Study on tools designed to facilitate switching and cross-border opening of payment accounts on the EU payment accounts market

Final Report

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Abstract

In accordance with Article 26(2) of the Treaty on the Functioning of the European Union (TFEU), the internal market is to comprise an area without internal frontiers in which the free movement of goods, persons, services and capital is ensured. The smooth functioning of the internal market and the development of a modern, socially inclusive economy increasingly depends on the universal provision of payment services.

To ensure the above objective, the Payment Accounts Directive (PAD)[1] was adopted in 2014. Article 28 of this Directive requires the Commission to carry out a review of the Directive. A first study on the EU Payment Accounts Market[2] was carried out to contribute to the collection of evidence, analysis and recommendations required for this review. The present study comes in complement of the first study, and provides qualitative and quantitative data to support the analysis of possible further improvements of its provisions, as referred to in Article 28(c), (d) and (f). Concretely, it examines the feasibility of developing and implementing:

- A cross-border switching service;
- An automated redirection of payments; and
- An EU-wide portability of payment account numbers.

[1] Directive 2014/92/EU of the European Parliament and of the Council of 23 July 2014 on the comparability of fees related to payment accounts, payment account switching and access to payment accounts with basic features Text with EEA relevance: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014L0092

[2] Deloitte on behalf of the European Commission (DG FISMA), "Study on the Payment Accounts Market": https://op.europa.eu/en/publication-detail/-/publication/0854f727-6117-11eb-8146-01aa75ed71a1/language-en

Executive Summary

Introduction

This document constitutes the Final Report of the "Study on tools designed to facilitate switching and cross-border opening of payment account on the EU payment accounts market", that Deloitte is carrying out for the European Commission, Directorate General for Financial Stability, Financial Services and Capital Markets Union (DG FISMA) and Directorate General for Justice and Consumers (DG JUST).

In accordance with Article 26(2) of the Treaty on the Functioning of the European Union (TFEU), the internal market is to comprise an area without internal frontiers in which the free movement of goods, persons, services and capital is ensured. The smooth functioning of the internal market and the development of a modern, socially inclusive economy increasingly depends on the universal provision of payment services.

To ensure the above objective, the Payment Accounts Directive (PAD)[1] was adopted in 2014. PAD envisages three objectives for which it has foreseen regulatory measures:

- Allow consumers to compare payment account fees;
- Allow consumers to switch accounts easily;
- Allow all EU consumers access to payment accounts with basic features.

Building on the current legal framework, and the different practices across Member States, this study aimed to provide qualitative and quantitative evidence about the feasibility of developing and implementing new tools for facilitating switching and cross-border opening of payment accounts. To achieve this general objective the study team assessed three different types of switching tools with the following specific objectives:

- Identifying options for designing a **cross-border switching service** allowing consumers to switch payment accounts across Member States (Switching tool 1).
- Identifying options for implementing an **automated redirection of payments** (Switching tool 2), more specifically:
    - A system allowing automated redirection of payments between two payment accounts within the same Member State;
    - A system allowing automated redirection of payments between two payment accounts in two different Member States.
- Identifying options for implementing an **EU-wide account number portability (ANP)** (Switching tool 3).

Eight policy options were developed across these different tools and assessed on the basis of their feasibility, effectiveness and efficiency. This study also assessed the supply and demand for cross-border opening and switching of payment accounts in the EU. Overall, this study provides a view on possible options that could be considered in order to move forward with facilitating cross-border switching of accounts in the EU.

[1] Directive 2014/92/EU of the European Parliament and of the Council of 23 July 2014 on the comparability of fees related to payment accounts, payment account switching and access to payment accounts with basic features Text with EEA relevance: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014L0092

Methodology & scope

A number of different data collection tools and methodologies were carried out as part of this study, including desk research, case studies, interviews, surveys and a validation workshop.

The study team conducted **10 case studies** to analyse existing practices of domestic switching, automated redirection and account number portability (ANP). These were developed based on the **GOFA** (Governance, Operations, Financing and Architecture) framework. This approach allowed the study team to ensure consistency across the three tools. Building on this approach, it identified several options under each of the three tools.

Besides the GOFA framework, the study team applied a **funnelling approach** in order to shortlist the most relevant options under each switching tool. For this purpose, the pros and cons were studied taking into account the feedback gathered during the data collection activities, as well as based on expert judgement. Concerning the latter, we organised an internal virtual workshop with the study's experts on EU payment systems and legal matters in order to discuss and assess together the main benefits and weaknesses of the preliminary options identified.

After studying the pros and cons of the identified options, it was decided, together with the European Commission, to keep all of them for further assessment. It was considered that a careful examination of all the options, in terms of implications for the stakeholders, feasibility, costs and benefits, and effectiveness was necessary before any could be disregarded.

The study team then conducted an analysis of the **feasibility**, **effectiveness** and **efficiency** of the eight policy options and outlined conclusions and key takeaways.

To collect the data needed to carry out the assignment, the following data collection activities were used:

- A **first online survey** of consumers (both private and owners of micro enterprises and selfemployed), focusing on the supply and the demand for cross-border opening of accounts and on issues related to switching.
- **Interviews** to deep dive on the supply and the demand, as well as to build the case studies (including PSPs and their associations, switching service organisations, national competent authorities, consumer organisations, business associations and associations representing micro enterprises and self-employed);
- A **second online survey** focusing on the costs and benefits of the options, as well as on their feasibility and effectiveness. This survey was adapted to and shared with five different stakeholders: PSP associations, consumer associations, business associations, representatives of micro-enterprises and self-employed, and national competent authorities;
- **Follow-up calls** with survey respondents who agreed to be re-contacted;
- **Desk research** (including literature review and existing statistical data);
- **Consultation of experts** in the domain of payments and banking IT architecture; and A **validation workshop** with representatives of stakeholders.

The scope of this study focused on all payment accounts for consumers (whether in Euro or in another official currency of an EU Member State), as well as payment accounts for self-employed and micro enterprises, although they are not currently covered by the PAD. The aim was to assess whether the potential benefits for self-employed and micro enterprises, if they would also be eligible to these new tools, would be significant enough for the Commission to consider expanding the scope of chapter III of the PAD to small businesses. In terms of geographical scope, the study covered the EU-27. It focused both on Member States that are part of the Eurozone and Member States whose currency is not the Euro. The study also conducted case studies on national practices of switching, automated redirection and ANP covering 10 countries: Belgium, Bulgaria, France, Germany, Italy, Ireland, Spain, The Netherlands, Sweden, and the United Kingdom.

Study findings & conclusions

Demand and supply for cross-border opening and switching of payment accounts

Understanding the consumer perspective is key in order to assess the need and relevance of the options designed. Therefore, before developing the options for each of these tools, this study assessed the appetite for cross-border opening of payment accounts. For that purpose, both the demand and the supply of cross-border opening of payment accounts were assessed. The same assessment was also undertaken separately for micro-enterprises and self-employed.

On the one hand, it was found that the mobile consumers (i.e. consumers who have, at one point in their lives, lived in another EU Member State, or are still living there, regardless of the motive) would be the stakeholder group most likely to be interested in cross-border account opening. The drivers for such interest include mainly the proximity with the new PSP, and the need to carry out local transactions. The study also found that the main motivation for the non-mobile consumers to open an account in another Member State would be to benefit from lower fees. However, the demand among these consumers is very low, considering language barriers, distance and sometimes the need to be physically present at a branch to open the account. The demand analysis also showed that a number of obstacles might prevent consumers from switching, such as the fear of being charged additional fees in case a payment fails or is misdirected, and the uncertainty with regards to their account information being updated correctly everywhere it is needed, which indicates the relevance of redirection and ANP tools.

Although micro-enterprises and self-employed are currently not included in the scope of PAD, this study also took into account the demand and supply for this specific target group. It was found that the demand for these services in general would be very low and limited to the ones who would need to relocate to another Member State. Even then, they would rather tend to open an account in this other country and leave their current account open, mostly due to wanting to avoid the hassle and the risks with regards to misdirected payments associated with switching. Although they recognised that the tools for cross-border switching, redirection and ANP could be useful in the rare cases where they would need them, the interviewed associations revealed that they would be worried that the costs of such service, if made compulsory for PSPs, would be passed on in account or transaction fees, which are already key issues for them.

At the same time, cross-border opening of accounts entails some challenges for PSPs due to AML-CFT rules and other legal requirements. In this regard, remote identification represents a difficulty for PSPs when considering cross-border account opening. Nevertheless, it should be noted that new technologies are offering opportunities to PSPs to adapt their onboarding journey and allow remote cross-border opening of accounts. As part of the demand analysis, the study team also measured the demand for the different switching tools assessed in this study using the best possible estimates. Based on this exercise, approximately **3.1 million EU consumers** would use a **cross-border switching service** and approximately **4.5 million** would use a switching service with an **automated redirection** or **ANP** annually.

With regards to micro-enterprises and self-employed, the study team estimated that approximately **46 thousand** would use the **cross-border switching service** and approximately **66 thousand** would use a switching service with **automated redirection** or **ANP** annually.

Switching tools policy options and their feasibility

Based on the analysis of the demand and supply, as well as of the current national practices in some Member States, different options were developed for each of the switching tools. This report designed **eight policy options**:

For the cross-border switching service, two policy options were identified:

- Option 1.1 Cross-border switching service with decentralised governance
- Option 1.2 Cross-border switching service with centralised governance As for the automated

redirection the study identified three policy options:

- Option 2.1 Automated redirection of payments based on a Central Registry
- Option 2.2 Automated redirection of payments via account information embedded in error messages
- Option 2.3 Automated redirection of payments based on a Central clearing house Lastly, the report

presents three policy options for EU-wide ANP:

- Option 3.1 EU-wide portability of existing IBAN
- Option 3.2 Portable identifier/alias on top of IBAN
- Option 3.3 New portable account number throughout the payment chain (replacing current IBANs)

This study assessed the feasibility of these options from legal, technical and operational point of views and then evaluated their potential effectiveness and efficiency.

The feasibility analysis revealed that **all the identified options would be feasible, although with different legal, technical and operational implications and levels of complexity**. As part of the options for a cross-border switching service (Switching tool 1), a system based on a centralised governance (option 1.1) would imply a leaner process than a system with a decentralised governance based on national contact points. Although the EU platform would considerably simplify the switching process for PSPs, it would involve a more radical IT transformation for the different stakeholders.

With regards to the automated redirection of payments (Switching tool 2), the different options would have different implications for PSPs. A Central Registry (option 2.1) would imply important IT adaptations for PSPs to integrate the Redirection Table in their routing systems, but would create a seamless redirection process as it would occur upfront, when payments are initiated. The redirection based on the IBAN embedded in the error messages (option 2.2) would require PSPs to keep track of their old customers' IBANs for 13 months after they switch and redirect payments via (newly) expanded error messages whenever transactions are addressed to closed accounts. Although this aspect would be burdensome for them, this option involves less important infrastructure changes, as the error messages already exist and would just need to be enriched with a new field. An automated redirection based on a Central clearing house (option 2.3) would outsource the redirection role to this central entity which would manage the switching information, redirect misdirected payments to the right clearing institution and inform PSPs whenever redirections take place. This option would theoretically make the redirection much simpler for PSPs. However, it would come with a number of challenges and shortcomings, as it would require that the Central clearing house integrates all clearing and correspondent banking agreements of all PSPs across the EU. The Central clearing house would also become a critical component of the payment chain receiving an extremely high volume of transactions which, therefore, would imply high risks of single point of failure. The study has also shown that the implementation of these tools would be more feasible and less complex at a domestic level than at an EU level for cross-border redirection.

The options developed for ANP (Switching tool 3) would considerably simplify the switching process for consumers and creditors and debtors, however their implementation would be very complex. All these tools would involve the same complexity as options 1.2 and 2.1 as they would involve the set-up of an EU platform and of a Central Registry to support the switching and routing processes. The EU-wide portability of the existing IBAN (option 3.1) would allow consumers to keep their account number whenever they switch and avoid that their creditors and debtors have to be notified of any new account number. The implementation of this option is much simpler than the portable identifier/alias on top of the IBAN (option 3.2) and the new portable account number throughout the payment chain (option 3.3), as it does not involve any transition period or adaptation to a new identifier. Moreover, the security risks associated with using an alias (option 3.2) put at stake the robustness of this option, as it would not have the necessary security checks embedded. The fact that an existing alias would be linked to a specific company or provider (e.g. if it is an email address) would also defeat one of the main purposes of portability, as it would lock consumers to that provider.

Effectiveness analysis

The effectiveness analysis was based on the objective tree developed in the first phase of this study. It is important to emphasise that increasing switching is not a direct objective, the study merely considered tools that can facilitate it. Indeed, the specific objective identified as part of this study is to ensure that "**Opportunities for switching and opening of accounts are fully leveraged (cross-border and within Member States)**" and the operational objectives aim to remove existing barriers or to address current issues linked to switching and cross-border opening of accounts. Although the study team expects that these tools would trigger a slight increase in the switching rates, such increase is not the aim in itself.

The assessment of the effectiveness is based on the potential of the options to reach the identified operational objectives, i.e.:

1) An effective and efficient system facilitating cross-border switching of accounts throughout the EU
2) Legal certainty for economic operators, banks and consumers with regards to cross-border opening and switching of accounts
3) Mitigated risk of failed payments during and after the switching process
4) Consumers are aware and well-informed of the possibility and advantages of switching and opening accounts cross-borders
5) The possibility of cross-border opening is not limited by specific requirements (e.g. physical presence, due diligence for AML)

The options mainly address the three first operational objectives above. All options except for the ANP with a portable identifier/alias on top of the IBAN (option 3.2) are likely to be more effective than the current situation in reaching the three operational objectives. Across all switching tools, the **cross-border switching service with centralised governance** (option 1.2), the **automated redirection via account information embedded in error messages** (option 2.2) and the **EU-wide portability of existing IBAN** (option 3.1) would hold the **highest potential to reach these objectives**. A crossborder switching service with centralised governance (option 1.2) would set-up a centralised switching service and simplify and streamline switching across the EU. An automated redirection via account information embedded in error messages (option 2.2) would bring more reassurance to consumers as it would allow that any payments that would be addressed to their old closed account would be redirected to their new account, via the new IBAN communicated in the error messages. An EU-wide portability of existing IBAN (option 3.1) would go a step further by allowing consumers to keep their current IBAN when they switch. Although this would considerably simplify switching, with potentially a significant impact on consumers including on their financial awareness, it would also bring additional complexity for PSPs. Furthermore, the implementation of the automated redirection tools would be considered to have roughly the same potential effectiveness whether they are implemented at domestic or EU level. It should be noted that the assessment considers only the

effectiveness of the redirection service in itself and any of the options under this tool would need to be implemented building on the existing national switching services or on a new cross-border switching service.

To ensure that the options achieve the intended impacts pursued by this study, some extrinsic key requirements are important to keep in mind. These would also tackle the other operational objectives identified in this study, which were not considered as part of the effectiveness assessment (i.e. operational objective 4 and 5 above). First, an **effective communication campaign** would need to communicate the right to use the implemented switching tools, their advantages and their different features. Second, clear procedures should be put in place to ensure that consumers have a **recourse** in case they experience issues when using the different tools. Third, measures should be deployed to ensure that prohibition of **IBAN discrimination** is actively enforced throughout the EU. Fourth, a new right of **access to transactions history** linked to the previous account would remove an obstacle to switching for consumers while making the process more transparent.

Efficiency analysis

From an efficiency point of view, all policy options considered in this study are expected to bring benefits. However, the estimated costs required to reach these benefits are significant and recurrent costs are greater than the recurrent benefits not mentioning the substantial one-off costs, which indicates that **none of the options designed in this study are viable from a costs and benefits standpoint**. Moreover, the study also assessed the sensitivity of the costs and benefits to the switching rate estimates and concluded that only options under Switching Tool 1, and options 3.1 and 3.3 could have benefits that outweigh the costs, but it would require switching rates several times higher than the best estimates to achieve this and break even.

The efficiency analysis also demonstrated that the investments and costs for the domestic and EU-level implementation of automated redirection of payments would be similar in both cases, however the EUlevel implementation would bring more benefits as it would facilitate cross-border switching and reach a broader consumer base. Therefore, although they involve more complexity in view of the feasibility analysis, the EU-level options are more cost-effective than the domestic ones.

Furthermore, this study considered separately the costs and benefits of the different options as if they would include micro-enterprises and self-employed in their scope. However, the feedback received from this group of small businesses revealed that improving switching domestically or cross-border is not a priority for them as the interest for these tools would be rare and limited to a very small share of this group who would need to be relocated.

It should also be highlighted that switching tools could be extendible to other banking products. For instance, in Belgium the switching service also applies to savings accounts. These services could potentially have a broader impact on the identified general objectives and would also involve other costs and benefits, but the scope of this study was limited to switching payment accounts.

It should also be noted that not all the benefits could be quantified as part of the efficiency assessment. A number of **qualitative advantages**, such as benefits stemming from an increased competition in the EU payment accounts market should not be overlooked even if they cannot be translated into monetary benefits. For instance, higher competitive pressure across the EU would likely and ultimately incentivise PSPs to offer better quality services or lower prices to consumers in order to acquire/retain them.

Conclusions

In view of the assessment, it appears that the **cross-border switching service with a centralised governance** (option 1.2), the **automated redirection via IBAN embedded into error messages** (option

2.2) and the **EU-wide portability of existing IBANs** (option 3.1) would hold the highest potential in view of their feasibility and effectiveness. However none of the options assessed in this study would be viable from an efficiency standpoint. Although the tools for ANP would raise the level of ambition to facilitate switching in the EU, they come with high levels of complexity and high implementation and running costs compared to their expected benefits. Finally, the assessment also showed that some of the options would probably not be viable as they presented important shortcomings, which is the case of the automated redirection via a Central clearing house (option 2.3) and the portable identifier/alias on top of the IBANs (option 3.2).

Résumé analytique

Introduction

Ce document constitue le rapport final de l'« Étude sur différents outils visant à faciliter le changement et l'ouverture transfrontalière de comptes de paiement sur le marché des comptes de paiement au sein de l'Union Européenne (UE) ». Cette étude est réalisée par Deloitte pour le compte de la Direction Générale Stabilité financière, services financiers et union des marchés des capitaux (DG FISMA) et de la Direction Générale Justice et Consommateurs (DG JUST).

Au sens de l'article 26(2) du Traité sur le Fonctionnement de l'Union Européenne (TFUE), le marché intérieur comprend un espace sans frontière intérieure dans lequel la libre circulation des biens, personnes, services et capitaux est assuré. Le bon fonctionnement du marché intérieur et le développement d'une économie moderne et socialement inclusive dépendent de plus en plus de l'accès universel aux services de paiement.

Dans cette optique, la Directive sur la comparabilité des frais liés aux comptes de paiement, le changement de compte de paiement et l'accès à un compte de paiement assorti de prestations de base (la « Directive PAD ») est entrée en vigueur en 2014. Elle envisage trois objectifs principaux pour lesquels des mesures législatives ont été prises :

- Permettre aux consommateurs de comparer les frais liés aux comptes de paiement
- Permettre aux consommateurs de changer facilement de compte de paiement
- Permettre à tous les consommateurs de l'UE un accès à un compte de paiement assorti de prestations de base

En se basant sur le cadre législatif existant et les différentes pratiques des États Membres, cette étude vise à fournir des données qualitatives et quantitatives sur la faisabilité du développement et de la mise en œuvre de nouveaux outils visant à faciliter le changement et l'ouverture transfrontalière de comptes de paiement. Afin d'atteindre cet objectif général, cette étude a évalué trois types d'outils différents, en poursuivant les trois objectifs spécifiques suivants :

- Identifier des options pour concevoir un **service transfrontalier de changement de comptes** (Outil 1) permettant aux consommateurs de changer de comptes de paiements entre les États Membres.
- Identifier des options pour mettre en œuvre un **service de redirection automatisé des paiements** (Outil 2), plus spécifiquement :
    - Un système permettant la redirection automatisée de paiements entre deux comptes dans le même État Membre ; et
    - Un système permettant la redirection automatisée de paiements entre deux comptes dans deux États Membres différents.
- Identifier des options pour permettre la **portabilité des numéros de compte à l'échelle de l'UE** (Outil 3).

Huit options ont été développées dans le cadre de ces différents outils et analysées sur la base de leur faisabilité ainsi que de leur efficacité et de leur efficience. Cette étude a également analysé l'offre et la demande pour l'ouverture transfrontalière et le changement de comptes de paiement dans l'UE. En général, cette étude présente les options qui pourraient être envisagées afin de faciliter le changement transfrontalier de compte de paiement au sein de l'UE.

Méthodologie et portée de l'étude

Plusieurs techniques de collection de données ont été utilisées dans le cadre de cette étude, notamment de la recherche documentaire, des études de cas, des entretiens, des sondages ainsi qu'un atelier de validation.

L'équipe a conduit **10 études de cas** afin d'analyser les pratiques existantes en matière de changement de comptes de paiement, de redirection automatisée et de portabilité des numéros de compte au niveau national. Ces études de cas sont basées sur le modèle « **GOFA** » (Gouvernance, Opérations, Finances et Architecture). Cette approche a permis à l'équipe d'assurer une certaine cohérence entre les différents cas et in fine d'identifier une série d'options pour chacun des trois outils de changement de compte mentionnés ci-haut.

En plus du modèle GOFA, une **approche en entonnoir** a été utilisée afin de sélectionner les options les plus pertinentes pour chacun des trois outils. Pour cela, les avantages et inconvénients ont été étudiés sur la base des informations et données collectées, ainsi que de jugement d'experts. Entre autres, un atelier virtuel a été réalisé, rassemblant les experts techniques et juridiques de l'équipe en matière de systèmes de paiement de l'UE, afin de discuter et d'analyser les principaux bénéfices et lacunes des options préliminaires identifiées.

Après l'analyse des avantages et inconvénients, il a été décidé qu'il était pertinent de retenir toutes les options préliminaires afin de les analyser plus en profondeur. Plus précisément, l'équipe considéra qu'une étude plus approfondit de toutes ces options, en termes d'impacts pour les parties prenantes, de faisabilité, de coûts et de bénéfices, ainsi que d'efficacité et d'efficience était nécessaire avant de les écarter.

L'équipe a alors conduit une analyse de **faisabilité**, d'**efficacité** et d'**efficience** des huit options et a tiré des conclusions et des point clés à retenir.

Afin de collecter les données nécessaires pour conduire l'étude, les activités de collection de données suivantes ont été réalisées :

- Une **première enquête en ligne** visant les consommateurs (autant les personnes physiques que les propriétaires de micro-entreprises et travailleurs indépendants) et portant sur l'offre et la demande d'ouverture transfrontalière de comptes de paiement et sur les problèmes liés au changement de comptes.
- Une série d'**entretiens** portant sur l'offre et la demande ainsi que sur les pratiques existantes, afin de réaliser les études de cas. Ces entretiens ont été menés avec des parties prenantes telles que des prestataires de services de paiements (PSPs) et les associations qui les représentent, des organisations gérant les changements de compte au niveau national, des autorités nationales compétentes, des associations de consommateurs, des associations représentant des entreprises ainsi que des micro-entreprises et travailleurs indépendants.
- Une **seconde enquête** en ligne portant sur les coûts et bénéfices des options ainsi que sur leurs faisabilité et efficacité. Cette enquête a été segmentée, adaptée et partagée avec cinq différents groupes de parties prenantes : associations de PSPs, associations de consommateurs, associations d'entreprises, représentants de micro-entreprises et de travailleurs indépendants, et autorités nationales compétentes.

- **Appels de suivis** avec les répondants ayant participé à la seconde enquête en ligne et qui ont consenti à être recontactés.
- **Recherche documentaire** (incluant la revue de littérature et de données statistiques).
- **Consultation d'experts** dans le domaine des paiements et d'architecture bancaire en matière de technologies de l'information (TI).
- Un **atelier de validation** avec des représentants de chaque groupe de parties prenantes.

La portée de cette étude s'étend à tous les comptes de paiements pour les consommateurs (en Euro et en d'autres monnaies des États Membres de l'UE), ainsi que les comptes de paiements pour les travailleurs indépendants et micro-entreprises, même si ces derniers ne sont pas, à ce jour, couverts par la Directive PAD. Ces derniers ont été inclus dans le champ de l'étude afin d'analyser si leurs bénéfices potentiels, si jamais ils devenaient éligibles à ces nouveaux outils, seraient assez significatifs pour que la Commission envisage une possible extension de la portée du chapitre III de la Directive PAD à ces groupes.

En termes de portée géographique, l'étude couvre tous les États Membres de l'UE-27 et comprend donc aussi bien les États membres de la zone Euro que les États qui ont une autre monnaie que l'Euro. L'étude comprend aussi une série d'études de cas sur des pratiques existantes en terme de changement de comptes, de redirection automatisée des paiements et de portabilité des numéros de comptes. Celles-ci ont été réalisées dans 10 pays : la Belgique, la Bulgarie, l'Espagne, la France, l'Italie, l'Irlande, les PaysBas, la Suède ainsi que le Royaume-Uni.

Résultats et conclusions de l'étude

Offre et demande d'ouverture et de changement transfrontaliers de comptes de paiements

Comprendre la perspective des consommateurs est une étape primordiale afin d'analyser les besoins et la pertinence des options conçues dans cette étude. Ainsi, avant même de développer les options pour chaque outil facilitant le changement de comptes, il a été nécessaire d'analyser la demande des consommateurs pour l'ouverture transfrontalière de comptes de paiements. L'offre et la demande pour ce service ont été examinées séparément pour les consommateurs privés ainsi que pour les travailleurs indépendants et micro-entreprises.

L'étude a démontré que les consommateurs « mobiles » (consommateurs qui ont, à un certain moment dans leur vie, vécu dans un autre État Membre de l'UE ou qui y vivent encore, peu importe le motif) sont les plus susceptibles d'être intéressés par l'ouverture transfrontalière de comptes de paiement. Les principaux facteurs derrière cet intérêt sont la proximité avec leur nouveau PSP et le besoin d'effectuer des transactions locales. L'étude a aussi démontré que la principale motivation pour les consommateurs « nonmobiles » d'ouvrir un compte de paiement dans un autre État Membre serait de bénéficier de frais moins élevés. Cependant, la demande auprès de ces consommateurs est très limitée, considérant certains inconvénients tels que la barrière de la langue, la distance, et parfois, le besoin d'être physiquement présent à la succursale afin d'ouvrir un compte. L'analyse de la demande a également démontré qu'un nombre d'obstacles pouvaient aussi empêcher les consommateurs de changer de compte, tels que la peur de frais additionnels dans le cas où un paiement est rejeté ou est dirigé vers l'ancien compte, ainsi que l'incertitude dans le cas où les identifiants de compte ne sont pas mis à jour partout où ils devraient l'être une fois le changement effectué. L'importance de ces obstacles indique l'intérêt des outils de redirection et de portabilité.

Même si les micro-entreprises et travailleurs indépendants ne sont actuellement pas inclus dans le champ de la Directive PAD, cette étude a aussi analysé l'offre et la demande pour ce segment. Il est apparu que la demande pour ces services serait très restreinte et limitée à ceux qui auraient le besoin de se relocaliser dans un autre État Membre. Et encore, lorsque c'est le cas, ils préfèreraient plutôt ouvrir un compte dans ce pays et laisser leur compte existant ouvert, plutôt que de bénéficier d'un changement de compte, afin d'éviter les tracas et les risques associés à des paiements qui seraient dirigés par erreur vers l'ancien compte. Même s'ils reconnaissent que les outils de changement, de redirection et de portabilité peuvent être utiles dans les rares cas où ils en ont besoin, les entretiens ont révélé une inquiétude de la part de ces associations professionnelles. En effet, celles-ci craignent que si les PSPs devaient obligatoirement offrir ces services, leurs coûts se répercuteraient indirectement sur leurs frais de comptes ou de transactions, lesquels représentent déjà un enjeu majeur pour leurs membres.

À la fois, l'ouverture transfrontalière de comptes de paiement implique certains défis pour les PSPs, en particulier en ce qui relève du respect des règles en matière de lutte contre le blanchiment d'argent et financement du terrorisme (AML/CFT), et d'autres obligations légales. À cet effet, l'identification à distance des clients représente une difficulté pour les PSPs en matière d'ouverture transfrontalière. Cependant, les nouvelles technologies offrent des opportunités aux PSPs afin d'adapter leur procédure d'ouverture de compte et de permettre l'ouverture à distance.

Lors de l'analyse de la demande, l'équipe a aussi mesuré la demande potentielle pour les différents outils évalués dans cette étude, en se basant sur la meilleure estimation possible. Selon cet exercice, dans l'UE, environ **3.1 millions de consommateurs** pourraient utiliser annuellement un **service transfrontalier de changement** de comptes de paiement, et environ **4.5 millions** pourraient utiliser annuellement un tel service permettant une **redirection automatisée des paiements** ou la **portabilité des numéros de compte**.

En ce qui a trait aux micro-entreprises et travailleurs indépendants dans l'UE, l'équipe a estimé qu'environ **46 000** pourraient utiliser annuellement un **service transfrontalier de changement** de comptes de paiement, et environ **66 000** pourraient utiliser annuellement un tel service permettant une **redirection automatisée des paiements** ou la **portabilité des numéros de compte**.

Les outils facilitant le changement de compte et leur faisabilité

Différentes options ont été développées pour chacun des outils sur la base de l'analyse de l'offre et la demande ainsi que des études de cas sur les pratiques existantes. Cette étude a abouti à **huit options** :

Pour le service transfrontalier de changement de comptes, deux options ont été développées :

- Option 1.1 Service transfrontalier de changement de compte basé sur une gouvernance décentralisée
- Option 1.2 Service transfrontalier de changement de compte basé sur une gouvernance centralisée

Pour la redirection automatisée des paiements, cette étude a développé trois options :

- Option 2.1 Redirection automatisée des paiements basées sur un registre central
- Option 2.2 Redirection automatisée des paiements via l'intégration des coordonnées de compte dans les messages d'erreur
- Option 2.3 Redirection automatisée des paiements via une chambre centrale de compensation

Enfin, cette étude présente trois options pour la portabilité des numéros de compte à l'échelle de l'UE :

- Option 3.1 Portabilité des IBAN existants à l'échelle de l'UE
- Option 3.2 Portabilité d'identifiants/alias associés à des IBAN
- Option 3.3 Nouveaux numéros de compte portables tout au long de la chaine de paiements (remplaçant les IBAN actuels)

Cette étude a analysé la faisabilité de ces huit options des points de vue légal, technique et opérationnel, et a ensuite évalué leur potentielles efficacité et efficience.

L'analyse de faisabilité a révélé que **toutes les options identifiées sont faisables, toutefois avec différentes implications légales, techniques et opérationnelles, et différents niveaux de complexité**. Parmi les options pour un service transfrontalier de changement de compte (Outil 1), un système basé sur une gouvernance centralisée (option 1.1) impliquerait un processus plus simplifié qu'un système basé sur une gouvernance décentralisée impliquant des points de contact nationaux. Toutefois, même si l'utilisation d'une plateforme européenne simplifierait considérablement le processus de

changement pour les PSPs, cela impliquerait une transformation plus radicale en matière d'informatique pour les différentes parties prenantes.

En ce qui a trait à la redirection automatisée des paiements (Outil 2), les options présentent différentes implications pour les PSPs. Un registre central (option 2.1) impliquerait d'importantes adaptations d'un point de vue informatique afin que les PSPs intègrent les tableaux de redirection dans leurs systèmes de routage, mais cela impliquerait un processus de redirection simple car la redirection se produirait avant même que le paiement ne soit échangé entre les PSPs. La redirection via l'information de compte intégrée dans les messages d'erreur (option 2.2) nécessiterait que les PSPs gardent une trace des IBANs de leurs anciens clients pour une durée de 13 mois après leur changement de compte et effectuent la redirection sur la base des messages d'erreur lorsqu'un paiement est dirigé vers un compte fermé. Cet aspect impliquerait une certaine lourdeur pour les PSPs, néanmoins cette option implique de moins importants changements d'infrastructure puisque les messages d'erreur existent déjà et n'auraient qu'à être adaptés pour inclure un nouveau champ. Une redirection automatisée basée sur une chambre de compensation centrale (option 2.3) impliquerait d'externaliser la fonction de redirection à la chambre de compensation centrale qui serait chargée de compiler les informations de changement de compte, de rediriger les paiements à la bonne institution de compensation et d'informer les PSPs lorsqu'une redirection a été effectuée. Théoriquement, cette option simplifierait significativement la redirection pour les PSPs. Cependant, elle implique un certain nombre de défis et d'inconvénients puisqu'elle nécessiterait que la chambre de compensation centrale intègre tous les accords de compensation et de correspondance bancaires. La chambre de compensation centrale deviendrait également une composante critique de la chaine de paiement, recevant un très haut volume de transactions, ce qui représenterait un risque élevé de point unique de défaillance. L'étude a aussi démontré que la mise en œuvre au niveau national de ces options serait davantage faisable et moins complexe qu'à l'échelle de l'UE pour une redirection transfrontalière.

Les options de portabilité des numéros de compte (Outil 3) simplifieraient considérablement le processus de changement de comptes pour les consommateurs et pour les créanciers et débiteurs. Toutefois, leur mise en œuvre serait très complexe. Ces options impliqueraient le même niveau de complexité que les options 1.2 et 2.1, puisqu'elles impliqueraient la mise en place d'une plateforme européenne et d'un registre central à la base du processus de changement de compte et de routage des paiements. La portabilité des IBAN existants à l'échelle de l'UE (option 3.1) permettrait aux consommateurs de garder leur numéro de compte actuel lorsqu'ils changeraient de compte et éviterait que les créanciers et débiteurs n'aient à être notifiés d'un nouveau numéro de compte. La mise en œuvre de cette option serait beaucoup plus simple que celle d'identifiants/alias portables associés à des IBAN (option 3.2) et celle des nouveaux numéros de compte portables tout au long de la chaine de paiements (option 3.3), car elle ne nécessiterait aucune période de transition vers un nouvel identifiant. En outre, l'usage d'alias (option 3.2) poserait des risques de sécurité remettant en cause la robustesse de cette option, puisque les alias ne pourraient comprendre les contrôles de sécurité intégrés que contiennent les IBAN. Le fait que les alias préexistants (ex. adresse courriel) seraient liés à un fournisseur remet aussi en cause l'objectif même de la portabilité, puisqu'il lierait les consommateurs à ces fournisseurs.

Analyse d'efficacité des options

L'analyse d'efficacité des options est basée sur l'arbre des objectifs développé dans la première phase de cette étude. Il est important de noter que les options ne visent pas à augmenter dans l'absolu le nombre de changements de compte, mais plutôt à faciliter le changement de compte pour les consommateurs. L'objectif spécifique identifié dans cette étude est donc d'assurer que « **les opportunités pour changer et ouvrir des comptes de paiement sont pleinement saisies (à l'échelle domestique et transfrontalière)** ». Les objectifs opérationnels visent à réduire les obstacles existants et à apporter des solutions aux problèmes associés au changement et à l'ouverture de comptes de paiements. Même si l'étude présume que la mise en place des outils déclencherait une légère augmentation des taux de changement de compte, une telle augmentation ne constitue pas un objectif en soi.

L'analyse de l'efficacité des options est basée sur leur potentiel d'atteindre les objectifs opérationnels suivants :

1) Un système efficace et efficient facilitant le changement de compte transfrontalier à travers l'UE
2) Une sécurité juridique pour les opérateurs économiques, PSPs et consommateurs lors de l'ouverture et du changement transfrontalier de comptes
3) Risques évités de paiement rejeté durant et après le processus de changement de comptes
4) Des consommateurs conscients et bien informés de la possibilité et des avantages liés à l'ouverture et au changement transfrontalier de comptes
5) L'ouverture transfrontalière de compte n'est pas entravée par des exigences spécifiques (ex. présence physique, diligence raisonnable pour prévenir le blanchiment d'argent)

Les options développées dans cette étude visent principalement les trois premiers objectifs opérationnels ci-haut. Toutes les options, à l'exception de la portabilité des identifiants/alias en complément de l'IBAN (option 3.2), sont susceptibles d'être plus efficaces que la situation actuelle pour atteindre ces trois objectifs. Parmi l'ensemble des outils de changement de compte, le **service transfrontalier de changement de compte basé sur une gouvernance centrale** (option 1.2), la **redirection automatisée via l'intégration des coordonnées de compte dans les messages d'erreurs** (option 2.2) ainsi que la **portabilité des IBAN existants à l'échelle de l'UE** (option 3.1) sont celles qui présentent **le plus haut potentiel** pour atteindre ces objectifs. L'option 1.2 établirait un service centralisé de changement de compte et simplifierait la procédure de changement au travers de l'UE. L'option 2.2 apporterait davantage de tranquillité d'esprit aux consommateurs car elle permettrait que les paiements adressés aux anciens comptes soient redirigés vers leur nouveau compte via le nouvel IBAN intégré dans le message d'erreur communiqué au PSP ayant lancé le paiement. L'option 3.1 couvrirait une étape supplémentaire en permettant aux consommateurs de garder leur IBAN actuel lorsqu'ils changent de compte. Toutefois, même si cela simplifierait considérablement la procédure de changement de compte, cette option implique beaucoup de complexité pour les PSPs. Quant à elles, les options de redirection automatisée seraient considérées comme ayant relativement le même potentiel en termes d'efficacité, peu importe si elles sont mises en œuvre à l'échelle nationale ou celle de l'UE. Il est à noter que l'analyse ne considère que l'efficacité de la redirection en soi. En d'autres termes, ces options devraient être implémentées en s'appuyant sur les services nationaux de changement de compte existants ou sur un nouveau service transfrontalier à créer.

Afin d'assurer que les options atteignent les objectifs identifiés dans cette étude, il convient de mentionner certains facteurs importants qui sont extrinsèques à l'analyse d'efficacité et d'efficience. Ces facteurs affecteraient également les objectifs opérationnels qui n'étaient pas concernés par cette analyse d'efficacité (objectifs opérationnels 4 et 5 ci-avant). Premièrement, une **campagne de communication efficace** devrait promouvoir le droit des consommateurs d'utiliser les outils facilitant le changement de compte ainsi que leurs avantages et différentes fonctionnalités. Deuxièmement, des procédures claires devraient être mises en place pour assurer que les consommateurs aient différents **recours** en cas de problèmes lorsqu'ils utilisent les différents outils. Troisièmement, des mesures devraient être déployées afin d'assurer que

l'interdiction de **discrimination sur la base de l'IBAN** soit respectée au sein de l'UE. Quatrièmement, assurer que **les consommateurs aient le droit d'accéder à l'historique de transactions** de leur compte d'origine enlèverait un des obstacles au changement de comptes, tout en rendant le processus plus transparent.

Analyse d'efficience des options

Du point de vue de l'efficience, cette étude démontre que toutes les options considérées apporteraient des bénéfices. Toutefois, les coûts estimés pour générer ces bénéfices sont significatifs. En se basant sur les estimations des taux de changement de compte présentées dans cette étude, les coûts récurrents de toutes les options sont significativement plus importants que leurs bénéfices, sans mentionner les investissements substantiels qu'elles nécessiteraient, ce qui indique qu'**aucune des options développées dans cette étude n'est viable d'un point de vue des coûts et bénéfices**. L'étude s'est aussi penchée sur la sensibilité des coûts et bénéfices aux niveaux de taux de changement de compte estimés. Cette analyse a conclu que seules les options pour le premier outil (option 1.1 et 1.2) ainsi que les options 3.1 et 3.3 pour le troisième outil pourraient atteindre leur seuil de rentabilité et avoir des bénéfices plus importants que les coûts, cependant avec des taux de changement de compte beaucoup plus élevés que les plus hautes estimations retenues dans cette étude.

L'analyse d'efficience a également démontré que les investissements et les coûts de la redirection automatisée pour une mise en œuvre domestique seraient semblables à ceux liés à une mise en œuvre à l'échelle de l'UE. Toutefois, cette dernière apporterait des bénéfices beaucoup plus importants, puisqu'elle s'appliquerait à un plus grand nombre potentiel de consommateurs. Ainsi, même si elles impliqueraient plus de complexité en termes de faisabilité, les options de redirection automatisée à l'échelle de l'UE seraient plus rentables que si elles étaient mises en œuvre au niveau national.

En outre, cette étude a estimé séparément les coûts et bénéfices des différentes options, selon que les micro-entreprises et travailleurs indépendants étaient inclus ou non dans le champ. Toutefois, les informations fournies par ce groupe de professionnels ont révélé que l'amélioration et la facilitation du changement de compte, autant domestique qu'à l'échelle de l'UE n'était pas une priorité pour eux, puisque l'intérêt pour ces outils serait limité à un très petit nombre d'entre eux qui auraient besoin de se relocaliser.

Il est aussi à noter que les outils facilitant le changement pourraient être utilisés pour d'autres produits financiers. Par exemple, en Belgique, le service de changement de comptes s'applique aussi aux comptes d'épargne. Ces services pourraient potentiellement avoir un impact plus large sur les objectifs identifiés et pourraient aussi impliquer d'autres coûts et bénéfices. Cependant, la portée de cette étude se limitait au changement de comptes de paiement.

Il est également intéressant de mentionner que tous les bénéfices ne pouvaient pas être quantifiés et inclus dans l'analyse de l'efficience. Un certain nombre d'avantages qualitatifs, tels que les bénéfices qui seraient générés par une augmentation de la concurrence sur le marché des comptes de paiements de l'UE ne doivent pas être négligés, même s'ils peuvent difficilement être monétisés. Par exemple, une plus grande pression concurrentielle à travers l'UE serait susceptible d'inciter les PSPs à offrir aux consommateurs des services de meilleure qualité et pour des prix plus bas afin de les attirer et/ou de les retenir.

Conclusions

Au vu de cette étude, il apparait que le **service transfrontalier de changement de compte basé sur une gouvernance centralisée** (option 1.2), la **redirection automatique via l'information de compte intégrée dans les messages d'erreur** (option 2.2) ainsi que la **portabilité des IBAN existants à l'échelle de l'UE** (option 3.1) présentent le plus haut potentiel au vu de leur faisabilité et de leur efficacité. Cependant, aucune des options présentées dans cette étude ne serait viable sur le plan de l'efficience. En

ce qui concerne les outils de portabilité des numéros de compte (outils 3), ceux-ci élèveraient le niveau d'ambition pour faciliter le changement de comptes dans l'UE. Toutefois, ils viendraient avec une grande complexité et des coûts de mise en œuvre importants comparativement à leurs bénéfices. Finalement, l'analyse a démontré que certaines options ne seraient probablement pas viables puisqu'elles présentent des lacunes importantes et des inconvénients majeurs. C'est le cas de la redirection automatisée via une chambre centrale de compensation (option 2.3) ainsi que de la portabilité des identifiants/alias en complément des IBAN (option 3.2).

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1 Introduction

1.1. Purpose of the document

This document constitutes the Final Report of the "Study on tools designed to facilitate switching and cross-border opening of payment account on the EU payment accounts market", that Deloitte is carrying out for the European Commission, Directorate General for Financial Stability, Financial Services and Capital Markets Union (DG FISMA) and Directorate General for Justice and Consumers (DG JUST).

The purpose of this report is to present the final findings of the study. It summarises the state of play with regards to switching and cross-border opening of payment accounts, including the analysis of the demand and supply for these services. It also describes the policy options in detail including their expected impacts and feasibility, as well as the assessment of their effectiveness and efficiency. Lastly, the report brings forward its conclusions and lessons learnt.

1.2. Structure of the document

This report is structured as follows:

- Section 1: *Introduction* presents the purpose and structure of this Final Report of the study;
- Section 2: *Our methodology* outlines the methodological approach applied during the assignment;
- Section 3: *State of play overview* describes the analysis of the demand and supply for cross-border opening of accounts;
- Section 4: *Presentation of the policy options* includes a detailed description of the options, including the different implications for the stakeholder groups, and their legal, operational, and technical implications;
- Section 5: *Assessment of the options* describes the effectiveness and efficiency assessments of the options;
- Section 6: *Conclusions and lessons learnt* summarises the main conclusions and lessons learnt of the study, indicating the preferred options within each switching tool, in view of the different assessments.

This report also includes five Annexes, which contain details on:

- Annex A: *Abbreviations*
- Annex B: *Consulted stakeholders*
- Annex C: *Use cases for cross-border opening of payment accounts*
- Annex D: *Results of the consumer survey on cross-border opening and switching of bank accounts*
- Annex E: *Policy options: Detailed workflows*
- Annex F: *Problem definition*
- Annex G: *Note on calculation methods and assumptions*

2 Our methodology

This section briefly presents the methodology applied during this phase, as well as the data collection activities conducted.

2.1. Methodological approach and tools

The purpose of this assignment was to identify and assess a number of options to facilitate the switching of payment accounts (see definition in section 2.2 on the scope of the study) in the EU. Three different types of switching tools were assessed, with the following objectives:

- Identifying options for designing a **cross-border switching service** allowing consumers to switch payment accounts across Member States (Switching tool 1).
- Identifying options for implementing an **automated redirection of payments** (Switching tool 2), more specifically:
  - A system allowing automated redirection of payments between two payment accounts within the same Member State;
  - A system allowing automated redirection of payments between two payment accounts in two different Member States.
- Identifying options for implementing an **EU-wide portability of payment account numbers** (Switching tool 3).

The study team conducted 10 case studies to analyse existing practices of domestic switching, automated redirection and account number portability (ANP). These were developed based on the GOFA (Governance, Operations, Financing and Architecture) framework. This approach allowed the study team to ensure consistency across the three tools. Building on this approach, it identified several options under each of the three tools.

Besides the GOFA framework, the study team applied a funnelling approach in order to shortlist the most relevant options under each switching tool. For this purpose, the pros and cons were studied taking into account the feedback gathered during the data collection activities, as well as based on expert judgement. Concerning the latter, we organised an internal virtual workshop with the study's experts on EU payment systems and legal matters in order to discuss and assess together the main benefits and weaknesses of the preliminary options identified.

After studying the pros and cons of the identified options, it was decided, together with the European Commission, to keep all of them for further assessment. It was considered that a careful examination of all the options, in terms of implications for the stakeholders, feasibility, costs and benefits, and effectiveness was necessary before any could be disregarded.

The study team then conducted an analysis of the feasibility, effectiveness and efficiency of the eight policy options and outlined conclusions and key takeaways.

To collect the data needed to carry out the assignment, the following data collection activities were used:

- A first online survey of consumers (both private and owners of micro enterprises and self-employed), focusing on the supply and the demand for cross-border opening of accounts and on issues related to switching (hereafter "the first online survey").
- Interviews to deep dive on the supply and the demand, as well as to build the case studies (including PSPs and their associations, switching service organisations, national competent authorities, consumer organisations, business associations and associations representing micro enterprises and self-employed);
- A second online survey focusing on the costs and benefits of the options, as well as on their feasibility and effectiveness (hereafter "the second online survey"). This survey was adapted to and shared with five different stakeholders: PSP associations, consumer associations, business associations, representatives of micro-enterprises and self-employed, and national competent authorities;
- Follow-up calls with survey respondents who agreed to be re-contacted;
- Desk research (including literature review and existing statistical data);
- Consultation of experts in the domain of payments and banking IT architecture; and A validation workshop with representatives of stakeholders.

2.2. Scope of the study

As part of this study, switching is defined following the definition provided in Article 2 (18) PAD:

"Switching" or "switching service" means, upon a consumer's request, transferring from one payment service provider to another either the information about all or some standing orders for credit transfers, recurring direct debits and recurring incoming credit transfers executed on a payment account, or any positive payment account balance from one payment account to the other, or both, with or without closing the former payment account.

This study focuses on all payment accounts for consumers (whether in Euro or in another official currency of an EU Member State), as well as payment accounts for self-employed and micro enterprises, although they are not currently covered by the PAD. The aim was to assess whether the potential benefits for selfemployed and micro enterprises, if they would also be eligible to these new tools, would be significant enough for the Commission to consider expanding the scope of chapter III of the PAD to small businesses. Therefore, the assessment presents separately the data and analysis with regards to micro-enterprises and self-employed specifically. In terms of geographical scope, the study covers the EU-27. It focuses both on Member States that are part of the Eurozone and Member States whose currency is not the Euro. The study also conducted case studies on national practices of switching, automated redirection and ANP covering 10 countries: Belgium, Bulgaria, France, Germany, Italy, Ireland, Spain, The Netherlands, Sweden, and the United Kingdom.

2.3. Limitations of this study

In terms of challenges and limitations of the study, a few elements should be highlighted especially with regards to the first and second online surveys and to the assessment of costs and benefits.

The purpose of the first survey was to assess the demand for cross-border opening of payment accounts and identify related challenges, barriers and needs. The survey aimed to define the type of demand and the motivation for it, confirming the initial qualitative assumptions developed by the study. The target audience identified for this activity consisted mainly of mobile consumers, as they are the most susceptible group to

be interested or affected by cross-border opening of payment accounts. Therefore, the survey was disseminated via channels traditionally used by these mobile consumers (e.g. social media, university mailing lists), but also broader channels that do not necessarily distinguish between consumer types (as the survey was targeting all types of consumers, including micro-enterprises and self-employed).

The survey collected 314 replies in total. This response rate entails a margin of error of 5.5% at a 95% confidence level, which is an acceptable one. Nevertheless, this approach also entails a self-selection bias. Therefore, other measures were put in place to counter-balance this issue. When using the input of this survey to analyse the potential demand for cross-border switching, the results were compared with the overall EU population and triangulated with desk research, interview insights and expert judgement.

The second survey was targeted to the main associations representing the different groups of stakeholders identified in this study. It was meant to gather more in-depth insights on the policy options developed by the study. The target audience was the main (national and EU level) associations representing the different types of stakeholder groups (i.e. consumers, economic operators, competent authorities, and micro-enterprises and self-employed). This approach allowed the study team to collect information on a broad stakeholder base in an efficient way.

The study team deployed a number of measures to ensure an acceptable response rate during the summer period. . The survey was shared with many relevant associations, asking to spread it to their members, several reminders via emails were sent, and the timeline was extended to accommodate respondents (in total the survey was available online for eight weeks). These measures enabled key associations to submit their answers to the survey. In total 23 answers were received. As the quantitative data received was scarce and patchy, follow-up calls were scheduled in order to clarify some of the replies from stakeholders, and to try to gather additional figures to feed our assessment of costs and benefits.

Finally, considering that this study is a forward looking exercise meant to assess solutions that do not exist today, information and data on the potential costs and benefits of the different options were scarce and scattered and generally based on – a limited number of - estimations, while the impact of the possible non-financial benefits was difficult to identify and evaluate. Consequently, different sources had to be used and triangulated, and assumptions had to be made, knowing that this incomplete basis could lead to divergent interpretations for the final assessment. Eventually, the final validation workshop also allowed the study team to validate its findings with the stakeholders and, after the validation workshop, they were given the opportunity to provide written feedback, which the study team took into account when outlining its final results.

3 State of play overview

This section presents the supply and demand analysis carried out on cross-border account opening.

3.1. Introduction

As mentioned in the recommendations of the Study on the Payment Accounts Market[2], in order to determine the relevance of the cross-border focus of the activities assessed in this study (cross-border account opening and cross-border switching), it is important to understand the magnitude of the current needs. In this vein, one of the first steps of the current study is to analyse the state of play of the demand and supply of cross-border account opening.

By means of a survey disseminated amongst EU citizens and residents, interviews with different stakeholders both at EU and national level[5] (including industry representatives, consumer representatives and public authorities) and desk research, the study team has collected data to provide a clearer understanding of the demand for and supply of cross-border account opening, and the consequent needs in this area.

3.2. Demand for cross-border account opening

Taking into account the diversity of the payment accounts ecosystem in the EU, the first step to determining the demand and the supply is understanding the most common reasons that would bring a consumer to want to open a payment account across borders and what could be a blocking factor. For this purpose, the study team implemented the *design thinking*[3] methodology to define the key needs[4] and obstacles[5] for opening an account in another country, and to build a number of profiles or "personas"[6] representing the demand side, six in total:

- A student moving temporarily to a new country for his Erasmus;
- An expatriate living in one country and moving to a new one;
- A cross border-worker;
- A curious (deal seeker) consumer;
- A self-employed person moving to a new country, and

[2] Deloitte on behalf of the European Commission (DG FISMA), "Study on the Payment Accounts Market": https://op.europa.eu/en/publication-detail/-/publication/0854f727-6117-11eb-8146-01aa75ed71a1/language-en [5] The interviews at national level were carried out in eight Member States: Belgium, Bulgaria, France, Germany, Italy, Spain, The Netherlands, and Sweden.

[3] Design thinking is a methodology which assesses the needs of the stakeholders involved in a given policy by adopting the perspective and views of a "persona".

[4] The main needs identified were: to carry-out local transactions, to receive better conditions, to have further digital services and to enjoy more proximity. A more detailed explanation is available in Annex C.

[5] The main obstacles identified were: the requirements to open an account, the lack of information and the uncertainty, the fear of administrative burden, and the fear of losing payments (or failed payments). A more detailed explanation is available in Annex C.

[6] A persona is a realistic but fictional user, representing one segment or user group of a targeted audience.

- An owner of a micro-enterprise who does cross-border business.

These personas were built based on the assumptions developed based on the insights collected via desk research and interviews, which were subsequently corroborated by the findings of the first survey. These personas allowed us to establish different use cases to better understand the demand for cross-border opening (and switching) of payment accounts for individuals, self-employed and micro-enterprises[7]. This, in turn, also enabled us to understand the potential supply of such accounts. In fact, as stated in the Payment Account Directive, for PSPs, "entering new markets often entails large investment. Such investment is only justified if the provider foresees sufficient opportunities and a corresponding demand from consumers"[8]. Hence, the supply of cross-border opening of payment accounts is determined by the type of demand.

Based on the interviews conducted, and in line with the personas defined, consumers can be divided into two distinctive groups, namely the "mobile" and the "non-mobile" consumers, with different needs, motivations and challenges. As explained above, the "mobile" and the "non-mobile" personas were built on the data gathered through desk research, interviews, and the first survey.

Box 1 - Mobile vs. Non-mobile consumer

As part of this analysis, mobile consumers are defined as consumers who have, at one point in their lives, lived in another EU Member State, or still are, regardless of the motive (e.g. this might include citizens who have participated in the Erasmus programme, retired in another country, expats, etc.).

Non-mobile consumers, as part of this study, refer to consumers who live in their country of origin and have never lived in another EU Member State.

Eurostat revealed the proportion of the mobile citizens in working age (20 to 64 years old) in 2019 accounted overall for 3.3% of the total EU resident population[9]. This does not take into account Erasmus students younger than 20 years old and people over 64 – including those retiring in other EU countries – which, according to the interviews, were two important consumer profiles to take into account as "mobile consumers".

As for the survey carried out among consumers in the framework of this study (i.e. "the first survey"), it received a high rate of responses from consumers who are currently living in another Member State or who have lived in another Member State at one point in their lives, i.e. respectively 50.64% and 78.03%. As previously mentioned, this first survey mainly targeted mobile consumers, as they represent the group most susceptible to be interested or affected by cross-border opening of payment accounts. Therefore, the high response rate from this stakeholder group allowed to collect valuable data and insights on this group.

As confirmed by the interviews and the first survey, mobile consumers are more likely to want an account cross-border when they move ("significant demand"), whereas the demand from non-mobile consumers is rather found to be very low ("infrequent demand"). The only exception to the latter concerns deal seekers who have an account in an online bank. Based on our first survey 49% of the non-mobile consumers have

[7] A more detailed description of their profiles is available in Annex C.

[8] Payment Account Directive, 2014: https://eur-lex.europa.eu/legalcontent/EN/TXT/HTML/?uri=CELEX:32014L0092&from=en, recital 5.

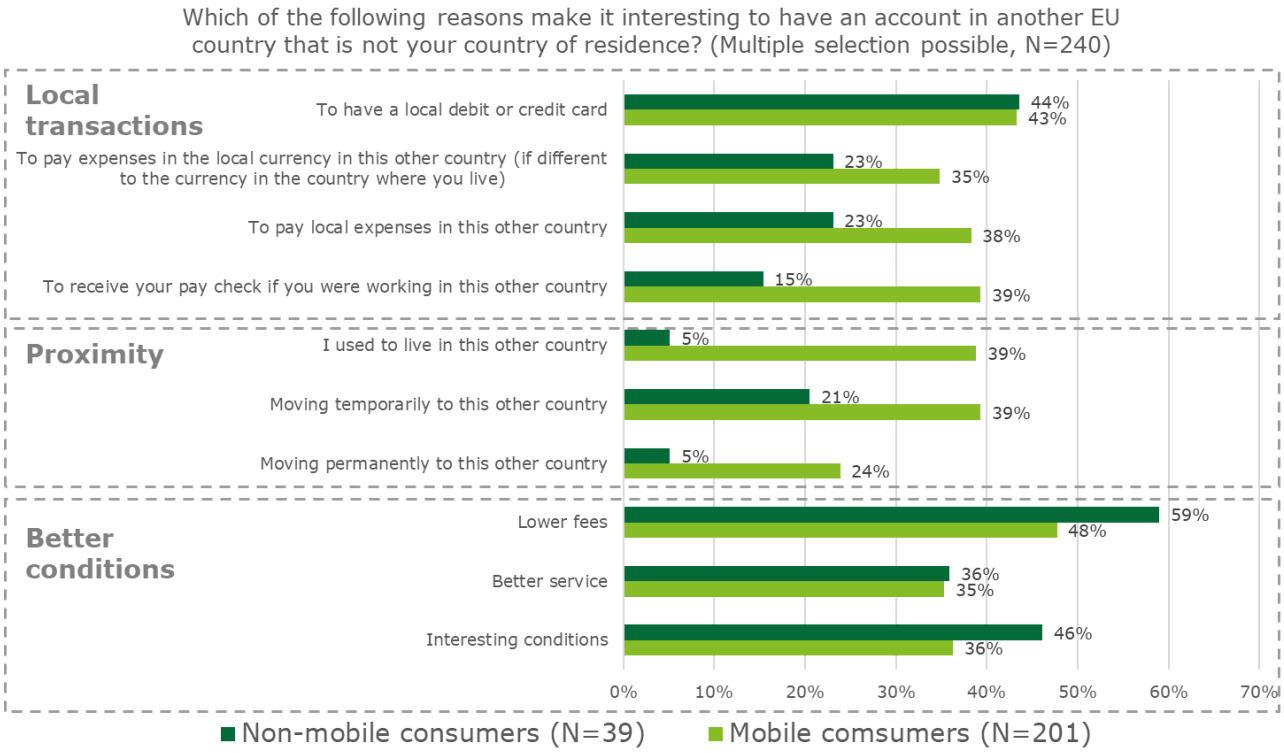
[9] Eurostat, EU citizens living in another Member State - statistical overview, https://ec.europa.eu/eurostat/statisticsexplained/index.php/EU_citizens_living_in_another_Member_State__statistical_overview#Who_are_the_most_mobile_EU_citizens.3F

an account in an "online bank that has no physical location". This percentage is slightly higher for mobile consumers with 62%.These outstandingly high results might be explained by the fact that younger people (18 to 25 and 26 to 35 years old) were over-represented in the survey respondents, compared to other age groups (see Annex D), and by the fact that the survey was disseminated online.

Reasons for cross-border opening of accounts

In the consumer survey, the 240 respondents out of 314 who had declared that they would/could or have been interested in opening an account in another EU country were then asked to select the reasons that make it interesting for them to open an account in another Member State (multi-selection was possible)[10]. Figure 1 shows the results of the question for mobile and non-mobile consumers respectively[11].

Figure 1 - Reasons for opening a bank account in another Member State



Source: Deloitte, based on the first online survey.

