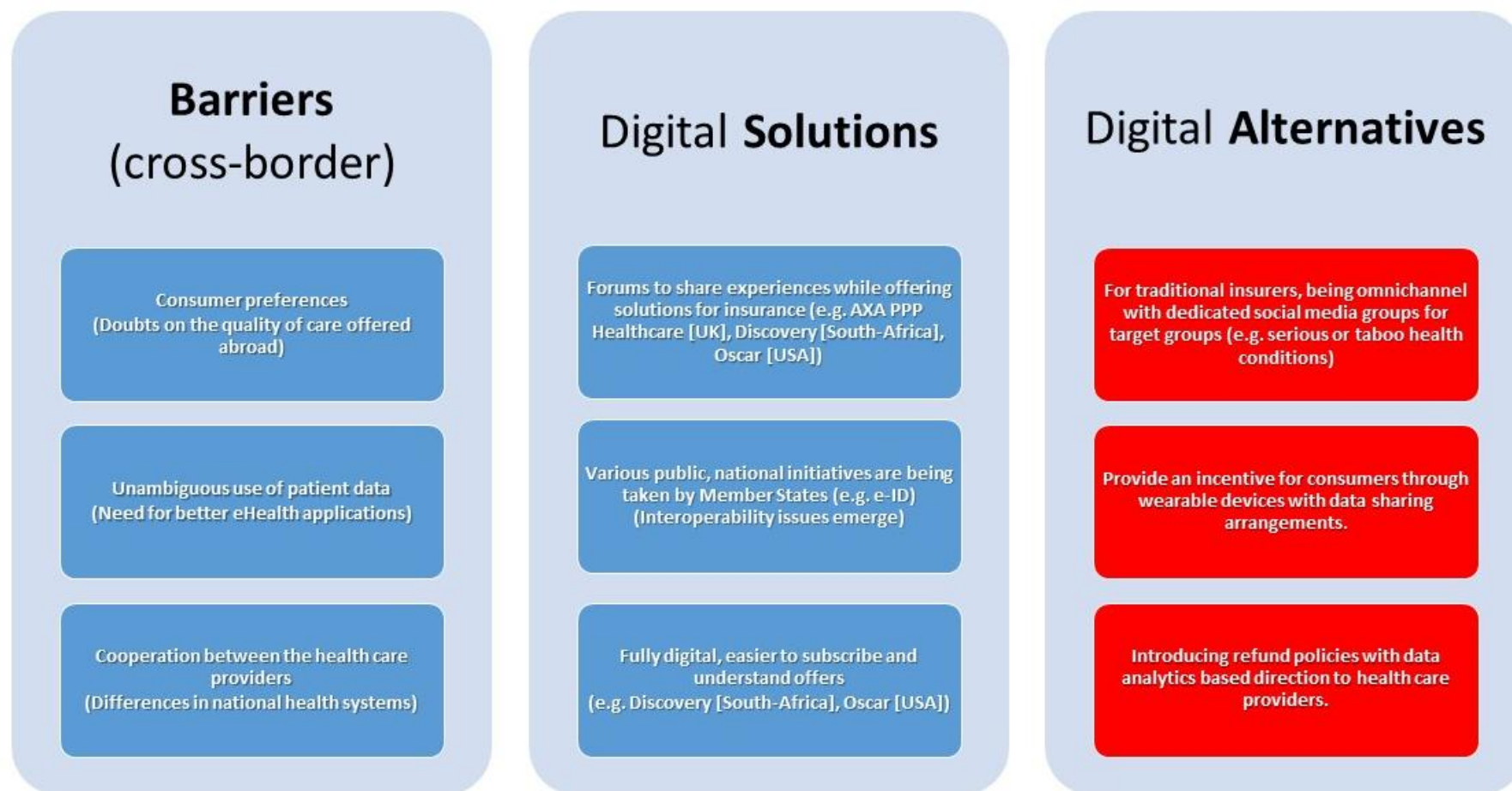


<sup>383</sup> The colour “red” implies that the study has not identified any existing concrete examples for the related digital solution or alternative.