The assumptions about the needs of consumers developed in the persona-approach were overall validated by the consumer survey. Among the non-mobile consumers, reasons for the cross-border opening of accounts relating to better conditions (lower fees, better service, interesting conditions) are the ones that were selected by the largest share of respondents. 59% of non-mobile survey participants stated that lower fees make it interesting for them to open an account in another EU Member State. The only exception from

[10] Note that this question was not asked to the full survey sample but only to those respondents who previously stated to show interest in opening an account in another Member State. This applied to 63% of all non-mobile respondents (39 out of 62) and to 82% of all mobile respondents (201 of 245).

[11] To be able to analyse the importance of mobility for the replies to different survey questions, respondents were asked to identify with one of the following situations: "I live in my country of origin and have never lived in another EU country"; "I live in another EU country which is not my country of origin, and I have lived in other EU countries before"; "I live in another EU country which is not my country of origin, and it is the only other EU country I have lived in"; "I live in my country of origin but I have lived in another EU country for some time"; or "I live in my country of origin but I have lived in several other EU countries for some time". All respondents who selected the first statement were labelled as "non-mobile" while the remaining respondents were labelled as "mobile". See Annex D.

this general trend is the fact that a high share of non-mobile consumers indicated to be interested in having a bank account in another MS to have a local debit or credit card (44%). This is a motive that can be attributed to the need category "carry out local transactions".

In line with the assumptions on needs for cross-border opening of the mobile population developed on the persona method, Figure 1 shows that the motives relating to the factors "proximity" and "carrying out local transactions" are more important for the mobile sub-set of respondents than for the non-mobile ones. When consumers move to another country (including daily commuting) to live, work or study, they tend to open a new payment account in order to conduct daily transactions. However, the reason "lower fees" which can be attributed to the need category "better conditions" is the most popular reason for the mobile survey participants as well, albeit being chosen by a lower share compared to the non-mobile respondents (48%). This indicates that mobile consumers can also be "deal-seeking" curious consumers with an interest in opening a bank account in another Member State irrespective of their mobility. This finding stands against the opinion of most interviewees who mentioned that it was not likely for consumers to open an account in another Member State than their country of origin without having a physical link to this country.

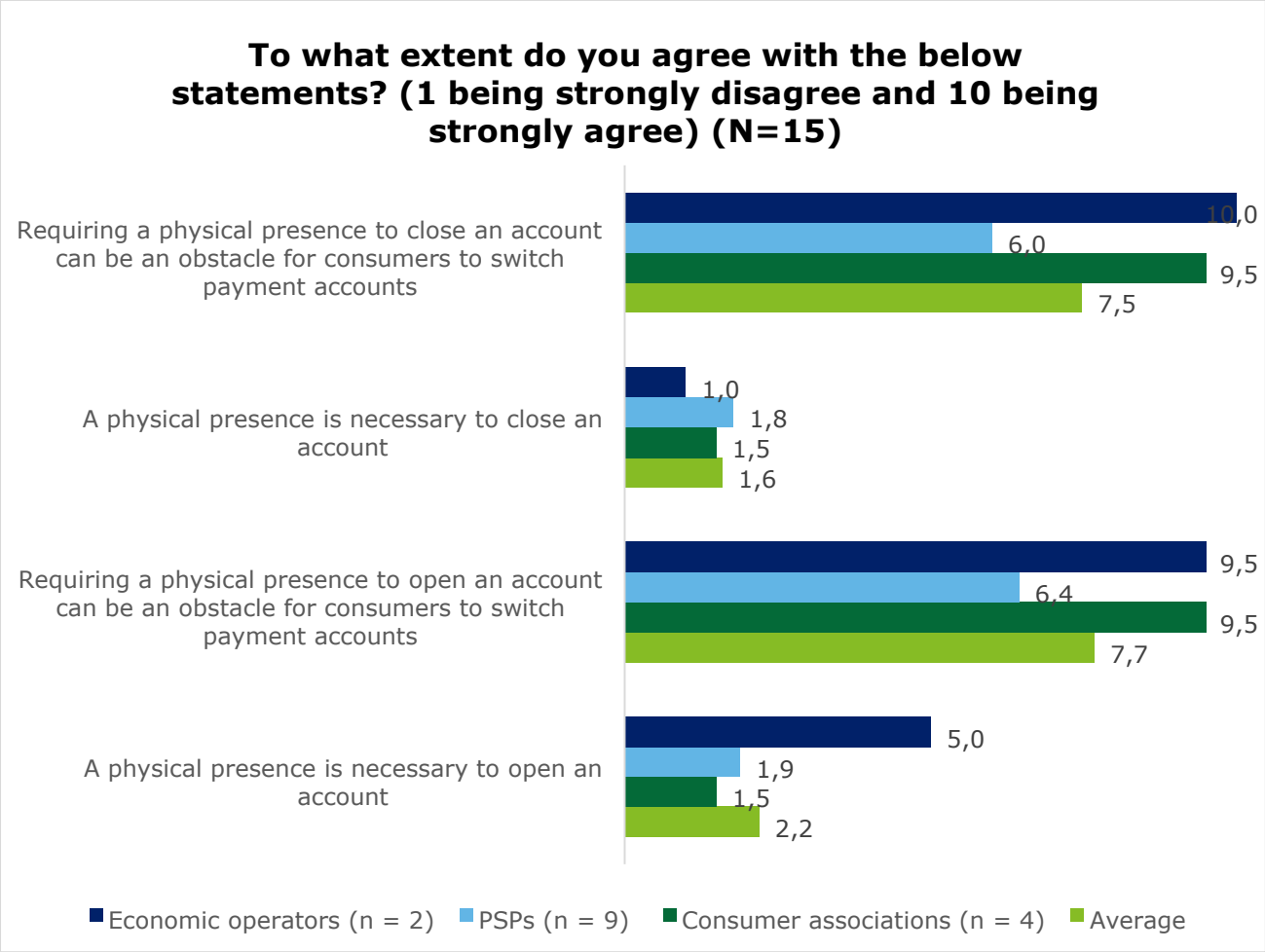
To summarise, the first survey and the supply and demand interviews showed key differences between the mobile and non-mobile consumers, when it comes to opening accounts cross-border. The demand is higher for mobile consumers and is motivated especially by proximity reasons, to have a local debit or credit card or to benefit from lower fees. Although non-mobile consumers are also interested in benefitting from lower fees, opening an account in another Member State is currently rare for this group of consumers and they are more likely to open an account in an online bank (which can be based in another Member State).

3.3. Supply for cross-border opening of accounts

Cross-border opening of accounts entails some challenges for PSPs. In particular, when the consumer has no link to the country where (s)he requests to open a bank account, PSPs are very cautious in order to comply with Anti-Money Laundering (AML) legislation and seeking to avoid fines and harm to their reputation in this regard. In fact, as part of the second online survey, most of the consumer associations strongly agreed that AML requirements could be obstacles for consumers to switch payment accounts cross-border[12]. Moreover, remote identification can be an additional challenge faced by PSPs when it comes to offering cross-border opening or switching of payment accounts while ensuring the compliance with their AML obligations (e.g. some PSPs struggle with the verification of consumers' identities when they do not reside in the Member State where the PSP is offering the services). Interestingly, the results of the second survey[13] indicated that PSPs do not necessarily require a physical presence to open and close a payment account, as shown in the figure below.

[12] Second online survey with consumer associations.
[13] Second online survey with PSPs, consumer associations and economic operators.

Figure 2 - Required physical presence



Source: Deloitte, based on the second online survey with PSPs, consumer associations and economic operators.

Furthermore, all the stakeholder groups surveyed on those questions (i.e. consumer associations, PSPs and economic operators) tended to agree that requiring a physical presence to open and close payment accounts would be an obstacle for consumers to switch payment accounts.

New technologies represent a unique opportunity for PSPs in order to overcome these challenges when offering digital/remote on-boarding of new clients, particularly useful in cross-border cases. The European Commission has studied the close to 50 types of customer on-boarding journeys across 10 European countries, focusing on the identification of the applicant[14]. Based on the analysis, seven main journeys were identified:

- Journey 1: Cross Channel journey (Remote and Face to Face identification)

This journey starts with the applicant submitting the on-boarding application form remotely, and having to go into a branch for face to face identification.

[14] European Commission, Assessment Of Risks And Associated Mitigating Controls, Including Interoperability Of The Remote Solutions: https://ec.europa.eu/info/sites/info/files/business_economy_euro/banking_and_finance/documents/report-on-existingremote-on-boarding-solutions-in-the-banking-sector-december2019_en.pdf

- Journey 2: Remote on-boarding based on enhanced KYC measures (with or without electronic signature)

This journey commences when the applicant applies online for a payment account and uploads the requested identity documents. The identification is subsequently completed by enhanced KYC measures (e.g. cross-checking payment issued to or from another account the applicant holds in another EU bank).
In addition, the journey can also include electronic signature.

- Journey 3: Entirely remote on-boarding using video conference, and biometric identification (optional)

In this journey, the identification of the applicant is carried out by using a video identification conducted by trained agents, which is sometimes supplemented by biometric identification checks (depending on the legal framework of each Member State).

- Journey 4: Entirely remote on-boarding supported by selfie and biometric identification

This journey utilises automatized identification (selfie) as a biometric tool for identification, which is compared to the photo ID.

This is the journey followed by N26 for instance, which requires its customers to take a face picture (or a video) and a picture of the ID, and after cross-matching the two pictures, a confirmation code is sent via SMS to activate the account[15].

- Journey 5: Entirely remote on-boarding resulting in trust services created

In this journey, the applicant applies for the bank account remotely, and the identification process is similar to Journey 3 (i.e. use of video identification and biometric check). Upon the successful completion of the application, the delivered trust service certificate will then be used for the online signature of the bank documents.

- Journey 6: Entirely remote on-boarding using digital identity

In this journey, the applicant applies for a bank account using his/her eID.

This is the case in Estonia for example, where citizens and residents of the country can apply to a bank account using the Estonian eID.

This journey is also used by some PSPs, such as Keytrade bank[16].

- Journey 7: Remote on-boarding employed by e-merchants using electronic wallet

In this journey, the identification of the applicant is carried out via Credit Reference Agencies predominantly. This journey is particularly used in countries with mature Credit Reference Agencies (e.g. Italy).

During the interviews, additional examples for remote identification were found. For example, some PSPs also rely on the identity verification services provided by GBG (Global Identity Data Intelligence for

[15] N26, How to prove my identity: https://support.n26.com/en-eu/account-and-personal-details/verifying-identity/howto-prove-my-identity
[16] Key Trade Bank, Open an account: https://www.keytradebank.be/onboarding/en/holder/1/contact

Business)[17], which receives the pictures of the eIDs from the PSPs and cross-matches them with their database (that includes the pictures provided by the national authorities)[18].

Iberpay, the Spanish Payment Service Company[19], has developed an option for remote identification which would allow PSPs adhering to it to trust each other, and rely on the checks previously carried out by other PSPs on the consumer. The initiating PSP would be able to send a query (a standardised message) to the system in order to verify whether the consumer has an account in another PSP, and each receiving PSP would reply, informing its counterpart of whether the consumer is one of its clients, and whether (s)he can be trusted[20].

Despite the existence of these on-boarding journeys, the use of new technologies to allow remote identification and on-boarding is not yet the baseline. In most of the cases PSPs request their customers to be physically present in the branch to open an account. This requirement allows PSPs to verify the identity of the consumer, duly conduct the Know your Customer (KYC) checks, and mitigate the risks of fraud and ML. These findings from the interviews with both consumer associations and industry representatives are in line with the survey results. Indeed, from the participants who responded that they had been interested in having an account in another Member State (152), only 15% of the respondents who managed to open an account in the other Member State encountered no issues and/or found it easy to do so. The remaining 85% stated they had challenges due to the following reasons (multiple choice):

- Needing to be physically present to open the new bank account (58%);
- Not being able to produce some of the documents or justifications that were requested by the bank (32%);
- Having difficulties due to the remote situation (e.g. communication, exchange of documents, etc.) (27%);
- Not having the residency from the country of the new bank account (24%)[21].

Although mobile consumers do not represent the most significant demand (in terms of numbers) for PSPs, it should be noted that several PSPs have developed tailored services for them. For instance, many banks offer tailored payment account services for expatriates in Brussels[25]. Nevertheless, stakeholders had difficulties to mention any benefits for ('traditional') PSPs linked to offering cross-border opening of payment accounts when the consumer has no particular link to the country. Some PSPs explained the importance of building a sustainable relationship with their consumers, and a sense of belonging for which having a certain bond to the country is key, although this is in breach of Article 15 PAD. This, however, does not apply to neo-banks and Fintechs, whose business models are precisely based on offering online services to attract consumers across Member States. In this case, the link with the country is not an issue to take into account due to the nature of their business model.

Finally, some stakeholders reported that there could be some improvement in supporting consumers when they are opening or switching accounts cross-border. For instance, some banks mentioned that they try to support consumers on an ad hoc basis when they get a request from consumers who are moving to another country and want to open an account in the same affiliate bank there. An increased cooperation between

[17] GBG, ID3Global: https://www.gbgplc.com/products/gbg-id3global/
[18] It should be noted that this service only covers 24 countries. These countries are: Australia, Austria, Brazil, Canada, China, Denmark, France, Germany, Hong Kong, India, Ireland, Italy, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Singapore, South Africa, Spain, Sweden, Switzerland, UK, USA.
[19] The main purpose of Iberpay is to manage the Spanish interbank payments infrastructure.
[20] Iberpay: https://www.iberpay.es/Secciones/04MasServicios/Paginas/TitularidadCuentas.aspx
[21] Four tried to open an account without having moved from their country of origin and did not succeed because they were not a resident of the country of the new bank account. [25] Interview with Febelfin, June 2020.

affiliate banks across countries was also suggested by some consumer associations as a potential improvement that could facilitate consumers' mobility. Beyond that, as stated in Art. 11 PAD, PSPs are required to support their customers when they wish to open an account in a PSP located in another Member State, regardless of the affiliation. As enshrined in the article mentioned above, the type of assistance granted by the PSPs consists of providing (free of charge) the following information:

- a list of all permanent standing orders and of all currently active direct debits when available;
- available information about recurring transfers;
- transfers with memos; and
- standing orders initiated by creditors on the account of the consumer during the previous 13 months before the date of the authorisation.

Moreover, the PSP should also transfer any positive balance to the current account of the new PSP, and close the current payment account[22].

In a nutshell, the supply of cross-border opening of payment accounts appears to be shaped around the existence of two distinctive groups of consumers, i.e. the mobile consumers, and the non-mobile consumers, which is in line with the study's characterisation of the consumer types. For the former, supply options seem to exist through Fintechs and the offers from traditional banks, although consumers can encounter challenges when trying to make use of the services offered by traditional banks, mainly if they are not (yet) physically in the country. For the latter profile, interviewed PSPs and consumer associations seem to consider the need to open an account cross-border as almost inexistent[23].

3.4. Domestic and cross-border account switching

This section presents the analysis of the demand for domestic and cross-border switching of payment accounts, including an overview of the figures considered as part of the definition of the current state of play, setting the ground for the assessment. It also provides a brief overview of current trends that are likely to impact the demand for domestic and cross-border switching.

Before diving into the overviews of the demand for domestic and cross-border switching, it is important to mention that the demand, as well as the benefits (later on in the study), were calculated on the basis of the number of EU consumers benefiting from the different services, and not on the basis of the number of accounts. The study team first considered using the number of payment accounts, but no reliable data or proxy for the total number of payment accounts in the EU was publicly available. For instance, the study team considered using the number of payment cards as a proxy, but since a payment account is not always linked to one single card, this option was disregarded.

Although there are more accounts than consumers and it could thus be considered that using the number of consumers would be underestimating the switching potential, a number of aspects motivated the study team to choose the number of consumers as a basis for this analysis. First, the percentage of consumers with at least one payment account is publicly available, and from a reliable source (The World Bank[28]). Second, consumers are the ones deciding to switch payment accounts. To consider any evolution in the number of accounts, it would be necessary to have the average number of payment accounts per consumer, the number of consumers and an idea of how many of their accounts they would consider switching. Assuming that a

[22] Payment Accounts Directive, Article 11.
[23] Supply and demand interviews with PSPs and consumer associations [28]
Findex: https://globalfindex.worldbank.org/#data_sec_focus

consumer interested in switching would consider switching all her/his accounts would also be unfounded and would lead to overestimation. Third, although multi-banking exists, the fact that free accounts become rarer will likely lead to holding several accounts being less interesting for consumers.

The study team therefore used the number of consumers switching as the basis for the demand and for its assessment of costs and benefits (chapter 5).

Demand for domestic switching of accounts

In order to calculate the demand for national switching as part of the current situation, the study team used estimations provided by each Member State on their domestic switching services. It should be noted however that the data provided by the Member States are, in some cases, rough estimations and remain a work in progress, as monitoring mechanisms are not yet fully established and standardised in all Member States. For instance, the rates in some countries appear to be very low and in other Member States very high and some Member States have not been able to provide estimates or have provided estimates that might need further refinement. Nevertheless, these estimates are considered as the best estimates available. These are provided in absolute numbers per year per Member State. The study team therefore compared these numbers to the banked population over 15 years old (in age of having a payment account) for each EU Member State[24] in order to obtain a percentage of the banked population switching in each Member State in a given year and calculated a weighted average switching rate across the Member States to arrive at an overall figure for the EU. This approach led to estimating that approximately **0.7% of the EU banked population** over 15 years old is currently using the switching service provided by PAD per year, which hence constitutes the baseline.

Demand for a cross-border switching service and other tools to facilitate switching

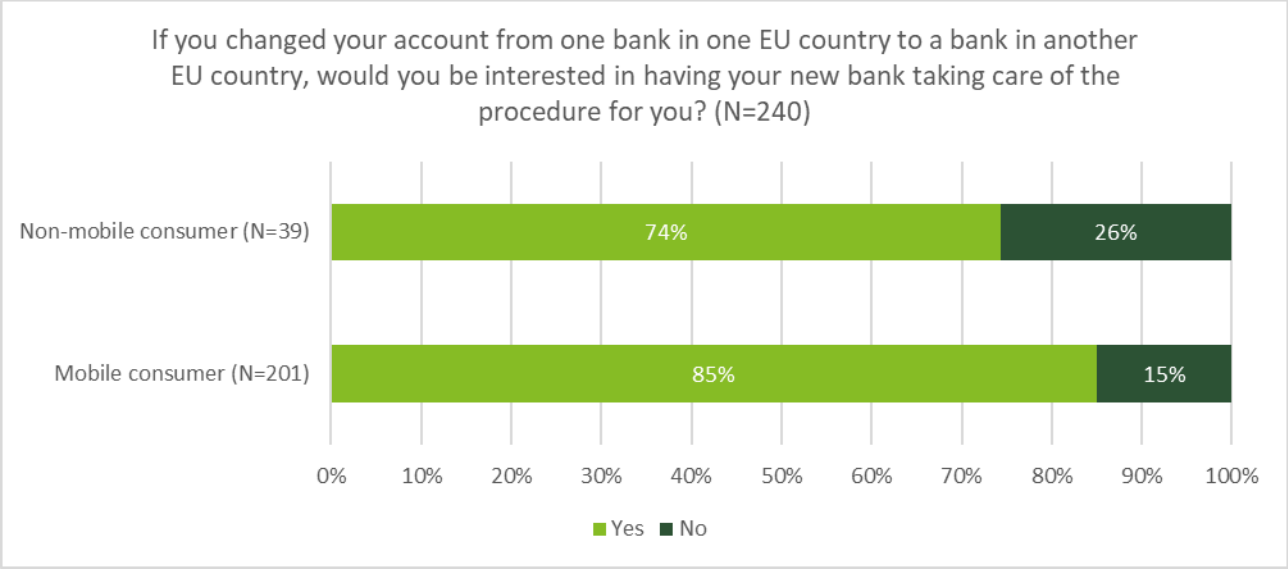
Even though no similar data is available for cross-border switching, the study team attempted to estimate the demand for a cross-border switching service as well as for each switching tool assessed in this study, based on the different data sources available. It should be noted that the study team had to rely on scattered data and expert's knowledge in order to reach the best possible estimates and therefore aims to present the results in the most simple, clear and transparent way. These best estimates will be used for the efficiency calculations in chapter 5. As part of the supply and demand interviews, the majority of interviewees from the side of the payment service industry expressed the view that the demand for switching payment accounts across countries in the EU was very low, as was the interest for cross-border opening. This point was also often raised in the responses from the same stakeholder category to the second online survey.

The consumer survey (i.e. the first online survey) looked into the proportion of consumers who could be interested in opening a bank account cross-border and, if so, using a cross-border switching service. To do so, the sub-set of respondents inclined to cross-border opening was asked a follow-up question about their interest in a cross-border switching service whereby the new bank would take care of the switching procedure. As can be seen in Figure 3, both respondents from the mobile and non-mobile categories predominantly showed interest in such a service (85% and 74%, respectively replied with "Yes"). However, this survey result was not taken into account for calculating the demand for cross-border switching, since the specific survey question did not enquire about the actual intention to switch. Although these estimations were not considered sufficient to formulate the best possible estimates, they give an indication of the proportion of consumers who might like to benefit from a cross-border switching service, if they were to open an account and switch cross-border at one point in their lives (as mentioned above, potentially between 74% of non-mobile EU consumers and 85% of mobile EU consumers). Based on the survey questions asking

[24] Eurostat, 2017 data for EU27 (without the UK), https://ec.europa.eu/eurostat/databrowser/view/sbs_sc_sca_r2/

whether respondents would be interested to open an account cross-border and if so, to benefit from a switching service (Figure 3), the proportion of mobile and non-mobile groups of respondents who could potentially be among the users of a cross-border switching service would be 70% and 47%, respectively[25].

Figure 3 - Interest in a cross-border switching service



Source: Deloitte, based on the first online survey.

To estimate the demand for a cross-border switching service, as well as for a redirection service and for ANP, the study team based its estimates mainly on the replies to the second online survey with consumer associations. As part of this survey, associations were asked "What percentage of EU consumers do you think would ultimately use this EU cross-border switching service?", in the context of the first switching tool (i.e. cross-border switching service). Similar questions were asked for each option under ANP[31], with different choices of ranges[32]. Based on the different responses, for the **usage of the cross-border switching service**, (i.e. switching tool 1), an estimation of **0.20% of EU consumers per year** was calculated[33].

No data on the current rates of cross-border opening of accounts and "manual switches" (consumers opening accounts cross-border and transferring recurrent payments and/or their balance and/or closing their previous account by themselves) in the EU is available. Therefore, to arrive at an estimation of **the current "manual" cross-border switching rate** (the baseline situation), we estimate that approximately half of the 0.20% consumers who would use the cross-border switching service are already switching cross-border by themselves without any help, which represents **0.10% of EU consumers per year**.

The second online survey also enquired about what would ultimately be the percentage of EU consumers using the switching services outlined in the 3 options for **ANP**. Nine answers were provided[34], indicating that the ultimate percentage of the EU population interested in using the services would be between 21% and

[25] This estimate is produced by multiplying the proportions of respondents stating to be interested in opening a bank account cross-border and using a cross-border switching service (0,63 x 0,74 = 0,467 for the non-mobile population and 0,82 x 0,85 = 0,70 for the mobile population) [31] For option 3.1: "What percentage of EU consumers do you think would be ultimately interested in using the same IBAN even if they switched payment accounts cross-border?". For option 3.2: "What percentage of EU consumers do you think would be ultimately interested in using an existing identifier together with a code (to allow a consumer to have several payment accounts) to identify their payment account across Member States and that would remain the same after switching (i.e. would be portable)". For option 3.3: "What percentage of EU consumers do you think would be ultimately interested in receiving a new account number to identify their payment account across Member States and that would remain the same after switching (i.e. would be portable)?". [32] Less than 5%, 5 to 10%, 11 to 20%, 21 to 30%, 31 to 40%, 41 to 50%, more than 50%. [33] To arrive at an estimation per year, the study team assumed that the average duration of consumers' "banking life" would be approximately 66 years (e.g. from 15 to 81 years old). Therefore, when consumers were asked if they were or would ever be interested to open or switch accounts, the results were divided by 66 years to obtain an annual rate of consumers.

>50%, with strong variations between the replies[26], without substantiated explanations to justify those variations. Adopting a conservative approach, the study team took into account the lower end of the provided estimates, i.e. 21% and decided to attribute the same annual rate to all three options, which on an annual basis amounts to **0.30% of EU consumers per year**.

As part of the options under **ANP**, the study team also estimates that the proportion of consumers who would use this service to switch **domestically** would amount to approximately **1% of EU consumers per year.** To arrive to this estimate, the study team applied the same ratio as the one between the usage of the national and cross-border switching service as per the first switching tool. While it is possible that cross-border switching would cannibalise the national switching rates to a certain extent, considering the relatively low level of projected cross-border switching rates, and the already existing level of uncertainty in the current estimations[27], these effects were not included in the assessment.

The second online survey did not attempt to estimate the potential proportion of consumers who would use a switching service with an **automated redirection**. Based on feedback received as part of the survey and interviews, such service would bring similar benefits as ANP at both national and **EU level** by providing further assurance to consumers in comparison to a cross-border switching service without redirection. Therefore, it was estimated that the switching rate for a switching service with an automated redirection would be similar to ANP at **0.30% per year at EU level, and 1%** at the **national level**.

The study team then considered the entire EU banked population over 15 years old to calculate the overall demand, as both mobile and non-mobile consumers would benefit from a cross-border switching service (e.g. when moving to another country or simply seeking better deals).

The figure below outlines the estimated switching rates for the baseline scenario as well as each switching tool as part of this study.

Table 1 - Estimations of the annual switching rates for consumers

		Baseline	(EU-wide) Cross-border switching service	Automated redirection	ANP
National switching	% Banked population	0.70%	0.70%	1%	1%
	Number of consumers	2 427 261	2 427 261	3 467 517	3 467 517
Crossborder switching	% Banked population	0.10%	0.20%	0.30%	0.30%
	Number of consumers	346 751	693 503	1 040 255	1 040 255

Source: Deloitte

[26] The 3 respondents did not rank the 3 ANP options consistently.
[27] The expression of interest would be likely to lead to an overestimation of the actual usage.
[28] respondents for each of the 3 ANP options.

Box 2 - Estimation of the demand for cross-border switching and other switching tools for micro-enterprises and self-employed

There is no domestic or cross-border switching service for micro-enterprises and self-employed and no data about their behaviour with regards to cross-border opening of accounts. Nevertheless, as for private consumers, the study team aims to arrive at the best possible estimates based on the available data sources. With regards to micro-enterprises and self-employed, the interviews indicated that the demand for switching and for cross-border opening would be very low.

To estimate the switching rates for the baseline scenario and for the different switching tools, the study team started by establishing the rate for the **cross-border switching service** In this regard, the only replies received to the second online survey indicated that "less than 5%" of micro-enterprises would ultimately[29]use a cross-border switching service. The study team therefore converted this 5% to an annual basis[30], which results in **0.033%** of micro-enterprises and self-employed which would use the cross-border switching service annually.

Then, the study team considered the same ratios and variations as for private consumers for the different tools and for the baseline. Hence, it is estimated that **0.116 % of micro-enterprises** would use a switching service per year for **domestic switches**. To calculate the rates for the **automated redirection** and for **ANP**, the study team used the same reasoning as for private consumers and assumed the same ratio between the different switching tools. Therefore, the estimated switching rate for these two switching tools at **EU level** would be **0.050%** of micro-enterprises and self-employed annually. The same ratio as for private consumers was again applied to determine the usage rate of these tools for domestic switching, which amounts to **0.166%** of micro-enterprises and self-employed annually. The baseline scenario (where currently only "manual" switches are taking place) is estimated at 50% of the estimated usage of a national and cross-border switching service, amounting respectively to 0.058% (national) and 0.017% (cross-border) of micro-enterprises and self-employed annually.

To calculate the overall population of micro-enterprises and self-employed in the EU, the study team considered the total number of companies in the EU with 0 to 9 employees, which amounts to approximately 20 million micro-enterprises and self-employed[31].

The figure below outlines our estimations of the switching rates for the baseline scenario and for the different switching tools for micro-enterprises and self-employed.

Table 2 - Estimation of the demand of micro-enterprises and self-employed for the different switching tools

[29] The question that was asked was: "What percentage of self-employed and micro-enterprises do you think would ultimately use this EU cross-border switching service?"
[30] To convert this result on an annual basis, the study team assumed that the average lifespan of micro-enterprises and duration of the status of self-employed would be approximately 15 years, considering that the average survival rate of businesses in the EU over 5 years is of 43.86% (https://www.statista.com/statistics/1114070/eu-business-survivalrates-by-country-2017/) and that the status of self-employed is likely to last longer than 5 years.
[31] Eurostat, 2017 data for EU27 (without the UK), https://ec.europa.eu/eurostat/databrowser/view/sbs_sc_sca_r2/

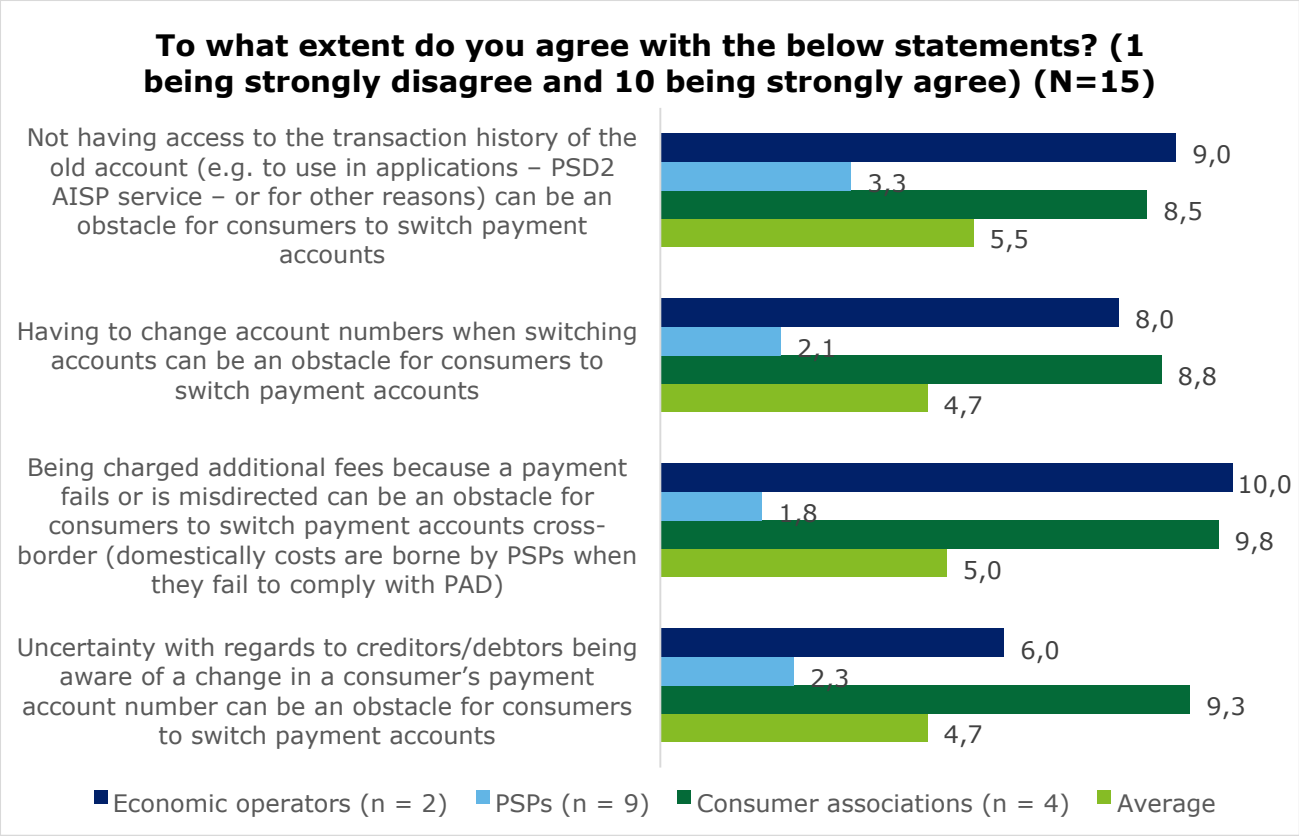
		Baseline	EU-wide switching service	Automated redirection	ANP
National switching	% Banked population	0.058%	0.116%	0.166%	
	Total number	11 600	23 200	33 143	
Crossborder switching	% Banked population	0.017%	0.033%	0.050%	
	Total number	3 300	6 600	9 900	

ource: Deloitte

Obstacles to domestic and cross-border switching

As part of the second online survey, consumer associations, PSPs and their representative associations, and economic operators and their representative associations were asked to rate some potential obstacles for consumers to switch payment accounts. The figure below outlines the average scores attributed to the different obstacles.

Figure 4 - Obstacles for consumers to switch payment accounts

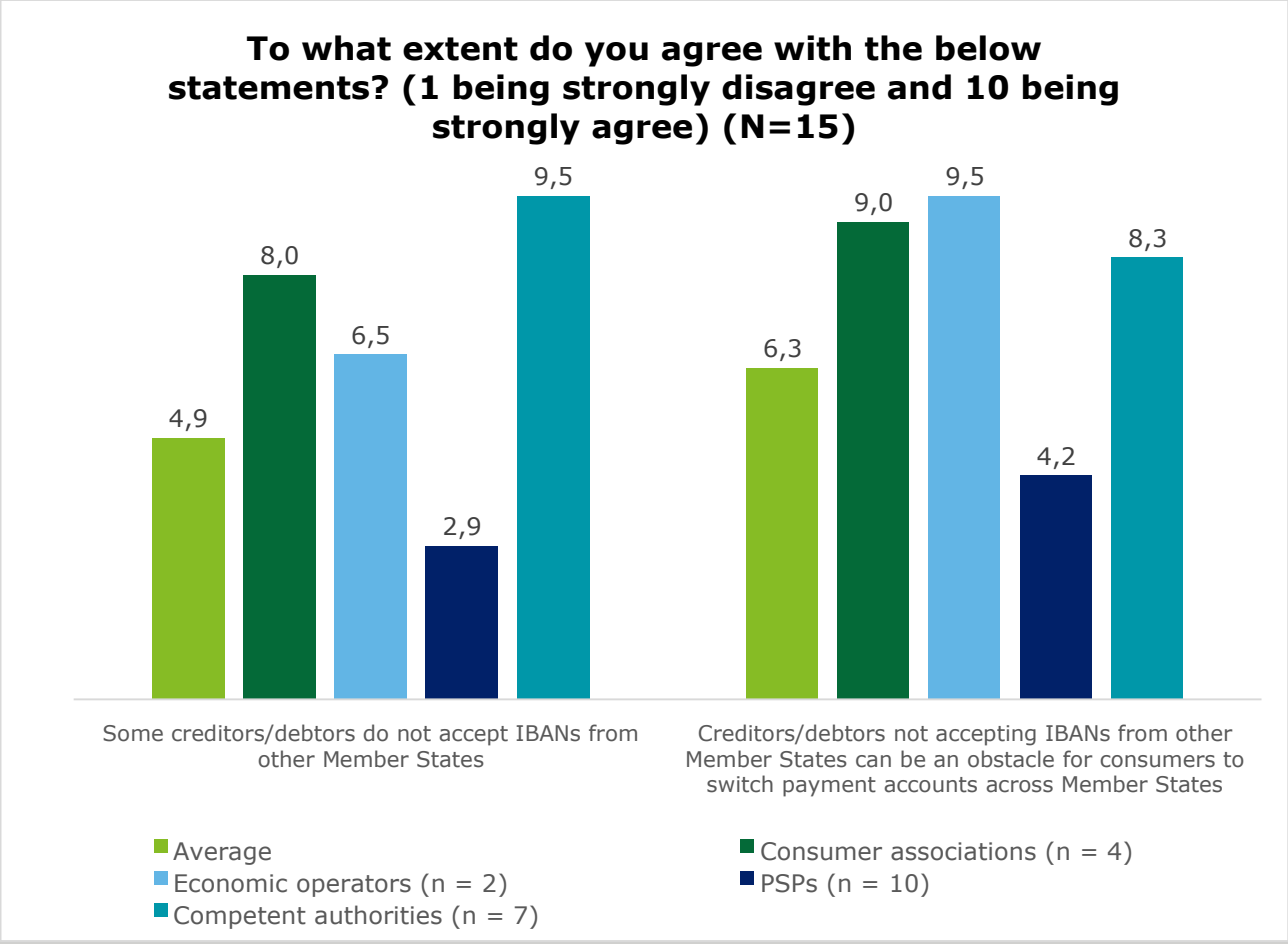


Source: Deloitte, based on the second online survey for consumer associations, PSPs and economic operators.

The above figure shows that a number of apprehensions might hinder consumers from switching payment accounts. Interestingly, the fact of not having access to the transaction history of the old account before switching would be the most important downside among the obstacles presented in the survey. The fear of being charged additional fees in case of misdirected or failed payments is also a key factor that might prevent consumers from switching. This is followed by uncertainty linked with creditors and debtors being aware of the account change and by having to change account numbers when the consumer switches. As seen in the figure above, the results vary quite extensively across the different stakeholder groups for all obstacles, with consumer associations being more convinced of the prevalence of these obstacles and PSPs being less concerned by them. When looking specifically at consumer associations' concerns, additional fees resulting from failed or misdirected payments is the most predominant fear.

IBAN discrimination also seems to be an issue that persists and might prevent consumers from switching payment accounts cross-border, as showed in the figure below.

Figure 5 - IBAN discrimination



Source: Deloitte, based on the second online survey.[32]

As illustrated above, it appears that some creditors and debtors might still not accept IBANs from other Member States, in spite of their obligation to do so under the Single Euro Payment Area (SEPA) regulation, although it was not acknowledged consistently across all the respondents. Indeed, consumer associations and economic operators tended to agree more with this statement than PSPs. Stakeholders seemed to agree however that creditors and debtors not accepting IBANs from other Member States would be an obstacle to cross-border switching.

[32] It should be noted that 5 respondents answered "I don't know" and 3 did not reply to the first affirmation. To the second affirmation, 3 replied "I don't know" and 3 did not reply.

Box 3 – Demand, supply and obstacles of –micro-enterprise and self-employed for cross-border switching

As mentioned in the previous sub-section, the interviews and the survey have reported that the demand of micro-enterprises and self-employed for cross-border opening is very low. The associations contacted explained that this topic was not a key priority for micro-enterprises and self-employed.

Interviewees were all convinced that micro-enterprises and self-employed which would need to have an account in another country would rather tend to open an account in this other country and leave their current account open, mostly due to the significant hassle that switching represents. In this sense, interviewees explained that cross-border switching would only be used by those micro-enterprises and self-employed willing to transfer their business from one country to another.

For a number of micro-enterprises and self-employed that would need to open an account cross-border and to switch recurrent payments and direct debits, there would be interest for a cross-border switching service. Compared to private consumers, micro-enterprises and self-employed typically have more important flows and volumes of payments transiting to their accounts. The risks linked to transferring these payments to a new account are therefore more important than for private consumers. Indeed, if there were any errors leading to failed payments, the time and efforts needed for micro-enterprises and self-employed to investigate and double-check their payments in default is likely to be more significant, compared to private consumers who have typically fewer recurrent payments on their accounts. These default payments, whether they would come from their payers or go to their payees would potentially entail more risks than payments of private consumers. Hence, the switching for micro-enterprises and self-employed would require to be handled with extra care[33].

As part of the first online survey, within the subset of micro-enterprises and self-employed who had replied that they had already moved some of their recurrent payments or all of them from one bank to another within the same country, 2 out of 3 mentioned that their PSP had taken care of this for them (i.e. the bank took care of contacting their old bank to transfer money and/or the list of recurrent payments to the new account, as well as of informing those payees or payers of the change of account). This might indicate that some PSPs already provide this domestic service to micro-enterprises as part of their business or corporate services.

Interestingly, some challenges for PSPs to provide a cross-border switching service to micro-enterprises and self-employed were highlighted in the second survey:

- Need to establish a new team that would handle the switching specifically for this group of consumers;
- KYC procedures for corporate customers are even stricter than for private customers.

The interviewed associations of micro-enterprises and self-employed also clearly mentioned that if a cross-border switching service was to be offered to micro-enterprises and self-employed and that the investment and operations costs incurred by PSPs would have to be borne in any way by microenterprises and self-employed (e.g. if this price is reverberated on account or transactions fees), they would be strongly opposed to a new EU legislation requiring PSPs to offer such service.

[33] Second online survey with PSPs.

Current and future trends which can impact the demand for switching (cross-border and domestically)

A number of trends could impact the demand for switching domestically and cross-border in the EU.

A first trend points towards an increase of the demand from the "deal-seeker" type of consumers (see annex C, use case #4) due mainly to two elements. First, payment account fees are likely to increase in the future, due to the low interest environment and to several new services provided with payment accounts (e.g. instant payments), which are likely to increase costs for PSPs. Second, account packages are likely to become more and more differentiated, as beyond the banking services that are provided by PSPs, consumers are increasingly looking for PSPs that offer user-friendly digital services. Indeed, as indicated above, more than half of the respondents to our first online survey have an account in an online bank. These two elements are likely to lead curious consumers to explore the offer of other PSPs in their own countries or in other Member States in order to look for better deals.

A second key trend is the further integration of the EU economy. Services, people and capital are moving increasingly across borders, which leads to believe that consumers will increasingly need and want to benefit from financial services offered in other Member States. At the same time, the increasing integration of the SEPA could make the need for cross-border switching less relevant for mobile consumers. As part of the supply and demand interviews, many interviewees indicated that with the increasing integration of the EU payment systems, consumers are able to make cross-border payments more and more easily, which decreases the need to have a payment account in another Member State when moving to another country.

Finally, for micro-enterprises and self-employed, the increasing use of incoming transfers from customers might make the use of a switching service more interesting for them. Interviews indicated that if microenterprises were to need another payment account, they would tend to leave their previous account open because of this. A redirection service could potentially take this concern away for micro-enterprises and self-employed.

Another important market trend for micro-enterprises and self-employed is the rise of neo and online banks focusing specifically on SMEs' needs and actively competing for this consumer group with more traditional PSPs, which may influence their demand for domestic and/or cross-border switching.

To take account of a potentially increasing demand for domestic and cross-border switching services, the feasibility analysis in Chapter 5 tests the results for increasing levels of switching demand expected for each types of switching tools.

4 Presentation of the policy options

This section presents options developed for each types of switching tools as part of the assignment.

This study aims to assess a number of options to facilitate national and cross-border switching of payment accounts in the EU. The development of these options builds on seven case studies conducted with national switching services and other organisations involved in switching, redirection of payments and portability of account identifiers. These case studies were developed on the basis of in-depth desk research and interviews, and explored Governance, Organisational, Financial and Architecture (GOFA) aspects of the national practices. The seven case studies were:

- The Belgian switching service
- The Irish switching service
- The Spanish switching service
- The French switching service
- The Dutch Overstapservice (switching and redirection service)
- The United Kingdom's Current Account Switching Service (switching and redirection service)
- The Swedish Bankgirot number (portable alias)

The European payment accounts market is characterised by the existence of national switching services in all Member States, as required by PAD. The implementation of the respective requirements of PAD has resulted in different typologies of services, from centralised to decentralised, some automated and others rather manual and some covering also other types of accounts (e.g. savings accounts in Belgium). Some in which consumers have more burden than in others and some that are more transparent and userfriendly than others. Overall, the switching landscape is rather fragmented across the EU. As regards cross-border opening of payment accounts, when moving to another EU country, consumers have a basic assistance as per article 11 PAD, but they have the burden of the entire process on their shoulders and face a number of obstacles outlined in chapter 3. No EU-wide cross-border switching service is currently in place in Europe, except for the basic/limited assistance provided under article 11 PAD. Hence, as part of **Switching tool 1,** the study develops options for an EU-wide cross-border switching service. National switching services that exist throughout the EU as required by PAD were analysed in order to design options for a cross-border switching service. These options are detailed in section 4.2 below.

With regards to the redirection of payments, only two countries have implemented such service as an additional feature to their national switching services (i.e. the Netherlands and the UK). These cases could be considered as examples to implement a redirection service at EU level. As part of **Switching tool 2,** the study develops options for automated redirection of payments both at an EU-wide cross-border level and at a domestic level. Hence, two different scopes are assessed for this type of tools, building mainly on the domestic redirection services existing in the Netherlands and in the UK. These options are detailed under section 4.3 below.

Finally, the portability of account numbers would facilitate the switching of accounts for consumers, as they would have an identifier that would follow them once they switch. Aliases have been used in mobile payments (Payconiq, Swish, Mobile Pay, Bancomat Pay, etc.), but not yet as portable account identifiers, except for the Bankgirot number which applies to business accounts in Sweden. Another use case of portability of identifier comes from the telecommunication sector, with the implementation of portability of telephone numbers. As part of **Switching tool 3** the study develops an EU-wide portable account number, building mainly on a case study conducted about the Bankgirot number.

This study covers **two different scopes**. As part of switching tools 1 and 3, it develops options to facilitate cross-border switching. As part of Switching tool 2, it develops options to facilitate on one hand national switching and on the other hand cross-border switching. It should be noted that all options presented apply to consumers, as well as micro-enterprises and self-employed.

Before diving into the options developed for each tool, it is necessary to put them into context by outlining key trends and aspects that are relevant to the European cross-border switching landscape. **European cross-border context**

The European cross-border landscape differs from the national (domestic) ones which brings along some important considerations when analysing possible options.

1. Creditor / Debtor[34] notification

When looking at switching from a cross-border perspective, a number of challenges arise if receiving PSPs need to notify the creditors and debtors located in another country than their own.

First, different notification systems exist across the EU as part of the national switching services (e.g. automated standardised notifications in Belgium, standard letters sent by the consumers in Ireland, etc).

Second, the contact information of creditors and debtors is not directly available to the receiving PSP. The mandate that is received by the transferring PSPs requests the name, address and country of the debtors, since when a consumer switches, this information needs to be shared by the transferring PSP with the receiving PSP, if the latter is to notify the debtors. With regards to creditors, it is less clear in which cases PSPs have access to theirs address. In some cases, there is no contact information available for the receiving PSP to inform the creditor directly of the new account number. Also, there is no common European standard to identify a creditor. Each national community has its own specific procedure for assigning an identifier to a creditor. Identifying the creditors, hence, requires knowledge of and access to the different national structures and bodies in place. And notifying creditors and debtors via postal services across the EU is not the most efficient way in a cross-border context. Moreover, contacting creditors and debtors in other EU Member States means having to foresee communications in all EU languages.

As one of the requirements of the PAD is to ensure that creditors/debtors are notified when their client switches payment accounts, these challenges will need to be taken into account for options including such a notification for cross-border switching of payment accounts. It will need to be clear how creditors/debtors will be informed and what the liabilities of the different PSPs and/or creditors/debtors involved in the notification procedure are.

[34] In the context of this study, the term creditors / debtors refers to all third parties with whom consumers may have recurrent payments, direct debits or standing orders (e.g. economic operators, their employers, tax institutions, other consumers, etc.).

2. Cross-border payments

Since the introduction of the Euro and the SEPA as a harmonised framework for electronic euro payments, there have been four euro payment schemes developed (SEPA Credit Transfer (SCT), SEPA Direct Debit (SDD) Core and Business, and the SEPA Instant Credit Transfer (SCT Inst) scheme).

The SCT and SDD schemes replaced the multitude of existing national euro payment schemes and are now used for all euro credit transfers and direct debits in the countries participating in SEPA[35]. The SCT Inst scheme, which is voluntary, provides a pan-European solution for euro instant credit transfers.

With the implementation of SEPA the notion of "cross border" euro transactions no longer exists within the SEPA countries as processing euro transactions is lean and efficient due to vast volumes processed and the simplicity of the models: single format, single clearing platform (TARGET2) and certainty of time and costs.

However, next to the use of the euro there are still eight countries in the European Union that have their own currency, domestic payment scheme and payments infrastructure.

Each PSP has the freedom to work with the CSM (Clearing and Settlement Mechanism) of its choice, as long as it is reachable. This reachability can be achieved through one or several of the following options:

- An automated clearing house that is compliant with the payment scheme or schemes.
- A decentralised bi- or multilateral clearing and settlement agreement between PSPs, also known as correspondent banking.
- An intra-group clearing and settlement arrangement (e.g. in case the PSP uses its own branches or subsidiaries within a single group as correspondent banks).

Depending on the payment scheme – SEPA or domestic one – the choice of CSM by a PSP can be different.

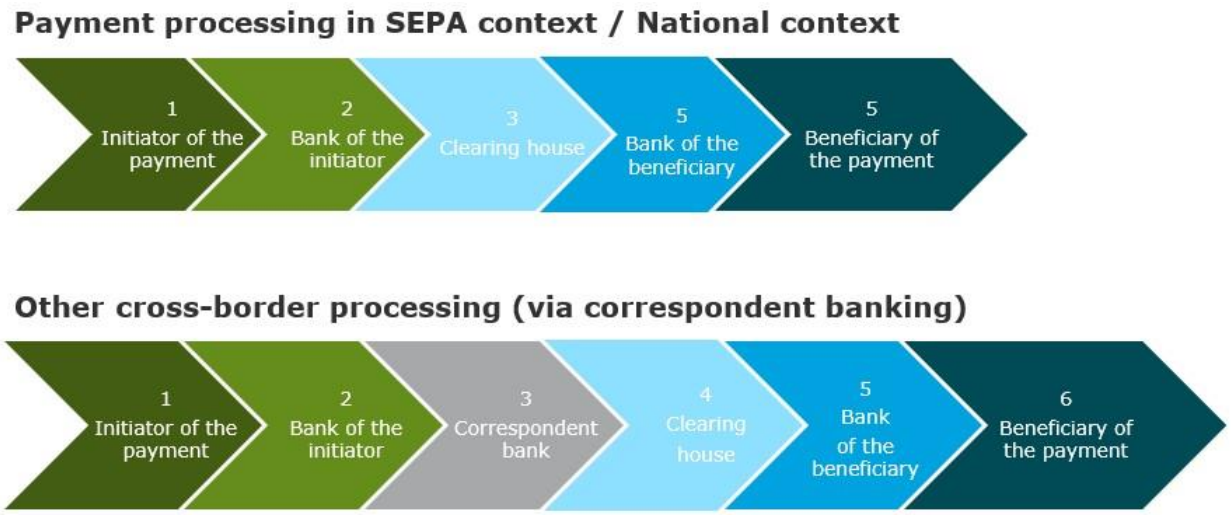
As no European platform exists for non-euro currencies, processing these currencies is typically done through the intervention of one or more correspondent PSPs. For instance, if a payment is destined to a non-SEPA country, the payment typically has to go through a correspondent bank in the country of destination. Correspondent banking is managed by PSPs via commercial agreements[36]. The figure below is a simplified representation of payment processing within the SEPA or national context, versus for crossborder payments.

Presentation of the policy options

Figure 6 - Payment processing via correspondent banking

[35] Source: EPC – Participating countries are the 27 EU member states plus United Kingdom, Norway, Iceland, Liechtenstein, Switzerland, Monaco and San Marino.

[36] Further information about the functioning of correspondent banking can be found here: ECB, Eleventh survey on correspondent banking in euro – 2019 https://www.ecb.europa.eu/pub/pdf/other/ecb.eleventhsurveycorrespondentbankingeuro202011~c280262151.en.pdf



Source: Deloitte.

The processing of payments via a correspondent bank (which has access to the local clearing systems) involves the intervention of additional actors and therefore increases the overall cost of transactions. The EU has aligned the fees for cross-border payments in euros that PSPs can charge to consumers for services such as credit transfers, card payments and withdrawals throughout the EU. Yet in practice, the costs for transactions done through correspondent banking are higher[37].

Another point to bear in mind, when it comes to cross-border payment processing, is that because of the existence of different payment systems in Europe, the switching of direct debits is only possible within the SEPA zone (as retail direct debits across different payment systems are not supported by correspondent banking). Furthermore, it is unlikely that PSPs will offer (competitive) payment account services crossborder in non-euro currencies, which would tend to limit the demand for a cross-border switching service in these markets.

4.1. Options for cross-border switching (Switching tool 1)

In line with the requirements of the Payment Account Directive, all Member States have a national switching service in place that allows consumers to switch accounts domestically. As the Directive provides the Member States with flexibility in terms of how they want to make such a service possible, each Member State has implemented it in their own way. Some have chosen to issue guidelines for the industry to follow; in others, the industry has taken the initiative to develop a central body to support the PSPs in automating the exchange of information in the context of a switch of PSP.

In addition, Article 11 of the Directive requires PSPs to support consumers expressing they wish to open an account in another Member State. In particular, the transferring PSP is required to provide the consumer with information on recurrent payments executed on the consumer's payment account in the previous 13 months (free of charge); transfer any positive balance remaining on the payment account; and close the payment account held by the consumer[46]. If the consumer wants to switch cross-border between these accounts, then, (s)he needs to personally undertake additional actions: (s)he will have to provide the receiving PSP with the information received from the transferring PSP, and contact the creditor/debtor of

[37] European Council, Payments in the EU: reform on reducing charges and increasing transparency adopted: https://www.consilium.europa.eu/en/press/press-releases/2019/03/04/payments-in-the-eu-reform-on-reducingcharges-and-increasing-transparency-adopted/ [46] Payment Accounts Directive, Article 11.

these recurring payments with the request to update the account number information. Both services are part of the current national switching services today.

In order to provide a similar switching service to consumers when switching between two Member States, this study looked into the options to extend the national switching service(s) to a European level.

Based on case studies of current national implementations two options were identified. The first option interconnects the switching services at national level – (Option 1.1), while the second option (Option 1.2) creates a standardized EU wide switching service, replacing the existing national systems.

The sections below briefly present the options developed for Switching tool 1, including the main implications of their implementation for the different stakeholder groups and the legal, operational and technical implications.

In both options, it is assumed that the consumer, self-employed, or micro-enterprise (hereinafter, consumer) already has two open payment accounts in two different Member States, and that (s)he would like to switch recurring payments and/or the positive balance from one account to the other.

4.1.1. **Option 1.1 Cross-border switching service with decentralised governance**

The first option is a cross-border switching service with a decentralised governance in order to interconnect, where possible, the existing national switching services. Each Member State would need to designate a national contact point which would liaise with other national contact points in other Member States to provide national PSPs with the contact details of their PSP counterparts in other Member States. PSPs would then be able to coordinate bilaterally (using standardised forms) to carry out the different tasks of the cross-border switching service (the same as the ones currently under the PAD).[38]

In this vein, those Member States that have already set up a body to support the functioning of the domestic switching service would be able to reuse it to support the implementation and functioning of a cross-border switching service at EU level. However, those Member States without an existing body would need to create it to ensure the liaison.

Taking into account the characteristics of this option, its implementation would entail the following implications:

Implications for stakeholder groups <u>Consumers:</u>

This option would create a user-friendly cross-border switching process for the consumers, including a lighter process and time savings due to the fact that they:

- Would only need to fill in the switching request through the standardised form and provide it to the receiving PSP.
- Would not be required to inform their creditors/debtors about the switching, as the receiving PSP would duly inform them.

[38] For more details on the information flows, see Annex E.

PSPs:

For those PSPs in Member States where the national switching system does not include an existing central body with which they exchange, some IT and organisational changes would be required. The PSPs would require adapting their processes in order to exchange information with their national contact points (including implementing change management).

As for the tasks linked to the switching service provided to the client, these would remain the same as the ones carried out at national level. The receiving PSP would take care of informing the transferring PSP of the request to switch by the consumer and of the tasks that they need to do[39]. The main difference would be that – instead of the receiving PSP or the consumer contacting the debtors/creditors directly[40] - the receiving PSP would need to reach out to the PSPs of the consumer's creditors/debtors to inform them of the switch and the new account number. The receiving PSPs would obtain the contact information of the creditors/debtors' PSP from the transferring PSP, as part of the switch. Creditors/debtors' PSPs would most likely be located in another Member State than the receiving PSP, and they would then need to inform their clients of the new account details. Although this procedure would entail an additional actor intervening in the communication chain, the creditors/debtors would receive the information from their own PSP (a trusted counterpart) in their local language.

Creditors/debtors (i.e. creditors/debtors with recurrent payments linked to the transferring PSP/old payment account):

The relevant creditors/debtors would be informed of the consumer's new payment account by their PSP and they would have to ensure that they register the account changes in their systems accordingly, regardless of where the IBAN comes from in the EU[41].

Competent authorities:

The national competent authorities would continue supervising the well-functioning of the national payment account markets, as is the case today. However, an EU central supervisory body would need to assume the function of supervising the EU switching service as part of its tasks (e.g. the European Central Bank or the European Banking Authority).

Others:

For those Member States where a national body that could take over the role of national contact point does not exist yet, the national contact point would need to be set up.

Depending on the practical implementation per Member State, different stakeholders could take on the role of setting up and running the national contact point. For example, it could be taken on by the PSPs (as is currently the case in most Member States where such a body exists) or by the national competent authority.

[39] In summary, when requested by the consumer: transfer the information on the recurrent payments with EOs, cancel and stop accepting recurrent payments, transfer the remaining positive balance and close the payment account, all within a specific (maximum) timeframe. See Article 10 of the PAD for more concrete details.
[40] As is the case in the existing national switching processes.
[41] Each Member State has a specific structure for their domestic IBANs. Currently, IBANs linked to an account in the EU should be accepted in all Member States, however, this is not always the case. See section 4.4.3 for more information on this matter.

Legal, operational and technical implications

Legal

- The definition of liability of the different parties would need to be clearly established to ensure the legal feasibility, extending the current provisions of Article 13 PAD to cross-border switches. The decentralised governance implies that several stakeholders (PSPs and contact points) would be interacting. Therefore the chain of responsibilities should be clearly defined, in order to determine the liability of each of them.
- Creditors/debtors' PSPs would need to have the mandate from their customers, similar to the current authorisation described in Article 10.2 PAD, in order to modify the payment entrusted by the consumer. In the event of an incident (e.g. if the switch is not correctly registered by the PSPs or the creditors/debtors), the consumers should be protected, having different (litigation) recourses at their disposal.
- The notification from the receiving PSP to the creditors/debtors' PSP about the new payment account would have to be compliant with GDPR and banking secrecy. The declaration of consent in the switching request will be essential in order to ensure that PSPs have the legal and contractual mandate from their customers to notify the creditors/debtors of the new IBAN.

Operational

- The decentralised option would grant a certain level of flexibility to the Member States for their organisation. While they would need to make sure that a national contact point exists in their Member State, they would be able to reuse any existing body that might already exist for it (e.g. the body that some Member States built to support the national switching service). However, the decentralised option would require PSPs to follow-up their requests with multiple PSPs and contact points. They would therefore need to build and keep track of their own requests and feedback received, which involves more complexity than in a centralised option.
- Exchanges of information would have to be implemented based on a standard format of messages (e.g. the ISO switching messages), which would need to ensure the necessary level of security and standardisation. Standardised information is indeed crucial, especially in decentralised governance settings to avoid any difficulty across Member States concerning the exchange and processing of data.
- In order to ensure the smooth functioning of the EU switching service's operations, a supervisory body at EU level would need to be appointed

Technical

- The contact points would need to keep two directories. The first one including the contact details of all other Member States' contact points, and a national directory including the contact details of all the PSPs.
- As there would be only one contact point per Member State, the risk of single point of failure exists. If a contact point in a given country would face some issues and be unreachable, this would entail a single point of failure for that country.
- In order to ensure the technical feasibility, the communication channels used by the stakeholders would need to be secured via appropriate IT-security measures (e.g. encryption, secured data connections, APIs).

Feasibility of the option

Taking into account the above implications, this option is considered overall feasible from a legal, operational, and technical point of view as long as the different elements from these three dimensions are fully taken into account.

4.1.2. **Option 1.2 Cross-border switching service with centralised governance**

The second option is a cross-border switching service with a centralised governance through an entity established at EU level. Contrary to option 1.1, a single central contact point would exist and it would not require the reuse of existing national switching systems. The EU entity would mainly install and manage a platform allowing all PSPs in the EU to exchange the necessary information in order to carry out the crossborder switching service for their clients as is currently the case for some national implementations.

The EU platform would be a push system, notifying the stakeholders when messages are available. For example, the transferring PSP would be notified when a receiving PSP would upload the switching request of one of its clients, the receiving PSP would be notified when the transferring PSP would upload the information on the recurrent payments to be transferred to the new account, and the creditors/debtors' PSPs would be informed about the new payment account details (and would then notify their own clients). [51]

Taking into account the characteristics of this option, its implementation would entail the following implications:

Implications for stakeholder groups

This option entails the following implications for the different stakeholder groups:

Consumers:

Same implications as for option 1.1.

PSPs:

As this option would bring a new platform, PSPs would require a number of changes in terms of IT and their organisation (including implementing change management). They would need to adapt their processes and IT infrastructure in order to ensure efficient exchange of information through the EU central platform.

As for the tasks linked to the switching service provided to the client, these would remain the same as the ones carried out under Option 1.1, with the exception of notifying the creditors/debtors' PSPs of the switch, as the platform would automatically generate a notification to the creditors/debtors' PSP. Such notifications would be aggregated and sent daily to the creditors/debtors' PSP, in a format that allows them to easily and seamlessly transfer them to their client, also avoiding that they receive many notifications from several PSPs across the EU.

Creditors/debtors:

Same implications as for option 1.1.

Competent authorities:

Same implications as for option 1.1.

[51] For more details on the information flows for this option, see Annex E.

Others

Different stakeholders could take on the role of creating and running the EU platform. For example, it could be taken on as a joint effort between all national competent authorities, the industry at EU level or an existing EU body. Moreover, existing national switching services would not be needed anymore as they would be replaced by the centralised service and therefore would need to be discontinued.

Legal, operational and technical implications

Legal

- As in policy option 1.1, customers would need to provide in the switching request the legal and contractual mandate to PSPs, similar to the current authorisation described in Article 10.2 PAD, to allow them to share their new IBAN.
- The liability of the PSPs should be clearly identified and defined, extending the current provisions of Article 13 PAD to cross-border switches. PSPs need to have the mandate from their customer in order to modify the payment entrusted by the customer. In the event of an incident (e.g. if the switch is not correctly implemented by the PSPs or the creditors/debtors), the consumers should be protected, having different (litigation) recourses at their disposal.
- The notification from the EU platform to the creditors/debtors' PSP about the new payment account would have to be compliant with GDPR and banking secrecy. The declaration of consent in the switching request would be essential in order to ensure that the receiving PSP and EU platform have the legal and contractual mandate from their customers to notify of the new IBAN.
- IBANs are considered as personal sensitive data, and the EU platform would be handling this data. Therefore, the database should follow the principles of data protection by design and by default[42] complying overall with the GDPR principles.

Operational

- In order to ensure the smooth functioning of the EU platform's operations, a supervisory body at EU level would need to be appointed.
- Exchanges of information would have to be implemented based on a standard format of messages (e.g. the new ISO switching messages), which would need to ensure the necessary level of security and standardisation.
- This option would be used for both national and cross-border switches.

Technical

- Although setting up an EU platform is feasible from a technical point of view, it entails some technical risks. First, all PSPs across Member States would need to be connected to the EU platform. Second, the EU platform would also represent a single point of failure. If the EU platform would fail, the entire system would stop functioning.
- In order to ensure the technical feasibility, it should be noted that the communication channels used by the stakeholders should be secured via appropriate IT-security measures (e.g. encryption, secured data connections, APIs).

[42] For more information, see: https://ec.europa.eu/info/law/law-topic/data-protection/reform/rules-business-andorganisations/obligations/what-does-data-protection-design-and-default-mean_en

Feasibility of the option

Taking into account the above implications, this option is considered overall feasible from a legal, operational, and technical point of view as long as the different elements from these three dimensions are fully taken into account.

4.2. Options for automated redirection of payments (Switching tool 2)

The analysis of the second type of switching tool within this study assesses options for an automated redirection of payments, both at national level and at the EU level.

With the automated redirection of payments, consumers could benefit from an automated service that redirects their incoming payment transactions from the old account to the new account for a period of 13 months. This period would allow that all recurrent payments and direct debits are covered at least once, since some can occur only on a yearly basis (e.g. tax returns from government).

As switches are affected by whether creditors and debtors register the new account number properly, this service would provide consumers with an additional guarantee that their payments would arrive in the right account, in case the new account number would not have been duly registered. Consumers could benefit from the redirection by-default, if they would use the national or cross-border switching service and close their initial account. Therefore, the options under automated redirection tools – when applied at the EU level – assumes the set-up of a cross-border switching service. The switching service considered for the automated redirection is the same as the one foreseen under option 1.2 above[43]. The redirection of payments can be compared to the postal service redirecting someone's mail once he/she has moved. Offered in several countries, such service consists of redirecting the mail addressed to someone's old address to his/her new address for a definite period after he/she has moved.

On a domestic level such payment redirection service already exists in the Netherlands and in the UK, as an additional feature to their domestic switching services. Case studies on these solutions were conducted to understand the different features and set-up of these services.

The first option below (option 2.1) is largely inspired by the "OverstapService" in the Netherlands where a Central Registry is used to distribute information on all switches on a daily basis with all PSPs. The PSP of the payment initiator would hence be able to automatically redirect payments that are mistakenly addressed to already closed accounts to the right account.

As this option would require a Central Registry and the integration of a new Switching Table by all PSPs, the study also assessed the possibility to re-use existing information exchange mechanisms. This led to the second option where the new account information would be embedded in the standard error messages that are exchanged when a transfer arrives to an account that is closed (option 2.2). Such option would involve less drastic infrastructure changes; however it would require that the old account would be closed and that the transferring PSP would be informed by the consumer or the receiving PSP of the new account and would keep this info in its database for 13 months.

[43] Option 2.2 could also be applied together with a switching service such as the one in option 1.1. However, for matters of simplicity and consistency, the study team decided to evaluate all the redirection and ANP options as they would be implemented with a switching service as per option 1.2.

As a third option, the concept as implemented in the UK where the re-direction takes place at the central clearing engine was evaluated (option 2.3).

As per the options developed below, the redirection service would apply by default to all consumers (private consumers, as well as micro-enterprises and self-employed) who switch payment accounts through their national switching service (if national scope) or via an EU cross-border switching service (if EU scope) and close their initial account[44].

The sections below present the options developed for automated redirection of payments.

4.2.1. **Option 2.1 Automated redirection of payments based on a Central Registry**

The first option for the automated redirection of payments consists of setting up a Central Registry that would collect all the information about the switches and closing of accounts. The Central Registry would share on a daily basis the closed and corresponding new account numbers with all PSPs. The PSPs would integrate this information in their payment systems and ensure that whenever a payment would be initiated to a closed account, it would automatically be redirected to the new account[45].

Taking into account the characteristics of this option, its implementation would entail the following implications:

Implications for stakeholder groups **Consumer:**

Consumers benefiting from this service would be ensured that the transactions mistakenly addressed to their closed account are duly transferred to their new account, without further effort from their side.

PSP:

PSPs would need to implement some changes in order to ensure the functioning of this option. Change management and IT adjustments would need to take place. PSPs would require adapting their processes and IT infrastructure in order to ensure that:

1) The redirection information they would receive from the Central Registry would be duly integrated into their systems
2) Whenever a creditor/debtor would initiate a payment, their PSP would need to validate the redirection information.
3) In case the payment would be initiated to a closed account, the PSP would redirect the payment to the new account before passing it to the clearing and settlement mechanism of its choice.
4) The creditor/debtor's PSP would inform the creditor/debtor of the account info to be updated.

Clearing houses:

[44] Since this study looks at redirection in the context of improving and supporting account switching, it focuses on redirection as a feature of the switching service. However, it could be considered for consumers who close their account without using the switching service and wish to redirect payments to another existing account. In this case, attention should be given to the risks of fraud that it entails and to the AML implications. There is a need for consent and for verification of the consumer's identity at the receiving and transferring bank, to make sure that the consumer is in fact the owner of the account to be redirected. Putting in place the necessary procedures to avoid AML would also involve additional costs and burdens for PSPs.
[45] The detailed process flow for this option is found in Annex E.

No impact.

Creditors/debtors:

Whenever a creditor or debtor would receive a communication from its PSP that a transaction had to be redirected, it would need to update its bookkeeping information to include the right account information, i.e. the closed account of the consumer should be replaced by the new account.

Competent authorities:

Alike for the switching service in Switching tool 1, the competent authorities would continue supervising the well-functioning of the payment account market. Furthermore, as a new task, they would need to supervise the functioning of the Central Registry. This would be assumed by the existing national competent authorities if the redirection is implemented domestically, or by a newly appointed EU body, if the redirection is implemented EU wide. Nevertheless, this new function is not expected to bring significant additional impacts.

Others:

Different stakeholders could take on the role of creating and running the Central Registry (as part of the redirection service). For example, they could be taken on by a joint effort between all national competent authorities, the industry at EU level or an existing EU body (maybe the one responsible for the new crossborder switching service).

If this option were to be applied to payments coming from third countries, transactions would have to go through one or more correspondent banks, which might involve additional costs for extra-EU transactions. Otherwise, the payments coming from third countries would be subject to the status quo and payments directed to such closed accounts would continue to result in an error.

Legal, operational and technical implications

This option is assessed from a legal, operational, and technical point of view, according to whether it would be applied at the national or EU level.

Legal

- IBANs are considered as personal data, and the Central Registry would be handling this data. Therefore, the Central Registry should follow the principles of data protection by design and by default and secure by design, and compliant with the GDPR principles overall.
- The liability of the PSPs should be clearly identified and defined, extending the current provisions of Article 13 PAD to cross-border switches and redirection. PSPs need to have the mandate from their customer in order to modify the payment entrusted by the customer. In the event of an incident (wrong redirection), the consumers should be protected, having different (litigation) recourses at their disposal.

Operational

- The transaction time for all payments would be slightly delayed, since all transactions would need to be subject to a verification of redirection by the initiating PSP. If the redirection information is properly integrated in PSPs systems, this would be a matter of milliseconds[46].

[46] It should be noted that the *OverstapService* in the Netherlands redirects the payments without any delay.

- PSPs would need to change their transaction processing by looking up the routing information – in their own replicated Switching Table – every time they process a payment, to ensure that it is redirected if it needs to.
- When a redirection is completed by a correspondent bank[47], the latter could notify the initiating PSP via a SWIFT message to inform it that the payment was redirected and asking it to inform its client about the new account (see step 7 in Annex E).

Technical

- The Central Registry would receive information sent by the receiving PSP chosen by the consumer. This information would contain: the new IBAN at the receiving PSP, the old (closed) IBAN at the transferring PSP, and the date of the changeover. After receiving this information, the Central Registry would notify and provide the information to all PSPs on a daily basis in a standardised format. PSPs would hence be able to update the information kept in their payment system.
- Every time a consumer would switch accounts, the new payment account would be added to the Central Registry. Therefore, for all the previous accounts, the Central Registry would indicate the (latest) new payment account number.
- The Central Registry would imply some technical risks, such as a single point of failure. This risk would increase if this option would be implemented at EU level, as all the PSPs across Member States would depend on the Central Registry to ensure a smooth functioning of the payment scheme. However as the Central Registry itself is not a component of the payments processing chain it is not considered as mission critical.

Feasibility of the option

This option is overall feasible from a legal, operational, and technical point of view, both at national and EU level, as long as the different elements from these three dimensions are fully taken into account and the risks are mitigated.

Although this option is a very robust solution, it has some disadvantages, especially when applied on a European level. First, it requires the set-up of a new central component - the Central Registry for redirection, and this component to be integrated with all European PSPs, which might take a long time to implement. Second, although the impact of the necessary check of the payment account every time when initiating transaction would only involve a slight delay (in milliseconds), the necessity to check every transaction creates an additional step for all the payments, while instant payments are likely to continue to gain more ground.

Moreover, since the redirection is a fall-back mechanism providing an extra guarantee to consumers who switched their account, only a very small portion[48] of the transactions would need to be redirected (only the ones still directed to the old (closed) account), whereas all the transactions need to be verified, which is highly inefficient from a process point of view.

[47] For instance, for payments to be redirected between different Member States outside the Eurozone, or between Member States from the Eurozone and from outside of the Eurozone.
[48] Based on data provided by the European Payments Council, in 2019, the number of failed payments directed to a closed account amounted to 0.07% of credit transfers and 0.13% of direct debits.

4.2.2. **Option 2.2 Automated redirection via account information embedded in error messages**

Considering the important impacts and implications of the first option, this study also explored the possibility to build an option on the basis of the existing information exchange practices and involving less structural changes for payment systems.

This option entails that payments mistakenly addressed to the old account would not be automatically redirected by the PSP of the creditor/debtor initiating the payment. The transferring PSP would be expected to inform the PSP of the creditor/debtor of the new account details by embedding the new account information in the closed account error message that already exists today. When receiving the error message, the initiating PSP would update the account information, re-initiate the payment to the new account and inform the debtor/creditor of the new account to be used.

Although this option would avoid the need for a Central Registry and the validation of redirection for every payment transaction initiated, it could only work when the transferring PSPs keep a record of the new account numbers to be used during 13 months.[49] Similarly as in option 2.1, the consumer would give consent to the redirection as part of the switch and the receiving PSP would inform the transferring PSP of this consent during the switching process (in the switching form exchanged via the EU Platform).

Taking into account the characteristics of this option, its implementation would entail the following implications:

Implications for stakeholder groups **Consumers:**

Consumers benefiting from this service would be ensured that the transactions mistakenly addressed to their old account are duly transferred to their new account, without further effort from their side.

PSPs:

PSPs would need to implement some changes in order to ensure the functioning of this option. Change management and IT adjustment would be necessary. PSPs would be required to adapt their processes and IT infrastructure in order to ensure that:

1) The error messages contain the right IBANs. Transferring PSPs would need to keep track of the new IBAN of all their ex-consumers who have switched in order to include this information in the error messages.
2) Whenever PSPs receive an error message, they can redirect the payment to the appropriate new account.
3) Creditors and debtors' PSPs who launched the payment and had to later redirect it would inform their customers (i.e. the creditors or debtors), to make sure they update their own systems with the right account information, to avoid that a failed payment occurs again.

Clearing houses:

Clearing houses would need to pass the new account information to the creditor/debtor's PSP as part of the error message received from the transferring PSP.

[49] The detailed process flow for this option is found in Annex E.

Creditors/debtors:

Whenever a creditor or debtor would receive a communication from its PSP that a transaction had to be redirected, it would need to update its bookkeeping information to include the right account information, i.e. the old IBAN of the consumer should be replaced by the new IBAN (as per the notification – in the vast majority of cases – it should have already received).

Competent authorities:

Same implications as under option 2.1.

Other

This option would also work for payments coming from third countries. The transferring PSP would send an error message containing the new IBAN to the correspondent bank of the initiating PSP[50].

Legal, operational and technical implications

This option is assessed from a legal, operational, and technical point of view.

Legal

- In terms of data protection, it should be noted that the error message including the correct IBAN must be compatible with GDPR and banking secrecy. In other words, consumers must give their consent in the switching and redirection request for their PSPs to notify the new IBAN. This declaration of consent, similar to the current authorisation described in Article 10.2 PAD, is essential in order to ensure that PSPs have the mandate from the consumers to notify the new IBAN.
- The liability of the PSPs should be clearly identified and defined. PSPs need to have the mandate from the consumer in order to modify the payments entrusted to them. In the event of an incident (e.g. if the switch is not correctly implemented by the PSPs or the creditors/debtors), the consumers should be protected, having different (litigation) recourses at their disposal, extending the current provisions of Article 13 PAD to cross-border switches.
- Although the modification or the error message is not a complicated modification from a technical point of view, since the "account closed" error messages already exist, it requires that the ISO message format is updated[61]. This would require an agreement at ISO level and payment schemes (e.g. SEPA, SWIFT, domestic payment schemes, etc.) to update their scheme documentation & rulebooks in order to account for the embedding of the new account numbers.

Operational

- The creditor/debtor's PSPs need to inform their clients (i.e. the creditors/debtors) of the redirection that has taken place, so that they can update their bookkeeping information.
- In those cases in which this fall-back solution would apply, the transaction would be slightly delayed, since the error message would need to reach the initiator PSP and the payment would need to be redirected. Still, this is less bad than having a failed payment. And for most payments like recurrent

[50] The processing of the IBAN would need to remain within the EU in order to avoid any potential breach of the GDPR. [61] ISO has introduced switching as well as redirection messages: the new Account Switching message set includes the new version of the Message Definitions that have been added as part of the maintenance cycle 2019/2020 (MCR #147) and approved by the Payments Standards Evaluation Group on 09 January 2020 as ISO 20022.

payments or direct debits, the payments do not need to be conducted instantly (e.g. salary paid by employer or tax return from the government) and in the cases of direct debits, those are usually processed in batches anyway. Moreover, if the creditors/debtors would not update the consumer's new account (as they would be supposed to), they would receive the consumer's new IBAN once again within this message, which would again be an additional security compared to the current situation. For instant payments, the process could be fully automated and the additional delay could be a matter of seconds.

- The impact for payments originating in non-EU countries would not be very different. The service provider correspondent bank through which they would go would be part of the system. It would therefore include the new payment account in the error message being returned to the initiating PSP[51].

Technical

- The implementation of the redirection process would be less complex for some Member States that already have similar procedures in place[63]. For the Member States that do not have such procedures in place, transferring PSPs would need to implement tailored solutions that allow them to keep track internally of the new account details of their consumers who switched and closed their account for a period of 13 months, in order to automatically embed their new IBAN into the error messages that are issued following the reception of a mistakenly addressed payment.
- In case of subsequent and multiple switches in the 13 months period where the creditor or debtor would not register the switch correctly when receiving notifications, several error messages would be needed before obtaining the most recent account which would be the active account of the customer. Such situation would cause delays in the consumer's transactions, as it would require the PSP to resubmit the payment again. The additional delay would be the same as for the first redirection. It should be noted that it would be in very rare cases, as a consumer would need to switch at least twice in the same year and this would require that the switches would not have been registered correctly. This delay would only happen one time.

Feasibility of the option

This option is overall feasible from a legal, operational, and technical point of view as long as the different elements from these three dimensions are fully taken into account. However, although the error messages already exist, an important pre-requisite is an international agreement at ISO level regarding the modification of the ISO standard in order to include the new account numbers in the error messages.

This option involves a number of advantages. For instance, it builds on the existing error messages that are already in place when payments reach closed accounts. Also, in contrast with the need for an EU platform for the cross-border switching service, no central component needs to be put in place for the redirection. Moreover, this option can be applied in correspondent banking and with non-EU PSPs by making use of the standard ISO messages.

On the other hand, this option also has a number of disadvantages. In particular it is burdensome for PSPs, since transferring PSPs need to keep information on their ex-clients for a period of 13 months and share it

[51] Either the initiating PSP would resend the payment instruction, or rely on the correspondent bank to do it, which could entail additional interbank fees. 63

For instance, NL has a system that informs all PSPs of the new account number to be used, , and hence they are used to updating account numbers and informing payment initiators of new account numbers. A large part of these processes could be re-used in the context of error messages.

with other PSPs. They also need to inform their customers who launched mistakenly addressed payments that there was a change of account, whenever they receive an error message. Moreover, it is likely to cause delays for the processing of redirected payments. As such, this typically results in a delay of one business day, but as Europe is moving towards Instant payments as the "new normal", the delay in case of an Instant payment should be only a matter of seconds. Finally, from a process point of view, it is more efficient than option 2.1, as additional efforts and delays for the redirection only apply to the transactions that are redirected, contrary to option 2.1, in which a look-up of all transactions is necessary.

4.2.3. **Option 2.3 Automated redirection based on a Central clearing house**

In order to further reduce the burden for PSPs, the study team also assessed a third option for the redirection of payments, based on the case study of the domestic implementation in the UK, where the redirection is managed by a Central clearing house. This Central clearing house would be the single entity redirecting the payments, instead of the PSPs. This clearing house would exist on top of other clearing houses and all payments would go through it, so that it could redirect the ones that would be mistakenly addressed to accounts that were closed.

As mentioned above, within SEPA, there are multiple clearing and settlement mechanisms (CSM) that exist and each PSP chooses the CSM offering the best conditions and services[52]. The Central clearing house would take care of the redirection of the payment to the CSM of choice of the PSP initiating the payment and then to the new account by the receiving PSP.

Taking into account the characteristics of this option, its implementation would entail the following implications:

Implications for stakeholder groups **Consumers:**

Same implications as for option 2.1.

PSPs:

PSPs would need to adapt their processes and IT infrastructures in order to ensure that:

1) Receiving PSPs provide the Central clearing house with the information necessary for the clearing house to conduct the redirections (i.e. consumers' old and new IBANs and the date of the switch).
2) Initiating PSPs inform their customers (the creditors and debtors) of the switch and of the new IBAN, whenever they receive a notification of redirection from the clearing house, so that they can update their information

Clearing houses:

All clearing commercial agreements and their updates would need to be provided to the Central clearing house in order to be integrated into its system, so that it could constantly redirect payments to the right CSM.

Creditors/debtors:

[52] EPC, Clearing and Settlement mechanisms: https://www.europeanpaymentscouncil.eu/what-we-do/sepa-paymentscheme-management/clearing-and-settlement-mechanisms

Whenever a creditor or debtor would receive a communication from its PSP that a transaction had to be redirected, it would need to update its bookkeeping information to include the right account information, i.e. the old account of the consumer should be replaced by the new account.

Competent authorities:

Alike for the switching service in Switching tool 1, the competent authorities would continue supervising the well-functioning of the payment account market. However, as a new task, they would need to supervise the functioning of the Central clearing house. This would be assumed by the existing national competent authorities if the redirection is implemented domestically, or by a newly appointed EU body, if the redirection is implemented EU wide. Nevertheless, this new function is not expected to bring significant additional impacts.

Others:

The role of the Central clearing house could be assigned to an existing organisation or could be taken up by a joint effort between all national competent authorities, the industry at EU level or an existing EU body. It could also be built from scratch.

This option would be applied equally to payments coming from third countries. Transactions would have to go through one or more EU correspondent banks, but from that point forward, the Central clearing house would redirect payments the same way.

Legal, operational and technical implications

This option is assessed from a legal, operational, and technical point of view, according to whether it would be applied at the national or EU level.

Legal

- IBANs are considered as personal data, and the Central clearing house would be handling this data. Therefore, it should follow the principles of data protection by design and by default and secure by design, and be compliant with the GDPR principles overall.
- The liability of the PSPs should be clearly identified and defined, extending the current provisions of Article 13 PAD to cross-border switches and redirection. PSPs would need to have the mandate from their customer in order to modify the payment entrusted by the customer. In the event of an incident (wrong redirection), the consumers should be protected, having different (litigation) recourses at their disposal.

Operational

- The transaction time for all payments would be slightly longer, since all transactions would need to be subject to a verification of redirection by the Central clearing house. This would be a matter of milliseconds.

Technical

- The Central clearing house would receive information sent by the receiving PSP chosen by the consumer. This information would contain: new IBAN at the receiving PSP, old IBAN at the transferring PSP, and the date of the changeover.
- Every time a consumer would switch accounts, the new payment account details would be added to the Central clearing house. Therefore, for all the old accounts, the Central clearing house would register the (latest) new payment account number.

- The Central clearing house would imply some important technical risks, such as a single point of failure, as all transactions in a Member State (if implemented domestically) or in the EU (if implemented EUwide) would need to go through this Central clearing house before reaching the right CSM. This risk would be even more important if this option would be implemented at EU level, as all the PSPs across the EU would depend on the Central clearing house to ensure a smooth functioning of the EU payment system. Significant resources would need to be mobilised to mitigate this single point of failure.

Feasibility of this option

Although this option would have less operational impact on PSPs (e.g. no need to store redirection information), the study has shown that its implementation would involve a number of important challenges and shortcomings.

First, the Central clearing house would need to integrate all clearing house and correspond banking agreements from each PSP and integrate with all clearing houses and correspondent banks to route payment transactions to the appropriate payment clearing house or correspondent bank.

Second, the establishment of a Central clearing house as a critical component of the payment chain would represent a single point of failure. This risk would be exacerbated when this option would be implemented at EU level, as all the PSPs across the EU would depend on this clearing house.

Third, this would also entail an extremely high volume of traffic (the clearing house would handle all payments, in order to be able to redirect all mistaken transactions at EU level), especially if implemented EU-wide. Similarly as in option 2.1 (although the Central Registry Switching Table in option 2.1 is integrated in all PSPs) this would be ineffective from a process point of view, as it would mean screening/checking all transactions to ensure the redirection of the mistakenly addressed ones[53]. The fact that this would be centralised also exacerbates the risk of single point of failure, as mentioned above.

These challenges significantly complicate the feasibility of this option, especially if its implementation is considered in an EU-wide context and need to be kept in mind in the next steps of the analysis.

4.3. Options for ANP (Switching tool 3)

Account Number Portability (ANP) entails the possibility for a consumer to switch (payment) accounts while keeping for the new account the same number (s)he had to identify the old account. Some of the main benefits of ANP are, if consumers would switch accounts:

- They would not need to memorise their account number more than once (if they chose to learn it);
- They would not need to notify any creditor/debtor with whom they have recurrent transactions of the new payment account number;
- Their creditors/debtors would not need to update their accounting systems to record the new payment account number.

- More broadly, ANP would facilitate switching for consumers more than Switching tools 1 and 2, primarily domestically but also cross-border, which could entail increased competitive pressure for PSPs, larger propensity of consumers to deal with contractual terms and conditions of their payment accounts (a potentially higher level of financial literacy) and, in the long term, an improved financial awareness of EU citizens[54].

[53] Based on data provided by the European Payments Council, in 2019, the number of failed payments due to an account being closed amounted to 0.07% of credit transfers and 0.13% of direct debits.
[54] This possible advantage should not be under-estimated – the analogous experience with the portability of phone numbers, with its significant and positive consequences for consumers, is to be considered. Indeed, with the portability

The options for ANP would build on a switching service similar as the one under option 1.2, supported by an EU Platform through which PSPs exchange switching information and a Central Registry that contains the routing information, similarly as in option 2.1. It should be noted that both components would belong to the same organisation or entity. In this study, the EU Platform refers to the portal allowing PSPs to exchange their documents and switching and redirection information, whereas the Central Registry refers to the system, fed by the EU Platform, which saves the data related to the switches and redirection and issues daily Switching and Routing Tables.

Today, accounts are identified by IBANs (international bank account numbers) - an international standard part of a worldwide ISO-based payment system that is *"used to facilitate the processing of data internationally in data interchange, in financial environments as well as within and between other industries."*[67] The IBAN includes alphanumeric characters that identify in which country and bank (sometimes even the issuing branch) the account is located, as well as the account holder (and sometimes the type of product it is). This information is used for several banking activities such as the technical routing or reporting of payments, balance of payments, AML/CFT screening, etc.; but also for reporting purposes to support the fight against VAT fraud[68].[55]

While some countries (e.g. the Netherlands or India) have been studying the principle, ANP does not yet exist *per se*. However, similar practices exist at national level and can serve as examples to inspire and understand the potential implications of such portability. Concretely, we have considered the use of aliases in payments (studying in particular the case of Bankgirot in Sweden) and the portability of phone numbers. Based on these, three options have been developed for ANP supporting EU-wide switches:

- Option 3.1 EU-wide portability of existing IBAN
- Option 3.2 Portable alias on top of IBAN
- Option 3.3 New portable account number throughout the payment chain (replacing current IBANs)

In order to address the fact that a portable account number would no longer allow alphanumeric characters to help identify the location of the account and facilitate the routing of transactions, the options have been built based on a dual key system. Each account would have:

- A **front-end** identifier: which would be the account number used on a daily basis by consumers and which would be shared with other stakeholders to carry out transactions, and which would be portable.

- A **back-end** identifier: which would only be used by the payment systems to recognise where the account is located and where the payment needs to be routed to.

The table below shows the front-end and back-end identifiers of each option. Table 3 - Key differences between the options for ANP

Options	Front-end identifier	Back-end identifier

of phone numbers, consumers have become more critical as regards the commercial offers in the field of telecommunications; it is plausible that a similar "cultural revolution" could also take place for financial services. [67] ISO, https://www.iso.org/standard/81090.html [68] Directive (EU) 2020/284.
[55] European Credit Sector Associations (ECSAs).

Option 3.1	Existing IBAN (initially provided by the transferring PSP) which would become portable and would be kept by the consumers after they switch	New IBAN assigned by the receiving PSP to the consumer (who would not necessarily be aware of its existence), which would keep the alphanumeric characters allowing the identification of the location of the account
Option 3.2	New or existing alias chosen by the consumer at the time of the first switch, which would be portable	New IBAN assigned by the receiving PSP to the consumer (who would not necessarily be aware of its existence), which would keep the alphanumeric characters allowing the identification of the location of the account
Option 3.3	New portable account number	Bank identifier/address allowing the identification of the location of the account, used throughout the payment chain

A key difference between options 3.2 and 3.3 is the fact that option 3.3 is implemented all at once (in a "big bang" transition period) whereas 3.2 happens gradually, whenever consumers switch payment accounts. This choice was made to test and compare these two implementation scenarios and to ensure enough difference between the two options. Another key difference between them is that option 3.2 still relies on the IBAN as the back-end identifier, whereas the new portable account number under option 3.3 would be fully portable and would only require the BIC as a back-end identifier.

The front-end and back-end identifiers would need to be connected to each other in order to ensure portability and the routing of transactions. Moreover, guaranteeing traceability would be crucial to ensure auditability in the payment system. Consequently, it would be necessary to put in place a registry at EU level with the capacity to keep track of the front- and back-end identifiers of all (relevant) EU accounts.
The registry would, on a daily basis, share the information with the different PSPs in the EU as part of a Routing Table. This would allow PSPs to know where transactions need to be directed.

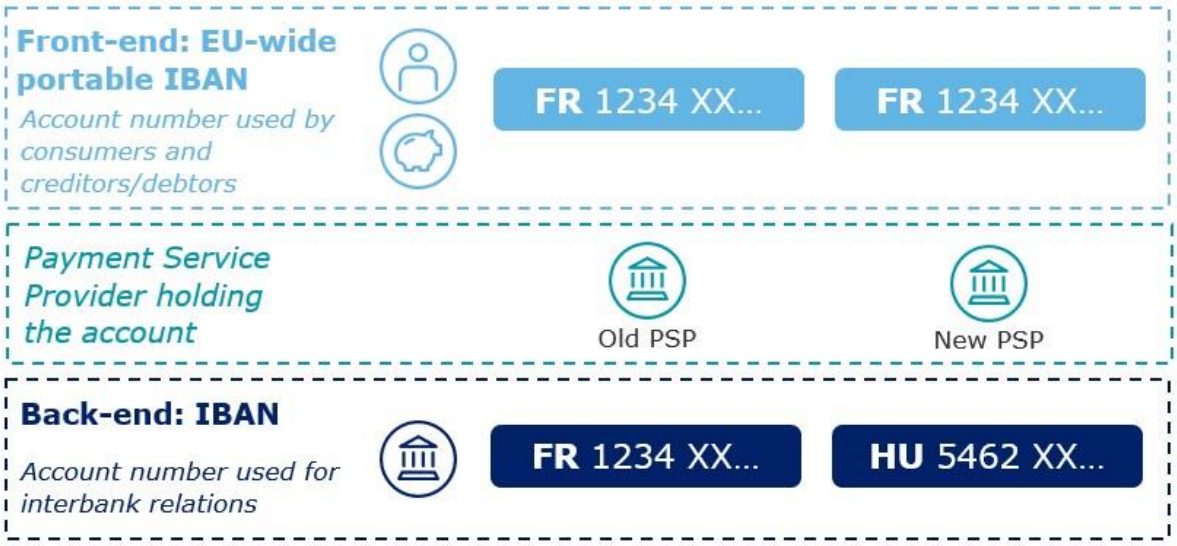
As mentioned in the beginning of this section, ANP would entail the possibility to switch accounts while keeping the same account number. ANP in this study is analysed in the context of switching, and therefore considered together with a corresponding switching service at cross-border level that supports consumers in their switching efforts. This switching service could be similar to that required by the PAD at national level, minus the necessity to notify creditors/debtors of the account change. Notifications would only be necessary as a one-off exercise for option 3.2, after the consumer has switched and chosen a new portable alias for the first time. Once the alias is communicated to them for the first time, creditors and debtors would not have to be informed of any account change as it would not impact them anymore. The system that would be favoured to facilitate the cross-border switching would have to be a centralised one (such as in option 1.2 of this study) as in any case a Central Registry would be required for the recording of the front- and back-end identifiers.

The sections below briefly present the options developed for Switching tool 3, including the main implications of their implementation for the different stakeholder groups and the legal, operational and technical implications.

4.3.1. **Option 3.1 EU-wide portability of existing IBAN**

In the first option, consumers would keep their existing IBAN after having switched payment accounts (domestically or cross-border) and creditors/debtors would no longer need to update their accounting system after a switch. The receiving PSP would allocate a new IBAN in the back-end, following the current IBAN creation procedure (i.e. including the alphanumeric strand that allows the identification of the account location). This back-end IBAN would be connected to the existing IBAN in the front-end (the portable IBAN), and would allow PSPs to direct transactions to the right account. The consumer's IBAN would thus appear to be portable in the front-end but, in reality, in the back-end their new account would actually have a new IBAN following the IBAN structure of the receiving PSP. The figure below provides an example of a consumer in France who would switch his/her current account in France with one in Hungary.

Figure 7 - Option 3.1 EU-wide IBAN portability



Source: Deloitte

As shown in the above figure, the consumer would keep the IBAN of his old account in France for his new account in Hungary, and the receiving PSP in Hungary would link the French (portable) front-end IBAN to the Hungarian back-end IBAN in their systems and in the Central Registry at EU level. Creditors/debtors would be able to continue using the French IBAN for transactions with the consumer and vice versa.

Taking into account the characteristics of this option, its implementation would entail the following implications:

Implications for stakeholder groups <u>Consumers:</u>

This option would ensure a user-friendly cross-border switching process for consumers, including:

A lighter process and time savings due to the fact that they would only need to fill in the switching request and provide it to the receiving PSP.

- They would not need to inform their creditors/debtors about the switching, as their account number would not change.
- They would also be able to memorise their account number if they choose with the reassurance that it would not change anymore.

If they would want to have multiple accounts, consumers would then have several portable account numbers (one for each account).

PSPs:

As this option would bring a new system (to support the switching service and allow ANP), PSPs would require a number of changes in terms of IT and their organisation (including implementing change management). They would need to:

- Adapt their processes and IT infrastructure in order to ensure efficient exchange of information through the EU central contact point / platform.
- Connect the portable front-end IBAN of new consumers to internally assigned back-end IBANs;
- Ensure the automatic integration of the Routing Table on a daily basis to guarantee the efficient routing of payments.

As for the tasks linked to the switching service provided to the client, these would remain mostly the same as the ones carried out at national level. The receiving PSP would take care of informing the transferring PSP of the request to switch by the consumer and the tasks that it would need to do[56]. The main difference would be that the receiving PSP would no longer need to reach out to the PSPs of the consumer's creditors/debtors to inform them of the switch as the identifier of the account in the front-end would remain the same.

Clearing houses:

As PSPs would receive the Routing Table on a daily basis and they would thus know where to direct a payment following the back-end identifiers (IBANs), their clearing houses would not be particularly impacted by ANP.

Creditors/debtors:

Creditors/debtors would no longer need to update their accounting systems due to a consumer switching payment account. They would continue to make transactions using the consumers' pre-existing IBANs which would have become portable. They would also need to be ready to register an increasing number of portable IBANs originating from other EU Member States.

Competent authorities:

[56] In summary, when requested by the consumer: transfer the information on the recurrent payments with EOs, cancel and stop accepting recurrent payments, transfer the remaining positive balance and close the payment account, all within a specific (maximum) timeframe. See Article 10 PAD for more details.

The national competent authorities would continue supervising the well-functioning of the national payment account markets, as is the case today. However, an EU central supervisory body would need to assume the function of supervising the EU switching service and the EU Central Registry as part of their tasks (e.g. the European Central Bank or the European Banking Authority).

Other

Different stakeholders could take on the role of creating and running the central EU registry / platform (which would in parallel operate the cross-border switching service as well). For example, it could be taken on by a joint effort between all national competent authorities, the industry at EU level or an existing EU body.

Transactions coming from outside the EU payment systems would not be disrupted, as the third country PSPs' correspondent bank – which, being part of an EU payment system, would have access to the Central Registry – would be able to route the payment to the right PSP (via its own correspondent bank if that PSP is not part of the same payment system).

Legal, operational and technical implications

Legal

- Customers would need to provide in the switching request the legal and contractual mandate to PSPs, similar to the current authorisation described in Article 10.2 PAD, to allow them to share their new IBAN (via the EU platform).
- The liability of the PSPs should be clearly identified and defined, extending the current provisions of Article 13 PAD to cross-border switches. PSPs need to have the mandate from their customer in order to modify the payment entrusted by the customer. In the event of an incident (e.g. if the switch is not correctly implemented by the PSPs), the consumers should be protected, having different (litigation) recourses at their disposal.
- IBANs are considered as personal sensitive data, and the EU platform would be handling this data. Therefore, the database should follow the principles of data protection by design and by default, complying overall with the GDPR principles.
- Introducing a new portable account number would require the enactment of a new piece of legislation in order to ensure that ANP is duly regulated. Besides this, those legal instruments referring to the IBAN as the identifier (e.g. PSD2, SEPA Regulation, Funds Transfer Regulation) would need to be amended in order to allow the distinction between the front-end and back-end identifiers. **Operational**

- In order to ensure the smooth functioning of the EU Central Registry's operations, a supervisory body at EU level would need to be designated (ensuring the right expertise in terms of security, for example).
- Exchanges of information would have to be implemented based on a standard format of messages (e.g. the ISO switching messages), which would need to ensure the necessary level of security and standardisation. Standardised information would indeed be crucial, to avoid any difficulty across Member States concerning the exchange and processing of data.
- PSPs would need to change their transaction processing by looking up the routing information – in their own replicated Routing Table – every time they process a payment, to ensure that it is redirected if it needs to.
- Option 3.1 would still rely on the current IBANs as we know them today, a distinction would just need to be made between the back-end and the front-end IBANs. PSPs would continue to work with their

IBAN format, without the portable IBAN impacting its core banking applications and customer portals, communications, and processes.

- Although having to look up every payment to reach the correct destination might entail an additional step in the payment process, this would not necessarily impact payment transactions significantly (and instant payments would remain instant – within milliseconds).

For payments originating in third countries, the redirection would depend on the payment scheme applicable in the Member State in question. The correspondent bank in the EU of the initiating PSP would re-route the payment to the back-end identifier, on the basis of the information from the Central Registry.

Technical

- The EU Central Registry would receive information sent by the receiving PSP via the EU Platform after a switch takes place: back-end IBAN from the receiving PSP and portable IBAN from the transferring PSP, and the date of the changeover. The Central Registry would save this information and provide, once a day, an update to the Routing Tables for all PSPs, containing the new switching information from the last 24 hours.
- Although setting up an EU Central Registry is feasible from a technical point of view, it entails some technical risks. All PSPs across Member States would need to be connected to the EU Central Registry, and it could become a single point of failure when carrying out the switching service. However, for the routing of payments the Central Registry is not consulted directly during the execution of the payment transaction so this would limit the risk.
- Communication channels used by the stakeholders should be secured via appropriate IT-security measures (e.g. encryption, secured data connections, APIs).
- The different interfaces (e.g. mobile applications, websites, etc) would need to be adapted in order to ensure that the front-end IBAN can be used (despite potentially being an IBAN from another bank, from another Member State).
- The capacity of the registry would need to be very high as it would need to keep track of a significant amount of switches cumulatively and permanently (and not limited to a period of 13 months), and the take up by consumers of portable IBANs would be expected to gradually increase over time, putting a risk on the processing efficiency.

Feasibility of the option

Taking into account the above implications, this option is considered overall feasible from a legal, operational, and technical point of view as long as the different elements from these three dimensions are fully taken into account.

4.3.2. Option 3.2 Portable identifier/alias on top of IBAN

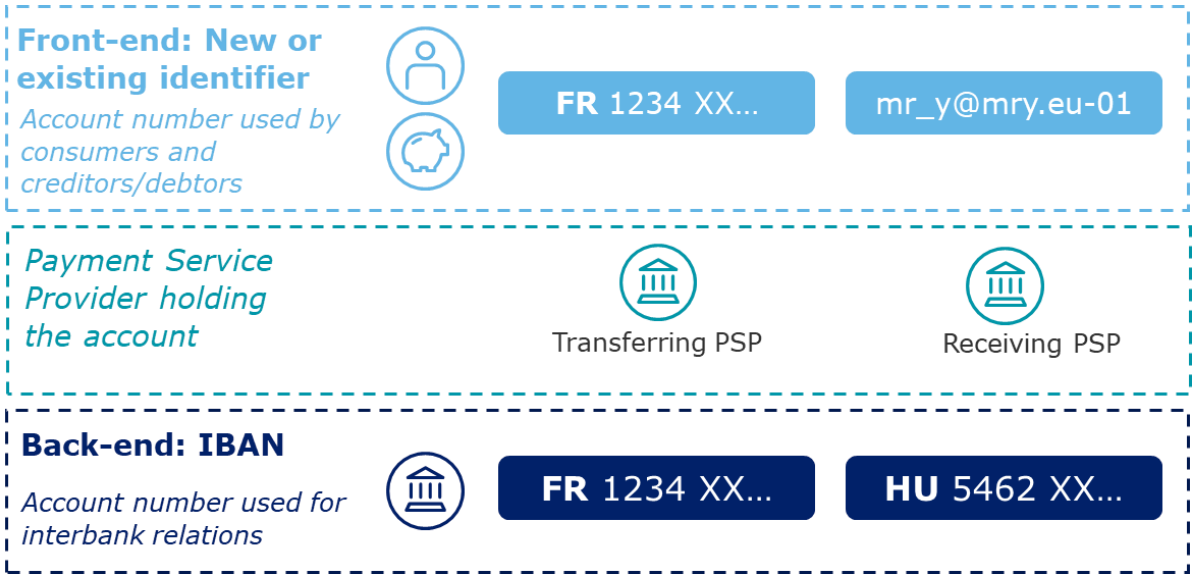
The second option for ANP would be to allow customers to use an alias of their choice as portable frontend identifier, and keep the IBAN assigned by the receiving PSP as the back-end identifier, similarly as is the case of Bankgirot for example. It should be noted that the alias would be offered to consumers by PSPs when they switch, but it could also be offered to consumers by PSPs as a service (free or not) – to facilitate their transactions – without them necessarily switching. This could ultimately have a positive impact on the achievement of the benefits of the switching service. However as this would be voluntary and outside of the

scope of switching, as well as dependant on too many uncertain variables, this service is not considered in this study.

The role of the Central Registry would be of special importance to ensure that the alias chosen by the consumer is not already in use. The alias could be either an existing identifier (e.g. phone number, email address, ID number) or a new identifier (a new alphanumeric string of the consumer's choice).

The figure below provides an example of a consumer in France who would switch her/his current account in France by one in Hungary, choosing an email address as alias which (s)he would use as of then for any transaction (and would keep if (s)he was to switch again).

Figure 8 - Option 3.2 new or existing portable identifier/alias



Source: Deloitte

Once the consumer has requested to switch account, his/her new IBAN would be linked to an alias of her/his choice, it would be registered in the Central Registry, and communicated to the PSPs of the creditors/debtors (who would then also have to be notified by their PSPs). From then onwards, if the consumer would change payment accounts again, (s)he would be able to use the same portable alias to carry out payment transactions.

Taking into account the characteristics of this option, its implementation would entail the following implications:

Implications for stakeholder groups <u>Consumers</u>

Overall, the implications of this option would be the same as for option 3.1, with the exception that, by being able to choose their preferred alias to implement the ANP, it would be even easier for consumers to remember the identifier of their account and make transactions with it. However, should their preferred alias have already been selected by another consumer, they would have to choose another available alias.
Moreover, the chosen alias:

- Would not allow the additional security provided by the alphanumeric check provided by the current IBAN structure (for new identifiers chosen by consumers), making it more difficult to prevent fraud or errors[57]; or
  Might bind consumers to a specific provider (e.g. if they choose an email or phone number) or country (if they use a telephone or ID number).

If they would want to have multiple accounts, they could have several aliases.

PSPs:

Overall, the implications of this option would be the same as for option 3.1, with the exception that PSPs would have to:

- Ensure enough flexibility in their system to recognise any type of alias (alphanumeric format) chosen by the consumer for their account;
- When allocating new aliases, verify in the Central Registry if the alias chosen by the consumer is not already allocated; and
- Creditors/debtor's PSPs would receive from the Central Registry the notification of the alias replacing the consumer's old payment account, which they would need to transmit to their clients (the consumer's creditors/debtors).

Clearing houses:

Same implications as for option 3.1

Creditors/debtors:

Option 3.2 would be more burdensome than option 3.1 for creditors/debtors. First of all, all creditors/debtors would need to adapt their payment systems to be flexible and able to support aliases (even if only a limited number of their customers might have them) as well as traditional IBANs. Then they would still have to update once their customers' account information with their alias whenever one of their customers would request an alias for the first time. After the attribution of an alias to a specific consumer, they would no longer need to update their accounting systems due to that consumer switching payment account: they would continue using the consumer's portable alias to carry out payment transactions.

Competent authorities:

Same as option 3.1.

Other

Same as option 3.1.

In order for this option to allow payments from outside of the EU to work with an alias, PSPs and creditors and debtors from third countries would need to recognise it. If they decide to recognise it, third country PSPs' correspondent bank – which being part of an EU payment system would have access to the Central

[57] Without the check digits in the account number (that confirm whether the account is held by the specific person that is identified when carrying out the payment), the customer would have to accept the full liability of validating the correctness when providing his/her alias to a third party when carrying out a payment transaction. For instance, in the case of an email address, it is not possible to confirm that an email address is owned by a specific person, so a typo mistake could lead to a valid alias of another consumer, who would receive the payment(s), since the economic operator cannot check that the alias belongs to the consumer.

Registry – would be able to route the payment to the right PSP (via the appropriate correspondent bank if that PSP is not part of the same payment system).

Legal, operational and technical implications

Legal

Same legal implications as option 3.1.

Operational

- In order to ensure the smooth functioning of the EU platform's operations, a supervisory body at EU level would need to be identified/appointed (ensuring the right expertise in terms of security, for example).
- Exchanges of information would have to be implemented based on a standard format of messages (e.g. the ISO switching messages), which would need to ensure the necessary level of security and standardisation. Standardised information is indeed crucial, to avoid any difficulty across Member States concerning the exchange and processing of data.
- PSPs would need to change their transaction processing by looking up the routing information – in their own replicated Routing Table – every time they process a payment, to ensure that it is redirected if it needs to.
- PSPs would continue to work without the portable alias impacting the processes behind their core banking applications and communications, as the IBANs in the back-end would remain. However, the user interfaces of these applications would need to show and work with both the aliases and IBANs.
- An important downside of aliases based on existing identifiers is the lack of embedded security checks, hampering significantly the feasibility of this option. Moreover, this option could also entail additional risks, such as having an existing alias linked to a specific company or service provider (e.g. email, or phone number), making the alias dependent, and thus preventing its durable use.
- All payment-related IT systems would need to be adjusted in order to recognise and accept both the new identifiers and the existing IBANs. The systems and inter-banking infrastructures would need to keep accepting the current IBANs on the one hand (for those consumers not switching or corporate customers), and on the other be adapted to recognise and accept the alias (for those consumers switching). Requiring stakeholders to accept both would entail a significant operational and technical burden for them.

  Although having to look up payments with aliases to reach the correct destination would entail an additional step in the payment process, this would not necessarily impact payment transactions significantly (and instant payments would remain instant – within milliseconds).

Technical

- The EU Central Registry would receive information sent by the receiving PSP after a new alias is attributed (e.g. when a switch takes place): portable alias, back-end IBAN from the receiving PSP, old IBAN from the transferring PSP, and the date of the changeover. The Central Registry would register this information and provide, once a day, an update of the Routing Table to all PSPs, containing the renumbering/switching information from the last 24 hours.
- PSPs would need to change their transaction processing by looking up the routing information – in their own replicated Routing Table – every time they process a payment, to ensure that it is redirected if it needs to be.

- Although setting up an EU registry is feasible from a technical point of view, it entails some technical risks. All PSPs across Member States would need to be connected to the Central Registry, and it could become a single point of failure when carrying out the switching service. However, for the routing of payments the Central Registry would not be consulted directly during the execution of the payment transaction so this would limit the risk.
- Communication channels used by the stakeholders should be secured via appropriate IT-security measures (e.g. encryption, secured data connections, APIs).
- The different interfaces (e.g. mobile applications, websites, etc) would need to be adapted in order to ensure that the front-end alias can be used.

  The capacity of the registry, would need to be sufficient to keep track of the switches permanently (not limited to a period of 13 months), and the take up by consumers of portable aliases would be expected to gradually increase over time.
- In terms of security, the existing aliases (such as email address, or telephone number) would entail higher IT security risks than a new alias with a standardised format and embedded security check, which would be more robust and safer. Moreover, creditors and debtors would be able to conduct verifications to see if the alias exists, but they would not be able to verify if it belongs to the consumer to whom they want to address the transaction (e.g. when entering an email address or telephone number, if one character is mistaken, the payment might still work but could be addressed to the wrong account without the initiator being aware).
- The Central Registry's role would be especially important in order to keep track of the identifiers / aliases that have already been allocated, to ensure their uniqueness.

Feasibility of the option

This option is feasible from legal, operational and technical point of views. However, the significant security risks linked to using a new or existing alias, described above, need to be factored in the analysis. The fact that an existing alias might be used would put at stake the robustness of this option, as it would not have the necessary security checks embedded. Moreover, an existing alias could also be temporary as it could be linked to a specific company or provider, jeopardising its sustainability.

4.3.3. **Option 3.3 New portable account number throughout the payment chain (replacing current IBANs)**

Finally, option 3.3 would entail the development of a new portable identifier replacing IBANs throughout the payment chain, both in the front-end and in the back-end. The consumer would keep the same account identifier when switching, and the information on the link between the new portable identifier and the current location of the account (current PSP identified through a locator or address such as the Bank Identifier Code (BIC) or a corresponding back-end number) would be kept in a Central Registry.

However, for this to be possible, this option would require as a starting point that all consumers and corporate, public, etc. account holders (not only those who switch) would be attributed a new portable account number as well. To mitigate the impact of such far-reaching change on the payment chain and any accounting or other system using payment account numbers, the new portable identifier would follow the current IBAN format, and would start with an "EU" code. In order to guarantee its uniqueness when new account numbers are allocated, the issuing of the account number would need to be handled centrally at EU level, as the new account number would replace the IBAN throughout the payment chain throughout the EU, i.e. also in interbank payments. The Central Registry would also have a crucial role in ensuring the

traceability of account holders by permanently keeping track of the actual location of the account for each new EU portable account number.

The figure below illustrates what would happen when a switch takes place, after all current IBANs have been replaced by the new EU-wide portable account number.

Figure 9 - New portable account number throughout the payment chain replacing current IBANs (keeping the IBAN structure)

Source: Deloitte

After a consumer would choose to switch cross-border or domestically, (s)he would keep using the same EU-wide portable account number to make transactions. The back-end routing process would be similar to options 3.1 and 3.2 as PSPs would have upfront information from the Routing Tables, linking the portable account numbers to the accounts' location (in the new/receiving PSP).

Taking into account the characteristics of this option, its implementation would entail the following implications:

Implications for stakeholder groups Consumers:

The replacement as a prerequisite of all current IBANs under this option would be disruptive for all EU consumers since it would require the renumbering of all existing payment accounts in the EU, regardless of their interest in switching.

Once all payment account numbers would be replaced by the new portable account number, *the implications of this option would be the same as for option 3.1.* This option would ensure a user-friendly cross-border switching process for consumers, including:

- A lighter process and time savings due to the fact that they would only need to fill in the switching request and provide it to the receiving PSP.
- They would not need to inform their creditors/debtors about the switching, as their account number would not change.
- They would also be able to memorise their account number if they chose with the reassurance that it would not change anymore.

If they want to have several accounts, consumers would have several portable account numbers (one for each account).

PSPs:

The implications of this option would be similar to those of option 3.1, with the difference that the scale of the initial general renumbering would not be comparable. The new system to support the switching service and allow ANP, would entail a number of changes in terms of IT and the PSP's organisation (including implementing change management). They would also need, before any switch happens, to:

- Adapt their processes and IT infrastructure in order to ensure efficient exchange of information through the EU platform;
- Notify their clients of their new EU-wide portable account number;
- After being informed by the EU platform of the new portable account number replacing the existing one when the first and single account number change is done, creditor/debtor's PSPs would also need to notify their clients (the creditor/debtors) of the new account numbers so that the creditors/debtors would also be able to update their bookkeeping.
- Connect the portable account number of their consumers to the bank identifier/address in the backend (allowing the identification of the location of the account);
- Ensure the automatic integration of the update of the Routing Table on a daily basis to guarantee the efficient routing of payments.

When a switching would then occur, the tasks linked to the switching service provided to the client would remain mostly the same as the ones carried out at national level. The receiving PSP would take care of informing the transferring PSP of the request to switch by the consumer and the tasks that they need to do[58]. The main difference would be that the receiving PSP would no longer need to reach out to the PSPs of the consumer's creditors/debtors to inform them of the switch (after the first full change to the new portable account numbering system) as the identifier of the account in the front-end would remain the same.

Clearing houses:

Their functioning would not be impacted as they would continue to clear payments with portable account numbers that have the same structure as the IBAN together with BICs.

Creditors/debtors:

As this option would entail that all consumers and corporate, public, etc. account holders (not only those who switch) are attributed a new portable account number, the impact on creditors/debtors would be broader and manifold. In fact, while the creditors/debtors impacted by the other options would be limited to those interacting with consumers, micro-enterprises and self-employed, this option would impact all companies. These would have to:

- Update their accounting and other systems using payment account numbers (both theirs and that of their counterparts) to support/recognise the new EU-wide portable account number. This would be similar to regular systems updates, as if a new country was joining the EU;
- Update any databases and accounting systems having payment account numbers with the new EUwide payment account numbers that they will need to receive from the PSPs of all of their counterparts.

[58] In summary, when requested by the consumer: transfer the information on the recurrent payments with EOs, cancel and stop accepting recurrent payments, transfer the remaining positive balance and close the payment account, all within a specific (maximum) timeframe. See Article 10 of the PAD for more concrete details.

After the migration, creditors/debtors would no longer need to update their accounting systems due to a consumer switching payment account, they would continue using the consumer's portable account number to carry out payment transactions.

Competent authorities: *Same*

implications as 3.1.

Others:

Same implications as 3.1. with the added complexity of the breadth of the account number changes.

In order for the transactions coming from outside of the EU payment systems not to be disrupted, third country PSPs' correspondent bank – which being part of an EU payment system would have access to the Central Registry – would be able to route the payment directly to the right PSP (via the appropriate correspondent bank if that PSP is not part of the same payment system). .

Legal, operational and technical implications

Legal (including standards)

Same legal implications as option 3.1.

- The new portable account number would be consistent with the current IBAN format, except that it would not contain a Basic Bank Account Number (BBAN)[59] and it would have an "EU" country code. To be recognised as an IBAN, the EU would need to a have the new portable account number recognised as part of the ISO standard 1361674[60].

Operational

- Before the switching process described above can be implemented, the IBANs of all EU consumers would be replaced throughout the payment chain with a new portable account number. This implies that all payment-related IT systems, infrastructures, and procedures, would need to be adjusted in order to recognise and accept this new portable account number (not only within PSPs but also for all other relevant stakeholders). Nevertheless, when it comes to switching, this change would still be manageable to implement if the portable account number would, in order to be compliant with the current international ISO standards, have the same structure as the IBAN, with an "EU" country code. This would require an agreement of all Member States and of the third countries participating in the IBAN system.
- PSPs would need to change their transaction processing by looking up the routing information – in their own replicated Routing Table – every time they process a payment, to ensure that it is redirected if it needs to be.
- A central EU body would need to be in charge of allocating unique portable account numbers to the different accounts. This function would be adopted by the Central Registry, which would link the new number assigned to the back-end identifier/BIC establishing the location of the account. This body

[59] For more information, see: https://www.iban.com/glossary [74]
For more information, see:
https://www.iso13616.org/#:~:text=IBAN%20stands%20for%20International%20Bank%20Account%20Number.%20The,the%20structure%20of%20an%20ISO-compliant%20national%20IBAN%20format

[60] In the case where the portable account identifier would not be considered an IBAN anymore, every piece of legislation and contract mentioning "IBAN" would need to be updated to refer to the new portable identifier.

would also need to ensure the smooth functioning of the EU platform and of the Central Registry (also ensuring the right expertise in terms of security, for example).

- The new EU-wide portable account number would need to have the same or similar security checks embedded through the alphanumeric characters, ensuring the necessary safety for payment accounts.

- For payments originating in third countries the correspondent bank of the initiating PSP would have the possibility to look up the portable account number and route the payment to the right PSP on the basis of the BIC contained in the Central Registry.
- Exchanges of information would have to be implemented based on a standard format of messages (e.g. the ISO switching messages), which would need to ensure the necessary level of security and standardisation. Standardised information is indeed crucial, to avoid any difficulty across Member States concerning the exchange and processing of data.

Technical

- The EU Central Registry would receive information sent by the receiving PSP after a switch takes place: portable account number, BIC from the receiving PSP, and the date of the changeover. The EU Central Registry would register this information and provide, once a day, an updated Routing Table to all PSPs.
- Although setting up an EU platform is feasible from a technical point of view, it entails some technical risks. All PSPs across Member States would need to be connected to the EU platform, and it could become a single point of failure when carrying out the switching service. However, for the routing of payments the Central Registry is not consulted during the execution of the payment transaction so this would not be as risky.
- Communication channels used by the stakeholders should be secured via appropriate IT-security measures (e.g. encryption, secured data connections, APIs).
- The capacity of the registry, as well as of PSPs would need to be very high (higher than 3.1) as it would need to keep track of the connection between the front- and back-end identifiers of all existing payment accounts (across all types of accounts, e.g. businesses, public, etc.) in the EU permanently.
- Finally, as mentioned above, the migration to the new portable account numbers would need to be gradual to limit any operational and technological risks that could arise if the implementation of this option would take place in one go.

Feasibility of the option

Although the change to a new portable account number for all accounts in the EU would be very disruptive and have many implications for a broad array of stakeholders, such a migration has already been done in the past with the implementation of IBAN. Consequently, this option is considered overall feasible as long as the different legal, operational and technical elements described above are fully taken into account.