## Annex 13. Property insurance: summary of scenarios

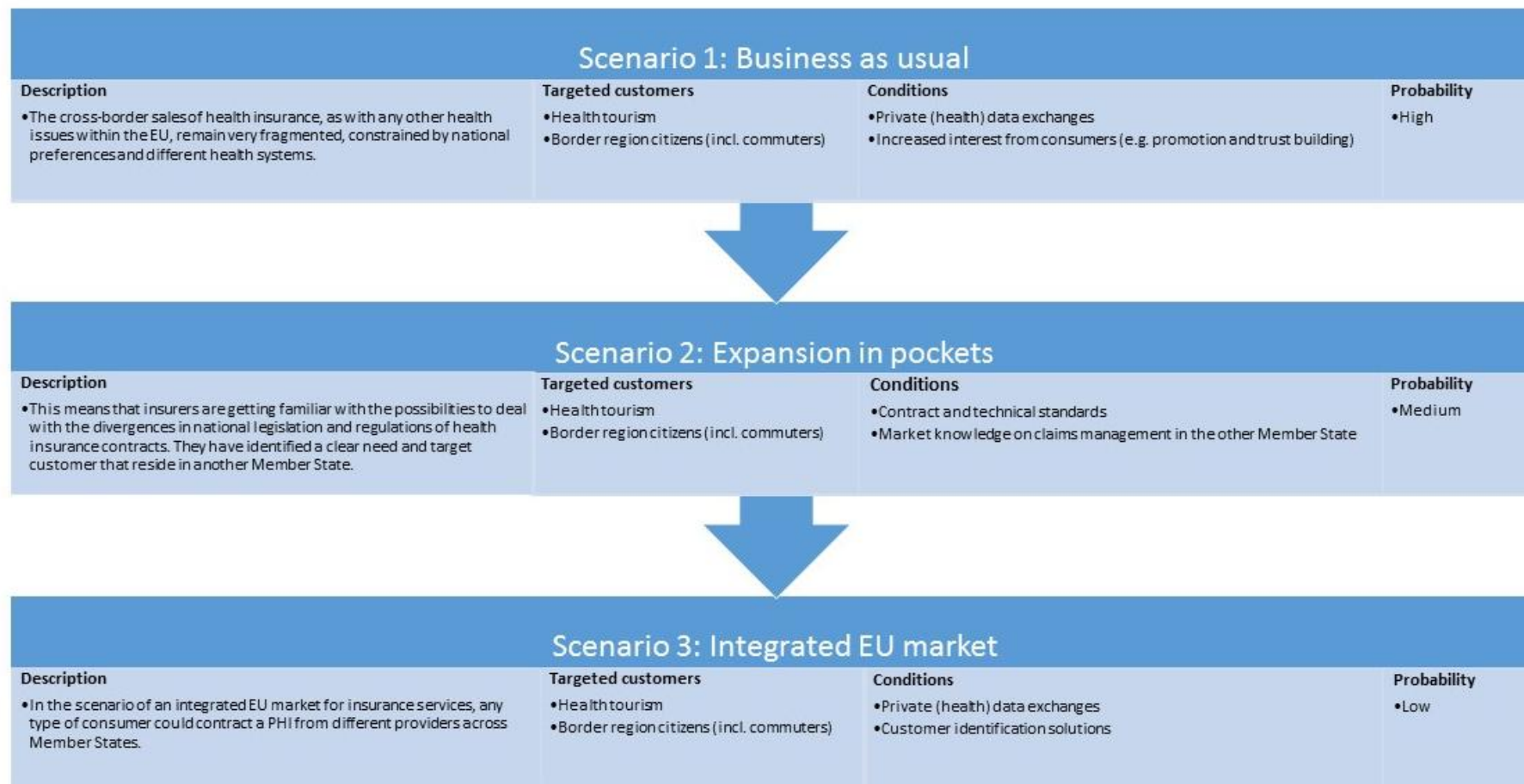


## Annex 14. Private health insurance: barriers to cross border sales, digital solutions and alternatives<sup>384</sup>



<sup>384</sup> The colour “red” implies that the study has not identified any existing concrete examples for the related digital solution or alternative.

## Annex 15. Private health insurance: summary of scenarios



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