4.4. Requirements for all options

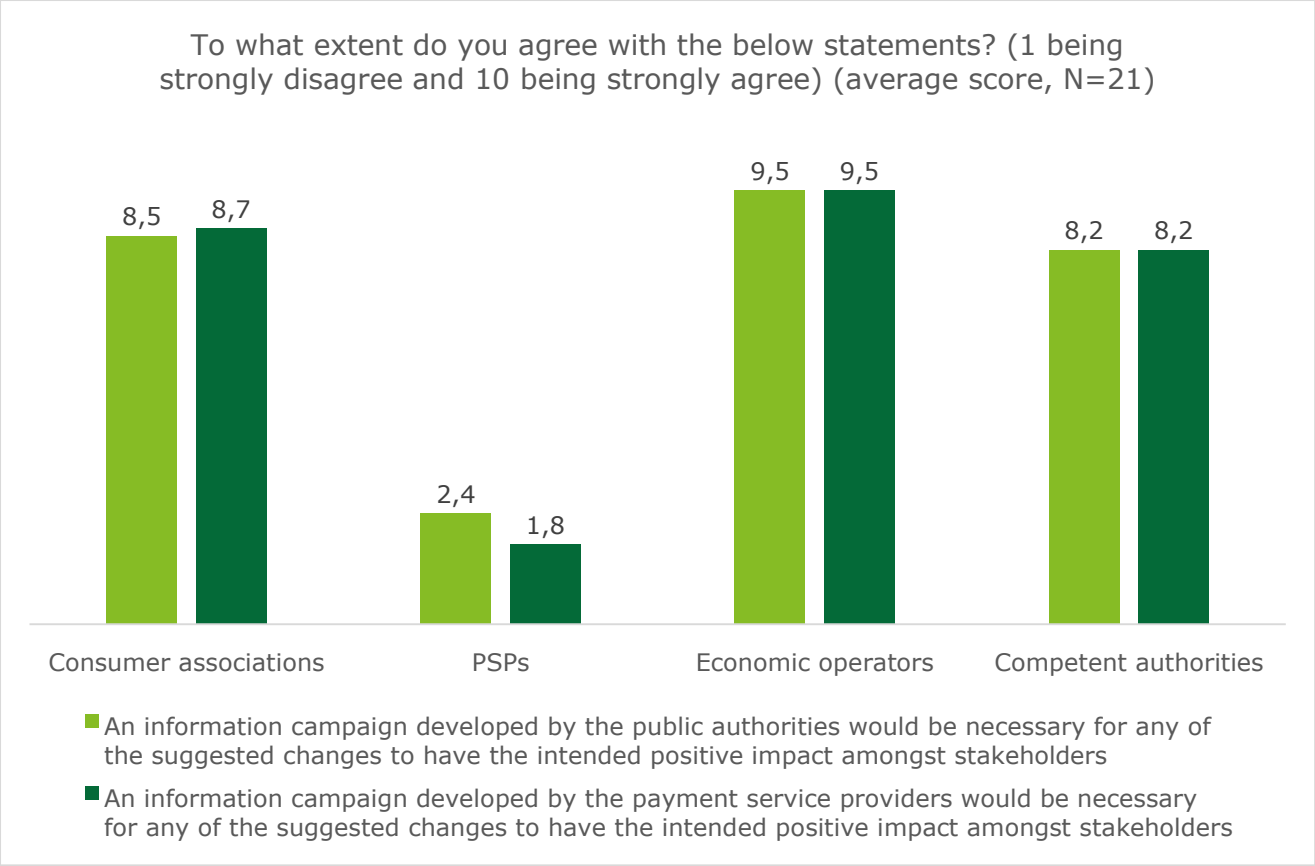
As part of the stakeholder consultation exercises, some extrinsic key requirements were highlighted in order to allow that all the options outlined above would have the intended impacts pursued by this study. The main aspects highlighted by stakeholders were: the necessity to have an effective communication campaign, the need for clear procedures to ensure that consumers have a recourse in case they experience problems as part of the switching service, the need to solve IBAN discrimination and the necessity of having access to transaction history linked to the previous account. These elements are briefly presented below.

4.4.1. **An effective communication campaign**

The low level of awareness of consumers about both domestic switching and cross-border opening was a recurrent observation made by all types of stakeholders consulted for this study. According to the supply and demand interviews, this might explain the low level of domestic switches in many countries in the scope of this study. In order for the policy options developed in this study to indeed allow opportunities for switching (nationally and cross-border) to be fully leveraged, effective communication campaigns targeting EU consumers would need to be put in place in all MS. Such campaigns would have to showcase how the switching service works, what are its main features (e.g. if it also includes a redirection of payments or ANP) and what are the advantages and implications for consumers, as well as their rights and the obligations of each party.

As shown in the figure below, all stakeholders seem to strongly agree with this necessity, except for PSPs which appear to be much less convinced.

Figure 10 – Need for an effective communication campaign



Source: Deloitte, based on the second online survey.

As for who should be in charge of the communication campaign, the figure above also shows that most stakeholders did not seem to have any strong preference on whether this campaign should be carried by the public authorities or by PSPs. PSPs seemed to be slightly more in favour of having public authorities carry out such campaign, while consumer associations were slightly more in favour of PSPs leading such an initiative.

4.4.2. **Clear procedures for consumer recourses and liability**

It was also strongly expressed as part of the different consultation activities that no matter the chosen option, there would need to be clear safeguards to ensure that the rights of consumers are duly respected. PSPs (of creditors and debtors) need to have the mandate from their customers, similar to the current authorisation described in Article 10.2 PAD in order to modify the payment entrusted by the consumer. In the event of an incident (e.g. if the switch is not correctly registered by the PSPs or the creditors/debtors), the consumers should be protected, having different (litigation) recourses at their disposal. For instance, there would need to be clear procedures to allow consumers to make a complaint in case they encounter any issues as part of the switching service and a clear and user-centric complaint handling system. The current legal framework enshrined in article 13 PAD should hence be extended to cross-border switches, with regards to liability (e.g. guarantees with regards to who is responsible in case of failed payments and

related consequences)[61]. An entity would need to be appointed in each Member State, or centrally in the EU, to ensure that consumers have a clear point of contact for information requests and complaints. This point of contact would need to be highlighted as part of the communication campaign mentioned above. This is even more important in the context of cross-border switching, as consumers might feel some confusion with regards to where to make complaints when there is more than one country involved in the switching process[77], hence the importance of clearly defining roles and responsibilities and raising awareness in this regard.

4.4.3. **Tackling IBAN discrimination**

As part of all the options, PSPs as well as creditors and debtors would need to be able to accept and support IBANs from all EU countries and with different structures. This should already be the case today, but as seen in section 1 (Figure 5), this seems to still be an issue. This might prevent consumers from switching cross-border because their "foreign" IBANs might not be accepted when trying to put in place recurrent payments. Based on feedback from a Fintech, the magnitude of this issue can be demonstrated by the fact that several Fintechs are starting to open branches in some Member States, against their characteristic online business model, in order to be able to provide domestic IBANs to consumers[78].

This problem is already on the radar of the European institutions[79], and should be dealt with to ensure that cross-border switching can bring the intended benefits.

4.4.4. **Access to transactions history**

Stakeholders, especially consumer associations, economic operators and competent authorities agreed that not having access to the transaction history could be an obstacle for consumers to switch payment accounts. Not having the history from their old account would not allow them to enjoy the full potential of e.g. certain applications – PSD2 AISP service –, which could discourage them from switching payment accounts in general. Therefore, making sure access to this type of information is possible after a switch takes place would be an important consideration to ensure the effectiveness of the switching (tools). A possible way to implement this would be to include the account history in the information to be provided by the transferring PSP to the receiving PSP as part of the switching service, which in turn would make it available to its new customer.

[61] Art. 13 PAD provides that the liability is on the creditors and debtors whenever their failure in implementing the account switching service, including possible delays, led to financial losses for the consumer. Such rules should be extended to cross-border switches. [77] Second online survey for consumer associations. [78]
Based on the interviewed Fintech, this type of change costs them between EUR 800 000 to EUR 2 million EUR per year (for audits, staff costs, reporting requirements, etc.), which they consider should not be necessary if IBAN discrimination was not a problem. [79]
EC Retail Payments Strategy 2020: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020DC0592

5 Assessment of the options

This chapter presents the effectiveness and efficiency assessment of each policy option, as well as their comparison on the basis of a multi-criteria analysis.

It should be noted that the assessment of effectiveness and efficiency takes into consideration each type of switching tool separately. As explained in chapter 4, the automated redirection of payments and the ANP are examined in the context of switching. As a switching service at EU level does not yet exist, the options in Switching tool 2 (EU level) would require the prior set-up of a cross-border switching service, although the effectiveness and efficiency assessment for Switching tool 2 is limited to the automated redirection as an add-on service to that. Switching tool 3, as described in chapter 4 and below, entails the implementation of its own service to support both switching and ANP, which is part of the assessment.

5.1. Effectiveness assessment

The effectiveness assessment aims at determining the extent to which the objectives defined for this intervention could be achieved if a particular policy option was implemented. These objectives were defined on the basis of the key problems identified at the beginning of this study based, among others, on the findings of the study on the payment accounts market. The problem and objective trees, as well as descriptions of the problem drivers, are found in Annex F.

This section focuses on the extent to which the different policy options are expected to be effective in achieving the five operational objectives. The table below provides an explanation for each of these objectives.

Table 4 – Description of the operational objectives

Description of the operational objectives
Operational objective 1: An effective and simple system facilitating cross-border switching of accounts throughout the EU. There is no system(s) for cross-border switching that allows all EU citizens to switch from one Member State to another[80]. MSs are required to have a switching system in place for domestic switching but the procedure and requirements are not streamlined amongst EU countries, and some approaches appear to be more effective and simple than others. Moreover, this fragmentation can complicate the set-up of a cross-border switching service as the practices from one country to another are not interoperable.
Operational objective 2: Legal certainty for economic operators, banks and consumers with regards to cross-border opening and switching of accounts, including remotely. There is insufficient legal certainty especially for consumers and PSPs with regards to cross-border switching and opening of payment accounts. Consumers are not always aware of their rights and obligations when it comes to opening accounts and switching in another country than their country of residence, which can unease them and prevent them from doing it. Likewise, PSPs can also feel uncertain about their rights and obligations when providing services to consumers residing in other countries, which can lead to their offer being more frequently targeted to local residents. Moreover, although PAD specifies that banks should not discriminate against consumers legally residing in the Union, the interpretation of AML-CTF rules by some PSPs can lead to the possibility of consumers in practice not being allowed to open an account cross-border.
Operational objective 3: Mitigated risk of failed payments during and after the switching process. The perceived risk of failed payments during and after the switching process discourages consumers from switching[81]. At the time of the PAD impact assessment, this aspect was identified as the main obstacle preventing consumers from switching[82]. This is most likely still valid as according to earlier studies, the fact that consumers cannot keep their account number is the most important perceived drawback of the account switching service[83], even

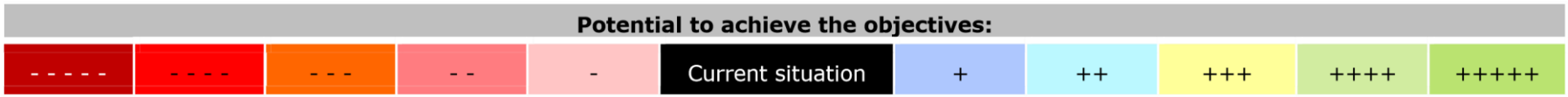
[80] PAD does not contain any cross-border switching provisions. See: Directive on payment accounts - Factsheet 2 Switching payment accounts, (2013): https://ec.europa.eu/info/sites/info/files/factsheet-2-06052013_en.pdf [81] BI-Switch - Applying behavioural insights to encourage consumer switching of financial products - Second Interim Report, including the literature review and the outline of the lab and online experiments, (2019): https://op.europa.eu/en/publication-detail/-/publication/f96b4696-255f-11eb-9d7e-01aa75ed71a1 p.38. [82]

European Commission, Impact Assessment accompanying the document Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the comparability of fees related to payment accounts, payment account switching and access to payment accounts with basic features, (2013): https://eurlex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52013SC0164&from=en [83] Ibid, p.3.

Description of the operational objectives
if the switching process is guaranteed by banks, as required by PAD. Moreover, once the bank informs creditors and debtors, which are party to a recurrent payment, direct debit or standing order (e.g. employers, utility companies, etc.), those still have to implement the change in their own systems and if they are not able to keep up, there is a risk of failed payments that can impact consumers.
Operational objective 4: Consumers are aware and well-informed of the possibility and advantages of switching and opening accounts cross-border. There appears to be a general lack of awareness amongst consumers about the possibility of switching payment accounts and opening accounts crossborder. Although increasing the occurrence of both these aspects (switching and cross-border opening) is not an aim in itself, their existence and the possibility for consumers to use them depends on the availability of information and their awareness of their own right to benefit from this service. In a nutshell, if consumers are not aware of such tools, they will not be used.
Operational objective 5: The possibility of cross-border opening is not limited by specific requirements (e.g. physical presence, AML). In some cases the opening of accounts can entail requirements that limit the possibility of cross-border opening. It is not uncommon that certain, sometimes legal, obligations lead to PSPs only opening accounts subject to i) a physical presence of the consumer in an agency, and ii) the provision of documents and evidence, including a national ID for AML-CFT purposes. Although these can be perceived as simple requirements to comply with by country residents, these requirements can become barriers to the access of non-residents.

It should be noted that objectives 4 and 5 are not tackled directly by any of the options. They need to be taken into account in the requirements for all options (see section 4.4), but as they are exogenous factors they are therefore not part of this assessment. The sections below present the effectiveness

assessment of the different options and how they compare across the different switching tools. Each option is qualified based on its potential to achieve each of the operational objectives 1, 2 and 3, compared to the current situation, following the scale below. It should be mentioned that although some of the options are considered as holding high potential to fulfil some of the operational objectives, even when they are identified as "+++++", none of them are considered to be perfect or to have the potential to fully reach the objectives. Figure 11 - Legend: Potential to achieve the objectives



5.1.1. **Options for cross-border switching (Switching tool 1)**

As presented above, two policy options have been proposed for this first type of switching tool:

- Option 1.1 Cross-border switching service with decentralised governance
- Option 1.2 Cross-border switching service with centralised governance

It should be mentioned that, as part of option 1.1, existing national switching services would be streamlined into the new requirements of the cross-border switching service with decentralised governance, but would not be fully replaced by it. However, as part of option 1.2, existing national switching services would need to be replaced by the centralised cross-border switching service. The switching services presented in option 1.1 and 1.2, would therefore carry-out both national and crossborder switches. Hence, to properly assess the potential of these options to achieve the objectives, it is key to consider how they would affect the national switching services as well. In the current situation, national switching services have very different features, systems, usage and satisfaction rates across the EU. Therefore, to be considered as effective, option 1.1 and 1.2 would also need to level the playing field or at least streamline national switching services overall. With regards to cross-border switching, the current situation is based on article 11 PAD which sets out the obligation of PSPs to support consumers when moving to another country. The main findings of the stakeholders and experts' consultation with regards to the potential of each of these options to achieve the identified objectives (i.e. operational objectives 1, 2 and 3) are outlined below.

Option 1.1 Cross-border switching service with decentralised governance

By setting up a cross-border switching service that would allow consumers to switch payment accounts from one EU Member State to another, this option is expected to contribute to achieving an "effective and simple system facilitating cross-border switching of accounts throughout the EU" (Objective 1).

By setting up clear roles and responsibilities for each actor (i.e. national contact points, receiving PSPs, transferring PSPs, creditors/debtors) both options would likely improve the current situation with regards to this first objective. Indeed there is currently no cross-border switching service, except for the basic assistance to consumers foreseen under article 11 of PAD by their current PSPs. When comparing the two options, option 1.1 is likely to bring some complexity, compared with policy option 1.2. As per option 1.1, there would be 27 national contact points exchanging information instead of one central entity through which information would be exchanged and notifications would be pushed whenever an action needs to be performed (i.e. the EU platform under option 1.2). Such decentralised service would provide an interoperable approach to cross-border switching across the EU; however, its process involves more communication points, steps and manual entries than under option 1.2, which is leaner. On the other hand, under option 1.1, all Member States would remain free to organise themselves internally with how they manage the storage, update and exchange of information (e.g. exchange of information between PSPs and their national contact point, as well as information received by other national contact points). In that sense, each Member State could adopt the practice that suits them best on the basis of the system they already have in place and would be free to keep and consolidate the established successful practices for domestic switches. This would also be expected to have a positive impact on achieving an effective and simple switching service throughout the EU.

Furthermore, clearly defined roles, obligations and rights of each player taking part in the decentralised cross-border switching service would provide more legal certainty to each of them (Objective 2). Both options presented under Switching tool 1 would include guarantees that would ensure a recourse for consumers and clarify their rights to issue a complaint in case they encounter an issue as part of the switching service. As part of the current situation, "manual switching" (consumers closing and opening accounts without the support of a switching service established by law) currently represents a risk for consumers (e.g. of not being able to reach out to their creditors/debtors, or of creditors/debtors not implementing the new account by the time the old account is closed) and having a proper legal framework for cross-border account switching would reduce this risk[62]. As part of the second online survey, all respondents either strongly agreed (50%) or agreed (50%) that a cross-border switching service would bring certainty to consumers[63]. Clear regulatory requirements would also ensure clarity to PSPs and creditors and debtors with regards to cross-border switching. PSPs would have to ensure that each step is completed appropriately, similarly to existing national switching services[64].

Such clear regulatory requirements would also contribute to mitigating the risks of failed payments (Objective 3) especially during the switch, as each actor involved in the switching process would have clear obligations and responsibilities across the EU, with clear due dates, which would bring additional assurance to consumers, compared to the current situation. However, stakeholders indicated that there would still be risks of misdirected funds once the switching would have taken place[65]. Under this option, it is the receiving PSPs, which would inform the creditors and debtors' PSPs – most often located in other countries – of the consumer's change of account. The mitigation of failed payments in this context would therefore rely on the PSPs' capacity 1) to inform other PSPs across the EU of the switch, 2) to receive information from other PSPs, 3) to inform the creditors and debtors of the switch. It would also rely on the capacity of creditors and debtors to process the switching of accounts. In other words, many steps are foreseen as part of this option for the switches to be implemented, which involve risks of human errors, for instance, if the PSPs do not follow-up with their counter PSPs, or if the creditors and debtors do not properly follow-up and register the account changes in their systems. Nevertheless, option 1.1 makes it easier for creditors and debtors to process account changes compared to the current situation when consumers switch by themselves, because they would receive standardised notifications from PSPs, instead of different letters, requests or phone calls from consumers across the EU.

Option 1.2 Cross-border switching service with centralised governance

From a purely effectiveness point of view, this option is expected to have a higher potential than option 1.1 to achieve an "effective and simple system facilitating cross-border switching of accounts throughout the EU" (Objective 1). It would streamline and centralise both EU and national switching services into one central entity (i.e. the EU platform) for national and EU switches, avoiding the multiplication of points of contact and the delays that might be caused by communications between several different entities (e.g. PSPs - national contact points – national contact points – PSPs – creditors/debtors, as in option 1.1), also removing complexity for PSPs. Having an EU platform that transfers the switching requests between the PSPs cross-border, and automatically sends out individual daily notifications to creditors and debtors' PSPs in a standardised manner and in their own languages is expected to significantly increase the effectiveness and simplicity of the switching service, especially at EU level, compared to the current situation in which this burden essentially rests on consumers (article 11 of PAD).

[62] Second online survey for consumers.
[63] Second online survey for consumer associations.
[64] Second online survey for competent authorities.
[65] Second online survey for PSPs and competent authorities. [88]
Second online survey for competent authorities.

The potential of this option to provide legal certainty to the different actors taking part in the switching service (Objective 2) is very similar to option 1.1, provided that roles, obligations and rights are clearly defined by regulatory requirements[88]. Economic operators were significantly more positive towards this option in terms of legal certainty in the online survey[66], which might indicate that receiving standard and automated notifications from a centralised platform instead of from PSPs across the EU might give them more certainty. As part of the second online survey, all the respondents either "strongly agreed" or "agreed" that a cross-border switching service would bring certainty to consumers[67].

Similarly to option 1.1, by providing a clear framework for undertaking cross-border switches, this option is also likely to mitigate the risks of failed payments during and after the switching process across Member States (Objective 3) as it establishes a clear process for cross-border switching, compared to the current situation. As part of this process, human errors can happen at every stage, but there are three main steps during which they can be more likely to occur (1- when the transferring PSP extracts information about the consumer's recurrent payments, standing orders and direct debits and submits it to the receiving PSP, 2- when the information about the consumer's new account transits from the receiving PSP to the creditors and debtors' PSPs (via the platform in this option) and then to the creditors and debtors themselves (via their PSPs), and 3- when creditors and debtors need to register the account change). The EU platform particularly mitigates the risks related to the first and second steps, as it automates these processes. Firstly, having notifications automatically processed and sent by the EU platform following the information provided by the transferring PSP into the system reduces the process delay (compared to the current situation where it has to be done by the consumer) and the risk of errors in case of lost information by the PSPs. Secondly, standardised, daily and aggregated (all combined together and sent at once) notifications for all EU switches are likely to be easier and simpler for creditors' and debtors' PSPs to process and to send to their clients, as opposed to multiple different notifications coming from PSPs in all Member States or directly from consumers all across the EU. In countries having implemented a similar centralised platform as part of their national switching service, the main reason for unsuccessful switches still results from creditors and debtors failing to register the new IBAN (on time[68]). Yet, all this is not sufficient to completely eliminate the risks of failed payments due to switching, since failed payments can still occur after the switching process (e.g. failed transaction due to a creditor/debtor addressing the payment to the old account)[69].

Comparison of the options

The policy options mainly differ by the fact that they are centralised or decentralised and by the fact that option 1.2 is leaner, more standardised and more automated than option 1.1. Among the different stakeholder groups consulted, associations of consumers and competent authorities were the most optimistic with regards to the general potential of Switching tool 1 to achieve the identified operational objectives. PSPs were less favourable than other stakeholders towards both options and economic operators had a significant preference for option 1.2. . Both options have similar implications for the different stakeholders, except that in option 1.2, PSPs would directly exchange information via a centralised EU platform without having to resort to the national contact points to collect the contact details of their PSP counterpart before an exchange can take place between them. Surprisingly, PSPs scored this option in general slightly lower than option 1.1 when they were asked about its potential to achieve the different objectives. But economic operators appeared to significantly prefer this option against option 1.1.

[66] Second online survey for economic operators.
[67] Second online survey for consumer associations.
[68] Case study interview with Belgium, June 2020.
[69] Second online survey for PSPs and economic operators.

Box 4 - Effectiveness of Switching tool 1 for micro-enterprises and self-employed

The potential effectiveness of the two options for micro-enterprises and self-employed is not expected to vary compared to private consumers, since they would hold similar potential to achieve the objectives as they do for the latter. Only a few differences can be highlighted. The interviews with associations of micro-enterprises and self-employed signalled that the demand for cross-border account opening and switching from this specific group would be even lower than from private consumers, as they do not need to move from one country to another as frequently. Although, if they do need to move across borders and to switch accounts, a switching service would provide them with more legal certainty (objective 2) and additional assurance that failed payments are mitigated (objective 3). Indeed, considering the typically high number of payments to be transferred, the potential risks are higher for them than for private consumers. The energy that they would need to spend on investigating if payments failed due to the switch whenever a payment is missing would discourage micro-enterprises and self-employed, which might push them to have several accounts instead of switching from one account to another, to avoid this potential hassle. Moreover, PSPs have more incentives to provide such service to this group of consumers, as they typically have accounts with bigger flows of transactions. Indeed, some PSPs appear to already provide a tailored switching service for this specific group of customers in some countries, so there are currently solutions available in the market for them

In view of the above, the table below outlines the potential for each option under Switching tool 1 to achieve each of the operational objectives.

Table 5 – Switching tool 1: Potential to achieve the objectives

Objectives	**Current situation**	**Option 1.1**	**Option 1.2**
		++	+++
Objective 1: An effective and efficient system facilitating cross-border switching of accounts throughout the EU	**Current situation**		
Objective 2: Legal certainty for economic operators, banks and consumers with regards to cross-border opening and switching of accounts, including remotely	**Current situation**	+++	++++
Objective 3: Mitigated risk of failed payments during and after the switching process	**Current situation**	+	++
Potential to achieve the objectives	**Current situation**	**++**	**+++**

Source: Deloitte

Overall, option 1.2 involves less back and forth in the interbank communications as the intermediary is centralised (i.e. the EU platform instead of 27 national contact points) and automated. Although it might require significant adaptation from PSPs, the fact that it simplifies, standardises and automates most steps of the switching process and thereby reduces the risks of errors makes it more likely to achieve the identified objectives in the long run (i.e. Objectives 1, 2 and 3). Both options are considered more effective than the current situation in reaching the operational objectives, with option 1.2 to a higher extent (+++) than option 1.1 (++).

5.1.2. **Options for automated redirection of payments (Switching tool 2)**

As presented above, three policy options have been proposed under Switching tool 2:

- Option 2.1 Automated redirection of payments based on a Central Registry
- Option 2.2 Automated redirection of payments via account information embedded in error messages
- Option 2.3 Automated redirection of payments based on a Central clearing house

It should be noted that these options can be applied at the national level, to complement existing national switching services or at the EU level, together with a cross-border switching service. As discovered across the different data collection activities, the technicalities of the options are not expected to have a significant impact on their degree of effectiveness, whether they are implemented nationally or at EU level. Their application at EU level or domestically is therefore tackled together in the sections below. The options under Switching tool 2 focus on the redirection which happens after the switching process. Therefore, they are not considered to improve the switching process itself and, thus, are not directly relevant for achieving objective 1.

The main findings of the stakeholders and experts' consultation with regards to the potential effectiveness of each of these options are outlined below.

Option 2.1 Automated redirection of payments based on a Central Registry

By providing a clear framework for the redirection of payments and related obligations for the different actors, this option would likely bring additional certainty to consumers and economic operators with regards to their rights and obligations for cross-border switching and redirection (Objective 2). Each stakeholder would have defined roles and responsibilities and clear obligations as part of the redirection process (e.g. receiving PSPs would have to provide information to the Central Registry, to update their Redirection Table daily and to inform the PSPs of creditors and debtors whenever they redirect, the latter PSPs would then have to inform their clients, the creditors and debtors, who would finally need to implement the account change). Consumers would also be assured that whenever they switch domestically and/or cross-border, their payments would be redirected.

Another key added value of the automated redirection of payments would be its power to mitigate the risks of failed payments (Objective 3), which goes a step further than Switching tool 1. The specificities of the other options under Switching tool 2 are not expected to vary significantly in terms of their potential to mitigate those risks. However, the advantage of this particular option (also relevant for option 2.3) is that the information about the switches would be centralised and integrated daily in each PSP's payment processes, which means that the redirection would happen before payments reach the transferring PSPs. The fact that the Central Registry would be centralised and automated would also mitigate risks of errors resulting from human intervention in the switching process.

Option 2.2 Automated redirection via account information embedded in error messages

As mentioned for option 2.1, by providing a clear framework for the redirection of payments and related obligations for the different actors, this option would likely bring additional certainty to consumers and economic operators with regards to their rights and obligations as part of the redirection (Objective 2). No significant variation is expected between the different options under Switching tool 2 in this regard and the same aspects mentioned above for option 2.1 are also valid here.

As mentioned above, the automated redirection of payments would significantly contribute to mitigating one of the key downsides of switching, which is the risk of failed payments (Objective 3). Although a switching service without redirection would also mitigate those risks (as compared to the baseline crossborder switching, currently entirely managed by the consumer), the redirection would go an extra-mile and provide an additional safety to consumers and creditors, as was confirmed by the second online survey. Yet, even if such system would be implemented, it would not mitigate 100% of the risks of failed payments resulting from switching. For instance, PSPs and creditors and debtors could still make mistakes during and after the redirection, such as when registering the switching information or when making the redirection by embedding the IBAN in the error message or when informing creditors and debtors that a redirection occurred. Creditors and debtors would also have to register the information in their systems and if they would not, there would still be a risk of failed payments after the period of 13 months.

Option 2.3 Automated redirection based on a Central clearing house

In terms of legal certainty (Objective 2), the same considerations as for option 2.1 and 2.2 are also applicable here, with the difference that information is stored and managed centrally by the clearing house, instead of by the Central Registry (option 2.1) or by each PSP (option 2.2).

As for option 2.1 and 2.2, this option holds significant potential to mitigate the risks of failed payments (Objective 3). The same elements as for option 2.1 are also valid here, with the difference that instead of the information being managed centrally by the Central Registry and payments being redirected upfront by the PSPs, everything would be handled by the Central clearing house, which would redirect the payment to the right clearing institution.

Comparison of the options

All three policy options for automated redirection of payments tackle the same objectives and only differ by the systems/processes supporting the redirection, which involve different burdens and obligations mainly for PSPs. Among the different stakeholder groups to be consulted, PSPs were the most critical and gave generally very low scores to all the options when they were asked to what extent these would be likely to achieve each operational objective. If implemented EU-wide, option 2.2 was the least disliked one, followed by options 2.1 and 2.3, all with very low scores. As part of the second survey, 100% of the consumers associations strongly agreed that the automated redirection of payments following a switch would bring certainty to consumers[70]. However, a key shortcoming of option 2.2 is the fact that when a consumer would have switched more than once in the 13 months period, the payment would need to be redirected several times before reaching the right PSP, whereas the Redirection Table in option 2.1 and the clearing house in option 2.3 would always hold the most recent IBAN, so there would be no risk that a payment would have to be redirected several times. Nevertheless, this situation where a consumer would switch several times in sequence within a 13 months period is expected to be rare.

Associations of consumers[71] and economic operators attributed significantly higher scores to all three options compared to PSPs, with option 2.2 as potentially the most effective option, according to economic operators[72]. Competent authorities gave in general a medium score to the general effectiveness of Switching tool 2. Those trends are consistent with the team's expert view, as an automated redirection of payments

[70] Second online survey for consumer associations.
[71] Associations of consumers were asked to score Switching tool 2 as a whole, without distinguishing the underlying system.
[72] Second online survey for economic operators.

would benefit mainly consumers and creditors and debtors, by providing them with extra safety and assurance with regards to their payments.

In general, an implementation at national level was more positively assessed, although the scores awarded by stakeholders overall in the second online survey remained significantly low. Another factor to consider is the fact that Switching tool 2 would require that consumers close their old account in order to benefit from the redirection, which is not the case in the current situation for the domestic switching service currently in place, as consumers can use it without closing their old account.

Box 5 - Effectiveness of Switching tool 2 for micro-enterprises and self-employed

With regards to micro-enterprises and self-employed specifically, the potential effectiveness of the two options is not expected to vary across the options. However, a few differences with private consumers must be highlighted. The interviews with associations of micro-enterprises and self-employed reported that considering the high flow of payments on their accounts, if they do need to switch, the extra assurance provided by an automated redirection would be even more valuable than for private consumers, considering the higher risks that their switches imply. However, because of these higher risks, a redirection system would most likely not convince them to go for switching instead of simply opening a new account, as they currently frequently do. Furthermore, micro-enterprises and selfemployed are worried that the costs of such service, if made compulsory for PSPs, would be passed on to them as account or transaction fees, which would aggravate what is already a key issue for them.

The table below outlines the potential of each option to achieve the identified objectives.

Table 6 – Switching tool 2: Potential to achieve the objectives

Objectives	Current situation	Option 2.1	Option 2.2	Option 2.3
Objective 1: An effective and simple system facilitating cross-border switching of accounts throughout the EU	Current situation	Current situation	Current situation	Current situation
Objective 2: Legal certainty for economic operators, banks and consumers with regards to cross-border opening and switching of accounts, including remotely	Current situation	+++	+++	+++
Objective 3: Mitigated risk of failed payments during and after the switching process	Current situation	++++	++++	++++
Potential to achieve the objectives	**Current situation**	**+++**	**+++**	**+++**

Source: Deloitte

Overall, all the options appear to have similar levels of overall potential to reach the operational objectives, with slightly more potential for option 2.2 in terms of mitigating the risks of failed payments. Although the options involve significant changes and additional burdens for PSPs, as part of the switching service and of the redirection, they hold important potential to address a key downside of the switching process, i.e. the risk of failed payments.

5.1.3. **Options for ANP (Switching tool 3)**

As presented in chapter 4, three policy options have been proposed under Switching tool 3:

- Option 3.1 EU-wide portability of existing IBAN
- Option 3.2 Portable identifier/alias on top of IBAN
- Option 3.3 New portable account number throughout the payment chain (replacing current IBANs)

As explained in chapter 3, these options require the implementation of a centralised cross-border switching service similar to the one under option 1.2. The only difference would be the absence of the notifications to creditors and debtors as part of the switch, which would not be necessary anymore since account numbers would be portable. Therefore, a closely identical analysis as under option 1.2 also applies to the options under Switching tool 3 for the assessment of effectiveness, in addition to the elements discussed below.

The main findings of the stakeholders and experts' consultation with regards to the potential effectiveness of each option under Switching tool 3 are outlined below.

Option 3.1 EU-wide portability of existing IBAN

ANP is not indispensable to have an effective and simple switching service (Objective 1), but by allowing consumers who close their old account when switching to keep their existing IBAN, this option significantly simplifies the switching process for both consumers and creditors and debtors. Indeed, the former would keep their account identifier when switching, and the latter would not have to be informed of any change, which makes switching more effective and simple. In fact, consumers and economic operators have both indicated a high overall potential for this option to achieve all the relevant operational objectives and scored its effectiveness higher than the other options under Switching tool 3[96].

By providing clear regulatory requirements for all actors involved in the switching and routing process and by setting obligations for PSPs to register their customers' switches via the Central Registry and integrate the Routing Tables into their systems, this option would bring additional certainty to consumers and economic operators (Objective 2[97]). This option would imply that front-end IBANs would not necessarily be attached to a specific country and to a specific PSP anymore, which could also lead to less risk of IBAN discrimination by pre-existing creditors and debtors for consumers switching to a foreign PSP. Consumer associations and competent authorities indicated that ANP in general would bring more legal certainty to consumers. As part of the second online survey, all consumer associations agreed (50% strongly agreed and 50% agreed) with the statement that consumers would be sure that they are switching accounts without any negative impact as they are keeping the same account number[98].

IBAN-portability would significantly mitigate one of the key downsides of switching, i.e. the fact that consumers cannot keep their account number, which involves risk of failed payments (Objective 3). Although IBAN-portability in itself is not absolutely necessary, nor the only way to mitigate those risks (e.g. a well-defined cross-border switching service can also effectively mitigate those risks), it would remove important steps of the switching process (i.e. the need to inform creditors and debtors and their
PSPs of the switch, and for them to register the account change), that were likely to increase the risk of failed payments. This would considerably reduce the risk of errors, especially considering that in some countries, these steps of the current switching process are considered as the main reason for failed

[96] Second online survey for consumer associations and economic operators.
[9797] Moreover, although objective 4 is not part of this specific analysis for the reasons explained in the *Description of the operational objectives* (Table 4), this option would seem to be the most effective one to achieve it. [98] Second online survey for consumer associations.

switches[73]. Consumers and economic operators have indicated a high potential for this option in this regard[100]. Yet, even if such system were implemented, there would still be risks that failed payments could occur at the routing stage, for instance if PSPs would not correctly integrate the Routing Tables in their systems. PSPs also gave very low scores to this option for its potential to achieve all the identified operational objectives. This reaction though might be based on their anticipation of high implementation costs, which is not part of the effectiveness assessment.

Option 3.2 Portable identifier/alias on top of IBAN

As mentioned above, ANP is not necessary to have an effective and simple switching service (Objective 1). This option was considered by all types of stakeholders as holding much less potential than option 3.1 to achieve this particular objective, as well as other objectives in general[101]. The main reason for this was that the benefits of ANP (similar to those under option 3.1[102]) only materialise once consumers have an alias, which they get after switching a first time, and only if they choose to switch a second time. However, based on the information provided by different stakeholders, the number of consumers who switch more than once is currently very rare[103], which is why this study works mainly under the assumption of one switch per consumer[104]. Of course, as mentioned in the description of this option, once the alias is in use and recognised by all the systems, PSP could offer the alias allocation as a service to their customers without them switching. Consumers who would have chosen this service would be able to enjoy the benefits of ANP as of their first switch. Nevertheless, the number of uncertain variables[105] makes it difficult to assess the impact of making the allocation of an alias available regardless of switching. Consequently, the study team considers that this option is not expected to have an impact as high as the one brought by options 3.1 and 3.3.

Nevertheless, similarly to option 3.1, by providing clear regulatory requirements for all actors involved in the switching and routing process and by setting obligations for PSPs to register their customers' switches via the Central Registry, this option might bring additional certainty to consumers and economic operators with regards to their rights and obligations when switching cross-border (Objective 2). However, using both systems, i.e. traditional IBANs and new aliases, would bring additional complexity and might bring confusion for consumers and creditors and debtors with regards to which identifier to use for a consumer who just switched, especially at the beginning of the implementation and for creditors and debtors who would have few or even no consumers using aliases. In addition, this option would create uncertainty with regards to transactions with third countries, as creditors and debtors outside of the EU would also need to accept aliases for a consumer to be able to use it.

Finally, although portable aliases should contribute to mitigate one of the key downsides of switching, i.e. to reduce the risks of failed payments (Objective 3)[106] alike option 3.1, the contrary will most likely be true. In addition to the fact that benefits for switching would only materialise after the second switch, if the alias was obtained on the occasion of a first switch, this option would also bring additional risks. In particular, it involves significant changes for creditors and debtors (e.g. to adapt their payments and bookkeeping systems to support these aliases and existing IBANs) and PSPs (e.g. to adapt their entire infrastructure and interfaces to support both aliases and IBANs). Therefore it is likely to require an important transition period

[73] Belgium case study. [100] Second online survey for consumer associations and economic operators. [101] Second online surveys with consumer associations, economic operators, PSPs and competent authorities. [102] By allowing consumers to keep the same account identifier when switching accounts, this option could remove an important challenge of the switching process: consumers would keep their account identifier when switching and creditors and debtors would not need to be informed of any change as part of the switching process, once they have registered the alias as part of their first switch. PSPs would simply need to link the alias with the new back-end IBAN in the Central Registry, which makes the cross-border switching process more simple and effective. [103] Supply and demand interviews. [104] See section 5.2. Efficiency for a more detailed explanation. [105] PSPs would need to decide to offer the alias allocation as a service, and their customers would have to be interested in it and request it. [106] Since consumers would use portable aliases and creditors and debtors would keep making transactions using the same alias, this option avoids that payments are misdirected.

during which the risks of errors and failed payments are likely to increase. Moreover, as described under the description of the option in chapter 4, the alias would not include any check digits, as in the IBAN, making it more difficult to prevent that a transaction could be addressed to an incorrect account working with an approaching alias.

Option 3.3 New portable account number throughout the payment chain (replacing current IBANs)

As mentioned above, ANP is not necessary to have an effective and simple switching service (Objective 1). However, by allowing consumers to keep the same account identifier when switching accounts, this option also removes a key downside of switching, as consumers would keep their account identifier when switching and creditors and debtors would not have to be informed of any change as part of the switching process. PSPs would simply need to link the new identifier with its right account locator in the Central Registry (similar system as option 3.2), as part of the switch. From this point of view, once all consumers would have received their portable account numbers, this option would bring an effective and simple system facilitating domestic and cross-border switching of accounts. Considering the amount of efforts required by stakeholders, they (especially PSPs[74]) considered this option as holding much less potential than option 3.1 to achieve this particular objective, as well as other objectives in general.

In terms of legal certainty, the same considerations as for option 3.1 are also valid for this option (Objective 2).

Finally, once implemented, the use of portable account numbers would contribute to mitigating one of the key downsides of switching, as it would reduce the risks of failed payments resulting from switching (Objective 3), since consumers and creditors and debtors would keep making transactions using the same identifier after switching. However, this option also brings potential additional risks of failed payments. As this option involves significant one-off changes for creditors and debtors[75], PSPs and clearing houses[109] and, even if it were to be implemented in a gradual manner, it is likely that during the transition period the risks of errors and failed payments would increase, and this burden would be even more important for smaller creditors and debtors. Since option 3.3 would require as a prerequisite the renumbering of hundreds of millions of accounts (not only private consumers' payment accounts, but all types of accounts, including businesses and public administrations), and the update of all public and private operators' bookkeeping, this would be highly likely to lead to a large number of operational problems, errors, failed payments, etc. – negatively affecting the effectiveness of the whole payment system compared to the baseline.

Comparison of the options

The potential to reach the identified objectives varies across the three policy options for ANP.

As for the other switching tools, amongst the consulted stakeholders, PSPs awarded the lowest scores to the three options when they were asked about their potential to achieve each operational objective. Across the different stakeholder groups, option 3.1 was consistently the one with the highest scores in terms of effectiveness, although the differences across stakeholder groups varied. Not surprisingly, consumers and economic operators were the most optimistic towards option 3.1. Economic operators' scores varied significantly across the different options, with 3.2 being the least preferred, whereas consumer associations were more stable, with relatively high scores across the different options, with a strong preference also for

[74] All second online surveys.

[75] e.g. To adapt their payments and bookkeeping systems to support these new identifiers. [109] e.g. To adapt their entire infrastructures and interfaces to support these new identifiers.

option 3.1. Competent authorities remained consistent, allocating medium scores to all three options, with a slight preference for option 3.3 in terms of effectiveness.

Box 6 - Effectiveness of Switching tool 3 for micro-enterprises and self-employed

With regards to micro-enterprises and self-employed specifically, the potential effectiveness of the three options presented varies a bit more amongst them. The same considerations as for Switching tool 2 are also valid here for this specific group of customers: they indicated that they would be more reassured by IBAN portability if they needed to switch, than an automated redirection of payments. They are especially concerned about the costs of such solutions and how it might be reflected in the account and transaction fees.

The table below outlines the potential of each option to achieve the identified objectives.

Table 7 - Switching tool 3: Potential to achieve the objectives

Objectives	**Current situation**	**Option 3.1**	**Option 3.2**	**Option 3.3**
Objective 1: An effective and efficient system facilitating cross-border switching of accounts throughout the EU	Current situation	+++++	+++	+++++
Objective 2: Legal certainty for economic operators, banks and consumers with regards to crossborder opening and switching of accounts, including remotely	Current situation	++++	-	+++
Objective 3: Mitigated risk of failed payments during and after the switching process	Current situation	+++++	- - -	- -
Potential to achieve the objectives	**Current situation**	**++++**	**-**	**++**

Source: Deloitte

Overall, option 3.1 appears as the one with the most potential to reach the operational objectives. As for option 3.1, it would allow for an effective and simple cross-border switching service. It would also provide more certainty to consumers and mitigate the risks of failed payments. Option 3.2 is far behind, mainly because it involves important one-off changes and the benefits for switching would be felt only when consumers switch for the second time as of its introduction or if they have already received an alias. The co-existence between aliases and IBANs might also bring more complexity for consumers and economics operators, which explains a lower score for the second objective. Lastly, option 3.3 would hold similar potential as 3.1 with regards to bringing more effectiveness and simplicity as part of a cross-border switching

service. However, as for option 3.2, the potential of this option to mitigate the risks of failed payments is more limited than for option 3.1, considering that it involves a longer migration period during which risks of failed payments would still be prevalent.

5.2. Efficiency assessment

The efficiency assessment is based on an analysis of the incremental[76] costs and benefits that each option would entail, for each of the stakeholder groups identified (i.e. PSPs, creditors/debtors, micro-enterprises and self-employed, consumers, and competent authorities). This exercise took into account a number of different cost and benefit categories which were assessed on the basis of data collected via desk research, surveys, interviews and/or expert judgement. Annex G outlines the key considerations for the calculation methods and assumptions related to the costs and benefits.

It should be noted that all potential benefits are not quantifiable, which entails that the picture that is presented below is inevitably incomplete, in particular for consumers[77][78].

5.2.1. **Cost and benefit categories**

The following tables present the stakeholder groups considered under this study (in alphabetical order), the estimated population they represent, and the cost and benefit categories considered in the efficiency assessment per each stakeholder group.

It should be noted that the data collection and expert judgement also led to disregarding some of the categories initially considered when the costs or benefits were found to be negligible, the data available not reliable enough, and/or the assumptions not sufficiently credible.

Clearing houses:
Payment clearing houses facilitate the exchange of payments transactions. They stand between different PSPs and centralise and standardise the steps leading up to the payment. They perform the exchange of checks and bills from their member banks so that only the balances need be paid between them. Their purpose is generally to reduce the different risks associated with payments[112]**.**
No particular costs are expected from this group of stakeholders as part of this study, as they would not be impacted by any of the tools.

[76] In other words, the change in costs and benefits as compared to the current (baseline) scenario.
[77] Including by improving consumers' awareness of the potential benefits of increased competition
[78] Speech by Chairman Bernanke on clearinghouses, financial stability, and financial reform - Federal Reserve Board: https://www.federalreserve.gov/newsevents/speech/bernanke20110404a.htm

Consumers[113]:	
In 2017, the total EU banked population was estimated at 346 751 709 in the EU-27. To arrive at the total EU banked population, the study team has taken into consideration the proportion of the EU population aged over 15 that was banked in 2017, which is the most recent available data from the World Bank and applied it to the EU population aged over 15 in 2017, to arrive at a total of 346 751 709.	
One-off costs	Costs of updating all their account identifiers arising from the one-off account switch, part of option 3.3 (no costs foreseen[114]).
Recurrent costs	Time related costs linked to having to deal with an increased number of failed payments: This cost category is based on the "value" of people's time and peace of mind. It considers the expected increase in risks of failed payments linked to option 3.2 and 3.3 (see the effectiveness assessment above) and thus, the increase in the burden that consumers would endure to resolve the failed payments.
Recurrent benefits[115]	Benefits due to spending less time to carry out a switch: By using a switching service, consumers would be less burdened when switching payment accounts because they would not need to inform their creditors/debtors and the bank would fully support them in the switch. The estimation of this benefit is also based on the "value" of people's time and peace of mind.[116]
	Benefits linked to not having to deal with an increased number of failed payments: This category follows the same logic as the cost category. It takes into account the expected decrease of the number of failed payments and the consequent time savings for

[113] The number of payment accounts is not publicly available, only the number of cards which is an unreliable figure to estimate the number of payment accounts (one payment account is not always linked to one single card). Consequently, although there are more accounts than consumers and it could thus be considered that using the number of consumers would be underestimating the switching potential, several aspects should be considered:

- The percentage of consumers with at least one payment account is publicly available, and from a reliable source (The World Bank's Global Findex database);
- Consumers are the ones deciding to switch payment accounts. To consider any evolution in the number of accounts, it would be necessary to have the average number of payment accounts per consumer, the number of consumers and an idea of how many of their accounts they would consider switching. Assuming that a consumer interested in switching would consider switching all his/her accounts is unfounded and would lead to overestimation.
- Although multibanking exists, the fact that free accounts become rarer will likely lead to holding several accounts being less interesting for consumers.
- Historic switching rates – that we use for our estimations – are already based on a ratio of number of accounts switched and number of consumers (banked population). Extrapolating this ratio in the future to assess the number of accounts switched should also base itself on the number of consumers.

Considering the above, we assume that consumers that express interest in switching will switch only one of their accounts at a given point in time. For the calculation of benefits, it will also be assumed that those consumers who will switch will do it only once in their remaining lifetime. [114] As the change of account number and the notifications to creditors/debtors would be fully dealt with by the EU platform and the PSPs (see section 4.3.3 and Annex D), consumers would not need to notify creditors and debtors with whom they have recurrent transaction (regardless whether they are a legal person or a natural person) of the new account number. [115] Note that only aspects of consumer benefits that can be monetised were considered. Other aspects such as a better quality of service would be a benefit as well, but since a monetisation is not possible, they are not included in the quantification of benefits. This does not exclude that, in particular from the consumer point of view, benefits in terms of improved financial awareness resulting from the facilitation of switching could be substantial. [116] We assume that all

switches would take place through the existing domestic switching service (or the future crossborder one once it would be in place). Consequently, all consumers who choose to switch cross-border would benefit from savings linked to the time they would have spent without a switching service.

Consumers[113]:	
	consumers who would be less burdened by having to resolve issues with failed payments. The estimation of this benefit is also based on the "value" of people's time and peace of mind.
	Benefits linked to potential savings in account fees for (additional) consumers who switch (nationally and/or cross-border): Savings linked to switching to a potentially less expensive account (nationally or cross-border)[79].

Competent authorities:	
Competent authorities are the authorities that are primarily responsible for a specific domain or task. Depending on the scope they will be the national competent authorities (27), or a competent authority at EU level.	
One off costs	Costs for creating templates for communications: This cost category covers the costs of developing a template to facilitate communications, available in all EU languages. This will mainly support the exchange between national contact points (option 1.1) and communications for account changes between the EU platform and the PSPs (options 1.2, 2.1 (EU level), 2.2 (EU level), 2.3 (EU level), 3.2 and 3.3).
	Change management for supervision: This cost category covers the costs for supervisors to be trained in order to adapt their supervision to the new systems, services and obligations foreseen by each option. Based on our experts' views, the same training costs would be required throughout the options to train the supervisors (the existing training schemes would require small modification to comprise also the necessary information about the redirection or ANP systems, but they would not involve any important additional costs per Member State).
	Costs of supervising system changes: Considering the significant one-off changes brought to the payment system by options 2.3 (creating a Central clearing house) and 3.3 (migration of all account numbers to a new portable account number), an additional cost is considered for the first three years of the implementation so competent authorities can clarify questions and oversee the transition[118].

[79] N.B.: Looking for better deals is not always the aim of a switch and consumers are not always able to find the best deal (although they have more tools at their disposal to compare payment accounts). In fact, based on the replies from the first survey to consumers, only 50% of respondents identified lower fees as the motivation to switch. Moreover, markets are dynamic, and prices evolve over time (the receiving PSP might increase its prices after some time, and/or the transferring PSP might choose to decrease them). Consequently, although a person who switches an account could ultimately have potential savings throughout his/her life time, we assume that this is not the case, and that potential fee savings decrease as time passes and disappear after three years, but during these three years they achieve them in full.
[118] For the options where the implementation is done at cross-border level (option 2.3 at EU level and option 3.3), three years of supervision by one FTE are accounted for by an EU level authority, as well as one year of supervision and support by one FTE by a national competent authority (this FTE year can be spread between the three years).

Competent authorities:	
Recurrent costs	Costs for processing consumer complaints (no new costs foreseen[119])

Creditors/debtors:	
As mentioned in chapter 4 on the description of the options, in the context of this study, the term creditors/debtors refers to all third parties with whom consumers may have recurrent payments, direct debits or standing orders (e.g. economic operators – such as utility companies, their employers, tax institutions, other consumers, etc.). As it is not possible to define a reliable estimation of this population, this study resorts to a direct estimation of the number of recurrent transactions to develop estimations linked to the costs and benefits of creditors and debtors, rather than an estimation of the total creditor/debtor population and an average number of their transactions. The only exception is the one-off costs required to adapt the IT systems to recognise the alias, which are considered only for a part of the creditor/debtor population (see Annex G for more details).	
One off costs	IT adaptation costs to recognise and support new account identifiers: This category covers the one-off costs for creditors/debtors to implement changes in their bookkeeping systems and administrative client relation systems for them to be able to support aliases (option 3.2[120]). All other options maintain the traditional IBAN structure.
	Costs of updating all customers account identifiers (option 3.3): As part of option 3.3, everyone (including businesses and administrations) would have to initially change their account number to the portable account identifier, and the creditors/debtors would need to update their account information accordingly.
Recurrent costs[121]	Personnel costs linked to implementing account changes after a switch: This cost category covers the costs in personnel for creditors/debtors to implement the account change of the consumers who switch in their bookkeeping. Today, creditors/debtors already have to conduct such tasks, so the current switching rate needs to be subtracted to only consider the expected evolution of the switching demand brought by the different options. Since option 3.2 still requires the update of consumer account numbers when they switch to an alias, this cost category would equally apply for this option – to the extent that current switching rates are expected to increase.
Recurrent	Benefits from savings in personnel costs linked to implementing account changes after a switch: This category represents the savings of creditors/debtors because of not having to

119 Based on expert opinion, the main costs for processing consumer complaints would not increase as it would be assimilated by existing procedures, therefore no additional costs are foreseen for competent authorities for this category.

120

In principle, the study team would have followed the same reasoning for option 3.3, but taking into account that the new EU portable account number would follow the same structure as an IBAN, and that the study works under the assumption that there should be no IBAN discrimination in the EU, systems should be able to recognise the new portable account number without major IT changes, so this cost is estimated as not applicable. [121]

The study team estimated the total potential demand for switching cross-border and nationally, counting the potential interest and the estimated number of switches currently happening at the national level.

Creditors/debtors:	
benefits	implement an account change if their customers decide to switch. This category is relevant for options 3.1 and 3.3 as the account numbers of consumers would be immediately portable when they switch. It is not for option 3.2, since it is assumed that the alias is provided at the time of the first switch, and that no subsequent switch occurs.
	Reduction of costs arising from fewer failed payments and redirection (e.g. directed to old/closed accounts) (no benefits foreseen[80])

Micro-enterprises and self-employed:	
Based on Eurostat data, the number of enterprises with 0 to 9 persons employed in the EU was around 20 million[123] in 2017. Under this assessment they are considered as potential users, in the same way as consumers, of the switching tools in case the scope of PAD would be extended to them. Consequently, the cost and benefit categories are the same as for consumers.	
One-off costs	Costs of updating all their account identifiers arising from the one-off account switch, part of option 3.3 (no costs foreseen[124]).
Recurrent costs	Time related costs linked to having to deal with an increased number of failed payments: This cost category is based on the "value" of the time spent by the employee having to tackle such issues. It considers the expected increase in risks of failed payments linked to option 3.2 and 3.3 (see effectiveness section) and, thus, the increase in the burden micro enterprises and self-employed would endure to resolve the failed payments.
Recurrent benefits	Savings due to spending less time to carry out a switch: By using a switching service, they would be less burdened when switching payment accounts because they would not need to inform their creditors/debtors and the bank would fully support them in the switch. The estimation of this benefit is also based on the "value" of the time and peace of mind of a micro enterprise or person who is self-employed. [125]

[80] The study team considered this benefit category but, after further reflection and data collection, decided to disregard it as the time spent by the department in charge of accounts payable and accounts receivable on handling the failed payment linked to an account switch when they choose to actively handle it, is residual/marginal compared to its overall responsibilities. It is assumed that the burden for the time and energy spent on investigating failed payments mainly lays on consumers. Moreover, economic operators often charge extra fees or penalties to consumers when their payments fail or do not come in, covering their extra efforts. [123] Eurostat, 2017 data for EU27 (without the UK), https://ec.europa.eu/eurostat/databrowser/view/sbs_sc_sca_r2/ [124]

As the change of account number and the notifications to creditors/debtors would be fully dealt with by the EU platform and the PSPs (see section 4.3.3 and Annex D), micro-enterprises and the self-employed would not need to notify creditors and debtors with whom they have recurrent transaction (regardless whether they are a legal person or a natural person) of the new account number. [125] We assume that all switches would take place through the existing domestic switching service or the future crossborder one, once it would be in place. Consequently, all micro enterprises and self-employed who choose to switch would benefit from savings linked to the time they would have spent without a switching service.

	Savings linked to not having to deal with an increased number of failed payments: This category follows the same logic as the cost category. It takes into account the expected decrease of the number of failed payments and the consequent time savings for micro enterprises and self-employed who would be less burdened by having to resolve issues

Micro-enterprises and self-employed:	
	with failed payments.
	Benefits linked to potential savings in account fees for (additional) micro enterprises and self-employed who switch (nationally and/or cross-border): Savings linked to switching to a potentially less expensive account (nationally or cross-border)[126].

PSPs:	
5 698 credits institutions were active in the EU-27 in 2018[127]. Although PSPs include different types of institutions[128], the analysis has chosen to take into account only this type of PSP as the available figure was considered the most reliable. Moreover, the study team has differentiated the PSPs between larger ones (assumed at 115[129]) and smaller ones (5 583) as the costs they incur are different[130].	
One off costs	Costs of updating all customers' account identifiers (option 3.3): As part of option 3.3, everyone (including businesses) would have to initially change their account number to the portable account identifier, and the PSPs would need to update their account information.
	Costs of adapting the IT infrastructure: This category represents the one-off costs for PSPs to adapt their IT infrastructure in order to offer the services foreseen in each policy option.
	Costs for change management: This category represents the one-off costs for change management for PSPs, which include the costs to develop new procedures, information tools, trainings, etc. to adapt to the new system proposed by each option.
	Personnel costs to notify creditors/debtors of the new EU-wide payment account number (option 3.3): For option 3.3 all accounts in the EU would initially need to be updated. This cost category refers to labour costs for the creditors/debtors' PSPs to notify their

126 N.B.: Looking for better deals is not always the aim of a switch and people are not always able to find the best deal (although they have more tools at their disposal to compare payment accounts). Moreover, markets are dynamic, and prices evolve over time (the receiving PSP might increase its prices after some time, and/or the transferring PSP might choose to decrease them). Consequently, although a micro enterprise/self-employed who switches an account could ultimately have potential savings throughout their "life time", we assume that this is not the case, and that potential fee savings decrease as time passes and disappear after three years, but during these three years they achieve them in full.

127 6088 credit institutions in the EU-28, minus 390 credit institutions in the UK. European Banking Federation: https://www.ebf.eu/facts-and-figures/statistical-annex/?lang=en

128 The PAD definition of PSPs referring to the definition in Directive 2007/64/EC includes a wide range of actors, namely: (a) credit institutions, (b) electronic money institutions, (c) post office giro institutions which are entitled under national law to provide payment services, (d) payment institutions, (e) the European Central Bank and national central bank when not acting in their capacity as monetary authority or other public authorities, (f) Member States or their regional or local authorities when not acting in their capacity as public authorities.

129 European Central Bank, List of supervised entities, cut-off date 1 January 2021. For more information, see: https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.listofsupervisedentities202102.en.pdf?d44578f617b9cb1931e643c1522e28d3

130 Part of the smaller institutions work together as a network in order to share costs and make savings (e.g. Germany's Savings Banks), which would represent a third category that should be differentiated in the

context of the cost calculation. However, the data available does not allow to make a reliable estimate so this distinction has not been made in this study.

PSPs:	
	customers of the new EU-wide portable account number which would change once, assuming such an exercise would be done manually by the creditors/debtors[81].
Recurrent costs	Personnel costs to offer the services foreseen in the policy options: This cost category refers to labour costs for PSPs to provide the service foreseen in each policy option.
	Operational costs: This cost category includes the recurrent costs for PSPs to run and maintain their IT systems supporting the different policy options.
	Potential loss of customers as the new service makes it easier for them to switch to another PSP (no costs foreseen[132]).
Recurrent benefits	Attraction (depending on each PSP's advantages on the market) of potential new customers due to the removal of barriers to switching across EU Member State (no benefits foreseen[133]).
	Reduction of administrative costs to implement the switches due to a standardisation of the domestic switching process (no benefits foreseen[134])
	Reduction of costs arising from failed payments and redirection (e.g. directed to old/closed accounts) (no benefits foreseen[135])

Others:
This last stakeholder group refers to either PSPs acting collectively, national competent authorities, or EU competent authorities as any of these stakeholders could bear the costs listed below. However, as it is not clear at this stage which stakeholder would be bearing them, they are included in a blended category.

[81] See "Costs of updating all customers' account identifier" under creditors/debtors. [132] It should be noted that costs related to a loss of consumers might be relevant for individual PSPs but not for the sector as a whole. If one bank loses customers to another bank, the latter benefits from this loss. Hence, from a sector perspective, there would not be costs associated with the movement of consumers between individual banks. [133] Ibid. Overall, benefits and costs from the movement of consumers would be considered as a zero-sum game. [134] The study team considered this benefit category, but after further reflection and data collection, it decided to disregard it due to limited proof that there would be a significant impact. [135] The study team considered this benefit category but, after further reflection decided to disregard it as PSPs are not expected to investigate and solve issues linked to a failed payment (including linked to an account switch).

One off costs	Costs for setting up the decentralised or centralised hub solution: The costs related to "setting up" the decentralised/central hub (national contact points, EU platform, Central Registry, etc.) covers all necessary one-off costs for establishing the new hub or institution(s), including IT and change management, e.g. training, setting up new processes and communication tools.
Others:	
Recurrent costs	Operational costs of the decentralised or centralised hub solution: This cost category includes the recurrent costs linked to running and maintaining the solution supporting the different policy options. It encompasses all IT related recurrent costs, as well as personnel and corresponding over-head.
Recurrent benefits	Benefits linked to savings in operational costs of the national switching service: This category is only valid for the cross-border options with a centralised solution and it covers the savings in operational costs from not having to run the existing national solutions that currently support the national switching service.

5.2.2. **General overview of costs and benefits**

The tables hereafter provide an overall view of the estimated total costs and benefits linked to the different options, per stakeholder group. Table 8 shows the costs and benefits in the context of an implementation applicable only to (non-professional) consumer accounts, while Table 9 presents the additional costs and benefits if the scope was to be extended to include the accounts of micro-enterprises and the self-employed.

Table 8 – Estimation of the incremental costs and benefits (EUR million)

EUR million		PO1.1	PO1.2	PO2.1 (MSlevel)*	PO2.1 (EUlevel)*	PO2.2 (MSlevel)*	PO2.2 (EUlevel)*	PO2.3 (MSlevel)*	PO2.3 (EUlevel)*	PO2.1 (EUlevel) w/ switching service**	PO2.2 (EUlevel) w/ switching service**	PO2.3 (EUlevel) w/ switching service**	PO3.1	PO3.2	PO3.3
PSPs	OOC	835.62	835.62	4 000.82	4 069.10	1 053.61	1 053.61	1 053.61	1 053.61	4 904.72	1 889.23	1 889.23	7 306.96	7 306.96	9 612.17
PSPs	RC	150.59	150.59	748.25	822.35	207.72	270.12	207.72	270.12	972.94	420.71	420.71	1 204.35	1 210.29	992.73
PSPs	RB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Consumers	OOC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Consumers	RC	-	-	-	-	-	-	-	-	-	-	-	-	2.24	1.49
Consumers	RB	40.64	41.16	80.73	112.23	81.30	112.98	80.73	112.23	153.60	154.45	153.60	154.14	150.82	150.82
Competent authority	OOC	2.80	2.80	2.70	2.80	2.70	2.80	12.44	6.15	5.60	5.60	8.95	2.70	2.80	12.78
Competent authority	RC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Competent authority	RB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Creditors/ Debtors	OOC	-	-	-	-	-	-	-	-	-	-	-	-	23.99	12 730.28
Creditors/ Debtors	RC	6.75	6.75	20.26	33.77	20.26	33.77	20.26	33.77	40.53	40.53	40.53	-	33.77	-
Creditors/ Debtors	RB	-	-	-	-	-	-	-	-	-	-	-	87.81	-	87.81
Other	OOC	7.00	1.50	71.50	5.50	-	-	67.50	5.00	7.00	1.50	6.50	7.00	7.00	7.00

Other	RC	2.05	0.30	14.30	1.10	-	-	13.50	1.00	1.40	0.30	1.30	1.40	1.40	1.40
Other	RB	-	0.19	-	-	-	-	-	-	0.19	0.19	0.19	0.19	0.19	0.19
Total	OOC	845.42	839.92	4 075.02	4 077.40	1 056.31	1 056.41	1 133.55	1 064.76	4 917.32	1 896.33	1 904.68	7 316.66	7 340.75	22 362.22
Total	RC	159.40	157.65	782.81	857.22	227.98	303.89	241.48	304.89	1 014.87	461.53	462.53	1 205.75	1 247.70	995.62
Total	RB	40.64	41.35	80.73	112.23	81.30	112.98	80.73	112.23	153.79	154.64	153.79	242.14	151.01	238.81

Source: Deloitte elaboration

Legend:

OOC: one-off costs RC: recurrent costs RB: recurrent benefits

* The amounts under these options only account for the redirection as an "add-on". Costs and benefits linked to the switching service are not included here.

** These columns provide the costs and benefits that would arise when the options supporting cross-border redirection would be combined with a switching service (i.e. considering the implementation of option 1.2 with the EU cross-border redirection options).

Table 9 – Estimation of the incremental costs and benefits (EUR million)

EUR million		PO1.1	PO1.2	PO2.1 (MSlevel)*	PO2.1 (EUlevel)*	PO2.2 (MSlevel)*	PO2.2 (EUlevel)*	PO2.3 (MSlevel)*	PO2.3 (EUlevel)*	PO2.1 (EUlevel) w/ switching service**	PO2.2 (EUlevel) w/ switching service**	PO2.3 (EUlevel) w/ switching service**	PO3.1	PO3.2	PO3.3
PSPs	OOC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PSPs	RC	2.55	2.55	3.79	4.54	3.79	4.54	3.79	4.54	7.09	7.09	7.09	1.61	3.22	1.80
PSPs	RB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Competent authority	OOC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Competent authority	RC	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Competent authority	RB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Creditors/ Debtors	OOC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Creditors/ Debtors	RC	0.58	0.58	0.84	1.10	0.84	1.10	0.84	1.10	1.68	1.68	1.68	-	1.10	-
Creditors/ Debtors	RB	-	-	-	-	-	-	-	-	-	-	-	1.68	-	1.68
Micro/ self-employed	OOC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Micro/ self-employed	RC	-	-	-	-	-	-	-	-	-	-	-	-	0.21	0.14
Micro/ self-employed	RB	8.63	8.71	10.15	12.60	10.23	12.71	10.15	12.60	21.35	21.47	21.35	13.39	13.05	13.05
Other	OOC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	RC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	RB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	OOC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	RC	3.13	3.13	4.63	5.64	4.63	5.64	4.63	5.64	8.77	8.77	8.77	1.61	4.52	1.93
Total	RB	8.63	8.71	10.15	12.60	10.23	12.71	10.15	12.60	21.35	21.47	21.35	15.07	13.05	14.73

Source: Deloitte elaboration

Legend:

OOC: one-off costs RC: recurrent costs RB: recurrent benefits

* The amounts under these options only account for the redirection "add-on". Costs and benefits linked to the switching service are not included here.

** These columns provide the costs and benefits that would arise when the options supporting cross-border redirection would be combined with a switching service (i.e. considering the implementation of option 1.2 with the EU cross-border redirection options).

5.2.3. **Comparison of options per type of switching tool**

This section provides an overview of the different costs and benefits of the options per tool and how they compare.

Cross-border switching service (Switching Tool 1)

Despite the different types of governance, the two options for a cross-border switching service would have similar costs (both one-off and recurrent) and benefits, option 1.1 being slightly more expensive and bringing less benefits.

Cost/Benefit description	Stakeholder (born by)	Frequency	PO1.1	PO1.2
Costs for creating templates for communications in all EU languages	Competent authority	OOC	0.10	0.10
Change management for supervision	Competent authority	OOC	2.70	2.70
Costs of supervising system changes (options 2.3 & 3.3)	Competent authority	OOC	-	-
Benefits due to spending less time to carry out a switch	Consumers	RB	18.17	18.17
Time related benefits linked to not having to deal with failed payments	Consumers	RB	0.11	0.63
Time related costs linked to having to deal with an increased number of failed payments	Consumers	RC	-	-
Benefits linked to potential savings in account fees for consumers who switch	Consumers	RB	22.36	22.36
IT adaptation costs to recognise and support new account identifiers (option 3.2)	Creditors/ Debtors	OOC	-	-
Costs of updating all customers' account identifiers (option 3.3)	Creditors/ Debtors	OOC	-	-
Personnel costs linked to implementing account changes after a switch	Creditors/ Debtors	RC	6.75	6.75
Benefits from savings in personnel costs linked to implementing account changes after a switch	Creditors/ Debtors	RB	-	-
Costs for setting up the decentralised or centralised hub solution	Other	OOC	7.00	1.50
Operational costs of the decentralised or centralised hub solution	Other	RC	2.05	0.30
Benefits linked to savings in operational costs of the national switching service	Other	RB	-	0.19
Costs of updating all customers' account identifiers (option 3.3)	PSPs	OOC	-	-
Costs of adapting the IT infrastructure	PSPs	OOC	544.97	544.97
Cost for change management	PSPs	OOC	290.65	290.65
Personnel costs to offer the services foreseen in the policy options	PSPs	RC	41.60	41.60
Personnel costs to notify creditors/debtors of the new EU-wide payment account number (option 3.3)	PSPs	OOC	-	-
Operational costs	PSPs	RC	108.99	108.99
	Total	OOC	845.42	839.92
	Total	RC	159.40	157.65
	Total	RB	40.64	41.35

Table 10 – Cross-border switching service: Breakdown of costs and benefits per stakeholder (EUR million)

Source: Deloitte elaboration

Table 11 – Cross-border switching service: Breakdown of costs and benefits per stakeholder (extension to microenterprises and self-employed) (EUR million)

Cost/Benefit description	Stakeholder (born by)	Frequency	PO1.1	PO1.2
Personnel costs linked to implementing account changes after a switch	Creditors/ Debtors	RC	0.58	0.58
Benefits in savings in personnel costs linked to implementing account changes after a switch	Creditors/ Debtors	RB	-	-
Benefits due to spending less time to carry out a switch	Micro/ self-employed	RB	6.97	6.97
Time related benefits linked to not having to deal with failed payments	Micro/ self-employed	RB	0.09	0.17
Time related costs linked to having to deal with an increased number of failed payments	Micro/ self-employed	RC	-	-
Benefits linked to potential savings in account fees for micro enterprises and self-employed who switch	Micro/ self-employed	RB	1.58	1.58
Personnel costs to offer the services foreseen in the policy options	PSPs	RC	2.55	2.55
	Total	OOC	-	-
	Total	RC	3.13	3.13
	Total	RB	8.63	8.71

Source: Deloitte elaboration

Costs and benefits would, overall, typically be the same for the two options for all stakeholders except for the benefits linked to mitigated failed payments for consumers, and the costs for those who would have to bear the cost of the central component(s) required for both policy options (the category "other").

The costs would differ with regards to the one-off costs and recurring costs to put in place and run the decentralised or central hub(s) that would be required to facilitate the exchange of information between the different stakeholders within and across Member States. A decentralised model would entail a multiplication of the costs to ensure that the technical and operational requirements are in place and sufficiently interoperable between countries. The cost of implementing a centralised solution would be higher than the cost of implementing the national contact point in one Member State, but considerably smaller than doing so for 27 countries. Moreover, as the centralised solution would replace all existing national solutions supporting the domestic switching service, the operational costs of those Member States having a national central body (assumed to be half of the Member States) would be saved and, thus, become benefits.

With regards to the costs for PSPs, while we assume that approximately half of the Member States are currently organised around a national body to support the domestic switching service and that it might be possible to reuse the same architecture and procedures for a decentralised implementation (option 1.1), the data available for this study does not allow a reliable understanding of the implications at PSP level for all EU PSPs. Consequently, we assume all PSPs will have to incur costs to adapt to the new cross-border switching service and they would be the same regardless of the option chosen.

In terms of benefits:

- For consumers: these would mainly arise for consumers switching cross-borders, although domestic switchers would also benefit from the decrease in potential failed payments brought about by the centralised solution, which would replace current national services.

- For micro-enterprises/self-employed: the benefits would be due to both domestic and cross-border switchers having access to a switching service and the consequent potential savings.

Automated redirection (Switching tool 2)

The costs to implement an automated redirection vary more between the different options. Overall, the option entailing the highest costs would be option 2.1, the Central Registry. The other two options would be between a quarter and a third of the cost of choosing the option with a Central Registry, with option 2.2 being slightly less costly than 2.3 as it would not require the development of a central entity. PSPs would be the ones expected to carry the majority of the investment in all three options.

Table 12 – Redirection tools: Breakdown of costs and benefits per stakeholder[82] (EUR million)

[82] It should be noted that the Netherlands already has a redirection system in place that has inspired option 2.1. Consequently, the costs for setting up a central registry and the subsequent costs for PSPs in the case of a national implementation have only been calculated for 26 Member States and their respective PSPs.

Cost/Benefit description	Stakeholder (born by)	Frequency	PO2.1 (MSlevel)*	PO2.1 (EUlevel)*	PO2.2 (MSlevel)*	PO2.2 (EUlevel)*	PO2.3 (MSlevel)*	PO2.3 (EUlevel)*
Costs for creating templates for communications in all EU languages	Competent authority	OOC	-	0.10	-	0.10	-	0.10
Change management for supervision	Competent authority	OOC	2.70	2.70	2.70	2.70	2.70	2.70
Costs of supervising system changes (options 2.3 & 3.3)	Competent authority	OOC	-	-	-	-	9.74	3.35
Benefits due to spending less time to carry out a switch	Consumers	RB	27.25	36.33	27.25	36.33	27.25	36.33
Time related benefits linked to not having to deal with failed payments	Consumers	RB	1.89	1.95	2.46	2.69	1.89	1.95
Time related costs linked to having to deal with an increased number of failed payments	Consumers	RC	-	-	-	-	-	-
Benefits linked to potential savings in account fees for consumers who switch	Consumers	RB	51.59	73.95	51.59	73.95	51.59	73.95
IT adaptation costs to recognise and support new account identifiers (option 3.2)	Creditors/ Debtors	OOC	-	-	-	-	-	-
Costs of updating all customers' account identifiers (option 3.3)	Creditors/ Debtors	OOC	-	-	-	-	-	-
Personnel costs linked to implementing account changes after a switch	Creditors/ Debtors	RC	20.26	33.77	20.26	33.77	20.26	33.77
Benefits from savings in personnel costs linked to implementing account changes after a switch	Creditors/ Debtors	RB	-	-	-	-	-	-
Costs for setting up the decentralised or centralised hub solution	Other	OOC	71.50	5.50	-	-	67.50	5.00
Operational costs of the decentralised or centralised hub solution	Other	RC	14.30	1.10	-	-	13.50	1.00
Benefits linked to savings in operational costs of the national switching service	Other	RB	-	-	-	-	-	-
Costs of updating all customers' account identifiers (option 3.3)	PSPs	OOC	-	-	-	-	-	-
Costs of adapting the IT infrastructure	PSPs	OOC	3 429.27	3 487.80	726.63	726.63	726.63	726.63
Cost for change management	PSPs	OOC	571.55	581.30	326.98	326.98	326.98	326.98
Personnel costs to offer the services foreseen in the policy options	PSPs	RC	62.40	124.79	62.40	124.79	62.40	124.79
Personnel costs to notify creditors/debtors of the new EU-wide payment account number (option 3.3)	PSPs	OOC	-	-	-	-	-	-
Operational costs	PSPs	RC	685.85	697.56	145.33	145.33	145.33	145.33
	Total	OOC	4 075.02	4 077.40	1 056.31	1 056.41	1 133.55	1 064.76
	Total	RC	782.81	857.22	227.98	303.89	241.48	304.89
	Total	RB	80.73	112.23	81.30	112.98	80.73	112.23

Source: Deloitte elaboration

Table 13 – Redirection tools: Breakdown of costs and benefits per stakeholder (extension to micro-enterprises and self-employed) (EUR million)

Cost/Benefit description	Stakeholder (born by)	Frequency	PO2.1 (MSlevel)*	PO2.1 (EUlevel)*	PO2.2 (MSlevel)*	PO2.2 (EUlevel)*	PO2.3 (MSlevel)*	PO2.3 (EUlevel)*
Personnel costs linked to implementing account changes after a switch	Creditors/ Debtors	RC	0.84	1.10	0.84	1.10	0.84	1.10
Benefits in savings in personnel costs linked to implementing account changes after a switch	Creditors/ Debtors	RB	-	-	-	-	-	-
Benefits due to spending less time to carry out a switch	Micro/ self-employed	RB	7.75	9.29	7.75	9.29	7.75	9.29
Time related benefits linked to not having to deal with failed payments	Micro/ self-employed	RB	0.26	0.32	0.35	0.43	0.26	0.32
Time related costs linked to having to deal with an increased number of failed payments	Micro/ self-employed	RC	-	-	-	-	-	-
Benefits linked to potential savings in account fees for micro enterprises and self-employed who switch	Micro/ self-employed	RB	2.14	2.99	2.14	2.99	2.14	2.99
Personnel costs to offer the services foreseen in the policy options	PSPs	RC	3.79	4.54	3.79	4.54	3.79	4.54
	Total	OOC	-	-	-	-	-	-
	Total	RC	4.63	5.64	4.63	5.64	4.63	5.64
	Total	RB	10.15	12.60	10.23	12.71	10.15	12.60

Source: Deloitte elaboration

The one-off investment in the IT infrastructure would be the highest cost, accompanied by the operational costs, which would be recurrent. Option 2.1 would require a more significant investment than option 2.2 because the former requires that PSPs connect to the Central Registry and are able to assimilate the Routing Table that would be updated on a daily basis, while the latter implies an update to the current payment system. As for option 2.3, while it also requires a connection to a central solution, the central solution would take care of everything and PSPs would only need to record the new payment account number, in the case a payment has been redirected by the Central clearing house. This procedure is considered to have similar costs as option 2.2 even if the solutions are different since the differences cancel each other out. While option 2.3 would need to ensure a connection with the clearing house, it would not need to keep track in the PSPs' systems of the new IBANs of their former clients in order to be able to fill in the new error messages like in option 2.2.

In terms of benefits, aside from the increases generated by a growing number of expected switches, both consumers and micro enterprises/self-employed would benefit from additional savings due to the extra safety introduced by the automated redirection of payments. However, the different options would not be expected to bring the same level of impact. As explained in the effectiveness assessment, option 2.2 is expected to have a higher positive impact in mitigating failed payments which would, in turn, translate in higher benefits.

Finally, the choice of implementing a redirection service at national or at cross-border level would not have significant impacts on the costs and benefits. One-off costs would not be very different, the main differences would be linked to costs and benefits that vary depending on the switching rates. An EU wide implementation that would allow switching both domestically and cross-border would lead to higher costs to support such a service as well as higher benefits.

ANP (Switching Tool 3)

While option 3.3 is the option with the highest one-off costs, it is also the option with the lowest recurrent costs. Options 3.1 and 3.2 have similar recurrent costs and one-off costs, both somewhat higher for option 3.2. As for the benefits, the implementation of an alias would have approximately two thirds of the expected benefits of the other two options. This is mainly due to the fact that around a third of the benefits of option 3.2 would materialise as of the second switch, as they are linked to the savings of creditors/debtors in the administrative processing of changes to the bank account number of customers who switch. However, as it is assumed for the purposes of this study that such a second switch would not happen, these savings do not apply to option 3.2.

Cost/Benefit description	Stakeholder (born by)	Frequency	PO3.1	PO3.2	PO3.3
Costs for creating templates for communications in all EU languages	Competent authority	OOC	-	0.10	0.10
Change management for supervision	Competent authority	OOC	2.70	2.70	2.70
Costs of supervising system changes (options 2.3 & 3.3)	Competent authority	OOC	-	-	9.98
Benefits due to spending less time to carry out a switch	Consumers	RB	54.50	54.50	54.50
Time related benefits linked to not having to deal with failed payments	Consumers	RB	3.32	-	-
Time related costs linked to having to deal with an increased number of failed payments	Consumers	RC	-	2.24	1.49
Benefits linked to potential savings in account fees for consumers who switch	Consumers	RB	96.32	96.32	96.32
IT adaptation costs to recognise and support new account identifiers (option 3.2)	Creditors/ Debtors	OOC	-	23.99	-
Costs of updating all customers' account identifiers (option 3.3)	Creditors/ Debtors	OOC	-	-	12 730.28
Personnel costs linked to implementing account changes after a switch	Creditors/ Debtors	RC	-	33.77	-
Benefits from savings in personnel costs linked to implementing account changes after a switch	Creditors/ Debtors	RB	87.81	-	87.81
Costs for setting up the decentralised or centralised hub solution	Other	OOC	7.00	7.00	7.00
Operational costs of the decentralised or centralised hub solution	Other	RC	1.40	1.40	1.40
Benefits linked to savings in operational costs of the national switching service	Other	RB	0.19	0.19	0.19
Costs of updating all customers' account identifiers (option 3.3)	PSPs	OOC	-	-	95.61
Costs of adapting the IT infrastructure	PSPs	OOC	5 427.49	5 427.49	4 369.42
Cost for change management	PSPs	OOC	1 879.47	1 879.47	1 879.47
Personnel costs to offer the services foreseen in the policy options	PSPs	RC	118.85	124.79	118.85
Personnel costs to notify creditors/debtors of the new EU-wide payment account number (option 3.3)	PSPs	OOC	-	-	3 267.66
Operational costs	PSPs	RC	1 085.50	1 085.50	873.88
	Total	OOC	7 316.66	7 340.75	22 362.22
	Total	RC	1 205.75	1 247.70	995.62
	Total	RB	242.14	151.01	238.81

Table 14 – ANP: Breakdown of costs and benefits per stakeholder (EUR million)

Source: Deloitte elaboration

Table 15 – ANP: Breakdown of costs and benefits per stakeholder (extension to micro-enterprises and selfemployed) (EUR million)

Cost/Benefit description	Stakeholder (born by)	Frequency	PO3.1	PO3.2	PO3.3
Personnel costs linked to implementing account changes after a switch	Creditors/ Debtors	RC	-	1.10	-
Benefits in savings in personnel costs linked to implementing account changes after a switch	Creditors/ Debtors	RB	1.68	-	1.68
Benefits due to spending less time to carry out a switch	Micro/ self-employed	RB	10.06	10.06	10.06
Time related benefits linked to not having to deal with failed payments	Micro/ self-employed	RB	0.34	-	-
Time related costs linked to having to deal with an increased number of failed payments	Micro/ self-employed	RC	-	0.21	0.14
Benefits linked to potential savings in account fees for micro enterprises and self-employed who switch	Micro/ self-employed	RB	2.99	2.99	2.99
Personnel costs to offer the services foreseen in the policy options	PSPs	RC	1.61	3.22	1.80
	Total	OOC	-	-	-
	Total	RC	1.61	4.52	1.93
	Total	RB	15.07	13.05	14.73

Source: Deloitte elaboration

The majority of costs (both recurrent and one-off) are expected to be incurred by PSPs and would be due to the connection to the Central Registry and the need to have the ability to assimilate the Routing Table that would be updated on a daily basis. However, from all three options, option 3.3 would be the least costly option for PSPs. This is explained by the fact that options 3.1 and 3.2 operate with a dual-key system with different account identifiers in the front-end and in the back-end, which have to be linked, while option 3.3 introduces one new unique account identifier throughout the payment chain, which only needs to be linked to a PSP identifier (i.e. the BIC). According to expert opinion, the added complexity of having multiple account identifiers tied to one account makes options 3.1 and 3.2 significantly more complex for PSPs both from a management and technical point of view. For instance, it would require additional efforts to allow for full traceability of payment transfers to avoid issues such as money laundering. PSPs would hence be faced with high initial costs to change from the current system based on one unique account identifier to a system that has to cater multiple identifiers. Moreover, making the new identifier in option 3.3 similar to the current IBAN means that PSPs would not have to change the backbone of their banking system and it would be almost as if a new country was joining the EU. Payments could then be traced using the BIC, which would be provided in the Central Registry. Once the initial costs for the implementation of the new identifier would be borne, recurrent costs for carrying out payments would not be significantly different from today.

The main reason why option 3.3 would almost double the one-off costs of the other options is because of the costs creditors and debtors would have to incur to update their bookkeeping to ensure that all the account numbers in the EU have been updated. For economic operators, option 3.3 would be by far the most burdensome. These changes in the account numbering would concern all enterprises in the EU that need to register payment accounts, not only those whose business model involves recurrent payments. Conversely, option 3.1 would be very beneficial for this stakeholder category as they would only achieve savings from it.

As for the benefits, aside from the increases generated by a growing number of expected switches, the main difference between the three options for ANP would be linked to their potential to mitigate failed payments.

Contrarily to the options under the other two tools (cross-border switching service and automated redirection), ANP following options 3.2 and 3.3 would bring additional risks of failed payments and would worsen the current situation in terms of the number of failed payments to deal with. Consequently, while option 3.1 would bring savings to the mitigation of failed payments, options 3.2 and 3.3 would lead consumers and micro enterprises/self-employed to incur additional costs to deal with increased failed payments.[83]

5.2.4. **Overall efficiency**

As seen in the previous overview tables, all policy options considered in this study are expected to bring benefits. However, the estimated costs required to reach these benefits are significant, and recurrent costs are higher than the recurrent benefits. Only Switching tool 1, and options 3.1 and 3.2 could have recurrent benefits that outweigh recurrent costs, if the switching rates were high enough (see Table 16 further below).

Furthermore, the analysis predicts substantial one-off costs for implementing the policy options that would not be recoverable over time unless the recurrent benefits outweighed the recurrent costs. Consequently, under these assumptions, none of the tools intended to facilitate switching cross-border (and also nationally) would allow the benefits to outweigh the costs at any given time.

Nonetheless, it should be noted that not all the benefits arising from these tools are quantifiable, and they should not be underestimated nor overlooked when assessing the efficiency of the options. Aside from obvious benefits such as allowing to switch more easily to a PSP that provides a better quality of service, other key benefits are as per the objective tree in Annex F:

- fostering healthier competition on the European payment accounts market;
- achieving the full potential of the single market.

It is also worthwhile to assess what would be the minimum switching rates required to break-even at a specific point in time for those options that have said potential. The table below provides an overview of the (national and/or cross-border) switching rates needed to achieve net quantifiable benefits (recurrent benefits exceed both one-off and recurrent costs) for the two options.

National switching rate	border switching rate	PO1.1	PO1.2	PO3.1	PO3.3
1.00%	0.30%	-	-	-	-
2.00%	0.60%	-	-	-	-
3.00%	0.90%	-	-	-	-
4.00%	1.20%	-	-	-	-
5.00%	1.50%	-	-	-	-
6.00%	1.80%	-	-	-	129

[83] The switch to a completely new account number (be it alias or the new EU-wide portable account number) would also entail that any counterpart (including another consumer) who has the account details of a consumer registered and who is not necessarily considered as a creditor/debtor with whom the consumer carries recurrent transactions, would no longer have the correct number. However, this is also currently the case today when someone switches his/her account and, often, consumers need to communicate their IBAN directly to such counterparts. Consequently, this is not considered as a significant additional cost for consumers specifically linked to options 3.2 and 3.3.

7.00%	2.10%	-	-	40	62
8.00%	2.40%	-	-	20	41
9.00%	2.70%	-	-	13	31
10.00%	3.00%	-	-	10	24
11.00%	3.30%	226	105	8	20
12.00%	3.60%	54	42	6	17
13.00%	3.90%	31	26	5	15
14.00%	4.20%	22	19	5	13

Table 16 – Overview of the required switching rates and number of years until the costs and benefits break even

Note: A combination of both the national switching rate and cross-border switching rate is considered for these options as they would be implemented EU-wide at cross-border level, impacting the potential switching rates at both domestic and cross-border level.

Source: Deloitte elaboration

As can be seen in the table, if we were to consider 20 years as a reasonable timeframe to break even:

- Option 1.1 would require a cross-border switching rate of more than 4.2%.
- Option 1.2 would require a cross-border switching rate of 4.2%.
- Option 3.1 would require a national switching rate of 8% and a cross-border switching rate of 2.4%.
- Option 3.3 would require a national switching rate of 10% and a cross-border switching rate of 3%.

Considering that these switching rates are several times higher than the best estimates, and that all other options and tools to support switching would not be able to break even, none of the tools and options assessed in this study are considered efficient.

6 Conclusions and lessons learnt

In accordance with Article 26(2) of the Treaty on the Functioning of the European Union (TFEU), the internal market is to comprise an area without internal frontiers in which the free movement of goods, persons, services and capital is ensured. The smooth functioning of the internal market and the development of a modern, socially inclusive economy increasingly depends on the universal provision of payment services.

To ensure the above objective, the Payment Accounts Directive (PAD)[84] was adopted in 2014. PAD envisages three objectives for which it has foreseen regulatory measures:

- Allow consumers to compare payment account fees;
- Allow consumers to switch accounts easily;
- Allow all EU consumers access to payment accounts with basic features.

Building on the current legal framework, and the different practices across Member States, the study at hand aimed to provide qualitative and quantitative evidence about the feasibility of developing and implementing new tools for facilitating switching and cross-border opening of payment accounts. To achieve this general objective the study team assessed **three different types of switching tools**:

- A **cross-border switching service** allowing consumers to switch payment accounts across Member States
- An **automated redirection of payments** that could be implemented at two different levels:
    - At national level (within the same Member State);
    - At EU level (between different Member States).
- An **EU-wide portability of payment account numbers**:.

Understanding the consumer perspective is key in order to assess the need and relevance of the options designed. Therefore, before developing the options for each of these tools, this study assessed the appetite for cross-border opening of payment accounts. For that purpose, both the **demand and the supply** of cross-border opening of payment accounts were assessed. The same assessment was also undertaken separately for micro-enterprises and self-employed.

On the one hand, it was found that the mobile consumers (i.e. consumers who have, at one point in their lives, lived in another EU Member State, or are still living there, regardless of the motive) would be the stakeholder group most likely to be interested in cross-border account opening. The drivers for such interest include mainly the proximity with the new PSP, and the need to carry out local transactions. The study also found that the main motivation for the non-mobile consumers to open an account in another Member State would be to benefit from lower fees. However, the demand among these consumers is very low, considering language barriers, distance and sometimes the need to be physically present at a branch to open the account. The demand analysis also showed that a number of obstacles might prevent consumers from switching, such as the fear of being charged additional fees in case a payment fails or is misdirected, and the uncertainty

[84] Directive 2014/92/EU of the European Parliament and of the Council of 23 July 2014 on the comparability of fees related to payment accounts, payment account switching and access to payment accounts with basic features Text with EEA relevance: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014L0092

with regards to their account information being updated correctly by creditors and debtors, which indicates the relevance of redirection and ANP tools.

Although micro-enterprises and self-employed are currently not included in the scope of PAD, this study also took into account the demand and supply for this specific group of consumers. It was found that the demand for these services in general would be very low and limited to the ones who would need to relocate to another Member State. Even then, they would rather tend to open an account in this other country and leave their current account open, mostly due to wanting to avoid the hassle and the risks with regards to misdirected payments associated with switching. Although they recognised that the tools for cross-border switching, redirection and ANP could be useful in the rare cases where they would need them, the interviewed associations revealed that they would be worried that the costs of such service, if made compulsory for PSPs, would be passed on in account or transaction fees, which are already key issues for them.

At the same time, cross-border opening of accounts entails some challenges for PSPs due to AML-CFT rules and other legal requirements. In this regard, remote identification represents a difficulty for PSPs when considering cross-border account opening. Nevertheless, it should be noted that new technologies are offering opportunities to PSPs to adapt their onboarding journey and allow remote cross-border opening of accounts. As part of the demand analysis, the study team also measured the demand for the different switching tools assessed in this study using the best possible estimates. Based on this exercise, approximately **3.1 million EU consumers** would use a **cross-border switching service** and approximately **4.5 million** would use a switching service with an **automated redirection** or **ANP** annually.

With regards to micro-enterprises and self-employed, the study team estimated that approximately **46 thousand** would use the **cross-border switching service** and approximately **66 thousand** would use a switching service with **automated redirection** or **ANP** annually.

Based on the analysis of the demand and supply, as well as of the current national practices in some Member States, different options were developed for each of the switching tools. This report designed **eight policy options**:

For the cross-border switching service, two policy options were identified:

- Option 1.1 Cross-border switching service with decentralised governance
- Option 1.2 Cross-border switching service with centralised governance As for the automated

redirection the study identified three policy options:

- Option 2.1 Automated redirection of payments based on a Central Registry
- Option 2.2 Automated redirection of payments via account information embedded in error messages
- Option 2.3 Automated redirection of payments based on a Central clearing house Lastly, the report

presents three policy options for EU-wide ANP:

- Option 3.1 EU-wide portability of existing IBAN
- Option 3.2 Portable identifier/alias on top of IBAN
- Option 3.3 New portable account number throughout the payment chain (replacing current IBANs)

The study assessed the feasibility of these options from legal, technical and operational point of views and then evaluated their potential effectiveness and efficiency.

The **feasibility analysis** revealed that **all the identified options would be feasible, although with different legal, technical and operational implications and levels of complexity**. As part of the options for a cross-border switching service (Switching tool 1), a system based on a centralised governance (option 1.1) would imply a leaner process than a system with a decentralised governance based on national contact points. Although the EU platform would considerably simplify the switching process for PSPs, it would involve a more radical IT transformation for the different stakeholders.

With regards to the automated redirection of payments (Switching tool 2), the different options would have different implications for PSPs. A Central Registry (option 2.1) would imply important IT adaptations for PSPs to integrate the Redirection Table in their routing systems, but would create a seamless redirection process as it would occur upfront, when payments are initiated. The redirection based on the IBAN embedded in the error messages (option 2.2) would require PSPs to keep track of their old customers' IBANs for 13 months after they switch and redirect payments via (newly) expanded error messages whenever transactions are addressed to closed accounts. Although this aspect would be burdensome for them, this option involves less important infrastructure changes, as the error messages already exist and would just need to be enriched with a new field. An automated redirection based on a Central clearing house (option 2.3) would outsource the redirection role to this central entity which would manage the switching information, redirect misdirected payments to the right clearing institution and inform PSPs whenever redirections take place. This option would theoretically make the redirection much simpler for PSPs. However, it would come with a number of challenges and shortcomings, as it would require that the Central clearing house integrates all clearing and correspondent banking agreements of all PSPs across the EU. The Central clearing house would also become a critical component of the payment chain receiving an extremely high volume of transactions which, therefore, would imply high risks of single point of failure. The study has also shown that the implementation of these tools would be more feasible and less complex at a domestic level than at an EU level for cross-border redirection.

The options developed for ANP (Switching tool 3) would considerably simplify the switching process for consumers and creditors and debtors, however their implementation would be very complex. All these tools would involve the same complexity as options 1.2 and 2.1 as they would involve the set-up of an EU platform and of a Central Registry to support the switching and routing processes. The EU-wide portability of the existing IBAN (option 3.1) would allow consumers to keep their account number whenever they switch and avoid that their creditors and debtors have to be notified of any new account number. The implementation of this option is much simpler than the portable identifier/alias on top of the IBAN (option 3.2) and the new portable account number throughout the payment chain (option 3.3), as it does not involve any transition period or adaptation to a new identifier. Moreover, the security risks associated with using an alias (option 3.2) put at stake the robustness of this option, as it would not have the necessary security checks embedded. The fact that an existing alias would be linked to a specific company or provider (e.g. if it is an email address) would also defeat one of the main purposes of portability, as it would lock consumers to that provider.

The **effectiveness analysis** is based on the objective tree presented in Annex F. It is important to emphasise that increasing switching is not a direct objective, the study merely considered tools that can facilitate it. Indeed, the specific objective identified as part of this study is to ensure that "Opportunities for switching and opening of accounts are fully leveraged (cross-border and within Member States)" and the operational objectives aim to remove existing barriers or to address current issues linked to switching and cross-border opening of accounts. Although the study team expects that these tools would trigger a slight increase in the switching rates, such increase is not the aim in itself.

The assessment of the effectiveness is based on the potential of the options to reach the identified operational objectives, as they tackle the associated drivers (see Annex F). The options mainly address three of the identified operational objectives (i.e. 1. "an effective and simple system facilitating crossborder switching of accounts throughout the EU", 2. "legal certainty for economic operators, banks and consumers with regards to cross-border opening and switching of accounts, including remotely", and 3. "mitigated risk of failed payments during and after the switching process"). All options except for the ANP with a portable identifier/alias on top of the IBAN (option 3.2) are likely to be more effective than the current situation in reaching the three operational objectives. Across all switching tools, the **cross-border switching service with centralised governance** (option 1.2), the **automated redirection via account information embedded in error messages** (option 2.2) and the **EU-wide portability of existing IBAN** (option 3.1) would hold the **highest potential to reach these objectives**. A crossborder switching service with centralised governance (option 1.2) would set-up a centralised switching service and simplify and streamline switching across the EU. An automated redirection via account information embedded in error messages (option 2.2) would bring more assurance to consumers as it would allow that any payments that would be addressed to their old closed account would be redirected to their new account, via the new IBAN communicated in the error messages. An EU-wide portability of existing IBAN (option 3.1) would go a step further by allowing consumers to keep their current IBAN when they switch. Although this would considerably simplify switching, it would also bring additional complexity mainly for PSPs. Furthermore, the implementation of the automated redirection tools would be considered to have roughly the same potential effectiveness whether they are implemented at domestic or EU level. It should be noted that the assessment considers only the effectiveness of the redirection service in itself and any of the options under this tool would need to be implemented building on the existing national switching services or on a new cross-border switching service.

To ensure that the options achieve the intended impacts pursued by this study, some extrinsic key requirements are important to keep in mind. These would also tackle the other operational objectives identified in this study, which were not considered as part of the effectiveness assessment (i.e. 4. "consumers are aware and well-informed of the possibility and advantages of switching and opening accounts cross border" and 5. "the possibility of cross-border opening is not limited by specific requirements such as physical presence and due diligence for AML"). First, an **effective communication campaign** would need to communicate the right to use the implemented switching tools, their advantages and their different features. Second, clear procedures should be put in place to ensure that consumers have a **recourse** in case they experience issues when using the different tools. Third, measures should be deployed to ensure that prohibition of **IBAN discrimination** is actively enforced throughout the EU. Fourth, a new right of **access to transactions history** linked to the previous account would remove an obstacle to switching for consumers while making the process more transparent.

From an **efficiency** point of view, all policy options considered in this study are expected to bring benefits. However, the estimated costs required to reach these benefits are significant and recurrent costs are greater than the recurrent benefits not mentioning the substantial one-off costs, which indicates that **none of the options designed in this study are viable from a costs and benefits standpoint**. Moreover, the study also assessed the sensitivity of the costs and benefits to the switching rate estimates and concluded that only options under Switching Tool 1, and options 3.1 and 3.3 could have benefits that outweigh the costs, but it would require switching rates several times higher than the best estimates to achieve this and break even.

The efficiency analysis also demonstrated that the investments and costs for the domestic and EU-level implementation of automated redirection of payments would be similar in both cases, however the EUlevel

implementation would bring more benefits as it would facilitate cross-border switching and reach a broader consumer base. Therefore, although they involve more complexity in view of the feasibility analysis, the EU-level options are more cost-effective than the domestic ones.

Furthermore, this study considered separately the costs and benefits of the different options as if they would include micro-enterprises and self-employed in their scope. However, as mentioned above, the feedback received from this group of consumers revealed that improving switching domestically or crossborder is not a priority for them as the interest for these tools would be rare and limited to a very small share of this group who would need to be relocated.

It should also be highlighted that switching tools could be extendible to other banking products. For instance, in Belgium the switching service also applies to savings accounts. These services could potentially have a broader impact on the identified general objectives and would also involve other costs and benefits, but the scope of this study was limited to switching payment accounts.

It should also be noted that not all the benefits could be quantified as part of the efficiency assessment. A number of **qualitative advantages**, such as benefits stemming from an increased competition in the EU payment accounts market should not be overlooked even if they cannot be translated into monetary benefits. For instance, higher competitive pressure across the EU would likely and ultimately incentivise PSPs to offer better quality services or lower prices to consumers in order to acquire/retain them.

In view of the assessment, it appears that the **cross-border switching service with a centralised governance** (option 1.2), the **automated redirection via IBAN embedded into error messages** (option 2.2) and the **EU-wide portability of existing IBANs** (option 3.1) would hold the highest potential in view of their feasibility and effectiveness. However none of the options assessed in this study would be viable from an efficiency standpoint. Although the tools for ANP would raise the level of ambition to facilitate switching in the EU, they come with high levels of complexity and high implementation and running costs compared to their expected benefits. Finally, the assessment also showed that some of the options would probably not be viable as they presented important shortcomings, which is the case of the automated redirection via a Central clearing house (option 2.3) and the portable identifier/alias on top of the IBANs (option 3.2).

To conclude, it should be kept in mind that this study has its limitations. As it was a forward-looking exercise assessing tools that do not exist today or at least do not exist at an EU-wide scale, information and data on the different options were scarce and the use of several assumptions and estimations was necessary. Although other aspects may be factored in the assessment of the different tools, this study provides a basis for assessing possible options that could be considered in order to move forward with facilitating cross-border switching of accounts in the EU.

Annexes

Annex A | Abbreviations

Table 17 – Abbreviations

Abbreviation	Meaning
AML	Anti-money laundering
AML-CTF	Anti-money laundering and combatting the financing of terrorism
ANP	Account number portability
DG FISMA	Directorate-General for Financial Stability, Financial Services and Capital Markets Union
DG JUST	Directorate-General for Justice and Consumers
ECB	European Central Bank
EEA	European Economic Area
eID	Electronic Identification
EPC	European Payment Council
EU	European Union
GBG	Global Identity Data Intelligence for Business
GOFA	Governance, Operations, Financing, Architecture
IBAN	International Bank Account Number
IT	Information Technology
KYC	Know Your Customer
PAD	Payment Accounts Directive

PSP	Payment Service Provider
SCT	SEPA Credit Transfer
SDD	SEPA Direct Debit
SEPA	Single Euro Payment Area
SCT Inst	SEPA Instant Credit Transfer
TARGET2	Trans-European Automated Real-time Gross Settlement Express Transfer System
TFEU	Treaty on the functioning of the European Union
TIPS	Target Instant Payment Settlement

Table 18 - EU Member States abbreviations

European Union Member States					
Belgium	BE	Greece	EL	Portugal	PT
Bulgaria	BG	Spain	ES	Romania	RO
Czechia	CZ	France	FR	Slovenia	SI
Denmark	DK	Croatia	HR	Slovakia	SK
Germany	DE	Italy	IT	Finland	FI
Estonia	EE	Cyprus	CY	Sweden	SE
Ireland	IE	Latvia	LV		

Annex B | Consulted stakeholders

This annex outlines the stakeholder groups consulted as part of the surveys, interviews and validated workshop.

Table 19 - Consulted stakeholders

Stakeholder group	**Strategic interviews and working sessions**	**First online survey**	**Supply and demand interviews**	**Case study interviews**	**Second online survey**	**Follow-up interviews**	**Validation workshop**	**Total**
EU institutions (DG FISMA, DG JUST, DG TAXUD, DG EMPL)	4							**2**
Individual consumers		314						**314**
Individual PSPs			10	2		1	1	**12**
Associations representing consumers *National level* *EU level*			 6 1	 2 0	 3 1	 1 2	 1 2	 **13** **6**
Associations representing PSPs *National level* *EU level*			 1 3	 8	 7 3	 6 3	 8 4	 **30** **13**
Associations representing economic operators *National level* *EU level*					 2		 1 1	 **3** **1**
Associations representing microenterprises, self-employed and SMEs *National level* *EU level*					 1	 1	 1	 **3**

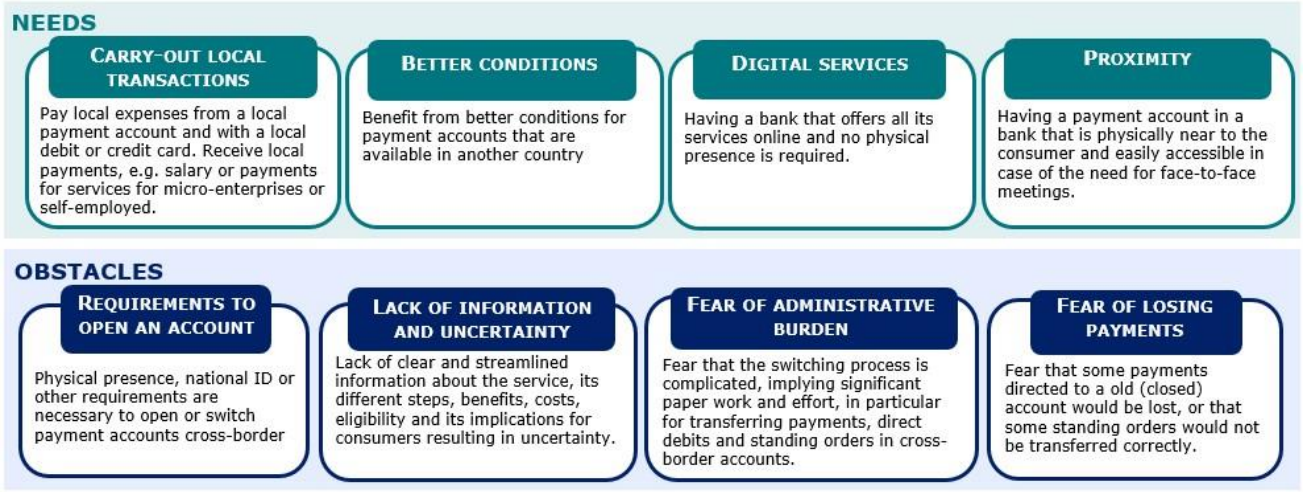
Relevant institutions for case studies (national practices) *National level* *EU level*			2	3			2	**5** **2**
National Competent authorities				2	6			**8**

Annex C | Use cases for crossborder opening of payment accounts

Introduction

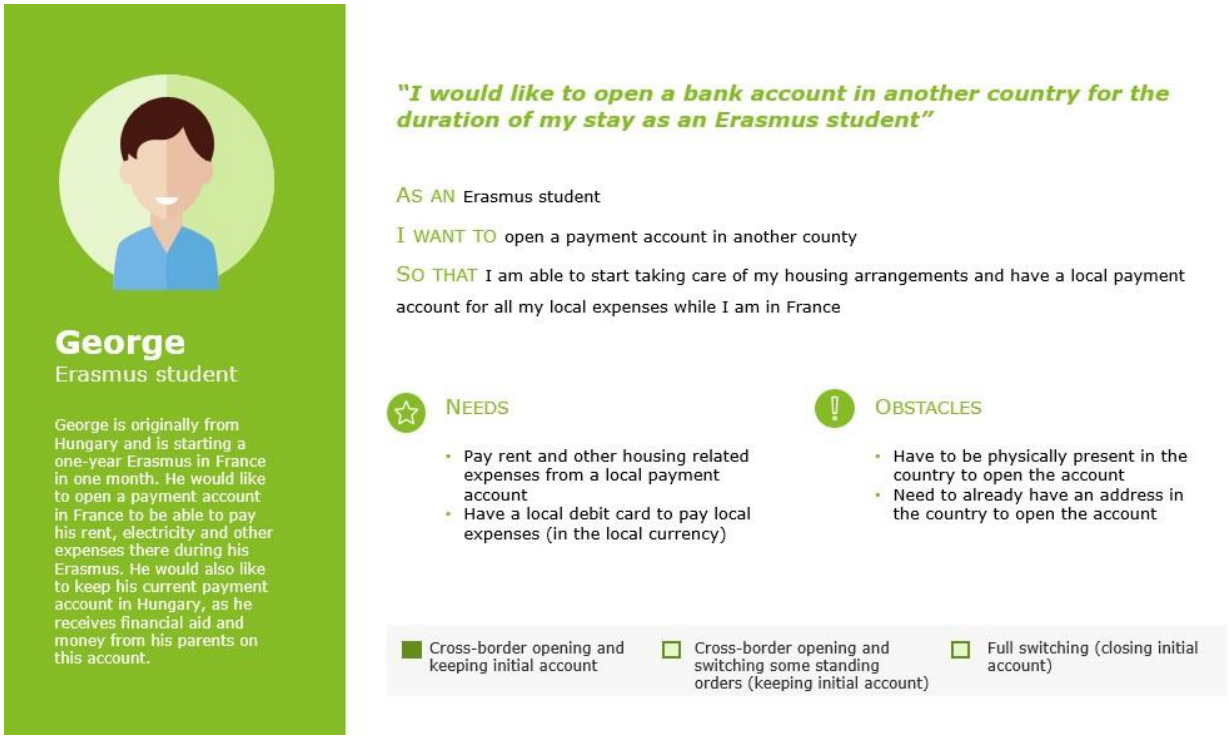
The *design thinking* is a methodology, which assesses the needs of the stakeholders involved in a given policy by adopting the perspective and views of "a persona". A persona is a realistic but fictional user, representing one segment or user group of a targeted audience. This exercise will allow us to establish different use cases to better understand the demand for cross-border opening and switching of payment accounts for personal accounts, self-employed and micro-enterprises.

This exercise is an iterative approach. Fictive use cases have been identified with hypothetical needs and obstacles, based on preliminary desk research and brainstorming with the European Commission. This first sketch consists of a starting point to design the next data collection tools (survey and interviews), and the findings of these activities will feed the personas, becoming more accurate and realistic. Below are outlined the main needs and obstacles identified at this stage.



Source: Deloitte

Use case #1



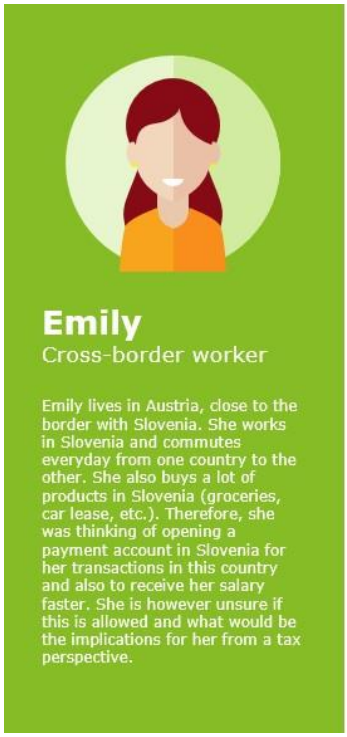
Source: Deloitte

Source: Deloitte

Use case #2

Source: Deloitte

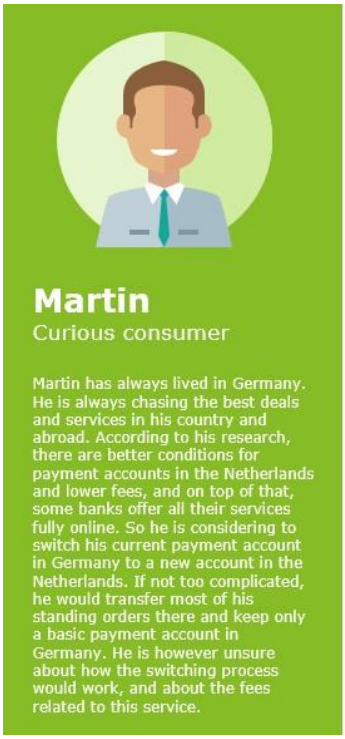
Use case #3



Source: Deloitte

Source: Deloitte

Use case #4

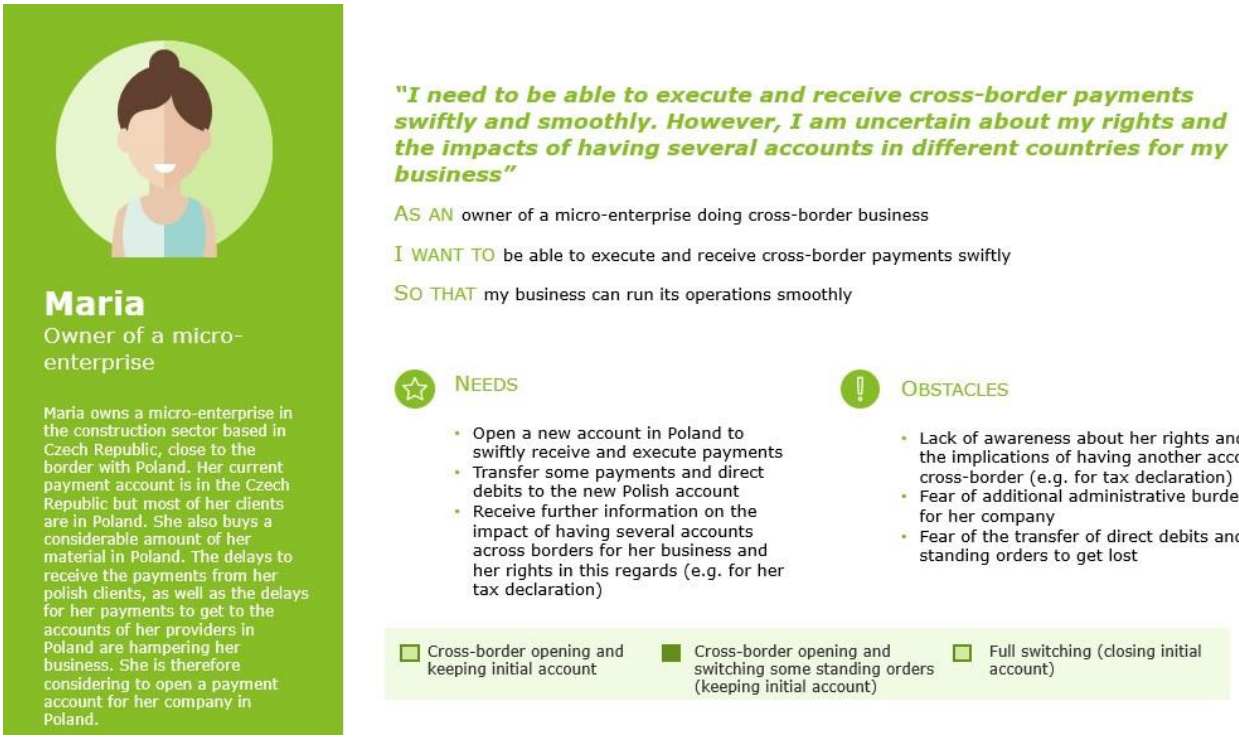


Use case #5

Source: Deloitte

Source: Deloitte

Use case #6



Source: Deloitte

Annex D | Results of the consumer survey on crossborder opening and switching of bank accounts

1. Introduction

The survey was available from 8 June to 19 July 2020 and received 314 replies in total. The survey assessed the demand for cross-border opening and switching for two groups of consumers, i.e. private consumers and micro-enterprises and self-employed. For these two groups, the survey included questions on different aspects, i.e. identification questions, questions on cross-border opening, questions on switching in the same country and questions on switching cross-border.

2. General questions

This first set of questions allows to categorise the respondents according to different characteristics such as whether they are from an EU or non-EU country, their age, their employment status, whether they have already lived in another EU Member State and their general use of payments accounts.

Summary of the results

Profiles of the respondents

With close to 90 percent, a large majority of the respondents comes from a country of origin that is a Member State of the EU. About half of the respondents live in their country of origin and the other half lives in another EU country. 78 percent are living or have already lived in another or several EU member states than their country of origin throughout their lifetime.

The sample is very open to move or conduct business cross-border within the EU. Over 84 percent indicate to carry out transactions, do business or travel to other EU countries on a regular basis.

The average respondent is young compared to the overall EU population. The 26 to 35-year-old age group is by far the most present in our sample, with close to 60 percent. Less than 10 percent of the respondents are 46 years old or older.

Employment status

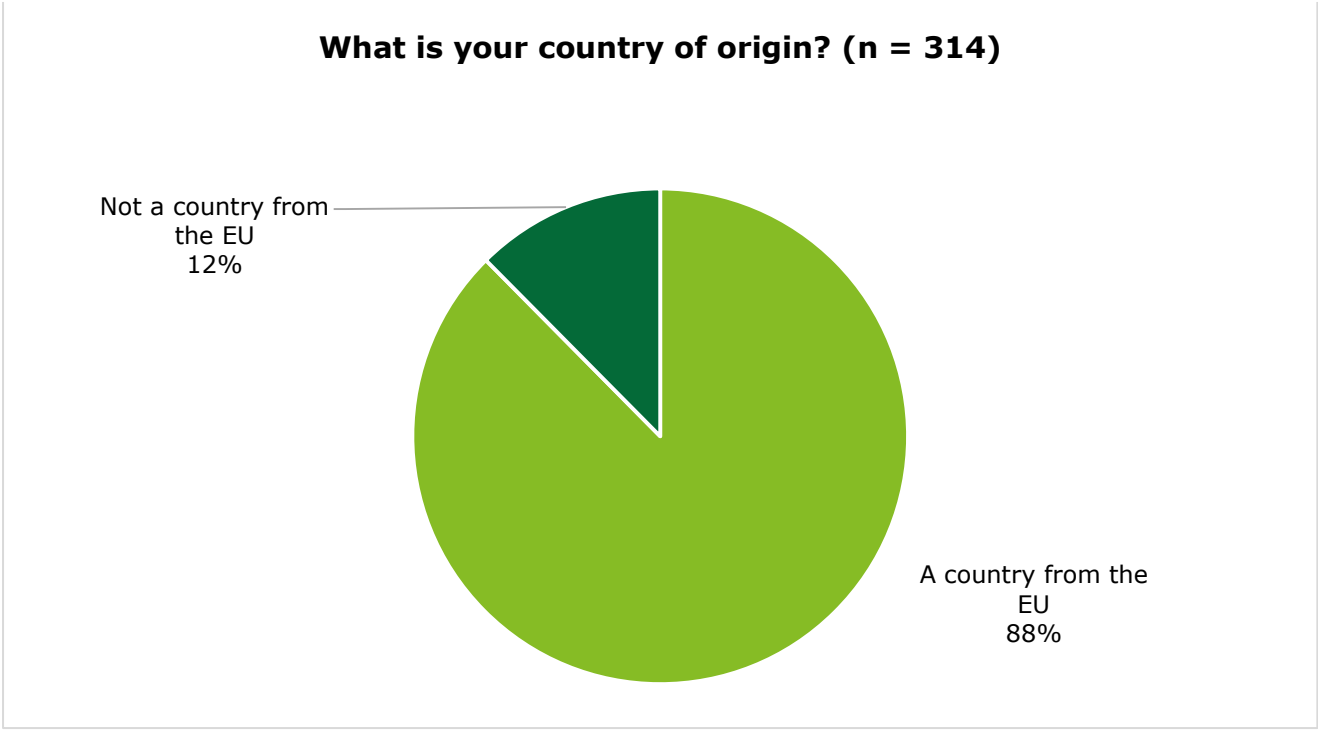
Regarding respondents' employment status, 77 percent indicated to be employees, followed by students with 10 percent. 25 participants (8 percent) are self-employed or owners of a company and 17 of these respondents describe themselves as owners of a micro-enterprise.

Multi-banking and online banking

It seems to be common across the respondents to have multiple bank accounts. 31 percent replied to have several bank accounts in their country of origin and 29 percent replied to have more than one account in their country of residence. Among the participants who live in another member state than their country of origin, more than 80 percent kept at least one account in their country of origin. Moreover, 56 percent have a bank account in an online bank.

Results in detail

Country of origin

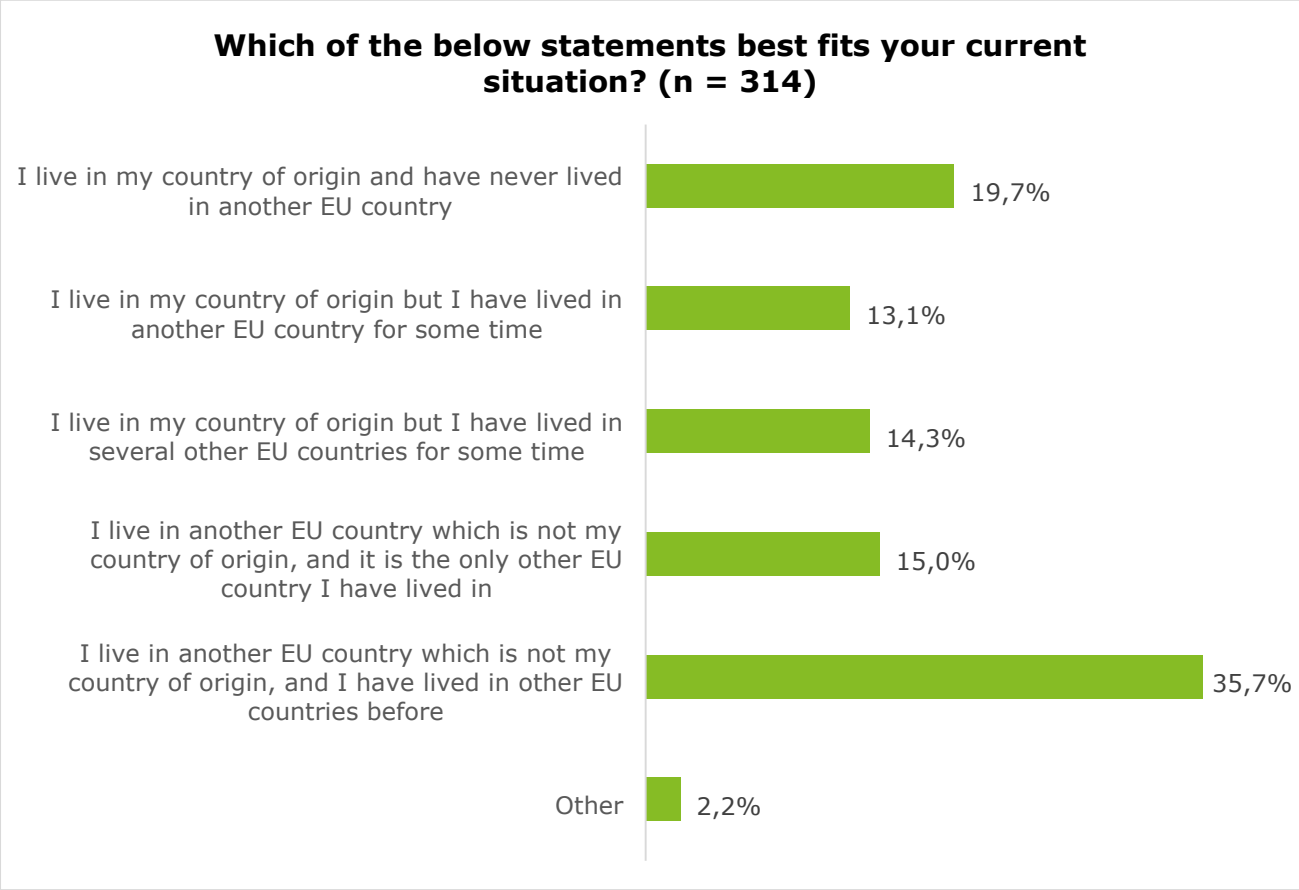


Country of residence

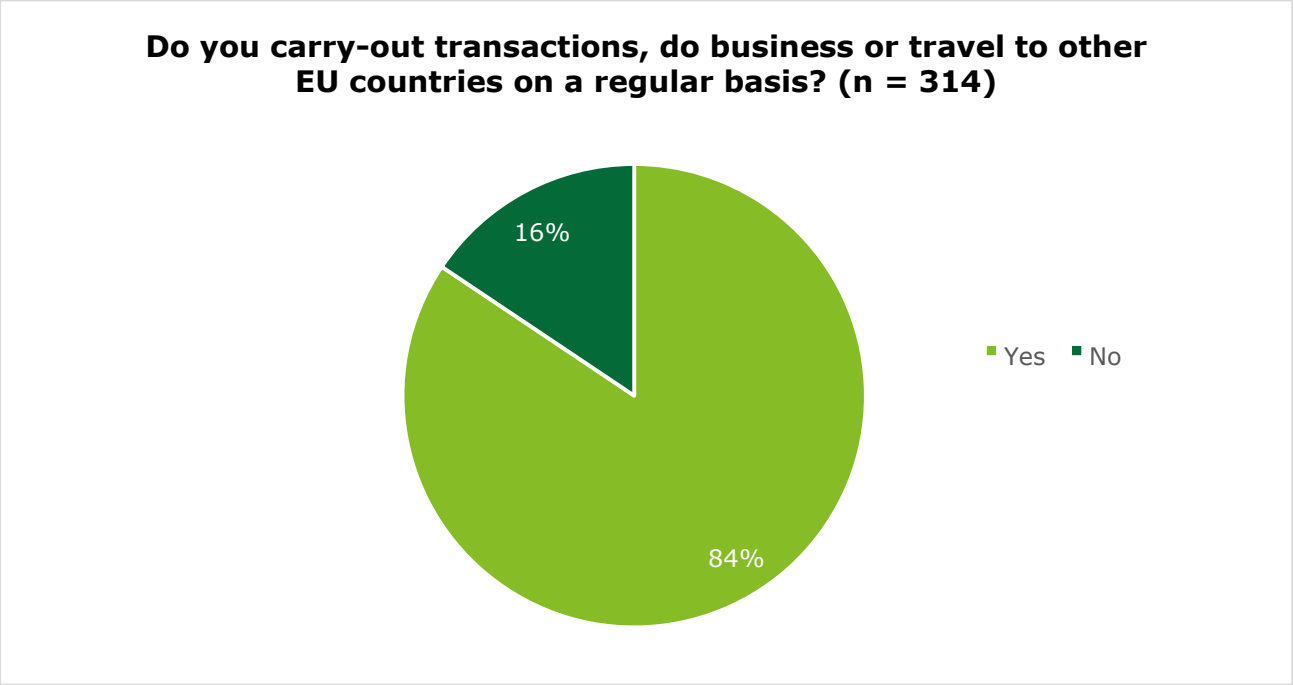
Which of the below statements best fit your situation	Amount	Percentage of total
I live in my country of origin and have never lived in another EU country	62	19,7
I live in my country of origin but I have lived in another EU country for some time	41	13,1
I live in my country of origin but I have lived in several other EU countries for some time	45	14,3
I live in another EU country which is not my country of origin, and it is the only other EU country I have lived in	47	15

I live in another EU country which is not my country of origin, and I have lived in other EU countries before	112	35,7
Other*	7	2
Total	**314**	**100**

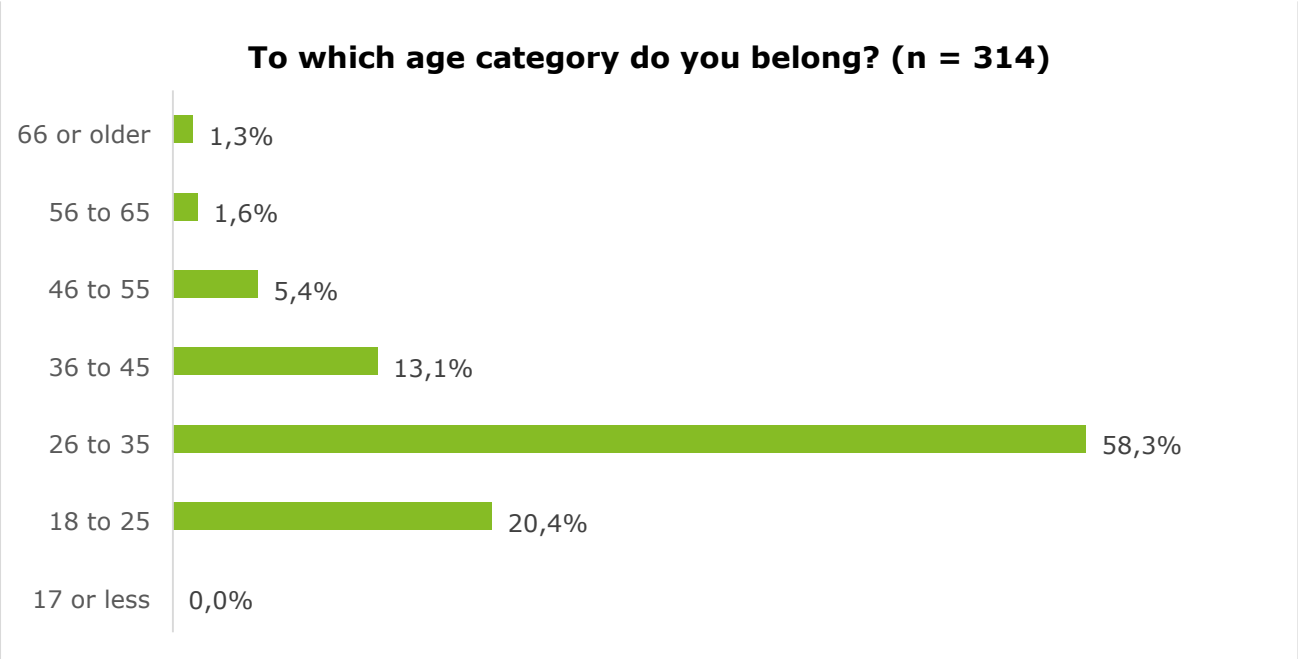
*Of the 6 people selecting "Other", 5 live in a non-EU country (2 in the UK, 1 in Switzerland, 1 in the US and 1 not specified). One is a US citizen living in Belgium and one did not provide information.



Transactions in other EU countries on a regular basis



Respondents' age

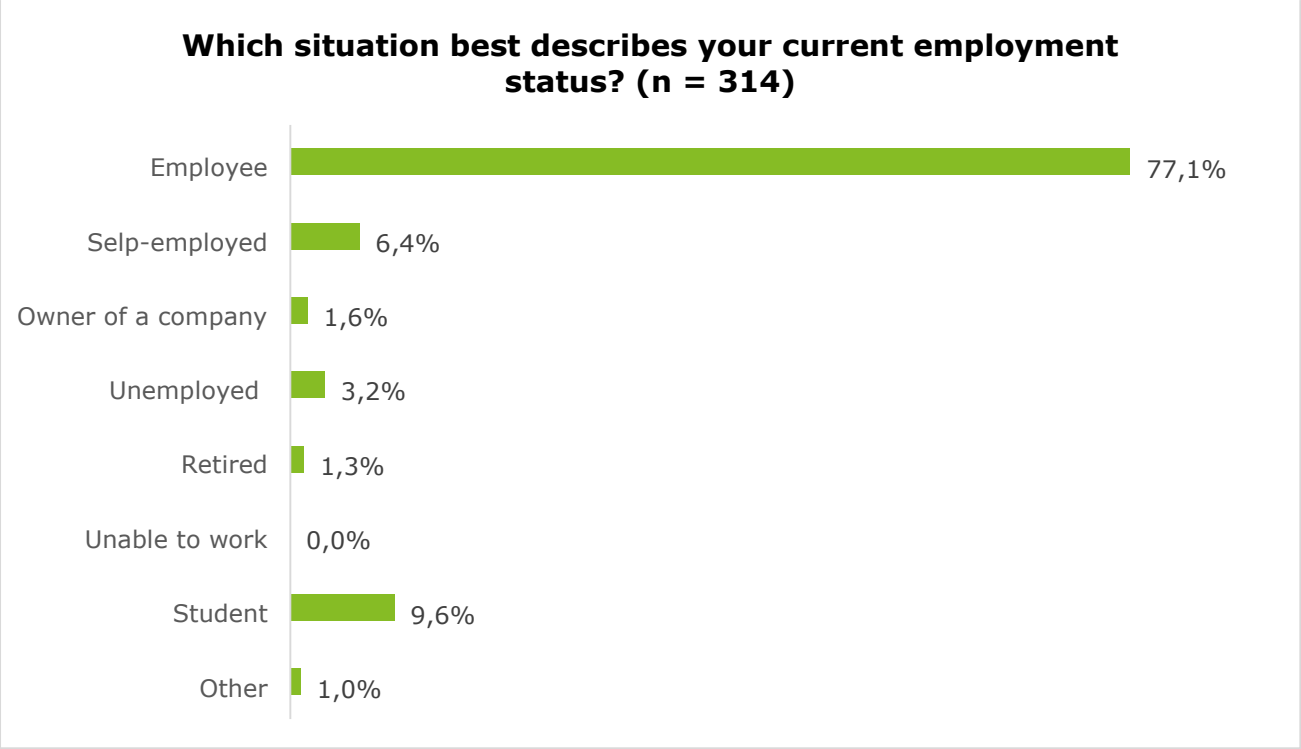


Respondents' employment status

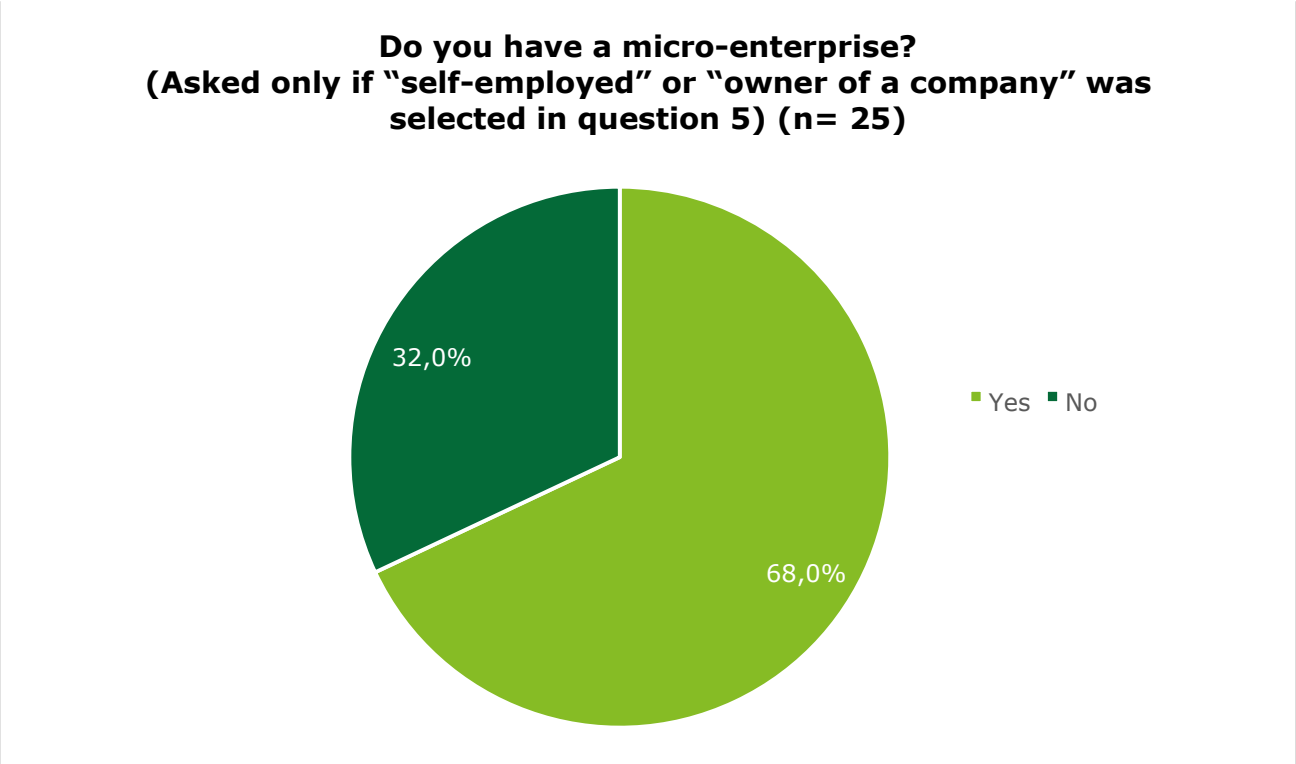
Which situation best describes your current employment status?	Amount	Percentage of total

Employee	242	77,1
Self-employed	20	6,4
Owner of a company	5	1,6
Unemployed	10	3,2
Retired	4	1,3
Unable to work	0	0
Student	30	9,6
Other	3	1
Total	**314**	**100**

*Of the three people selecting "Other", one is a volunteer NGO manager, one is a PhD researcher and one submitted the answer "independent". It can be assumed that this last person falls within the category of self-employed.

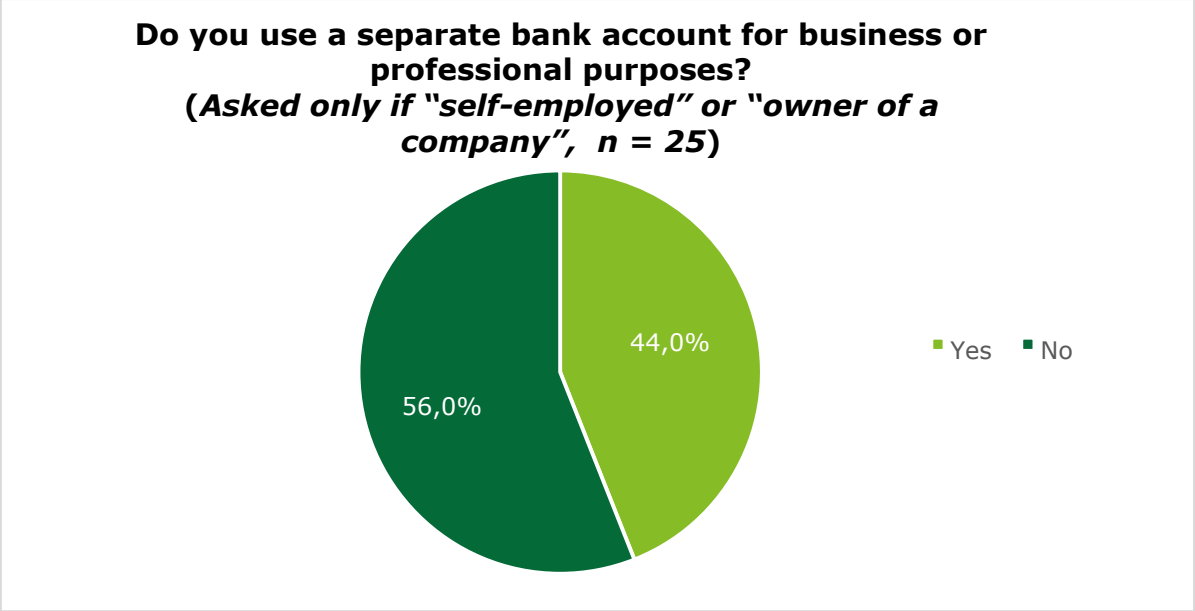


Do you have a micro-enterprise? (*Asked only if "selfemployed" or "owner of a company" was selected in question 5*)	**Amount**	**Percentage of total**
Yes	17	68
No	8	32
Total	**25**	**100**



Usage of bank account for self-employed owners of micro-enterprises

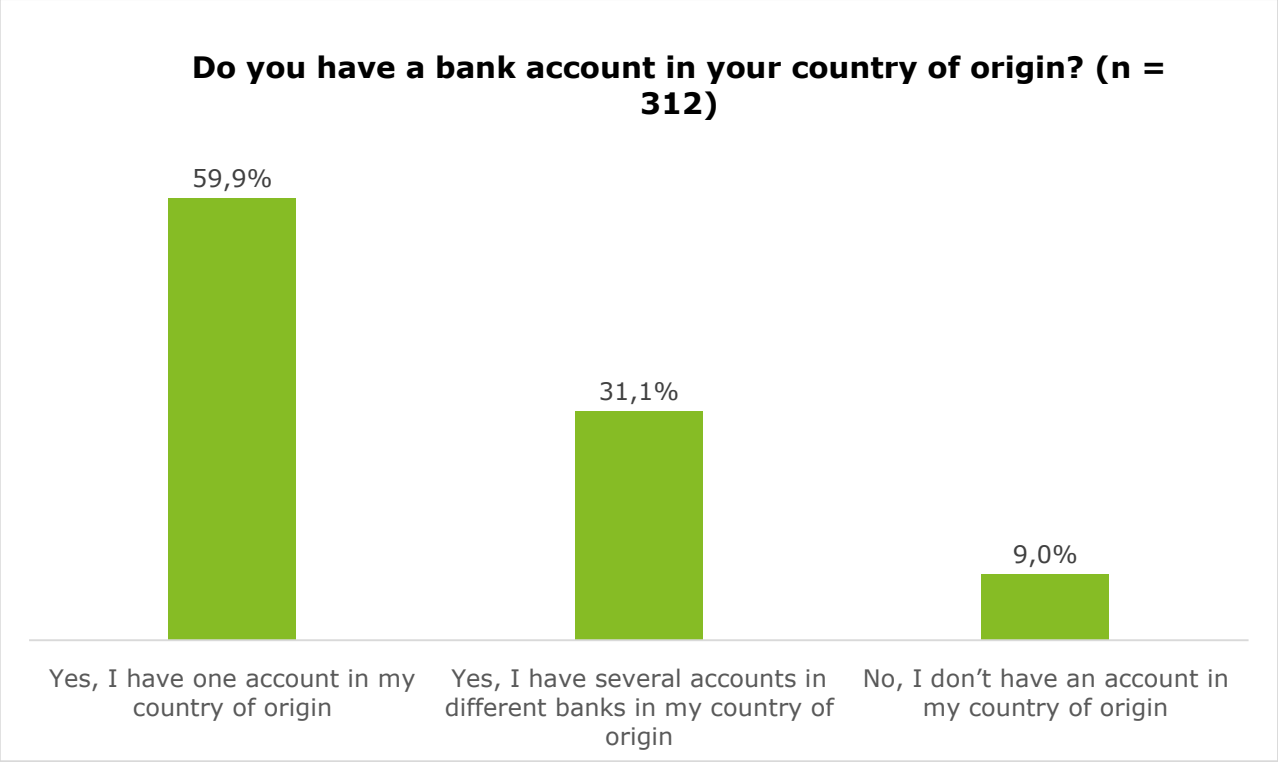
Do you use a separate bank account for business or professional purposes? (*Asked only if "selfemployed" or "owner of a company" was selected in question 5*)	**Amount**	**Percentage of total**
Yes	11	44
No	14	56
Total	**25**	**100**



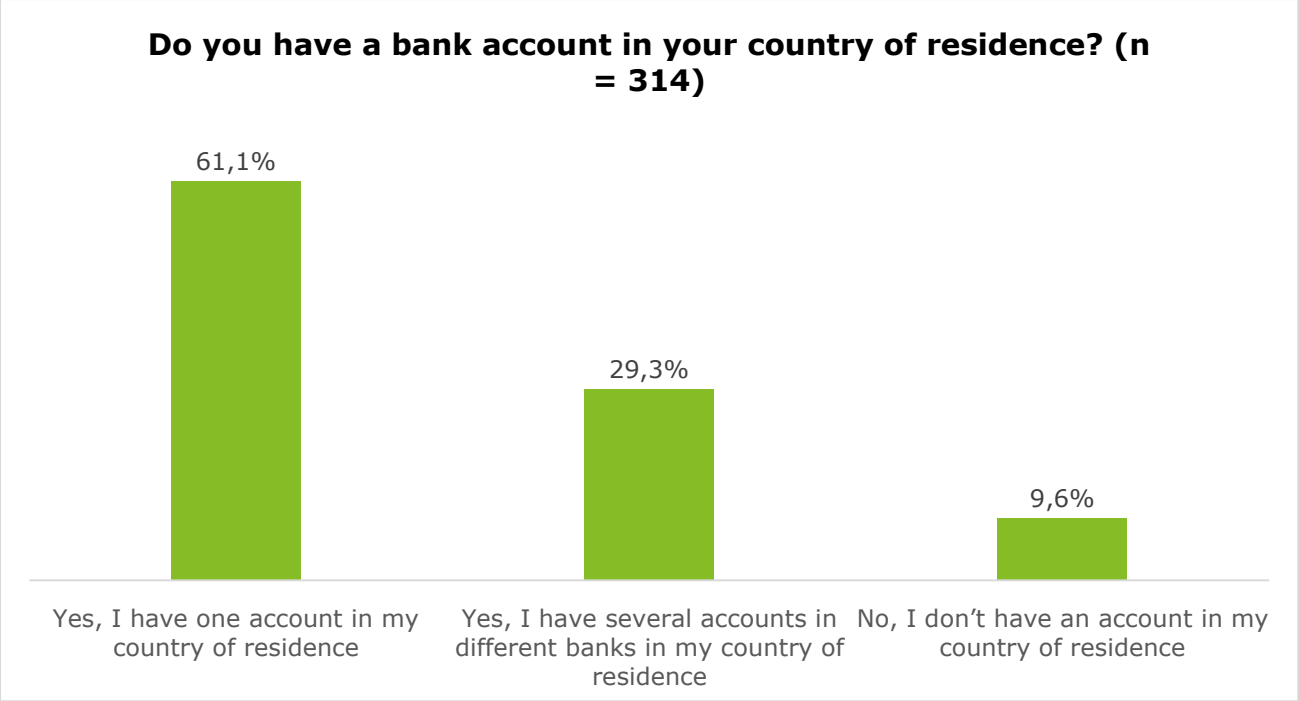
Banking behaviours and multi-banking

Do you have a bank account in your country of origin?	**Amount**	**Percentage of total***
Yes, I have one account in my country of origin	187	60
Yes, I have several accounts in different banks in my country of origin	97	31,1
No, I don't have an account in my country of origin	28	9
Total	**312**	**100**

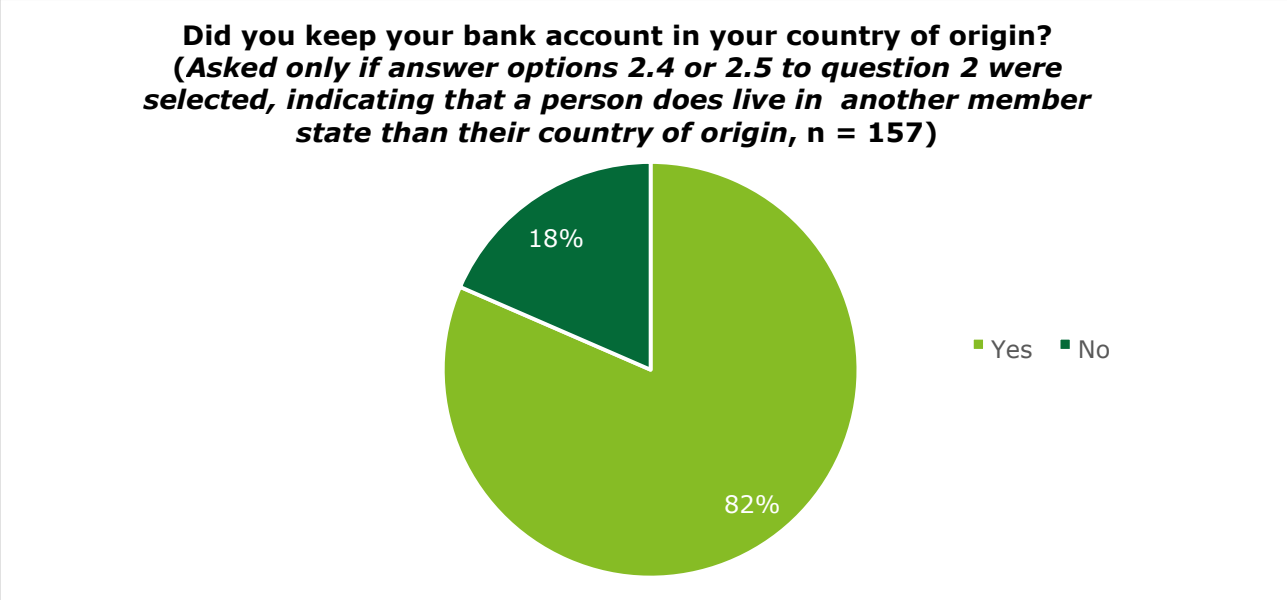
*Two respondents did not reply to this question, so the total of answers (312) is used for the calculation



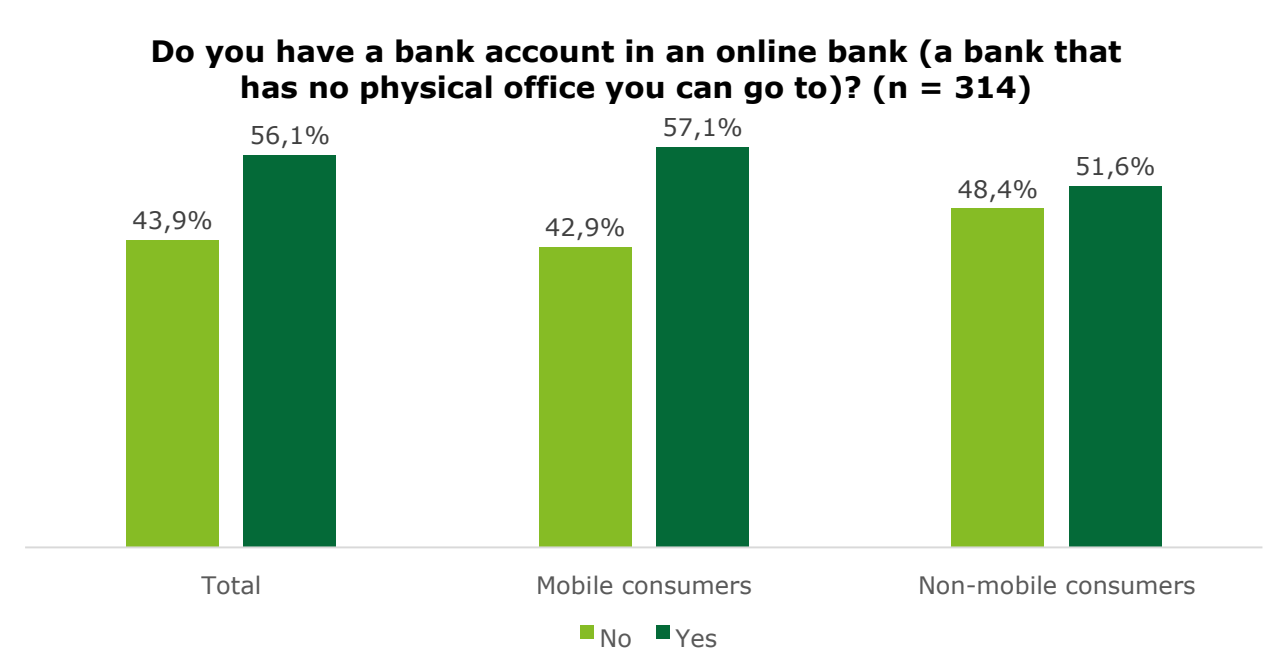
Do you have a bank account in your country of residence?	Amount	Percentage of total
Yes, I have one account in my country of residence	192	61,1
Yes, I have several accounts in different banks in my country of residence	92	29,3
No, I don't have an account in my country of residence	30	9,6
Total	**314**	**100**



Did you keep your bank account in your country of origin? (*Asked only if answer options 2.4 or 2.5 to question 2 were selected, indicating that a person does live in another member state than their country of origin*)	**Amount**	**Percentage of total**
Yes	128	81,5
No	29	18,5
Total	**157**	**100**



Do you have a bank account in an online bank (a bank that has no physical office you can go to)?	Amount	Percentage of total
Yes	176	56,1
No	138	43,9
Total	**314**	**100**



3. Switching and cross-border account opening of personal accounts

Cross-border opening of bank accounts

Summary of the results

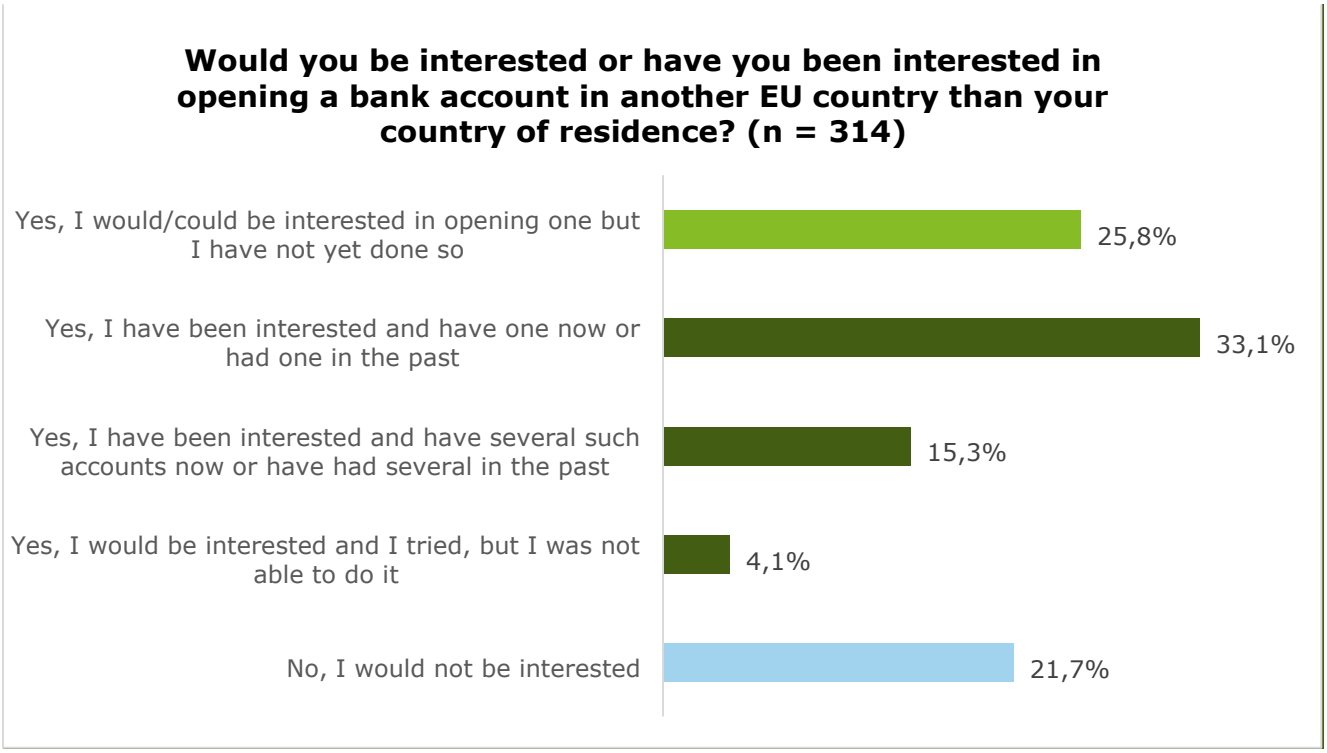
A clear majority of respondents (78,3%) indicated at least an interest in opening a bank account in another EU member state than their country of residence. Provided with a list of motivations for opening a bank account across borders, "lower fees" and "having a local debit or credit card" are the answer options that were chosen by the largest share of respondents (49,6% and 43,1% of those showing interest respectively). About a quarter of participants indicated that they could be interested but have not yet done so. The main reasons for their inaction so far are concerns regarding the implications for their tax declaration (48,1%), a lack of need (43,2%) and concerns about the time and energy needed for the switch (40,7%). A small fraction of the people who showed interest to cross-border switching indicated that they tried but were not able to do so (5,3% of all respondents interested in cross-border opening of bank accounts). When asked about the challenges they faced and that hindered them from switching, more than three out of four of this sub-group stated that not being a resident from the country of the new bank account was an issue.

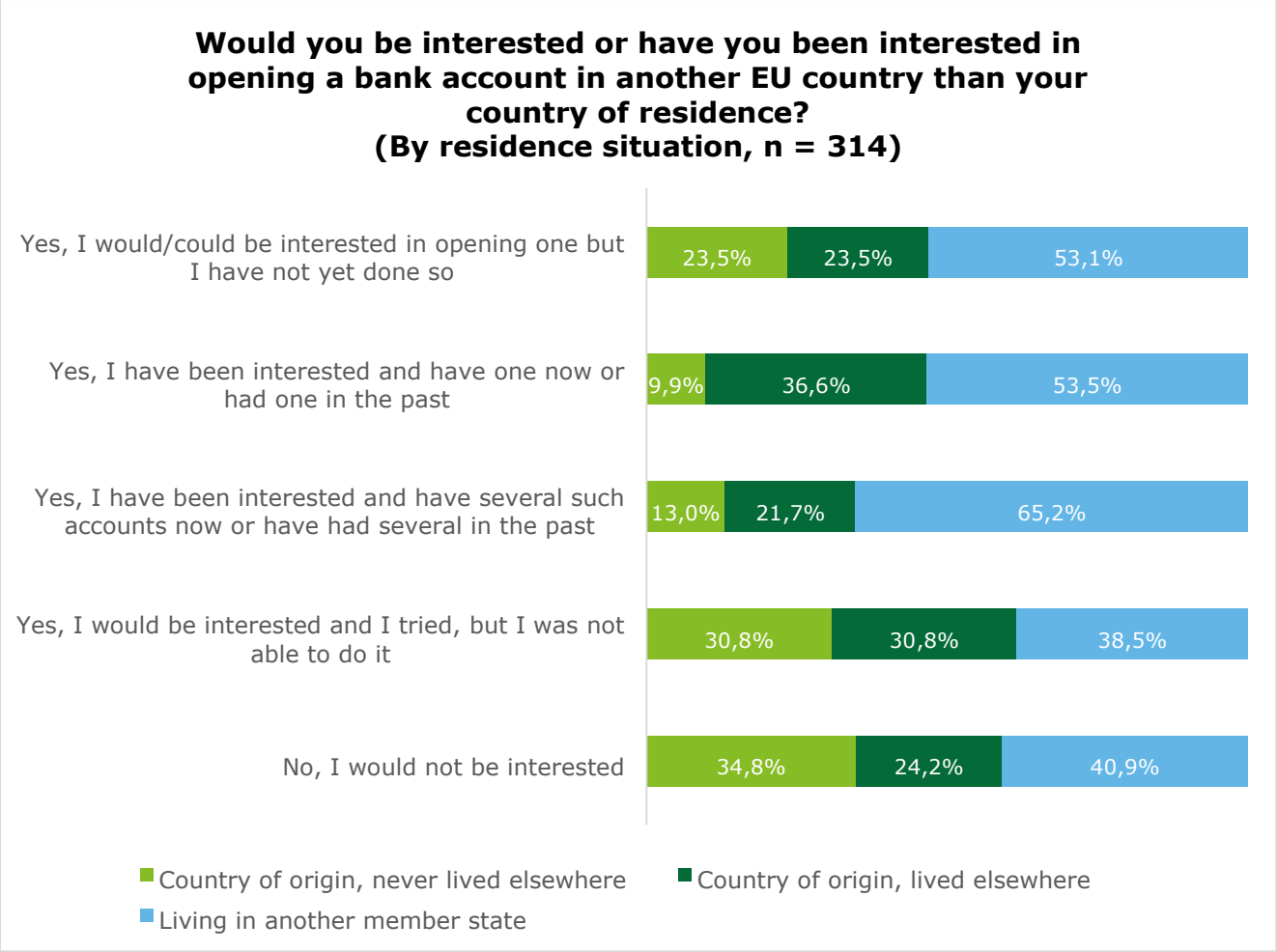
Results in detail

Interest to open an account cross-border

Would you be interested or have you been interested in opening a bank account in another EU country than your country of residence? (By residence situation)	**Country of origin, never lived elsewhere (2.1)**	**Country of origin, lived elsewhere (2.2/2.3)**	**Living in another member state (2.4/2.5)**	**Total**	**Percentage of total**
12.1) Yes, I would/could be interested in opening one but I have not yet done so	19	19	43	81	25,8
12.2) Yes, I have been interested and have one now or had one in the past	10	37	54	104	33,1
12.3) Yes, I have been interested and have several such accounts now or have had several in the past	6	10	30	48	15,3
12.4) Yes, I would be interested and I tried, but I was not able to do it	4	4	5	13	4,1
12.5) No, I would not be interested	23	16	27	68	21,7

Total	**62**	**86**	**159**	**314**	**100**





When breaking down the answers to the question about the interest in opening up a bank account cross border by the groups of origin as stated in the answers to question 2, differences can be detected. Notably, the group of people who live in their country of origin and have never lived elsewhere are the only subgroup for which the answer option "No, I would not be interested" is the one with the highest share (23 out of 62, or 37,1%).

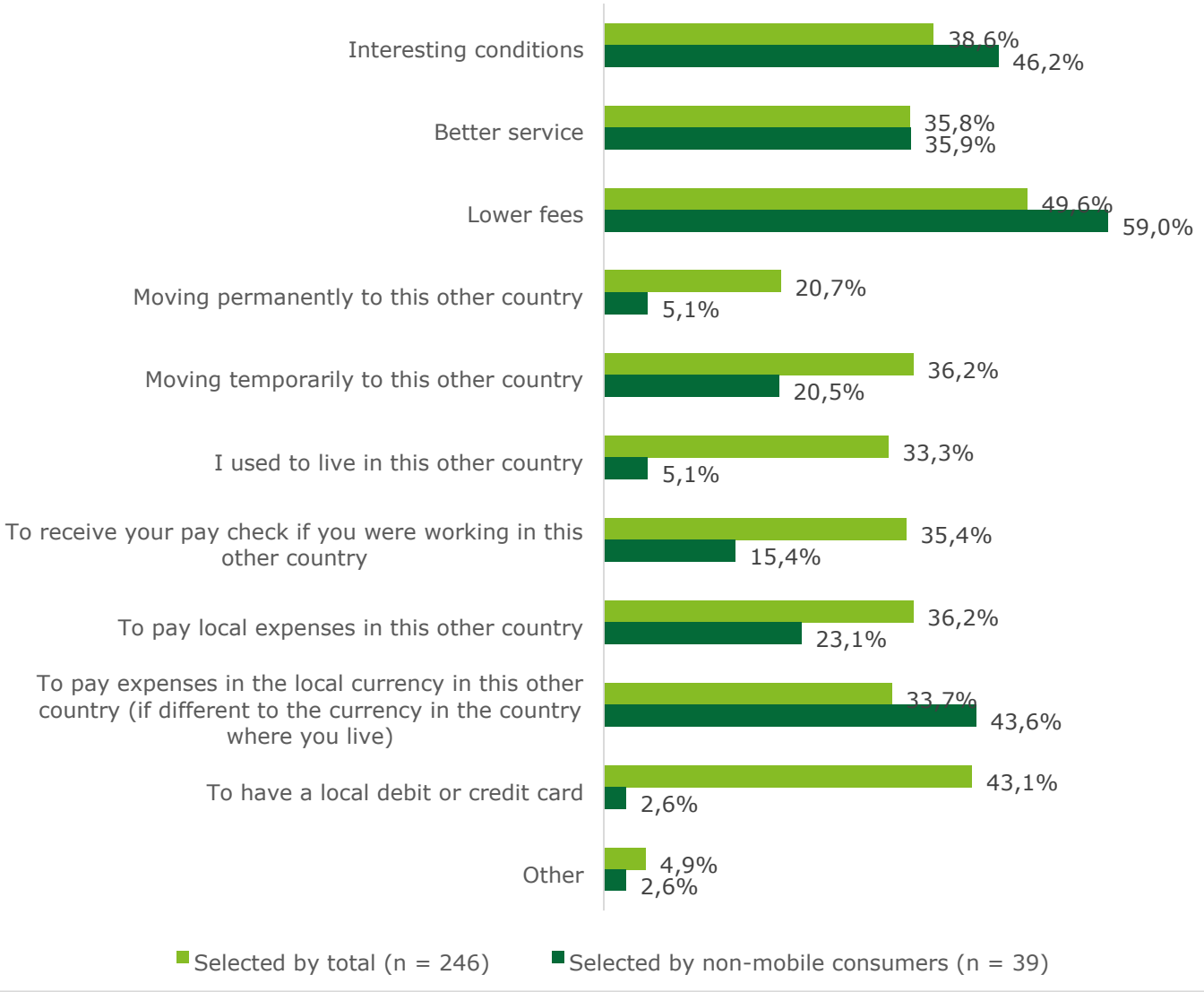
This percentage is lower for the groups of people who live in their country of origin but have lived elsewhere before (18,6%) and for the respondents who live in another member state than their country of origin (16,9%). This suggests that physical relocation is the main driver for the interest in opening an account in another member state. However, it is noteworthy that even for the group of respondents who have always lived in their country of origin, answer option 12.1 ("Yes, I would/could be interested in opening one but I have not yet done so") is the second most frequent (30,6%). This can indicate that there is also an appetite for opening a bank account in another member state even by non-mobile consumers, in a remote way.

Reasons to be interested in opening an account cross-border

Which of the following reasons make it interesting to have an account in another EU country that is not your	**Total (n = 246)**	**Percentage of total**	**Non-mobile consumers (= 39)**	**Percentage of non-mobile consumers**

country of residence? (*Asked only if answer options 12.1, 12.2, 12.3 or 12.4 were selected, n = 246, multiple answers possible)*				
14.1) Interesting conditions	95	38,6	18	46,2
14.2) Better service	88	35,8	14	35,9
14.3) Lower fees	122	49,6	23	59
14.4) Moving permanently to this other country	51	20,7	2	5,1
14.5) Moving temporarily to this other country	89	36,2	8	20,5
14.6) I used to live in this other country	82	33,3	2	5,1
14.7) To receive your paycheck if you were working in this other country	87	35,4	6	15,4
14.8) To pay local expenses in this other country	89	36,2	9	23,1
14.9) To pay expenses in the local currency in this other country (if different to the currency in the country where you live)	83	33,7	9	43,6
14.10 To have a local debit or credit card	106	43,1	17	2,6
14.11 Other	12	4,9	1	2,6

Which of the following reasons make it interesting to have an account in another EU country that is not your country of residence? (*Asked only if answer options 12.1, 12.2, 12.3 or 12.4 were selected*, multiple answers possible, n = 246)



When breaking down again the respondents into sub-groups based on their residence situation and looking at the non-mobile consumers, it becomes clear that for the respondents who have always lived in their country of origin, the main drivers for their interest in opening a bank account in other EU countries are more favourable conditions such as "lower fees" (59%), "better service" (35,9%) and "interesting conditions" in general(46,2%). The answer options that refer to mobility or replacement to another member state have much less relevance compared to the overall sample.

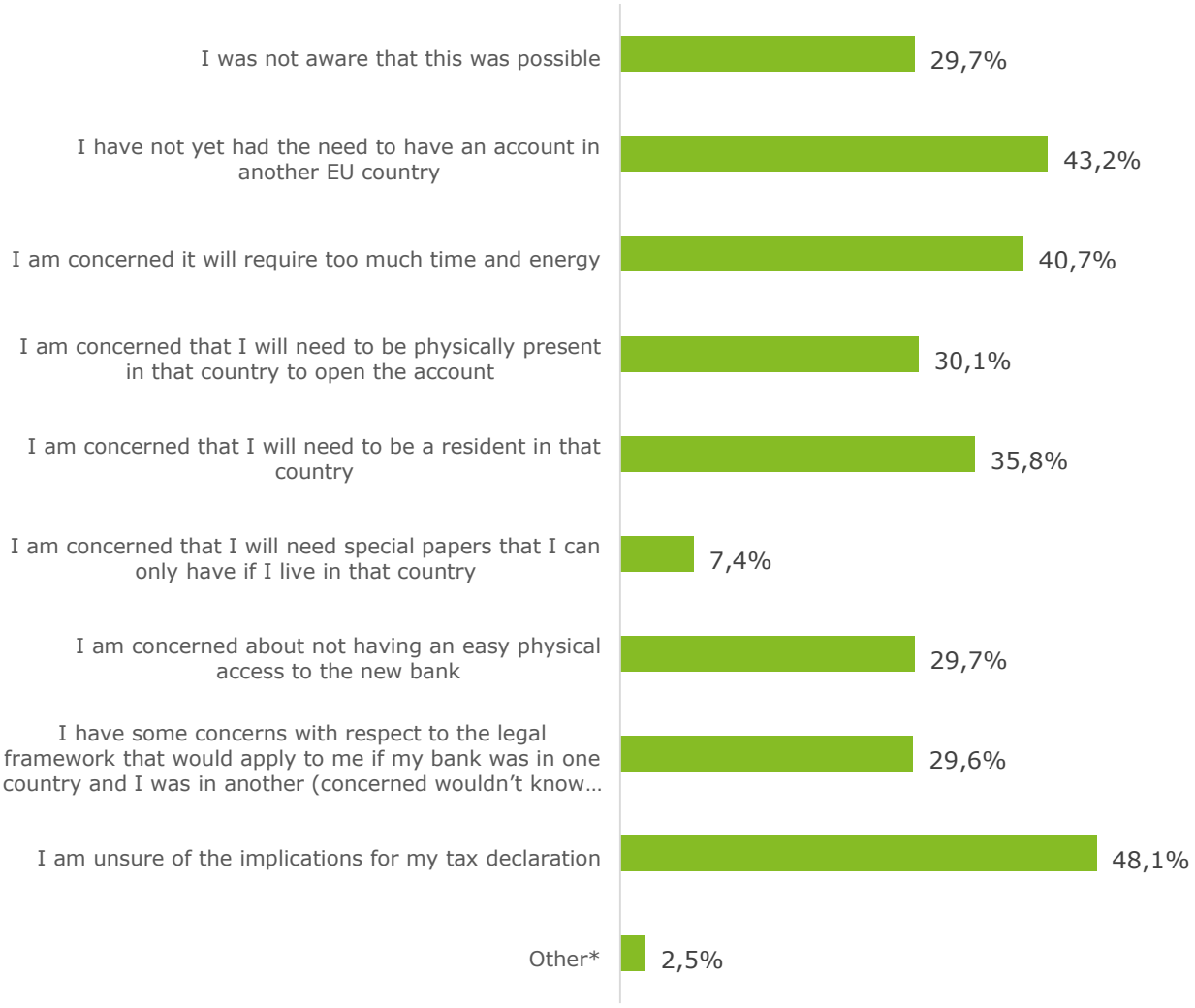
Reasons for not opening an account cross-border

Why have you not yet opened a bank account in another EU country? (*Asked only if answer option 12.5 "No I would not be interested" was selected, n = 68, multiple answers possible)*	**Amount total**	**Percentage of total (81)**

13.1) I was not aware that this was possible	24	29,7
13.2) I have not yet had the need to have an account in another EU country	35	43,2
13.3) I am concerned it will require too much time and energy	33	40,7
13.4) I am concerned that I will need to be physically present in that country to open the account	25	30,1
13.5) I am concerned that I will need to be a resident in that country	29	35,8
13.6) I am concerned that I will need special papers that I can only have if I live in that country	29	7,4
13.7) I am concerned about not having an easy physical access to the new bank	6	29,7
13.8) I have some concerns with respect to the legal framework that would apply to me if my bank was in one country and I was in another (I am concerned I wouldn't know who is the authority that is in charge when there is a legal problem)	24	29,6
13.9) I am unsure of the implications for my tax declaration	39	48,1
13.10) Other*	2	2,5

* "I have not seen it advertised"; "Having an online bank enables seems easier than opening a bank account in another EU country"

Why have you not yet opened a bank account in another EU country? (*Asked only if answer option 12.5 "No I would not be interested" was selected*, multiple answers possible, n = 68)



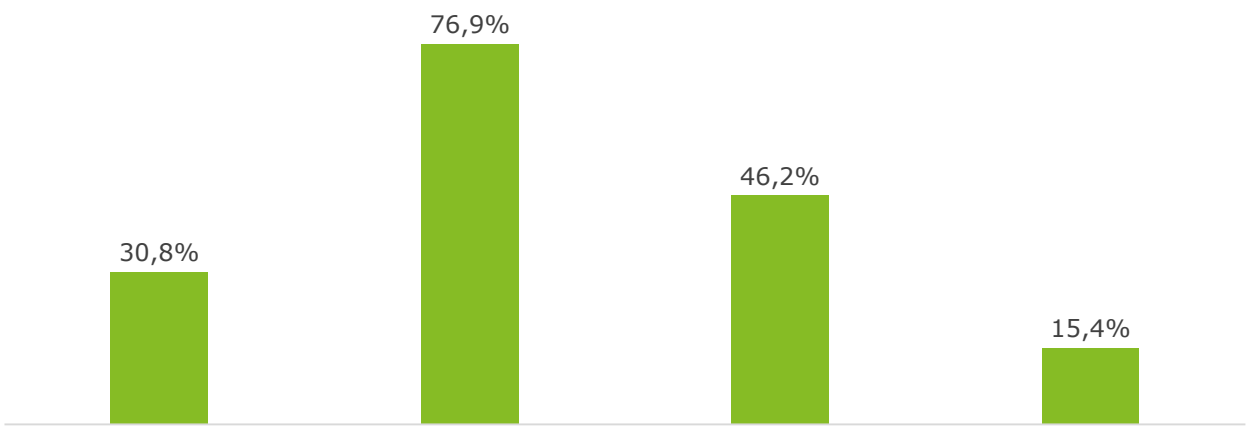
Among the 21,7% of respondents who stated that they would not be interested in opening a bank account in another EU country than their country of residence, most expressed that the reason for their lack of interest comes from the fact that they do not need it (57,3%). However, a non-negligible share within this subgroup also stated that concerns with respect to tax declarations (38,2%), the hassle of the process (26,5%) and concerns with respect to the legal framework (23,5%) are reasons for which they would not be interested to open an account in another member state.

Challenges when trying to open a bank account cross-border

Which challenges did you face when trying to open a bank account in another EU country? (*Asked only if answer option 12.4 was selected. Multiple answers possible,* n = 13)	**Amount**	**Percentage of total (13)**

15.1) I needed to be physically present to open the new bank account	4	30,8
15.2) I was not a resident from the country of the new bank account	10	76,9
15.3) I was not able to produce some of the documents or justifications that were requested by the bank	6	46,2
15.4) I had difficulties due to the remote situation (e.g. communication, exchange of documents, etc.)	2	15,4
15.5) Other(s)	0	0

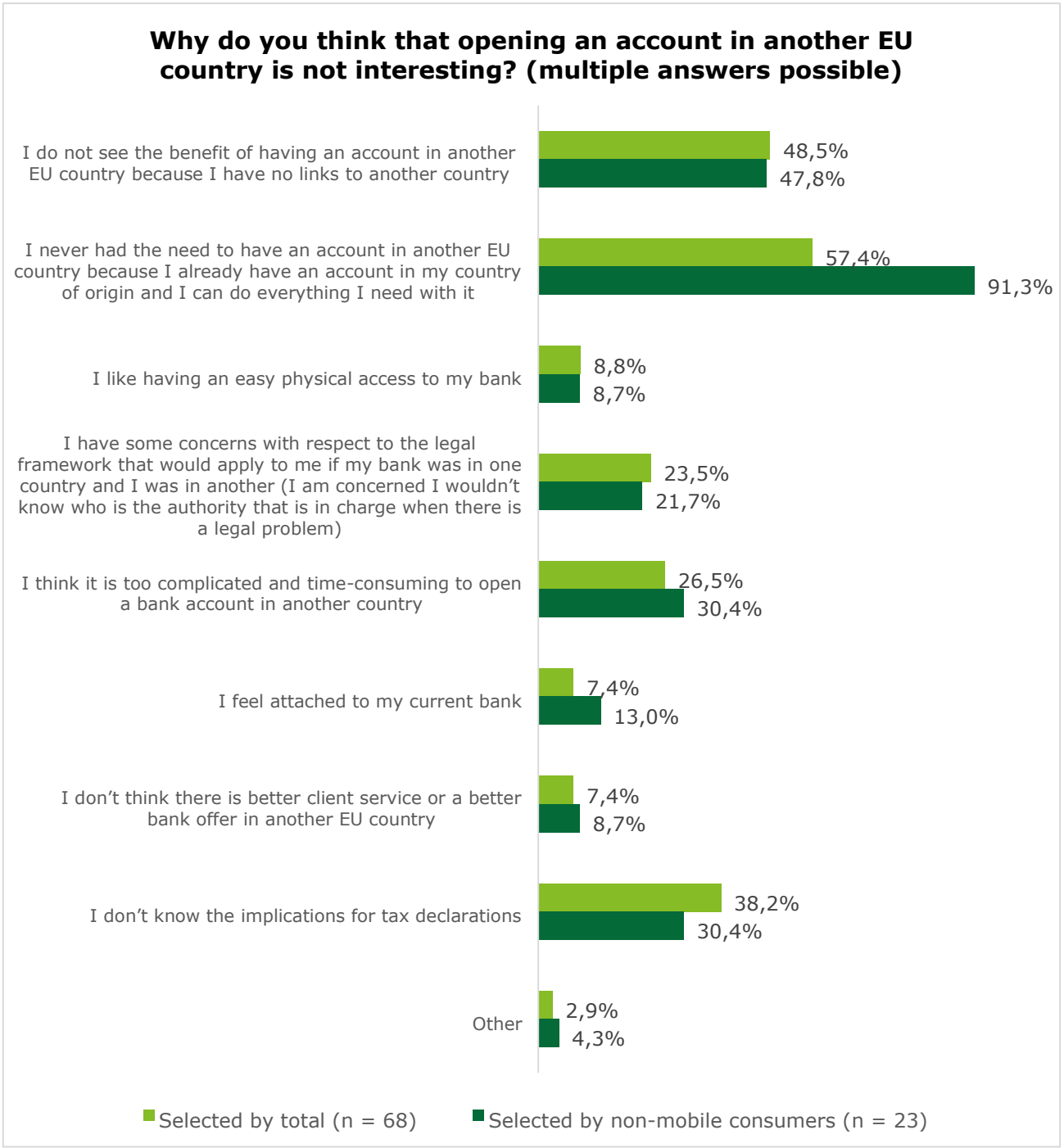
Which challenges did you face when trying to open a bank account in another EU country? (*Asked only if answer option 12.4 was selected, multiple answers possible*, n = 13)



Reasons for not being interested to open an account cross-border

Why do you think that opening an account in another EU country is not interesting? (*Asked only if answer option 12.5 was selected, multiple answers possible*.)	**Total**	**Percentage of total (n = 68)**	**Amount of nonmobile consumers**	**Percentage of non-mobile consumers (n = 23)**

16.1) I do not see the benefit of having an account in another EU country because I have no links to another country	33	48,5	11	47,8
16.2) I never had the need to have an account in another EU country because I already have an account in my country of origin and I can do everything I need with it	39	57,3	21	91,3
16.3) I like having an easy physical access to my bank	6	8,8	2	8,7
16.4) I have some concerns with respect to the legal framework that would apply to me if my bank was in one country and I was in another (I am concerned I wouldn't know who is the authority that is in charge when there is a legal problem)	16	23,5	5	21,7
16.5) I think it is too complicated and timeconsuming to open a bank account in another country	18	26,5	7	30,4
16.6) I feel attached to my current bank	5	7,4	3	13,0
16.7) I don't think there is better client service or a better bank offer in another EU country	5	7,4	2	8,7
16.8) I don't know the implications for tax declarations	26	38,2	7	30,4
16.9) Other	2	2,9	1	4,3



When looking at the non-mobile consumers, the above figure demonstrates that the main reason for their non-interest in opening a bank account cross-border is their satisfaction with their current bank account and the fact that they do not need to open another bank account in another country (91 percent of them selected this reason, against only 57 percent for the rest of the respondents). On the other hand, having a link to the country in which the bank account is opened is only important for about half of the non-mobile consumers. A lack of physical access seems to be even less of a hindrance. About one third thinks that the process of opening a bank account cross-border is too complicated and time-consuming.

Switching in the same country

Summary of results

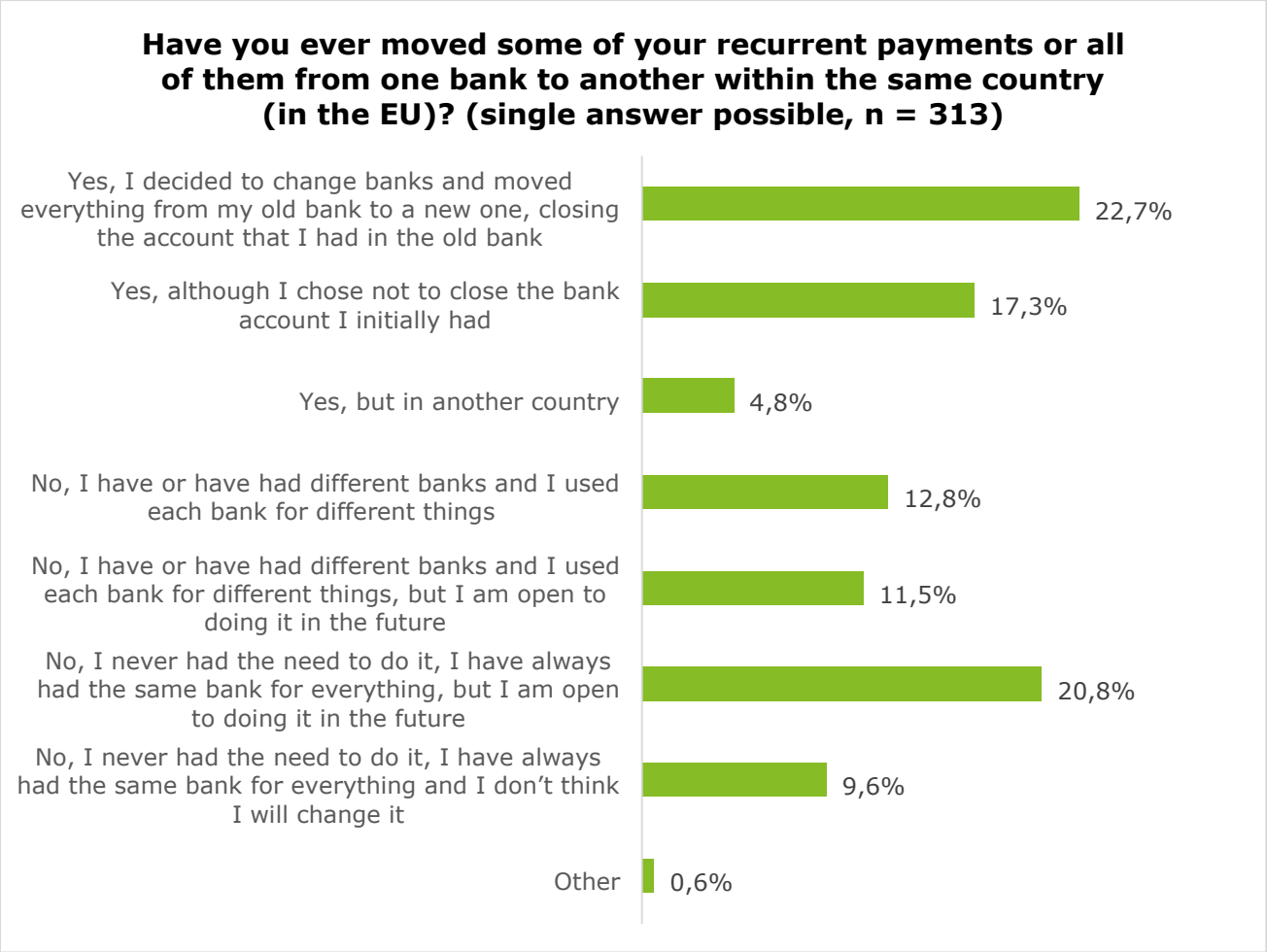
40 percent of all respondents have already moved some or all of their recurrent payments from one bank to another within the same EU country. Of this group, a clear majority (77,6 percent) indicated that they themselves transferred the recurrent payments and informed debtors and creditors. The remaining 22,4 percent stated that their new bank took care of transferring the payments. On the other hand, 32,2 percent of all respondents answered that they have not moved recurrent payments between accounts with different banks but would be interested to do so. Amongst the respondents who might want to switch in the future (n = 101) 96 percent stated to be interested in assistance in the switching process by from the new bank.

Results in detail

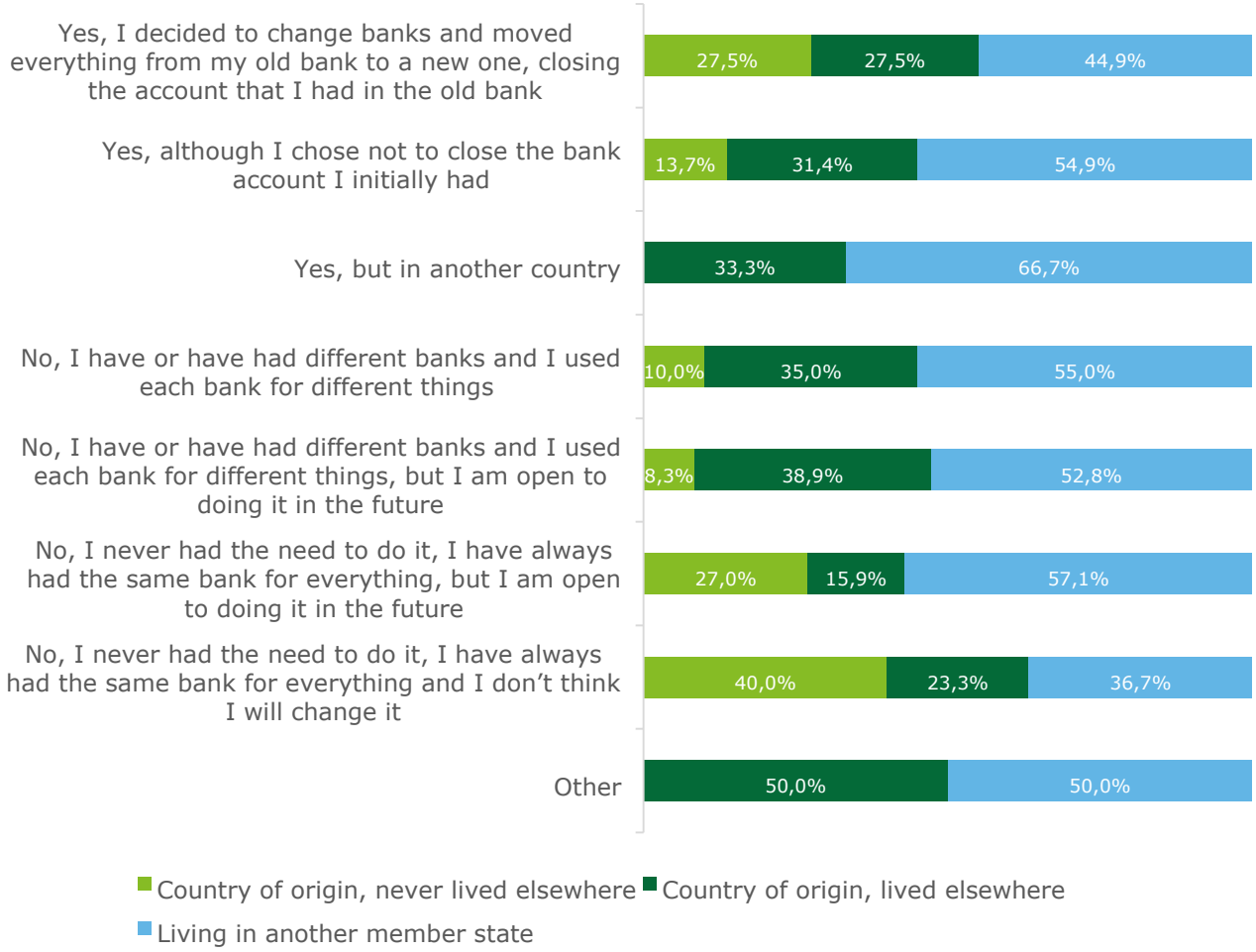
Moving some or all recurrent payments between banks within the same country

Have you ever moved some of your recurrent payments or all of them from one bank to another within the same country (in the EU)? (*single answer*)	**Country or origin, never lived elsewhere (2.1)**	**Country of origin, lived elsewhere (2.2/2.3)**	**Living in another member state (2.4/2.5)**	**Total (absolute)**	**Total (%)**
17.1) Yes, I decided to change banks and moved everything from my old bank to a new one, closing the account that I had in the old bank	19	19	31	71	22,7
17.2) Yes, although I chose not to close the bank account I initially had	7	16	28	54	17,3
17.3 Yes, but in another country	0	5	10	15	4,8
17.4) No, I have or have had different banks and I used each bank for different things	4	14	22	40	12,8
17.5) No, I have or have had different banks and I used each bank for different things, but I am open to doing it in the future	3	14	19	36	11,5
17.6) No, I never had the need to do it, I have always had the same bank for everything, but I am open to doing it in the	17	10	36	65	20,7

future					
17.7) No, I never had the need to do it, I have always had the same bank for everything and I don't think I will change it	12	7	11	30	9,6
17.8) Other	0	1	1	2	0,6



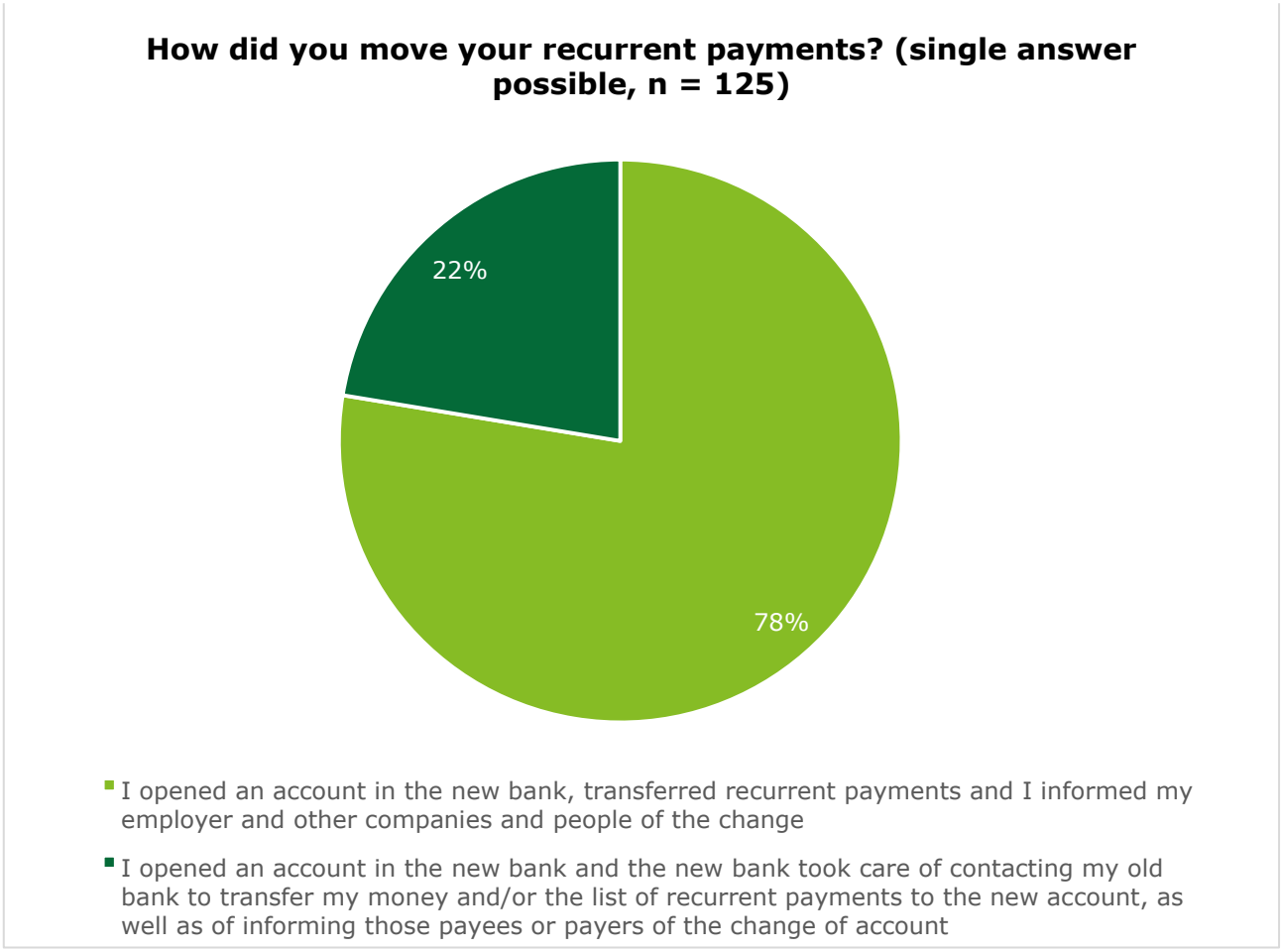
Have you ever moved some of your recurrent payments or all of them from one bank to another within the same country (in the EU)? (single answer possible, breakdown per residence situation, n = 313)



How are switches being done

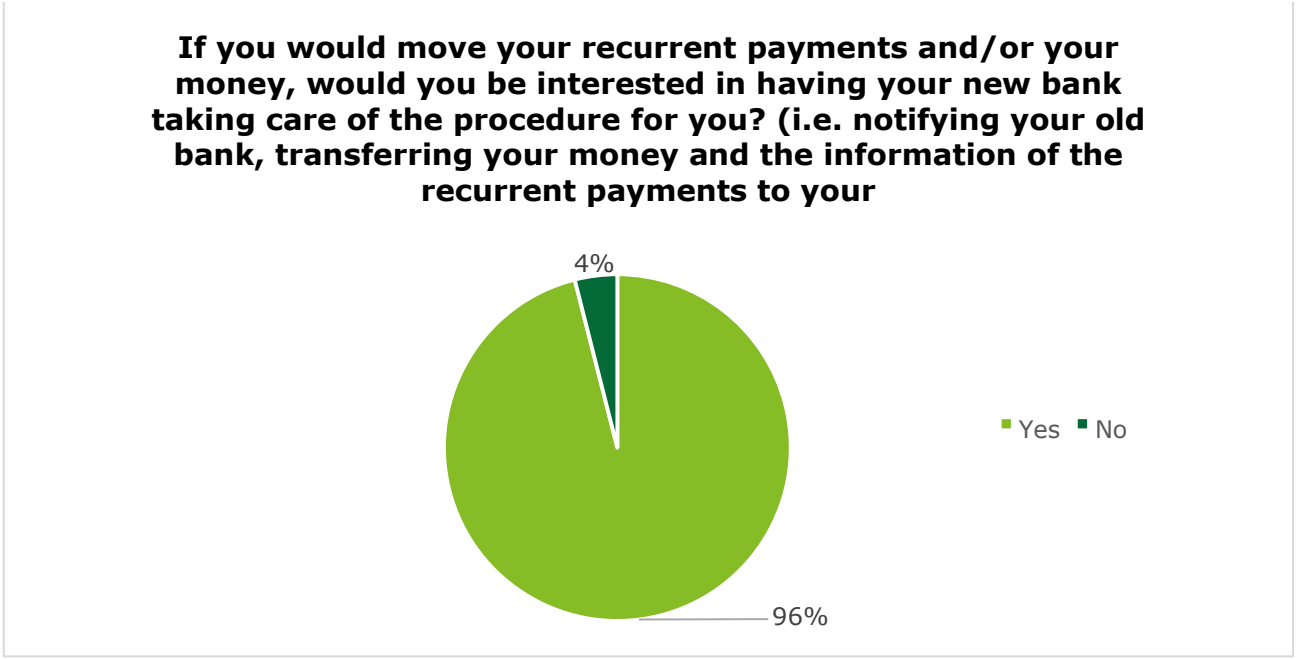
How did you move your recurrent payments? (*Asked only if answer options 17.1 or 17.2 were selected (if they already switched recurrent payments), single answer*)	**Amount**	**Percentage of total (n = 125)**
I opened an account in the new bank, transferred recurrent payments and I informed my employer and other companies and people of the change	97	77,6
I opened an account in the new bank and the new bank took care of contacting my old bank to transfer my money and/or the list of recurrent payments to the new account, as well as of informing those payees or payers of the change of account	28	22,4

Total	**128**	**100**



Interest in a domestic switching service

If you would move your recurrent payments and/or your money, would you be interested in having your new bank taking care of the procedure for you? (i.e. notifying your old bank, transferring your money and the information of the recurrent payments to your new account, and notifying payers and/or payees of the new bank details)? (*Asked only if answer options 17.5 or 17.6 were selected (never transferred recurrent payments but open to do it in the future), single answer possible, n = 101*)	**Amount**	**Percentage of total (n = 101)**
Yes	97	96
No	4	4
Total	101	100



Cross-border switching

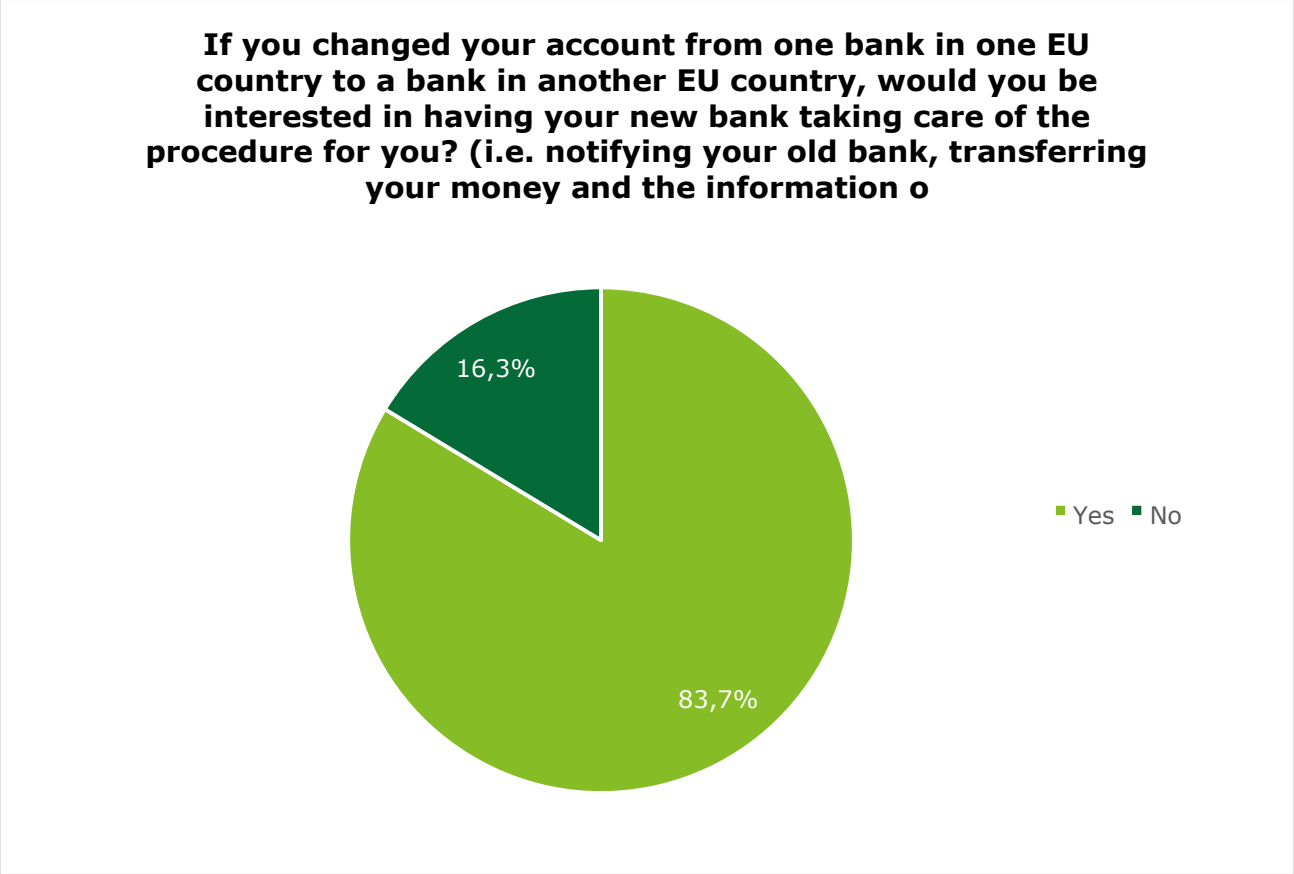
Summary of the results

Of the 245 respondents who declared that they could be interested in opening a bank account in another EU member state, 83,7 percent stated that they would be interested in benefiting from the new bank taking care of the switching process for them.

Results in detail

Interest in a cross-border switching service

If you changed your account from one bank in one EU country to a bank in another EU country, would you be interested in having your new bank taking care of the procedure for you? (i.e. notifying your old bank, transferring your money and the information of the recurrent payments to your new account, and notifying payers and/or payees of the new bank details)? *(Asked if answer options 12.1, 12.2, 12.3 or 12.4 were chosen in question 12 (would be interested to open an account cross-border), n = 245)*	**Amount**	**Percentage of total (n = 245)**
Yes	205	83,7
No	40	16,3
Total	**245**	**100**



4. Switching and cross-border account opening for micro-enterprises and self-employed

(full section dependent on whether the respond declared to be self-employed or to own a microenterprise AND to use a separate account for its professional/business purpose, (Question 9.1)

The following set of questions was only asked to participants who identified themselves as self-employed or as owners of a micro-enterprise and who indicated to use a separate account for business or professional purposes. The respondents were asked to answer the questions in this section thinking about their business or professional account. This section of the survey provides interesting insights on this group. However, it should be noted that the low response rate to this section of the survey (14 respondents) significantly limits the robustness of the conclusions that can be drawn from the results, which is why they were triangulated with interviews with associations representing micro-enterprises and self-employed in the study.

Cross-border opening of bank accounts

Summary of results

Compared to private consumers, the potential interest of self-employed and owners of a micro enterprise in opening a bank account cross-border is way lower. Amongst them, 42,9 percent have been, are or would be interested, compared to 78,3 percent for private consumers).

The main motivation to open an account cross-border for this specific group is to possess a local debit or credit card. Other reasons were also mentioned, such as better service, lower fees, relocating temporarily to

another country, receiving payments from local clients and paying expenses in the local currency in another country.

However, only one of the 14 respondents actually have or had an account in another EU country in the past. One failed to open the account and the rest (4) of the 42,9 percent would be theoretically interested but has not yet done so. All of the latter indicated concerns related to a necessary relocation of their business, VAT numbers and the legal framework as reasons keeping them from opening an account in another EU country. The one respondent having opened an account cross-border faced difficulties in the process because physical presence was required.

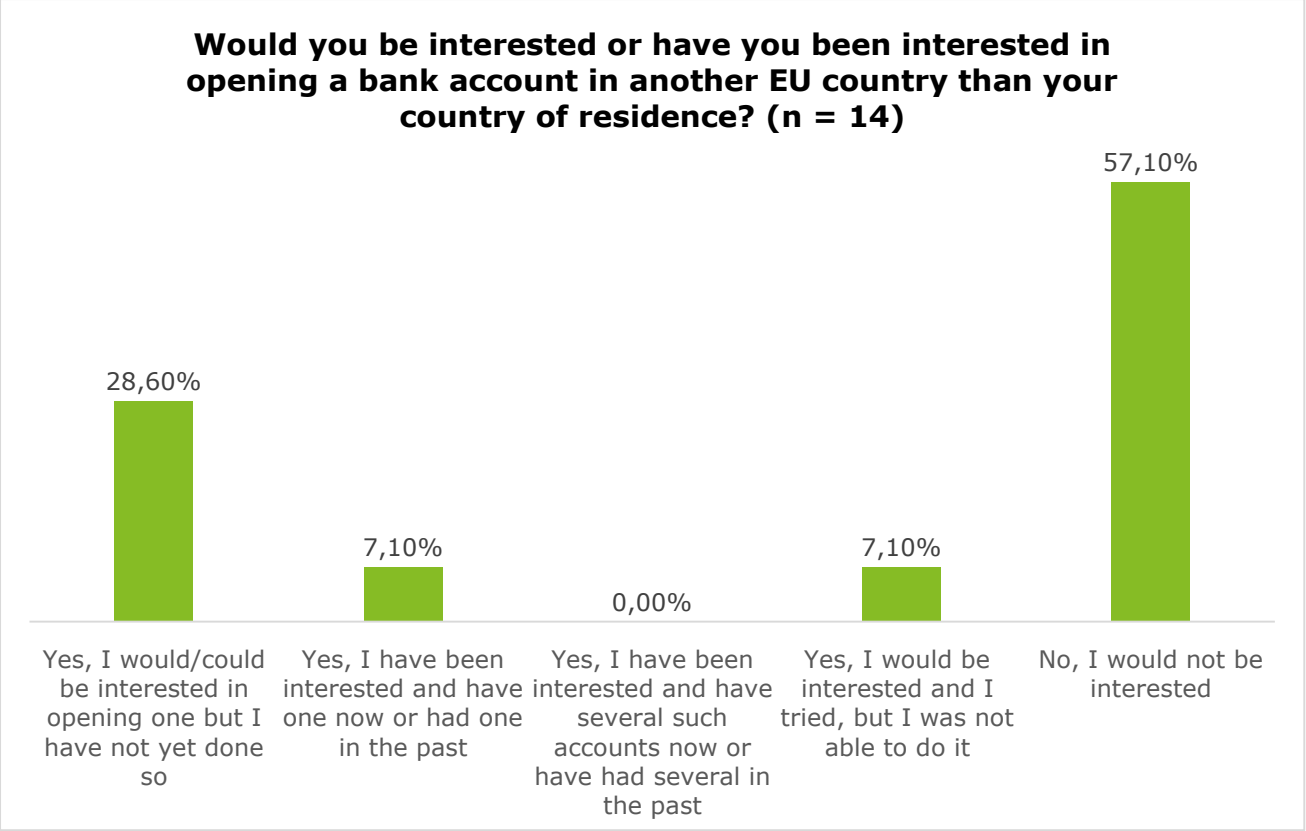
Within the group of 8 participants (57,1 percent) who stated not to be interested in opening a bank account in another EU country, the most important reasons for their disinterest are a lack of need and the complexity of the process (62,5 percent each).

The share of self-employed and micro business owners using a payment account offered by an online bank is low compared to the overall sample. Only 3 out of 14 stated to do so while the rest had an account with a branch office bank.

Results in detail

Interest to open an account cross-border

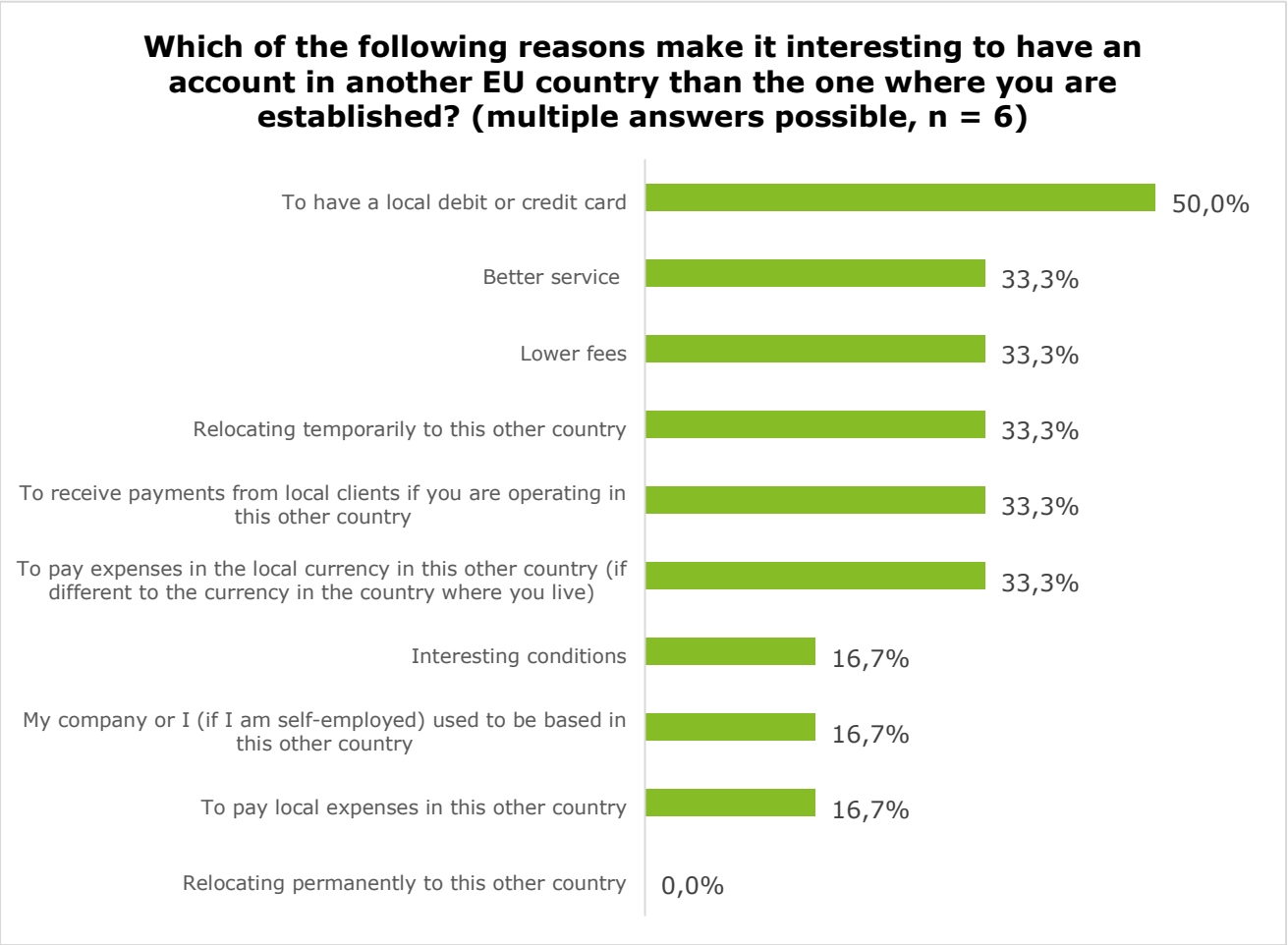
Would you be interested or have you been interested in opening a bank account in another EU country than your country of residence?	**Amount**	**Percentage of total (n = 14)**
21.1) Yes, I would/could be interested in opening one but I have not yet done so	4	28,6
21.2) Yes, I have been interested and have one now or had one in the past	1	7,1
21.3) Yes, I have been interested and have several such accounts now or have had several in the past	0	0
21.4) Yes, I would be interested and I tried, but I was not able to do it	1	7,1
21.5) No, I would not be interested	8	57,1
Total	**14**	**100**



Reasons to be interested in opening a bank account cross-border

Which of the following reasons make it interesting to have an account in another EU country than the one where you are established? (*Asked only if answer options 21.1, 21.2, 21.3 or 21.4 were selected (is, was or could be interested to open an account cross-border), multiple answers possible, n = 6*)	**Amount**	**Percentage of total (n = 6)**
Interesting conditions	1	16,7
Better service	2	33,3
Lower fees	2	33,3
Relocating permanently to this other country	0	0
Relocating temporarily to this other country	2	33,3
My company or I (if I am self-employed) used to be based in this other country	1	16,7
To receive payments from local clients if you are operating in this other country	2	33,3

To pay local expenses in this other country	1	16,7
To pay expenses in the local currency in this other country (if different to the currency in the country where you live)	2	33,3
To have a local debit or credit card	3	50
Other	0	0

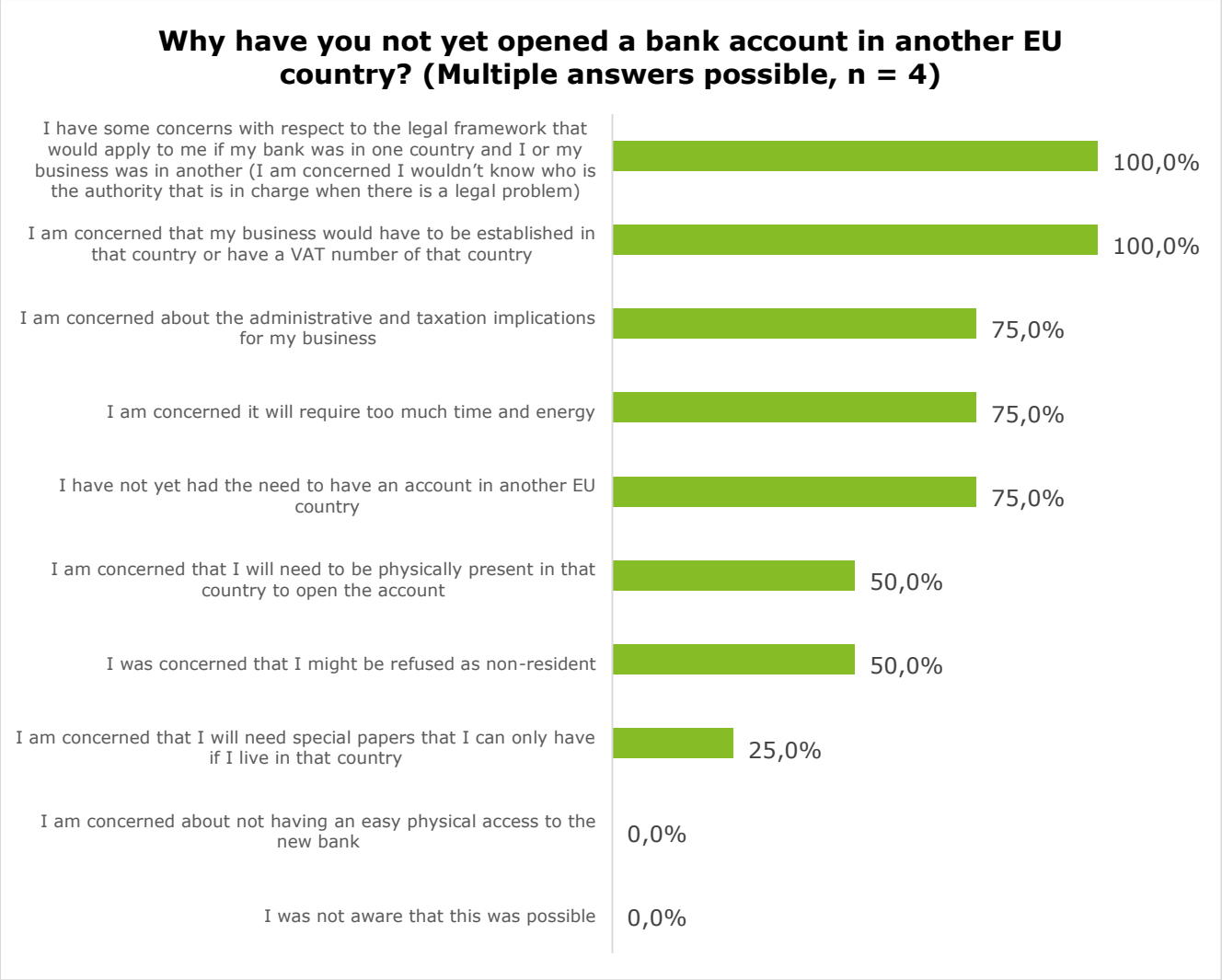


Reasons for not opening an account cross-border

Why have you not yet opened a bank account in another EU country? (*Asked only if answer option 21.1 was selected (interested but not yet done so), multiple answers possible, n = 4)*	**Amount**	**Percentage of total (n = 4)**
I was not aware that this was possible	0	0

I was concerned that I might be refused as non-resident	2	50
I have not yet had the need to have an account in another EU country	3	75
I am concerned that I will need to be physically present in that country to open the account	2	50
I am concerned it will require too much time and energy	3	75
I am concerned that my business would have to be established in that country or have a VAT number of that country	4	100
I am concerned that I will need special papers that I can only have if I live in that country	1	25
I am concerned about not having an easy physical access to the new bank	0	0
I have some concerns with respect to the legal framework that would apply to me if my bank was in one country and I or my business was in another (I am concerned I wouldn't know who is the authority that is in charge when there is a legal problem)	4	100
I am concerned about the administrative and taxation implications for my business	3	75
Other	0	0

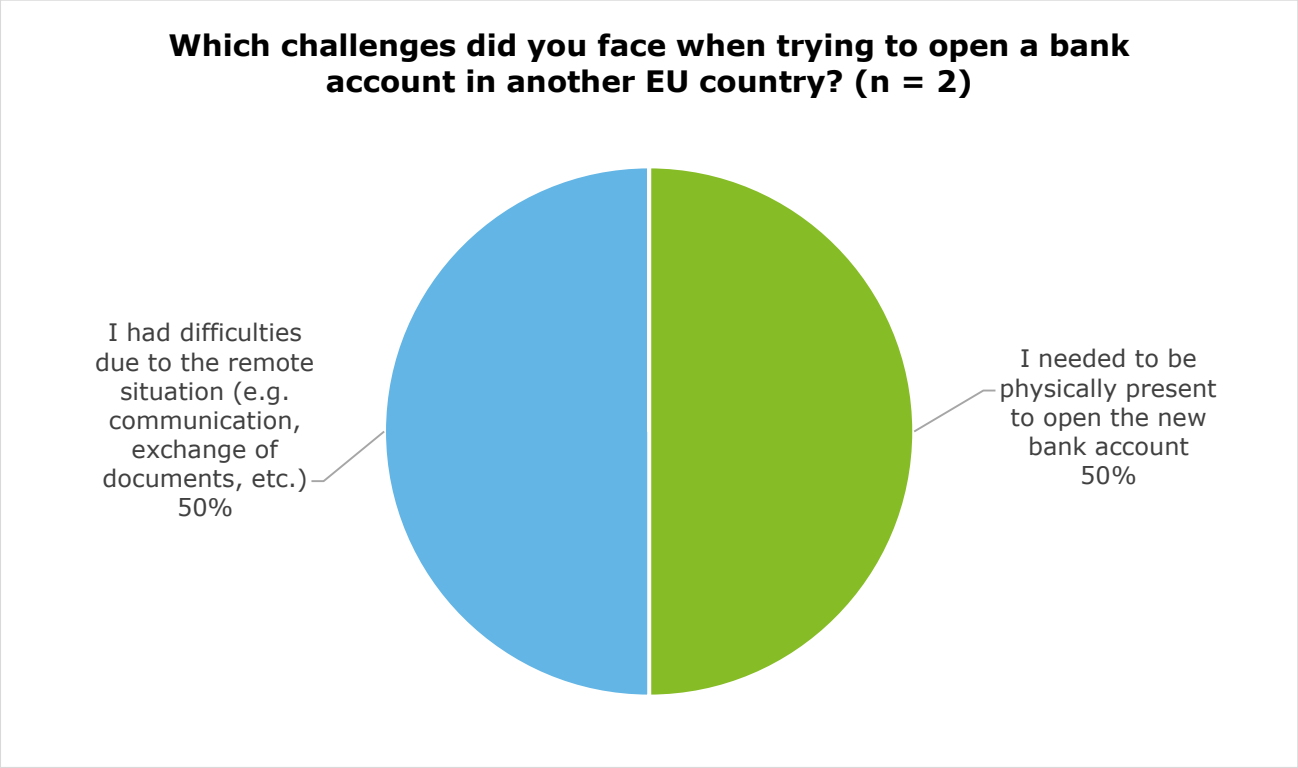
*Only 4 out of the 14 respondents replied to this question



Challenges when trying to open an account cross-border

Which challenges did you face when trying to open a bank account in another EU country? (*Asked only if answer option 21.2 or 21.3 were selected (have or have tried to open an account cross-border), multiple answers possible, n = 2*)	**Amount**	**Percentage of total (n = 2)**
I needed to be physically present to open the new bank account	1	50
I needed a national VAT number from the country of the new bank account	0	0
I had difficulties due to the remote situation (e.g. communication, exchange of documents, etc.)	1	50
Other(s)	0	0

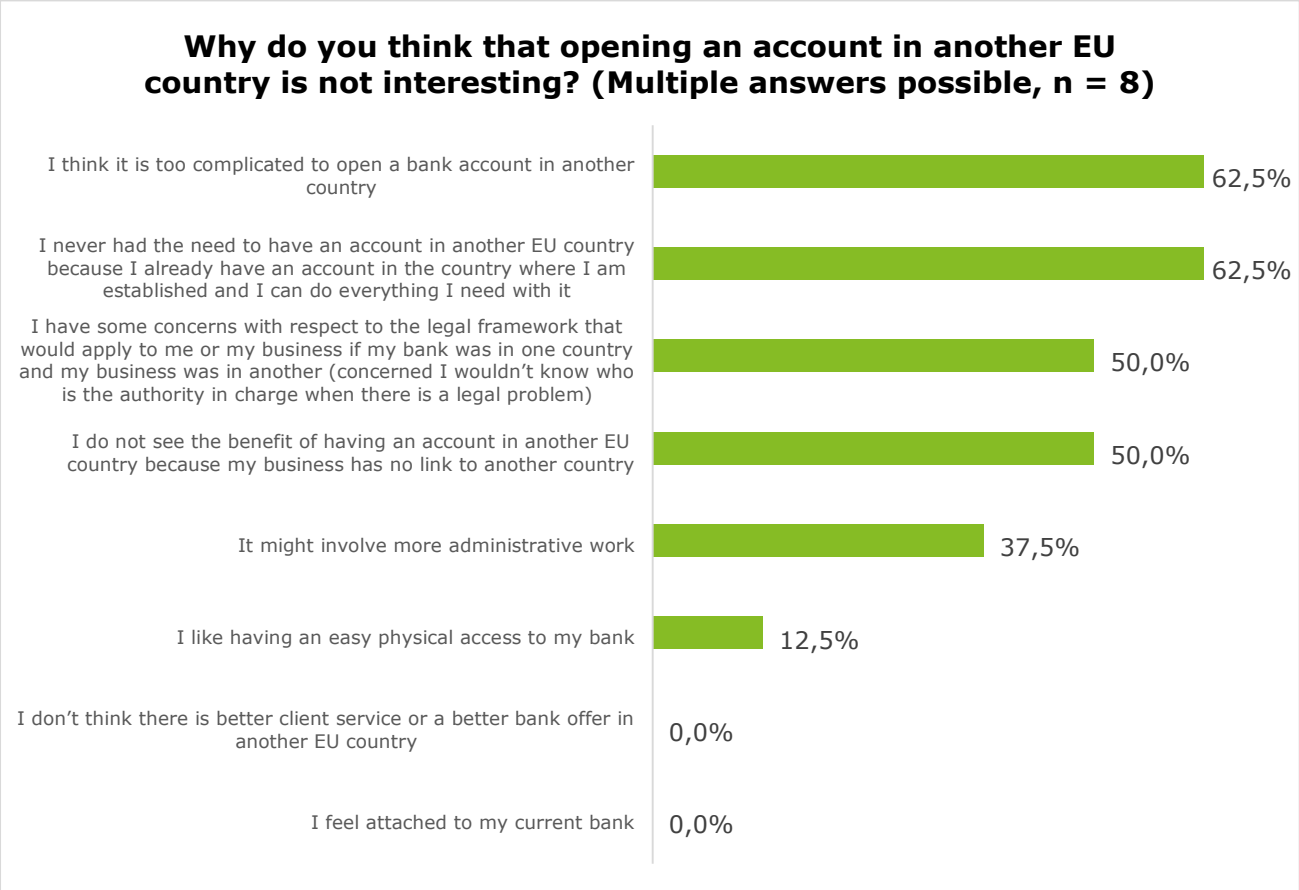
Total	**2**	**50**



Reasons for not being interested to open an account cross-border

Why do you think that opening an account in another EU country is not interesting? (*Asked only if answer option 21.5 was selected (not interested), multiple answers possible, n = 8*)	**Amount**	**Percentage of total (n = 8)**
I do not see the benefit of having an account in another EU country because my business has no link to another country	4	50
I never had the need to have an account in another EU country because I already have an account in the country where I am established and I can do everything I need with it	5	62,5
I like having an easy physical access to my bank	1	12,5
I have some concerns with respect to the legal framework that would apply to me or my business if my bank was in one country and I or my business was in another (I am concerned I wouldn't know who is the authority that is in charge when there is a legal problem)	4	50

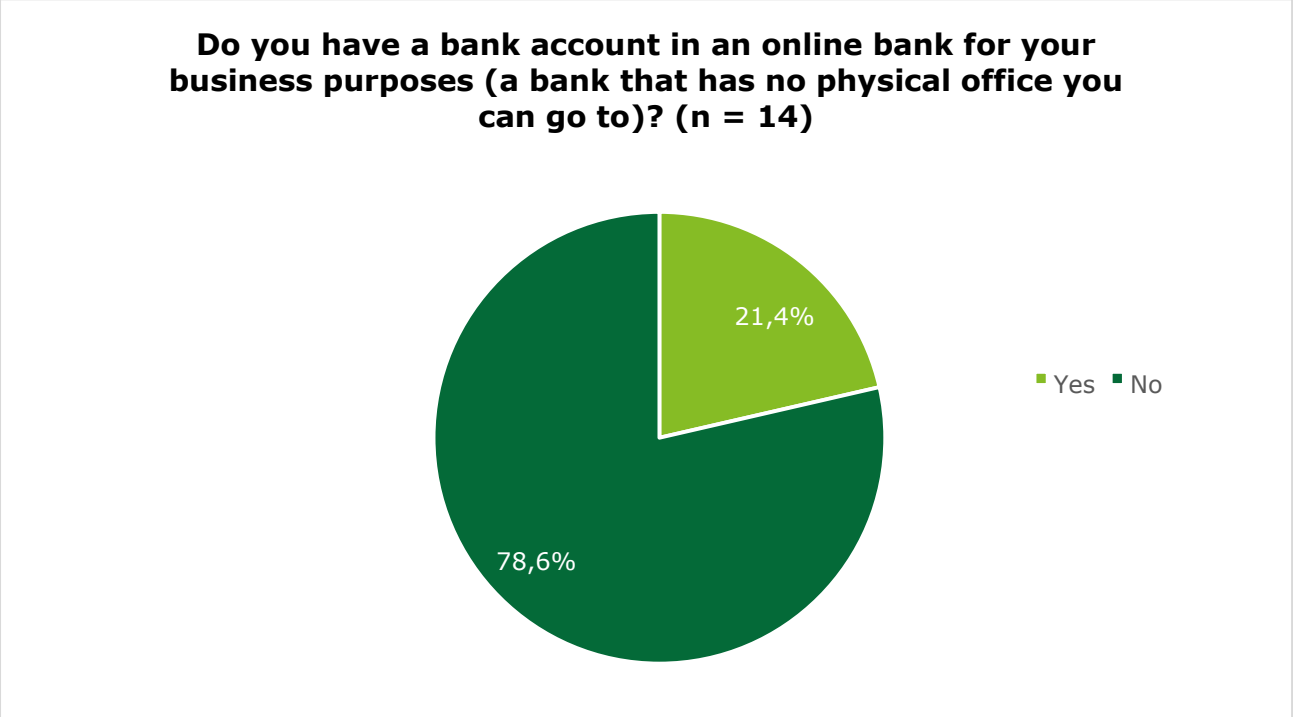
I think it is too complicated to open a bank account in another country	5	62,5
I feel attached to my current bank	0	0
I don’t think there is better client service or a better bank offer in another EU country	0	0
It might involve more administrative work	3	37,5
Other	0	0



Account in an online bank

Do you have a bank account in an online bank for your business purposes (a bank that has no physical office you can go to)? (n = 14)	**Amount**	**Percentage of total (n = 14)**
Yes	3	21,4

No	11	78,6
Total	**14**	**100**



Switching in the same country

Summary of results

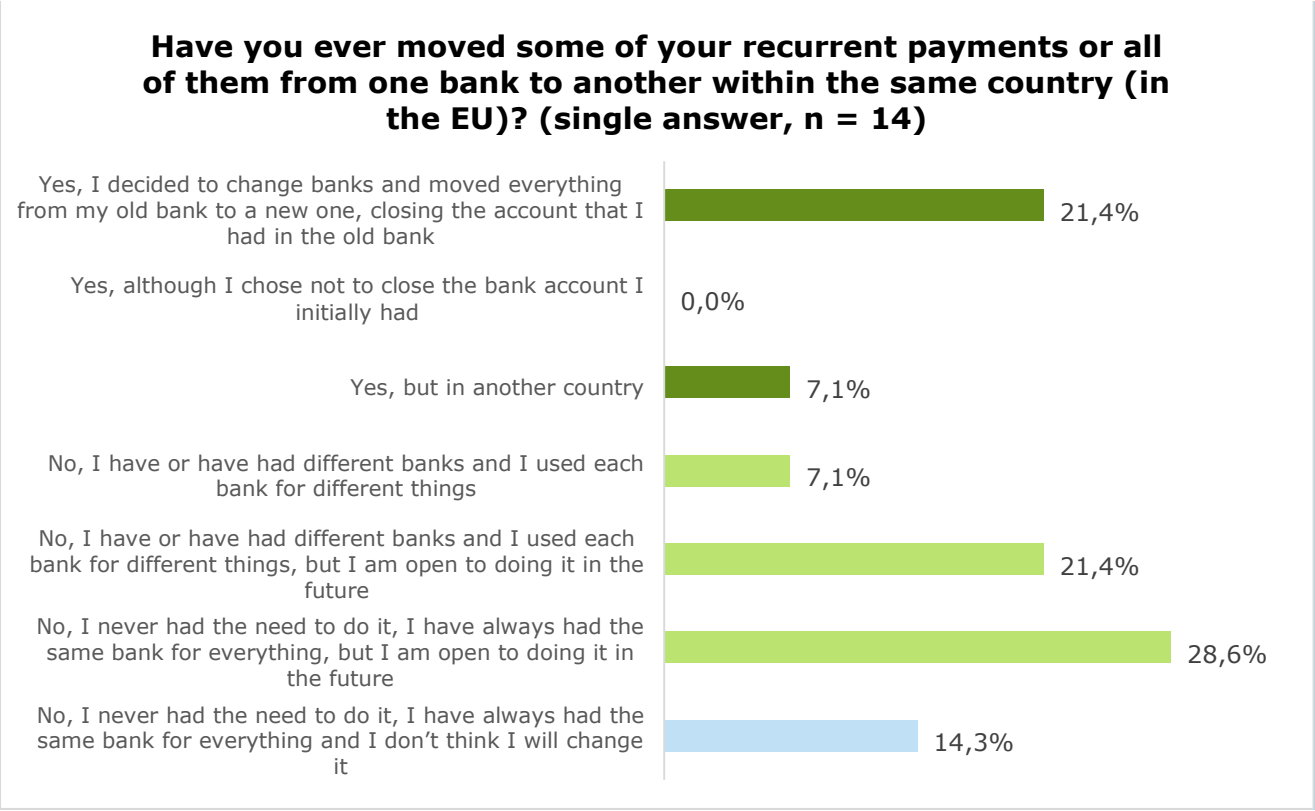
Switching bank accounts is not a common practice among the self-employed and owners of microenterprises who responded to the survey. Only 3 out of 14 replied to have done so (21,4 percent). However, half of the respondents are open to switch account in the future. Of the 3 self-employed and business owners who have opened an account in another country, two have received a switching service from the new bank. Of the 7 respondents being open to switching, almost all (6) would be interested in their bank taking care of the switching procedure.

Results in detail

Moving some or all recurrent payments within the same country

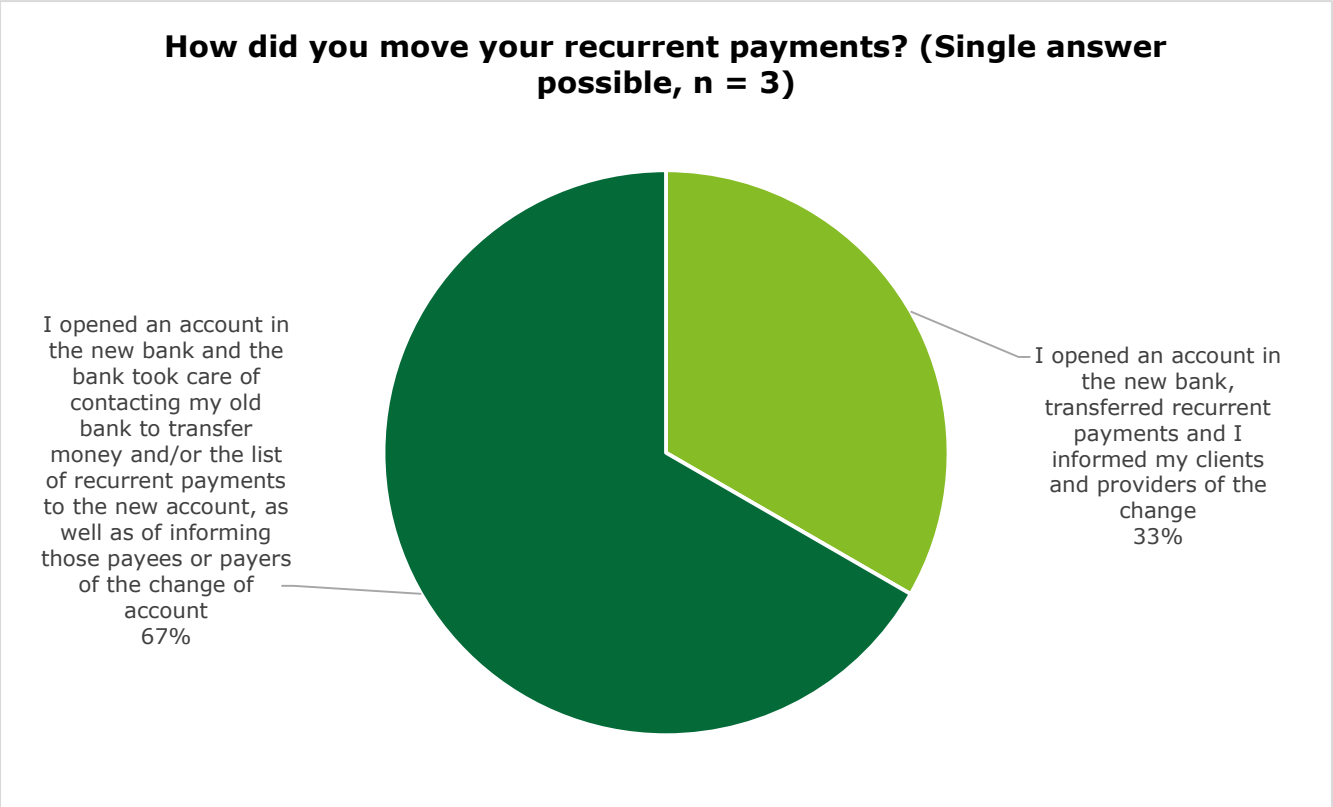
Have you ever moved some of your recurrent payments or all of them from one bank to another within the same country (in the EU)? (*single answer, n = 14*)	**Amount**	**Percentage of total (n = 14)**
Yes, I decided to change banks and moved everything from my old bank to a new one, closing the account that I had in the old bank	3	21,4

Yes, although I chose not to close the bank account I initially had	0	0
Yes, but in another country	1	7,1
No, I have or have had different banks and I used each bank for different things	1	7,1
No, I have or have had different banks and I used each bank for different things, but I am open to doing it in the future	3	21,4
No, I never had the need to do it, I have always had the same bank for everything, but I am open to doing it in the future	4	28,6
No, I never had the need to do it, I have always had the same bank for everything and I don't think I will change it	2	14,3
Other	0	0
Total	**14**	**100**



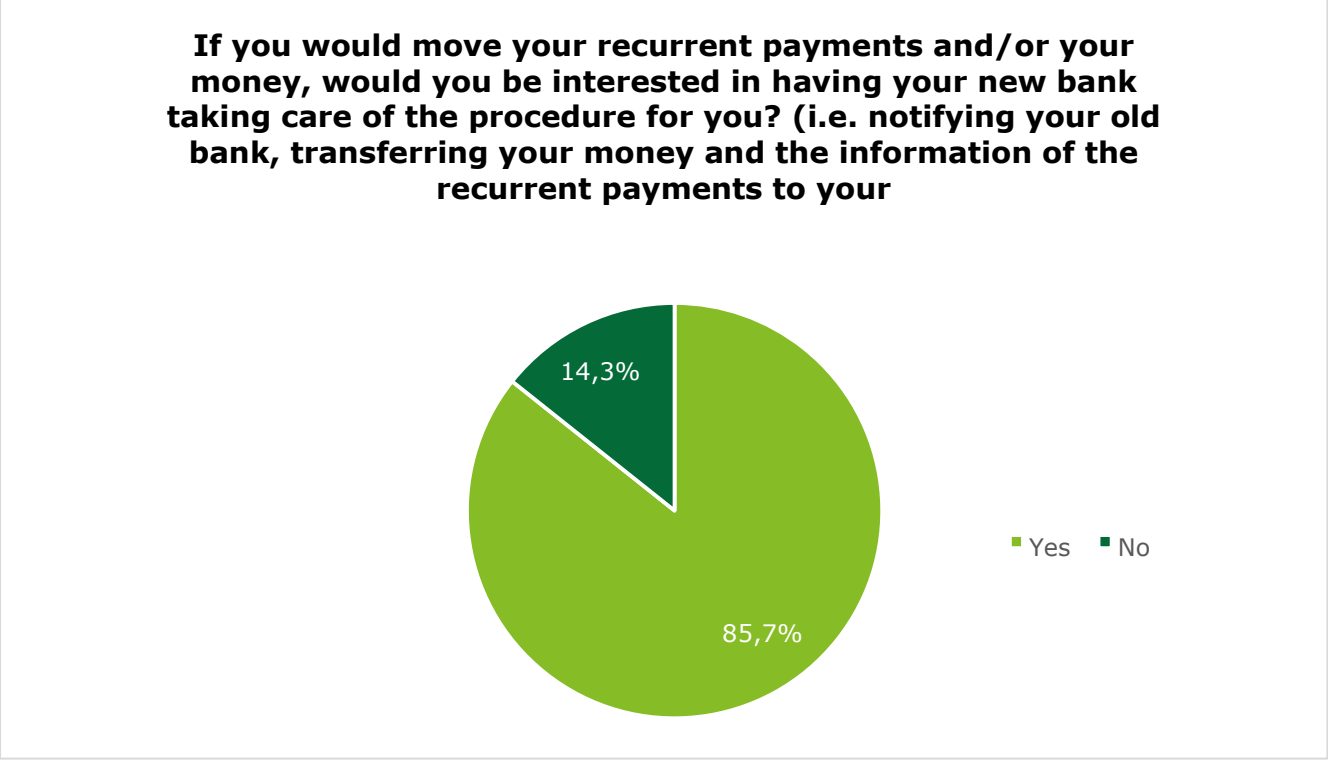
How are switches being done

How did you move your recurrent payments? (*Asked only if answered options 27.1 or 27.2 were selected (yes to having moved recurrent payments), single answers possible, n = 3)*	**Amount**	**Percentage of total (n = 3)**
I opened an account in the new bank, transferred recurrent payments and I informed my clients and providers of the change	1	33,3
I opened an account in the new bank and the bank took care of contacting my old bank to transfer money and/or the list of recurrent payments to the new account, as well as of informing those payees or payers of the change of account	2	66,6
Total	**3**	**100**



Interest in a domestic switching service

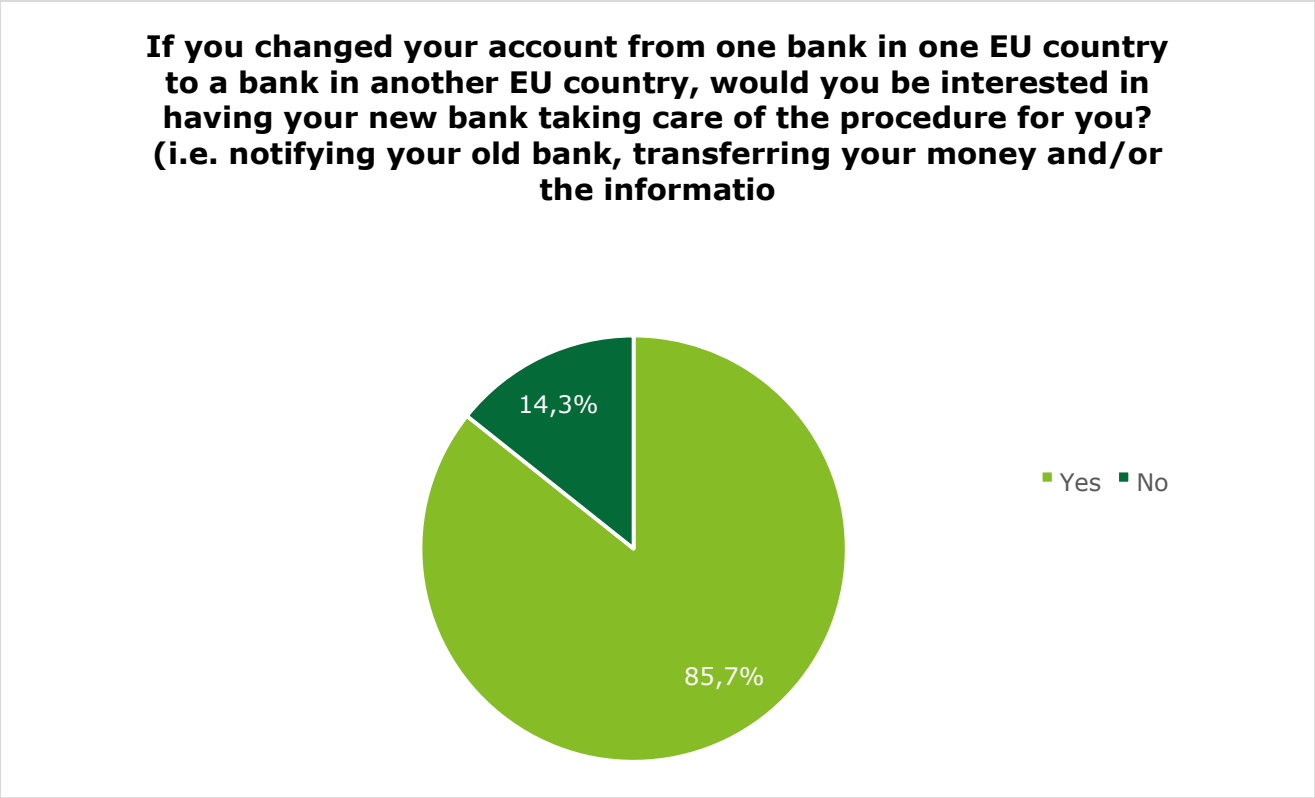
If you would move your recurrent payments and/or your money, would you be interested in having your new bank taking care of the procedure for you? (i.e. notifying your old bank, transferring your money and the information of the recurrent payments to your new account, and notifying payers and/or payees of the new bank details)? (*Asked only if answer options 27.5 or 27.6 were selected (open to doing it in the future), single answers possible, n = 7)*	**Amount**	**Percentage of total (n = 7)**
Yes	6	85,7
No	1	14,3
Total	**7**	**100**



Cross-border switching

As it is the case for national switching, the large majority (85,7%) of self-employed and owners of micro businesses who responded to the survey would be interested in having their new bank taking care of the switching procedure if they were to switch payments accounts to another EU member state.

If you changed your account from one bank in one EU country to a bank in another EU country, would you be interested in having your new bank taking care of the procedure for you? (i.e. notifying your old bank, transferring your money and/or the information of the recurrent payments to your new account, and notifying payers and/or payees of the new bank details)? (*Asked only if answer options 20.1, 20.2, 20.3 or 20.4 were selected (interested in opening an account crossborder), single answers possible*, n = 14)	**Amount**	**Percentage of total (n = 14)**
Yes	12	85,7
No	2	14,3
Total	**14**	**100**



Annex E | Policy options: Detailed workflows

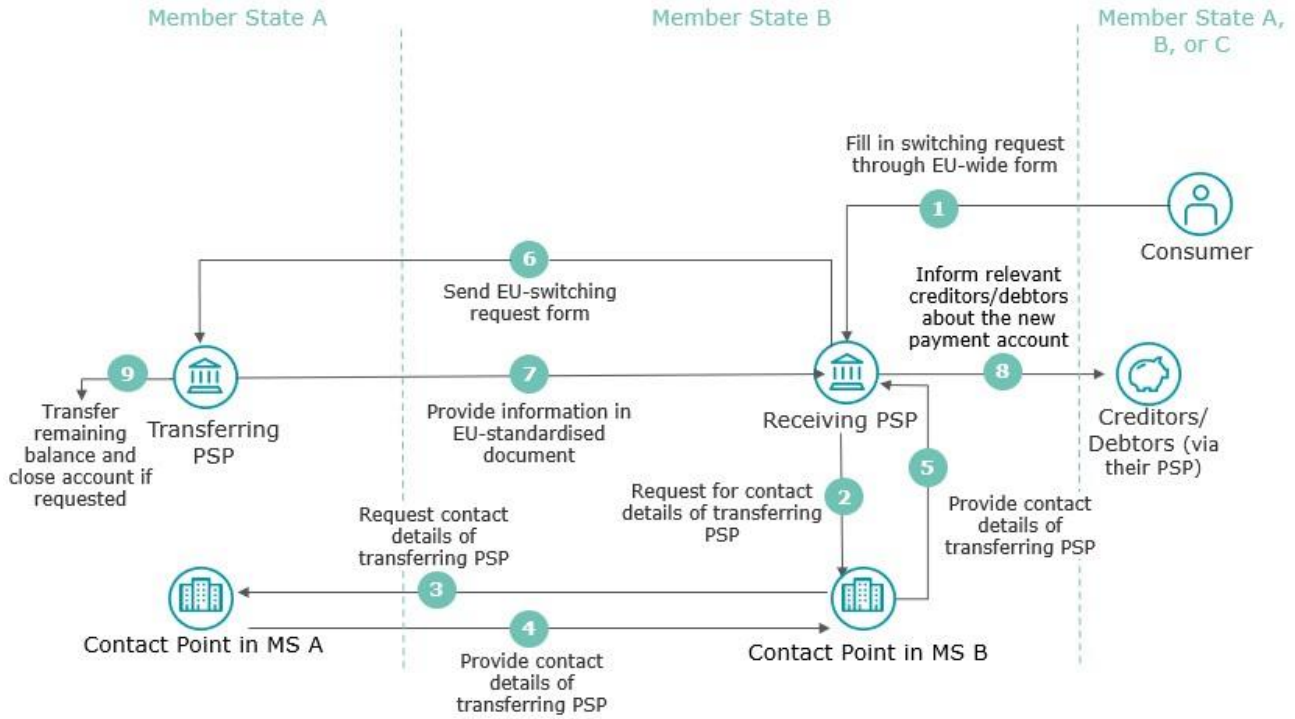
a. Options for cross-border switching (Switching tool 1)

The sections below present the options developed for Switching tool 1 in terms of the option's information flow.

Option 1.1 Cross-border switching service with decentralised governance

This first option consists of an EU-wide cross-border switching service with a decentralised governance through national contact points. An example of the information flow for this option is presented in the figure below.

Figure 12 - Option 1.1 Cross-border switching service with decentralised governance



Source: Deloitte

The steps part of the information flow above are described below:

Step 1:

To launch the switching process, the consumer would fill in the switching request, which would be an EU wide form, and share it with the PSP to which he wants to switch (i.e. the receiving PSP in Member State

B). In the form, the two IBANs of the two payment accounts would be included, as well as the desired date of the switch, the consumer's identity number and a signature.

Step 2:

Then, the receiving PSP would address a request to its national contact point (in Member State B).

Step 3:

This contact point then would reach out to the contact point in the Member State of the transferring PSP (Member State A) to retrieve the contact details of the transferring PSP (e.g. via email).

Step 4:

After receiving the request of the contact point (from Member State B), the contact point (from Member State A) would provide it with the contact details of the transferring PSP.

Step 5:

The contact point in Member State B would then share the contact details of the transferring PSP with the receiving PSP.

Step 6:

Based on the information received, the receiving PSP would send the EU-switching request form to the transferring PSP.

Step 7:

Upon the reception of the form, the transferring PSP would prepare and send the requested information in an EU-wide standardised document. In line with the current requirements under Article 10 PAD, this information would include:

- List of existing standing orders for credit transfers and available information on direct debit mandates that are being switched;
- The available information about recurring incoming credit transfers and direct debits executed on the consumer's payment account in the previous 13 months.

Step 8:

Following the reception of the relevant information, the receiving PSP would proceed to inform the PSPs of the relevant creditors and debtors of the account change so that they can inform their clients (i.e. the identified creditors and debtors) of the new account details of the consumer, for them to update their bookkeeping information (if the consumer would give its consent to the receiving PSP in the switching request form to do so)[85].

[85] This step could potentially be replaced by the receiving PSP contacting directly the creditors and debtors, if easier. As long as the creditors and debtors are duly informed at the end of the chain and implement the change.

If some of the creditor/debtors are outside of SEPA, they would receive as part of their notification, a message specifying that Direct Debit(s) mandates outside SEPA are not compatible and therefore they need to change towards sending an invoice / payments request.

The transferring PSP would also stop accepting direct debits and incoming credit transfers, as well as cancel standing orders with effect as of the date specified in the switching request form.

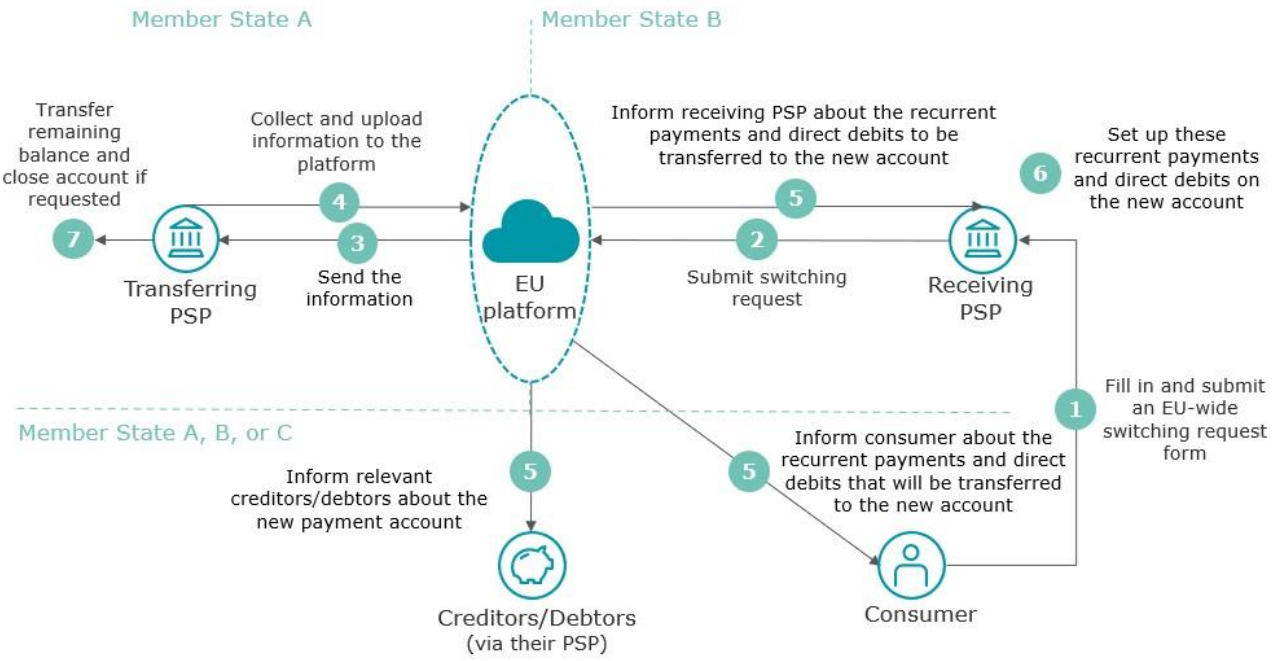
Step 9:

Lastly, the transferring PSP would transfer any remaining positive balance to the new payment account on the date specified by the consumer and close the old payment account, if requested by the consumer in the switching request form.

Option 1.2 Cross-border switching service with centralised governance

The second option is a cross-border switching service with a centralised governance through a centralised EU platform. This would replace existing national switching services and would streamline the switching process EU-wide. An example of the information flow for this option is presented in the figure below.

Figure 13 - Option 1.2 Cross-border switching service with centralised governance



Source: Deloitte

The process for this option is similar to the first option, but instead of PSPs having to go through national contact points, each key step (exchanging the switching form and the information on the old bank account, and informing creditors and debtors of the account switch) would be done via an EU platform. This EU platform would be an exchange platform allowing the PSPs involved in the process to send and receive the necessary documents for the switching process. The EU platform would be a push system, notifying the stakeholders with the key messages. For example, the transferring PSP would be notified when information on one of its clients has been uploaded by a receiving PSP, the PSPs of the creditors and debtors would also be informed

about the new payment account (who would notify their own clients), and the consumer would also be informed about the recurrent payments to be transferred to the new account.

Step 1:

The switching process would be launched the same way as in option 1.1: the consumer would fill in and submit an EU-wide switching request form to the receiving PSP.

Step 2:

The receiving PSP would share the switching form directly with the transferring PSP via the EU platform.

Step 3:

The transferring PSP would receive the switching form from the EU platform via a notification from the system. This notification would also request the transferring PSP to upload the information required by the receiving PSP by a given date.

Step 4:

After receiving the request, the transferring PSP would collect the necessary information required for the switching. Once ready, the transferring PSP would share this information by uploading it via a standardised document to the EU platform. The receiving PSP would then receive the information.

Step 5:

The transferring PSP would upload to the EU platform a standardised form concerning the consumer's recurrent payments and direct debits.

Based on the consumer's switching request and on information provided by the transferring PSP (i.e. the date of the switch, the new and old IBANs, the creditors and debtors' PSPs contact information), the system would automatically generate a standard letter in the language of the creditors/debtors (upon consent of the consumer). Such notification would be sent to the creditors/debtors PSP, in a format that allows them to easily and seamlessly transfer it to their client. These notifications would be aggregated and sent daily, to allow PSPs to process them all at once, in case several consumers switch in the same day, and in a timely manner.

If some of the creditor/debtors are outside of SEPA, they would receive as part of their notification, a message specifying that Direct Debit(s) mandates outside SEPA are not compatible and therefore they need to change towards sending an invoice / payments request.

The consumer would also receive an automatic email or letter from the EU platform informing him/her of the direct debits and recurrent payments that were transferred.

Step 6:

Having received the information about the recurrent payments and direct debits on the old account from the EU platform, the receiving PSP then sets up these recurrent payments and direct debits on the new account.

Step 7:

Finally, as for option 1.1, the transferring PSP would stop accepting direct debits and incoming credit transfers, as well as cancel standing orders with effect from the date specified in the switching request form. And if requested by the consumer in the switching form, it would transfer any remaining positive balance to the new payment account and close the old payment account on the date specified by the consumer.

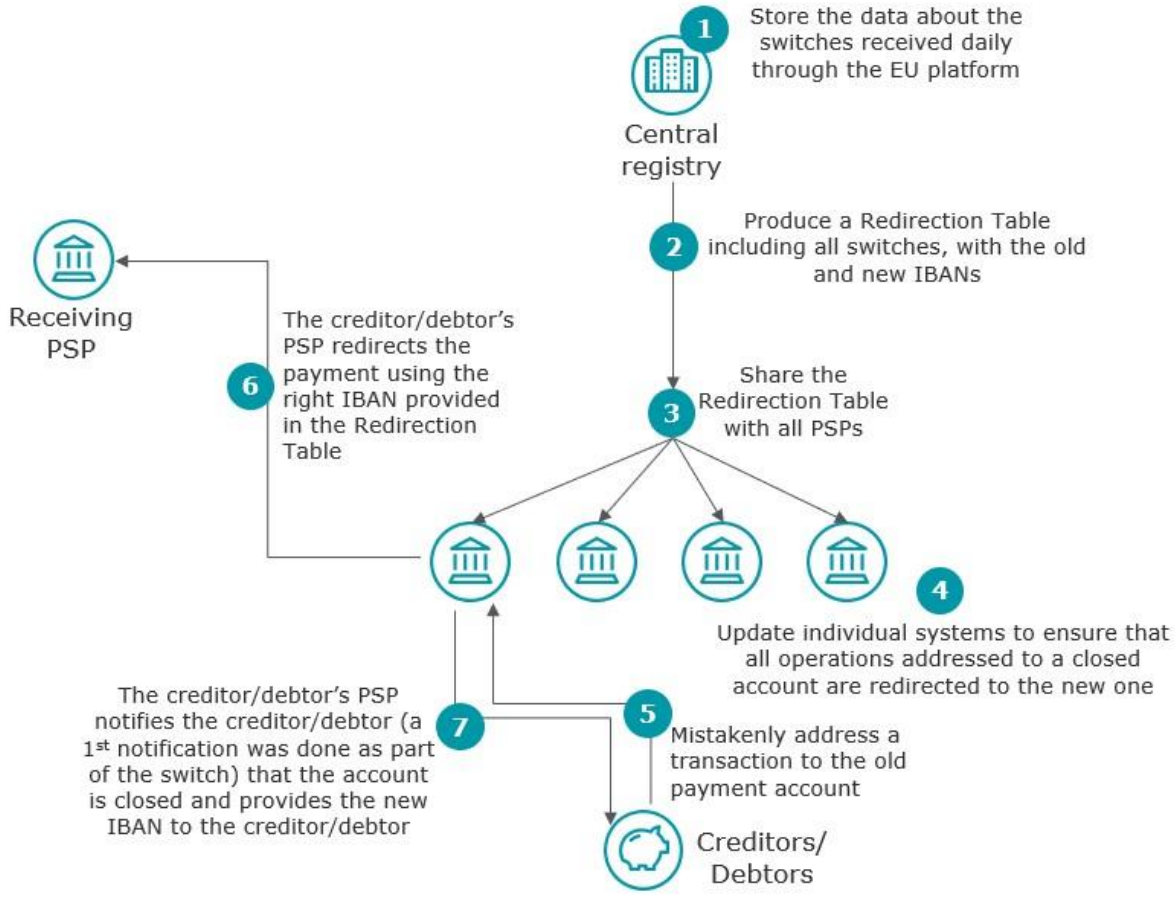
b. Options for automated redirection of payments (Switching tool 2)

The sections below present the options developed for Switching tool 2 in terms of the option's information flow.

Option 2.1 Automated redirection of payments based on a Central Registry

The first option for the automated redirection of payments consists of setting up a Central Registry that would contain all the information about the redirection and share it with PSPs daily. The information flow for this option is represented below.

Figure 14 - Option 2.1 Automated redirection of payments based on a Central Registry



Source: Deloitte

Each step of the process is described below:

Step 1

The information of all consumers having switched accounts and having agreed to benefit from the redirection service would be contained in the Central Registry. This information would be collected as part of the switching form and would be provided by the receiving PSPs via the EU platform. It would contain:

- Old IBAN;
- New IBAN;
- Date of the switch

Recording the date of the switch is crucial for the Central Registry, in order to determine when the data of the consumer needs to be deleted, as well as to determine what is the most recent IBAN, in case a consumer has switched more than once within the last 13 months. This data would be kept in the Central Registry for a period of 13 months as of the date the switch took effect.

Step 2

Based on the information received, the Central Registry would produce a Redirection Table including all the consumers having switched, and indicating their old and new IBANs.

Step 3

The Central Registry would then share the Redirection Table with every PSPs on a daily basis. The Central Registry would be a key element in this option to ensure the redirection.

Step 4

Receiving the information provided in the Redirection Table on a daily basis, PSPs' routing systems would conduct a daily update to integrate the Redirection Table. This up-to-date switching information would ensure that all operations addressed to an old IBAN are redirected to the new one (indicated in the Redirection Table).

Step 5

During the period of 13 months, the creditor or debtor launches a transaction that is mistakenly addressed to an old account.

Step 6

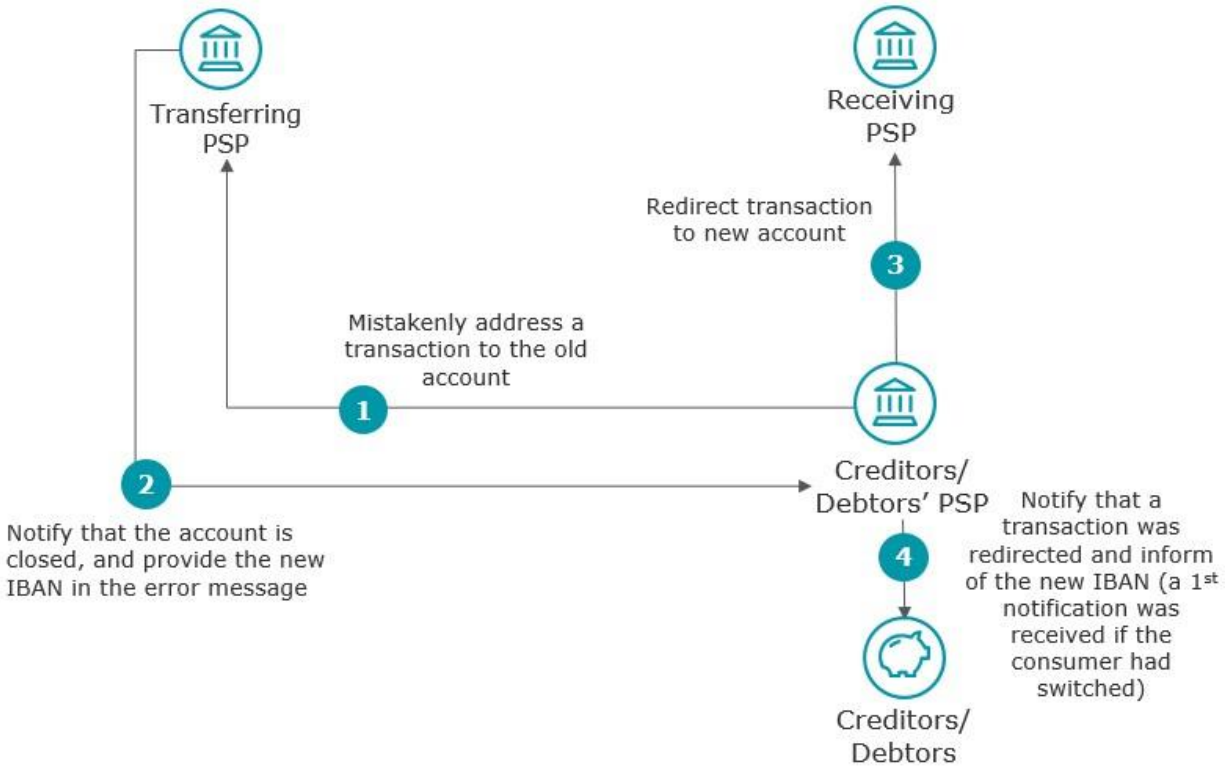
The Redirection Table from the creditor or debtor's PSP (in which the old IBAN is associated with the new IBAN) allows the automated redirection of the payment to the right account in the receiving PSP.

Step 7

Having received mistaken payment instructions (i.e. a payment linked to a closed account), the PSP of the creditor or debtor notifies the creditor or debtor that the old account is closed and that there has been a request for redirection, informing it of the new IBAN at the same time. This allows the creditor or debtor to update its bookkeeping information.

Option 2.2 Automated redirection via account information embedded in error messages

This second option would entail that, once a switch has occurred (via the national or cross-border switching service) if a payment is directed by mistake to the old account, the information about the consumer's new account would be embedded in the error message that the PSP of the creditor or debtor would receive. An example of the information flow for this option is presented in the figure below. Figure 15 - Option 2.2 Automated redirection via account information embedded in error messages



Source: Deloitte

This option would rely on secure existing schemes (e.g. SEPA, Bankgirot, etc.) and require that the functionality is included in the ongoing interoperability initiatives, in order to gradually reach interoperability with non-Euro countries. Those existing systems already send automatic error messages to the creditor/ debtor's PSP whenever a payment fails because an account is closed, without any further information. But with this option, whenever an account would be closed and a transaction in any EU currency would be addressed by mistake to the old account, the system would include the consumer's new IBAN in the automatic message to enable the PSP initiating the transaction to redirect it to the new IBAN. This requires that all transferring PSPs keep track for a period of 13 months of the information of the consumers who have switched and closed their account, so that they can include the new IBAN in the error message.

Once the consumer has provided his/her consent to benefit from the redirection service (as part of the national or cross-border switching service), the following steps are foreseen:

Step 1

The PSP of the creditor or debtor addresses a transaction to the consumer's old payment account by mistake.

Step 2

The PSP of the creditor or debtor receives an error message containing the correct IBAN information.

Step 3

Based on the error message received, the PSP of the creditor/debtor re-launches the payment with the correct IBAN.

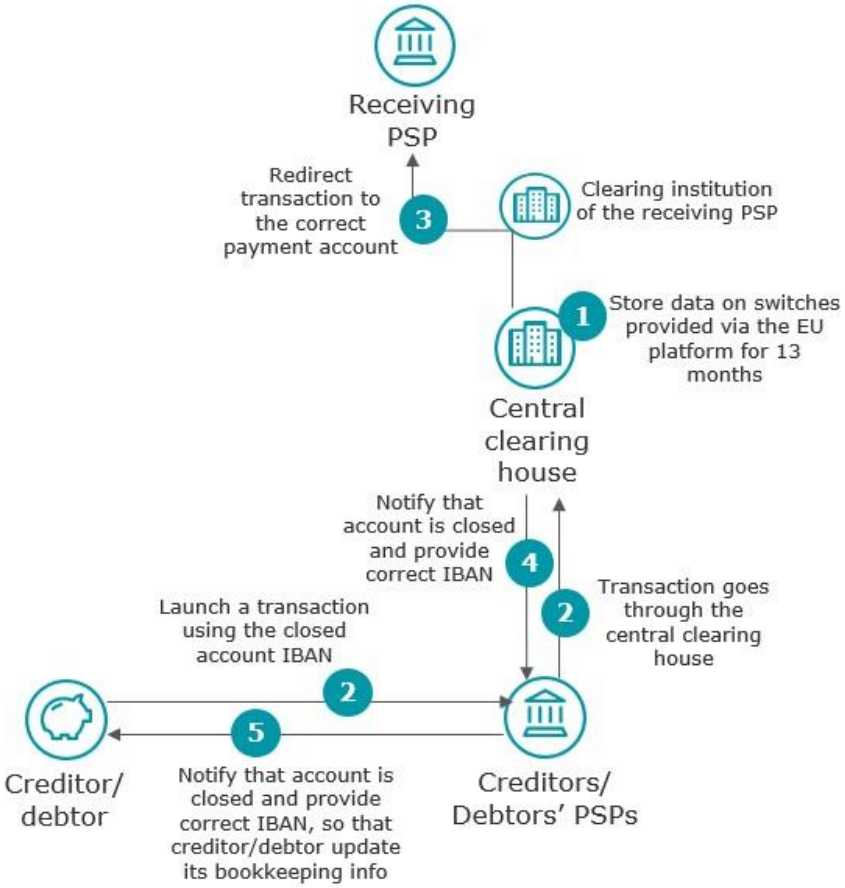
The PSP of the creditor or debtor (who had to redirect a payment) informs his client (i.e. the creditor/debtor) that a redirection was made and requires them to update their systems with the new IBAN, to avoid that another mistakenly addressed payment is launched again in the future.

Option 2.3 Automated redirection based on a Central clearing house

The third option for the automated redirection of payments would consist of the redirection being conducted by a Central clearing house, which would have a crucial role in the redirection scheme. This Central clearing house would not replace other clearing houses, but would be added on top of them. Its function would not be to clear the payments itself, but only to redirect the payments, based on the account switching information provided by the PSPs and on the existing clearing and settlement agreements across the EU. In a nutshell, in this option, the Central clearing house would be the entity redirecting the payments, instead of the PSPs.

An example of the information flow for this option is presented in the figure below.

Figure 16 - Option 2.3 Automated redirection based on a Central clearing house



Source: Deloitte

Each step of the process is described below:

Step 1

The Central clearing house would store the information of all consumers having switched and closed their account and indicated that they want to benefit from the redirection service, for a duration of 13 months. This information would be collected as part of the switching form and would be uploaded to the Central clearing house by the receiving PSP, and would include the consumer's:

- Old IBAN;
- New IBAN; and
- Date of the switch.

Step 2

A creditor or debtor's PSP mistakenly addresses a transaction to the old account of a consumer who switched.

Step 3

Whenever such transaction happens, the new Central clearing house would proceed to the redirection of the payment. The payment would be redirected to the usual clearing house of the receiving PSP and from there to the receiving PSP.

Step 4

In this option, there would be no need for the creditor or debtor's PSP or the transferring PSP to redirect the payment (as it is the case in options 2.1 and 2.2) as it would be done directly by the Central clearing house. Whenever a redirection is completed, similar steps as in option 2.1 would be initiated by the Central clearing house to ensure that the right account information are registered by all parties. The Central clearing house would issue a notification to the creditor or debtor's PSP, to inform it that an account change has not been correctly implemented by its customer (the creditor or debtor) as part of the switch.

Step 5

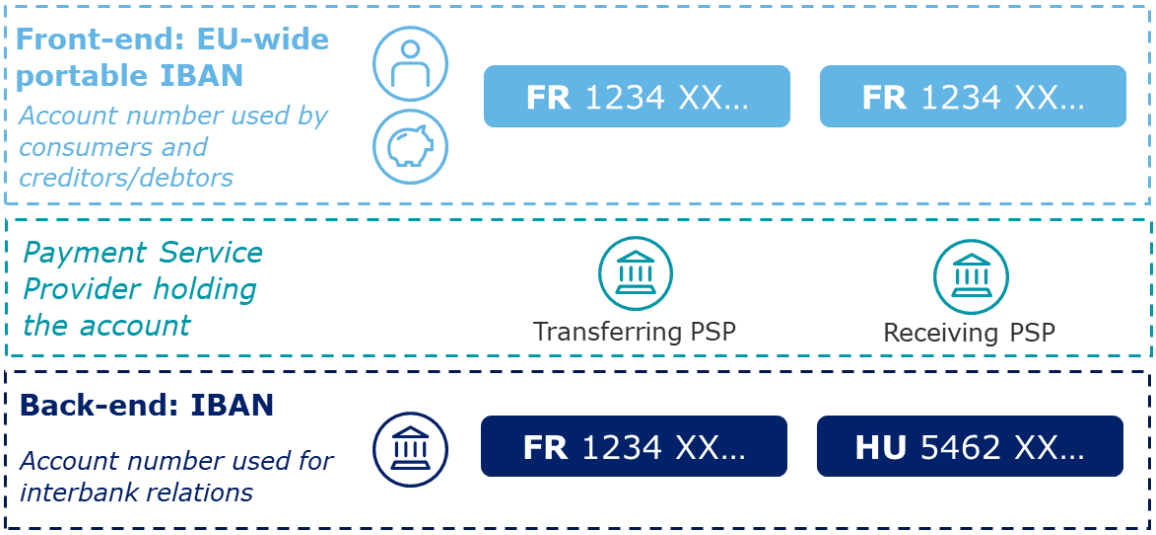
Whenever a PSP receives this notification, it would first inform its customers (i.e. the creditors and debtors), and then register the correct account information in its systems to avoid that a transaction is once again mistakenly addressed to a switched account.

c. Options for ANP (Switching tool 3)

The sections below present the options developed for Switching tool 3 in terms of the option's information flow.

Option 3.1 EU-wide portability of existing IBAN

The first option for ANP would consist of consumers keeping their current IBAN in the front-end, but PSPs using a new IBAN in the back-end. The main features of this option are illustrated in the figure below. Figure 17 - Option 3.1 EU-wide portability of existing IBAN

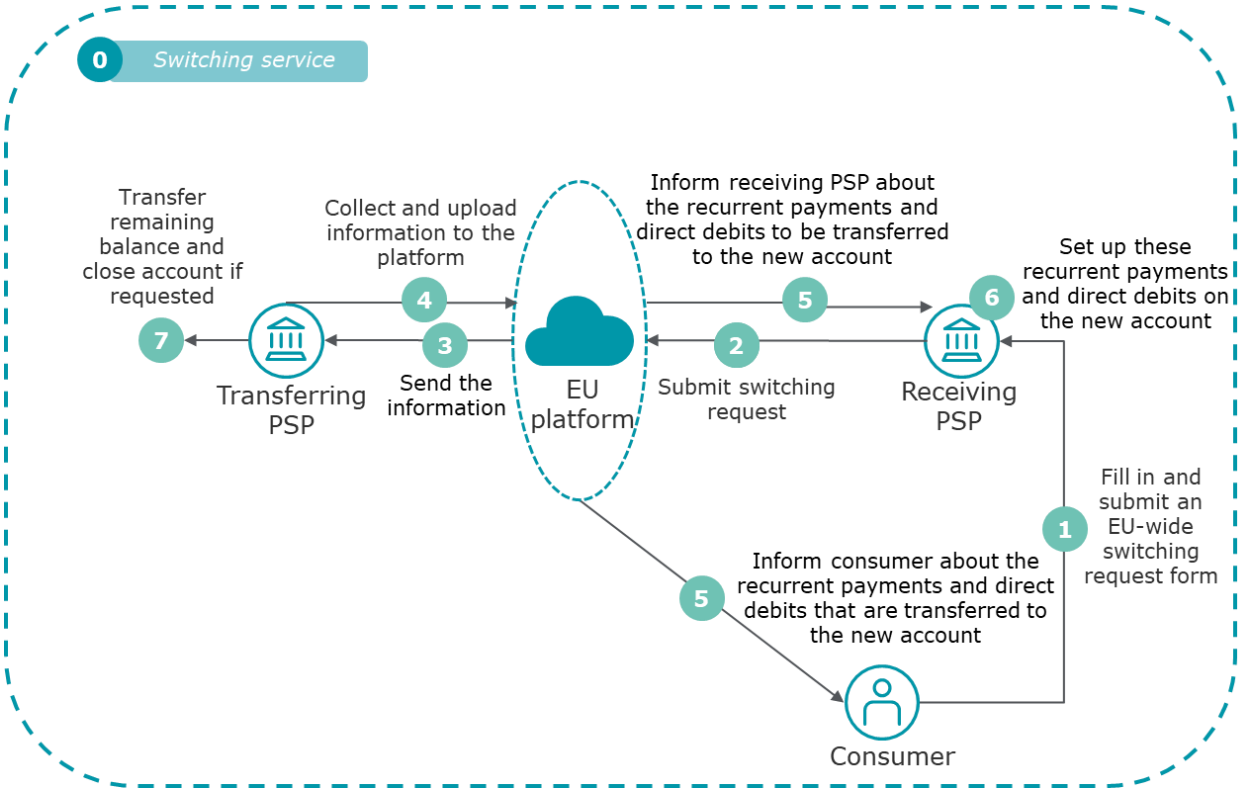


Source: Deloitte

As shown in the above figure, each consumer who would like to switch payment accounts domestically or cross-border could keep their current IBAN in the front-end, but their receiving PSP would allocate a new IBAN in the back-end, which would be used by the PSPs to identify the new account and ensure that the payments go into the right account.

As for the details on the switching service implemented through this option, the information flow and steps would be the same as for option 1.2 described above, with the exception of the notification to creditors/debtors.

Figure 18 - Option 3.1 EU-wide portability of existing IBAN (switching service)

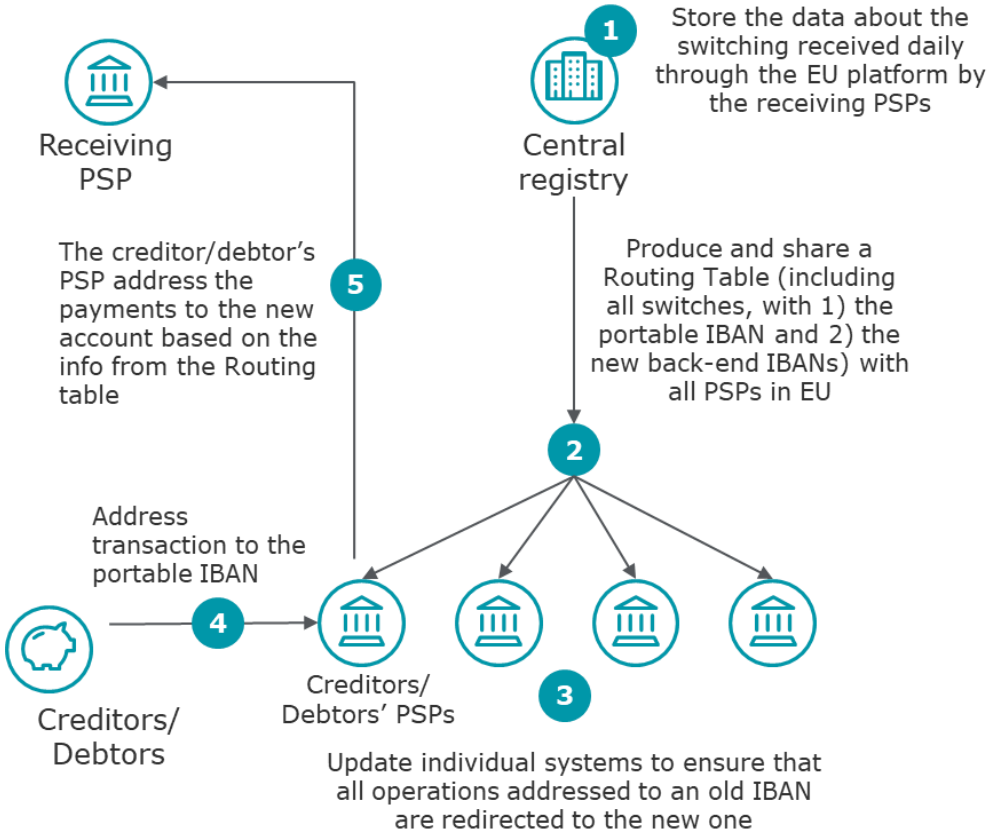


Source: Deloitte

Finally, in order to fully grasp this option, it is important to understand the routing process.

Once the consumers have switched and closed the old account, they still use the same IBAN to make transactions. Therefore, a routing system needs to happen in the back-end, to ensure that transactions go to the right account. The proposed system for routing the transactions is illustrated below.

Figure 19 - Option 3.1 EU-wide portability of existing IBAN (Routing process)



Source: Deloitte

The routing process is explained below.

Step 1

On a daily basis, the Central Registry receives from the PSPs (through the EU platform) the data from all EU switches.

Step 2

The Central Registry produces on a daily basis a Routing Table with front-end portable IBANs and corresponding new back-end IBANs that it shares with all PSPs in the EU in a structure that can be integrated in all PSP systems for routing payments.

Step 3

All PSPs in the EU update their systems to ensure that they take into account the new switches from the last 24 hours. **Step 4**

Creditors and debtors as well as consumers make transactions using their portable IBAN.

Step 5

The payment is automatically directed to the receiving PSP, thanks to the information on the new backend IBAN from the Routing Table, integrated into the PSPs' systems.

Option 3.2 Portable alias on top of IBAN

As part of this second option, consumers would have the option to choose a new or existing alias and would use it to make transactions. This alias would be a portable account identifier in the front-end, but in the back-end, consumers' accounts would still be identified by IBANs following the current IBAN format, as in option 3.1. The alias would be either an existing identifier (e.g. phone number, email address, ID number) or a new identifier (any new alphanumeric string chosen by the consumer). Consumers would receive their alias when they switch, but PSPs could also offer the alias as a service.

Once consumers would have received their alias, whenever they switch, their new account IBAN (back-end identifier) would be linked with this front-end alias in the Central Registry (as in option 3.1). The main features of this option are illustrated in the figure below.

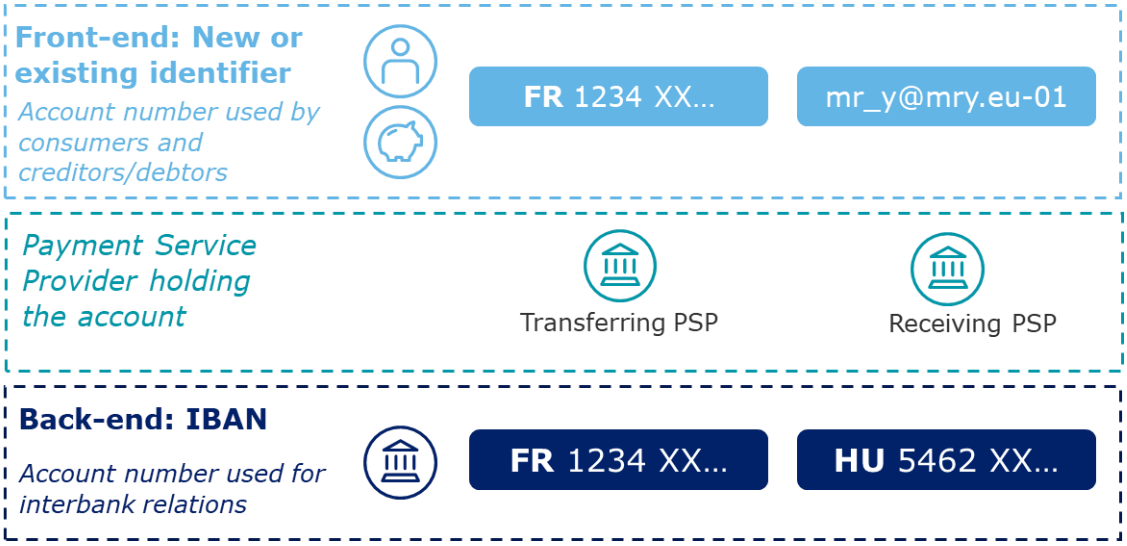


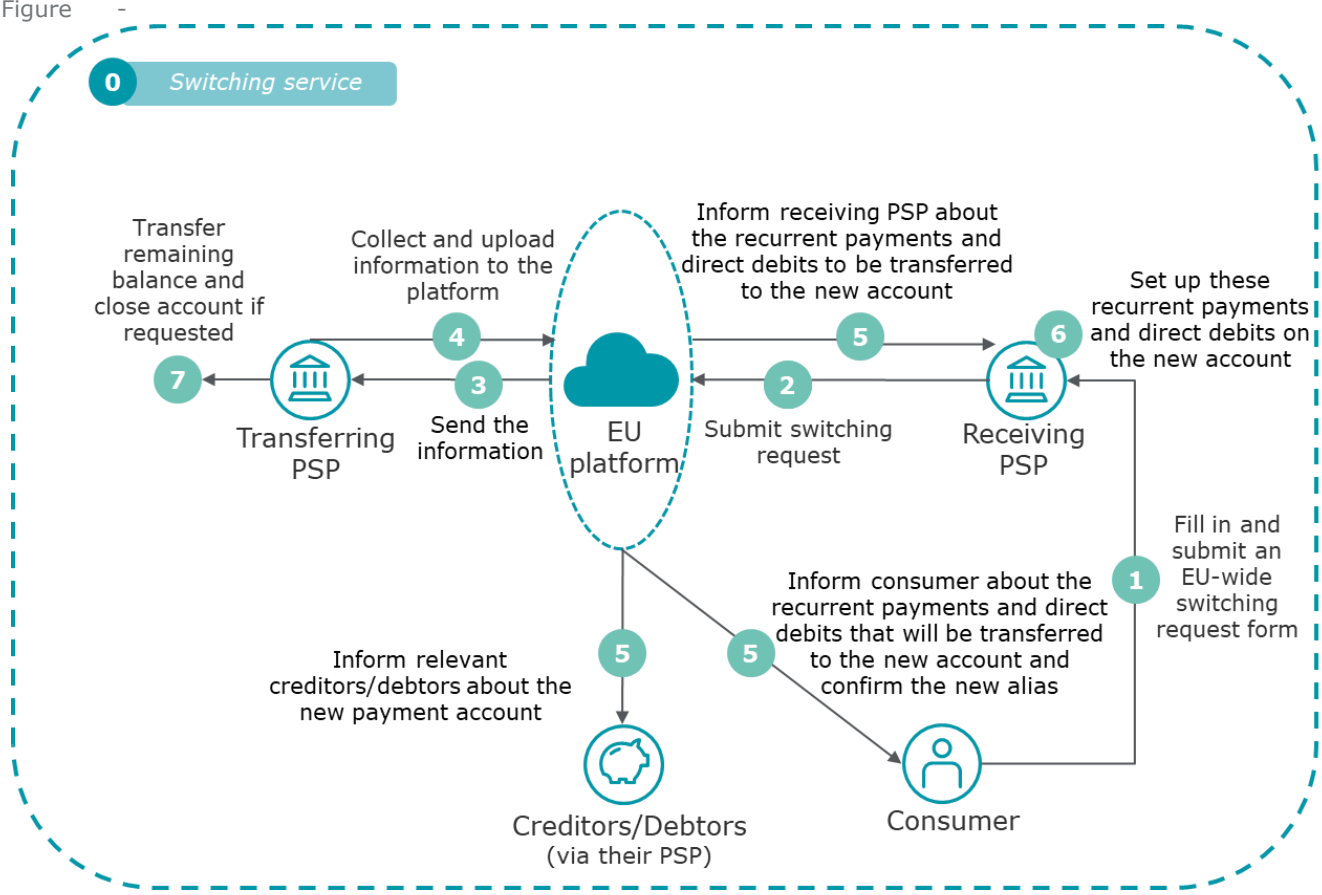
Figure 20 - Option 3.2 Portable alias on top of IBAN

Source: Deloitte

As for the details on the switching service implemented through this option, the information flow and steps would be the same as for option 1.2 described above, including the notification to creditors/debtors (even if it would take place only the first time the consumer would switch).

21 Option 3.2 Portable alias on top of IBAN (switching service)

Figure -

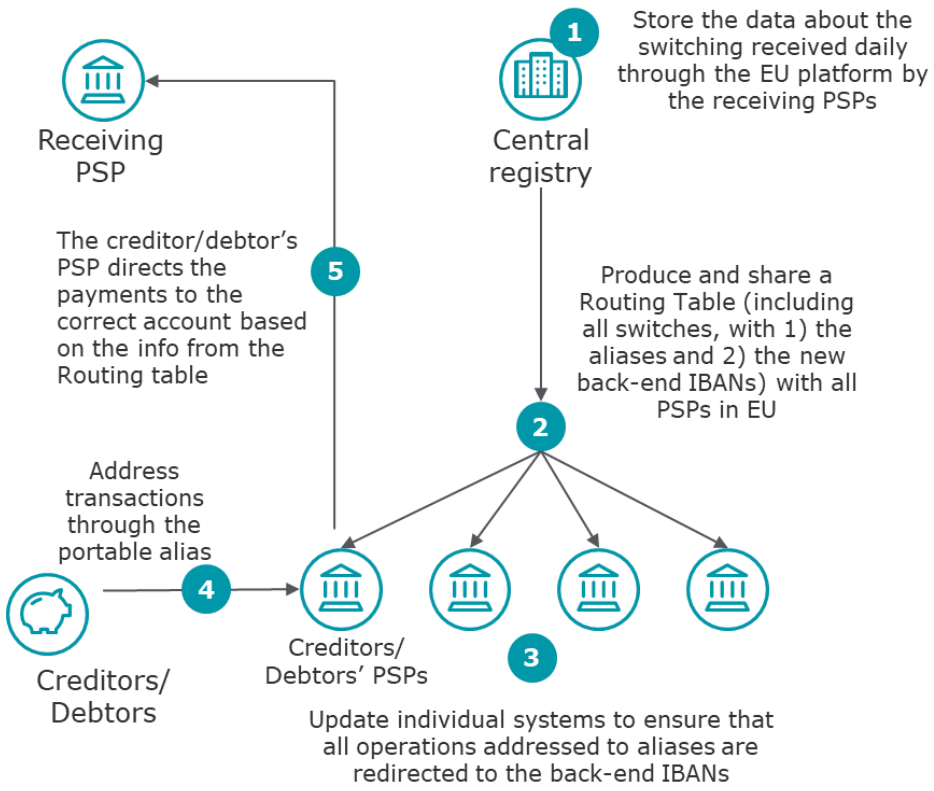


Source: Deloitte

Finally, in order to fully grasp this option, it is important to understand the routing process.

The consumers who have switched and who have an alias would use their portable alias to make transactions. The routing process is similar to option 3.1 because the alias is linked with the back-end IBAN, therefore the creditor/debtor's PSP would direct the payment thanks to the information from the Routing Table shared by the Central Registry. The routing process is illustrated below.

Figure 22 Option 3.2 Portable alias on top of IBAN (routing process)



Source: Deloitte

The routing process is explained below.

Step 1, 2, 3, 4 and 5

As of the moment they switch, consumers who do not have an alias and ask for one would receive a portable alias as part of the switching process, instead of a new IBAN. The next time they would switch, their new account would be linked with the same portable alias.

As seen in the figure above, the rest of the process is the same as in option 3.1 from step 1 to step 3, except that in the Routing Table, instead of the front-end IBAN being linked to the back-end IBAN, it is the alias that is linked to the back-end IBAN.

Regarding step 4 and 5, instead of using the portable IBAN when making transactions, consumers, creditors and debtors would use the alias.

Option 3.3 New portable account number throughout the payment chain (replacing current IBANs)

This third option would entail the development of a new portable identifier replacing IBANs throughout the payment chain, both in the front-end and in the back-end. This would entail that the consumer would keep the same account identifier when switching. The information on the link between the new portable identifier and the current location of the account (current PSP identified through a locator or address such as the Bank Identifier Code (BIC)) would be kept in a Central Registry.

Figure -

The main considerations for this option are illustrated in the figure below.

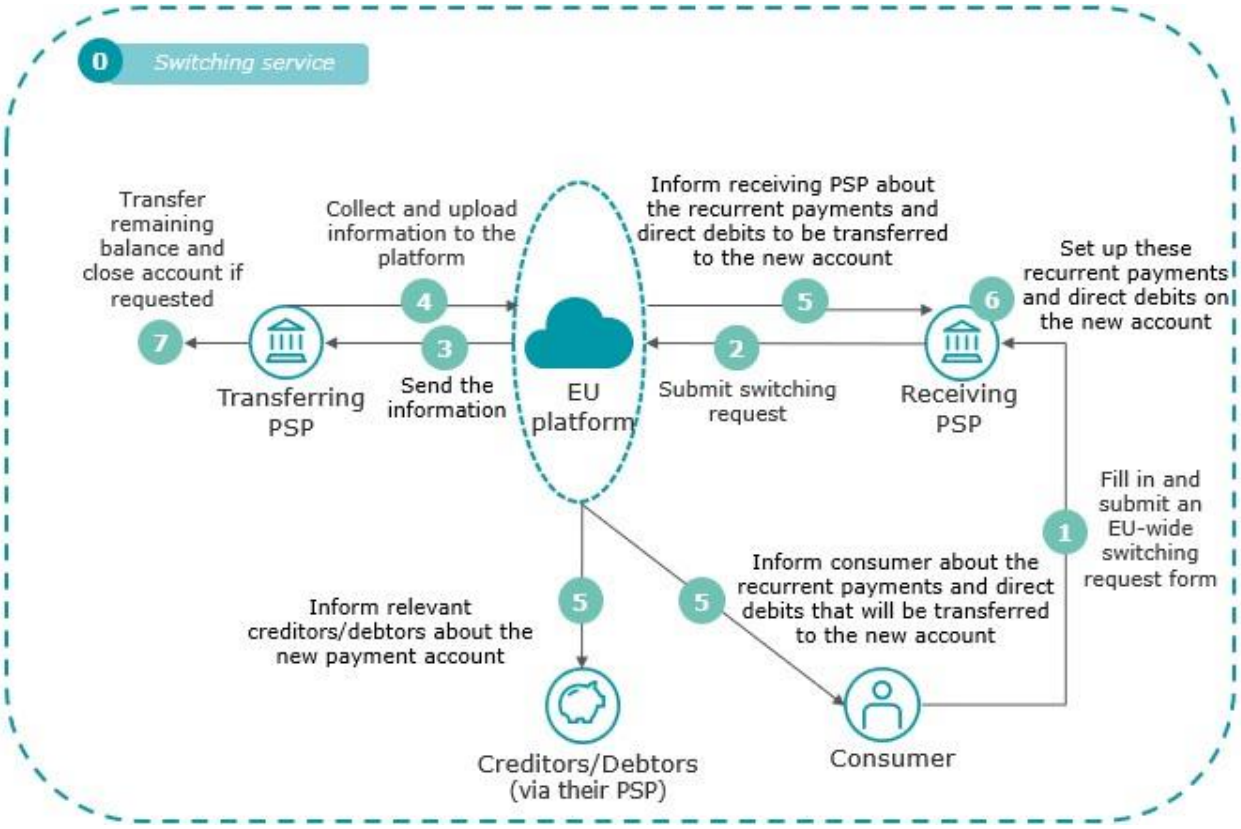
23 New portable account number throughout the payment chain

Source: Deloitte

Under this option, as a starting point, all consumers and corporate, public, etc account holders (not only those who switch) would be attributed a new portable account number.

After all accounts have been migrated, the switching implemented through this option would be the same as the one in option 3.1.

Figure 24 – Option 3.3 New portable account number throughout the payment chain (switching service)

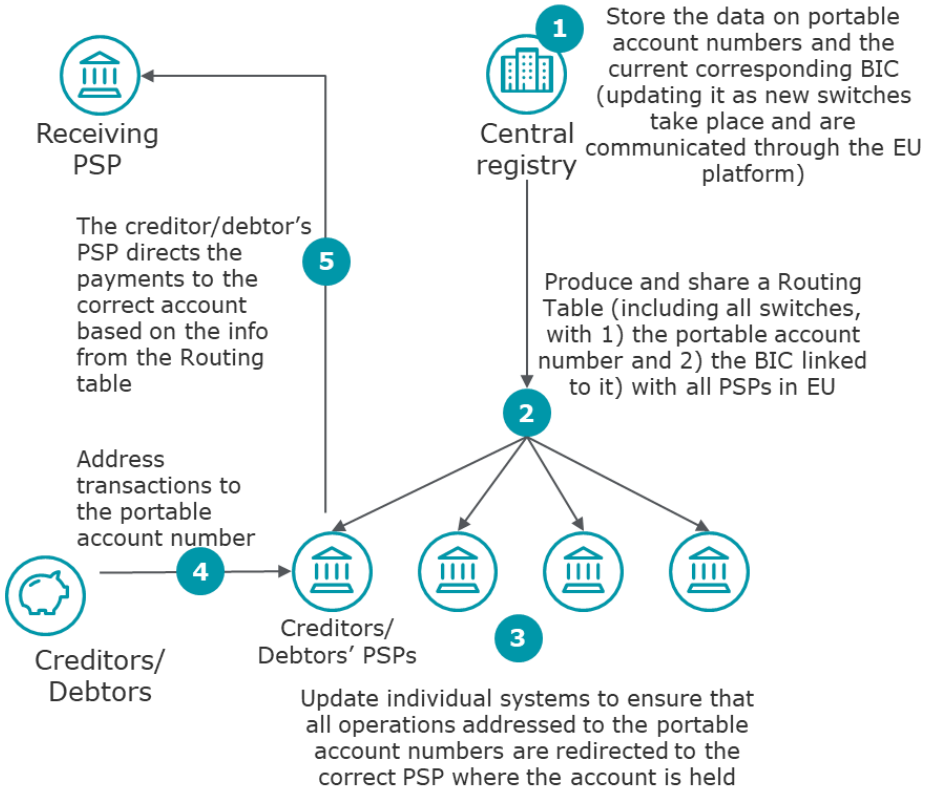


Source: Deloitte

When consumers would choose to switch, they would keep using the same portable account number to make transactions. The back-end routing process would be similar to options 3.1 and 3.2 as PSPs would have upfront information from the Routing Tables, linking the portable account numbers to the accounts' location (in the new PSP). The routing process is illustrated below.

Figure 28 – Option 3.3 New portable account number throughout the payment chain (routing process)

Figure -



Source: Deloitte

Step 1, 2, 3, 4 and 5

As seen in the figure above, the process is the same as in option 3.1 and 3.2 from step 1 to step 3, except that in the Routing Table, instead of the front-end IBAN or alias being linked to the back-end IBAN, it would be the portable account number that would be linked with the right account and the right PSP via a bank address/locator (e.g. the BIC). Regarding steps 4 and 5, instead of using the portable IBAN or the alias when making transactions, consumers, creditors and debtors would use the new portable account number.

Annex F | Problem definition

Methodological note:

The problem tree represents and summarises the links between:

- The trends impacting the switching and opening of accounts in the EU (blue boxes);
- The drivers representing the barriers preventing users to switch and open a payment account abroad (dark blue boxes);
- The main problem to be addressed (green box);
- The effects of the aforementioned problem on the EU (turquoise boxes).

Based on the drivers, problem, and effects identified in the problem tree, an objective tree is developed identifying three levels of objectives:

- General objectives refer to Treaty-based goals and constitute a link with the existing policy setting;
- Specific objectives relate to the specific domain and set out what the Commission wants to achieve with the intervention in detail; and
- Operational objectives concern deliverables or objectives of actions.

As shown in Figure 25, the main trends identified are the mobility of people and capital, the rise of new digital payment schemes and services and the fragmentation of the bank value chain. Those trends contribute to a series of problem drivers that were identified, discussed and agreed during the first participative working session. Most of these aspects were identified in the impact assessment of the PAD and still appear to be valid to varying extents:

- First, there is no system for cross-border switching that allows all EU citizens to switch from one Member State to another[86]. Article 11 provides only basic assistance to consumers for cross-border opening of accounts. Moreover, according to PAD, MSs are required to have a domestic switching system in place but the procedure and requirements are not streamlined across EU countries, and some approaches appear to be more effective and efficient than others. This fragmentation could complicate the set-up of a cross-border switching service as the practices from one country to another are often not interoperable;
- Second, there is insufficient legal certainty especially for consumers and PSPs with regards to crossborder switching and opening of payment accounts. Consumers might not always be aware of their rights and obligations when it comes to opening accounts and switching in another country than their country of residence, which can unease them and prevent them from doing it. Likewise, PSPs can also feel uncertain about their rights and obligations when providing services to consumers residing in other countries, which can lead to their offer being more frequently targeted to local residents. Moreover, although PAD specifies that PSPs should not discriminate against consumers legally residing in the Union, the interpretation of AML-CTF rules and the interpretation and transposition of PAD by some Member States[87][88] can lead to the possibility of some consumers not being able to open an account.

[86] PAD does not contain any cross-border switching provisions. See here: Directive on payment accounts - Factsheet 2 Switching payment accounts, (2013), see here: https://ec.europa.eu/info/sites/info/files/factsheet-2-06052013_en.pdf
[87] For instance the requirement in a few Member States for the consumer to demonstrate a "genuine interest" (Article
[88] PAD)

- Third, the perceived risk of failed payments during and after the switching process discourages consumers from switching[89]. At the time of PAD impact assessment, this aspect was identified as the main obstacle preventing consumers from switching[143]. This is most likely still valid as according to recent studies, the fact that consumers cannot keep their account number is the most important perceived drawback of the account switching service[90], even if the switching process is guaranteed by banks, as required by PAD. Moreover, once the bank informs creditors and debtors (e.g. employers, utility companies, etc.) which are party to a recurrent payment, direct debit or standing order, those still have to implement the change in their own systems and if they are not able to keep up, there is a risk that payments are addressed to the old account and fail, which can negatively impact the consumer.
- Fourth, there appears to be a general lack of awareness among consumers about the possibility of switching payment accounts and opening accounts cross-border. Although the increase of both switching and cross-border opening is not an aim in itself, their existence and the possibility for consumers to use them depends on the availability of information and consumers' awareness of their own right to benefit from these services. In a nutshell, if consumers are not aware of them, they will not be used.
- Finally, in some cases the opening of accounts can entail requirements that limit the possibility of cross-border opening. It is not uncommon that the interpretation of certain legal obligations leads some PSPs to only opening accounts subject to i) a physical presence of the consumer in an agency, ii) a national ID, and iii) the provision of documents and evidence for AML-CFT purposes. Although these can be perceived as simple requirements to comply with by country residents, these requirements can become barriers to the access of non-residents.

Those drivers all lead to the general problem identified, i.e. that opportunities for switching – both crossborder and domestically – and cross border opening of accounts are not fully leveraged by consumers. And this reduces the competitive pressure on banks and other PSPs in the European payment accounts market[91] and results in the fact that consumers do not fully benefit from the single market (as per article 26(2) TFEU).

Figure 25 - Problem tree

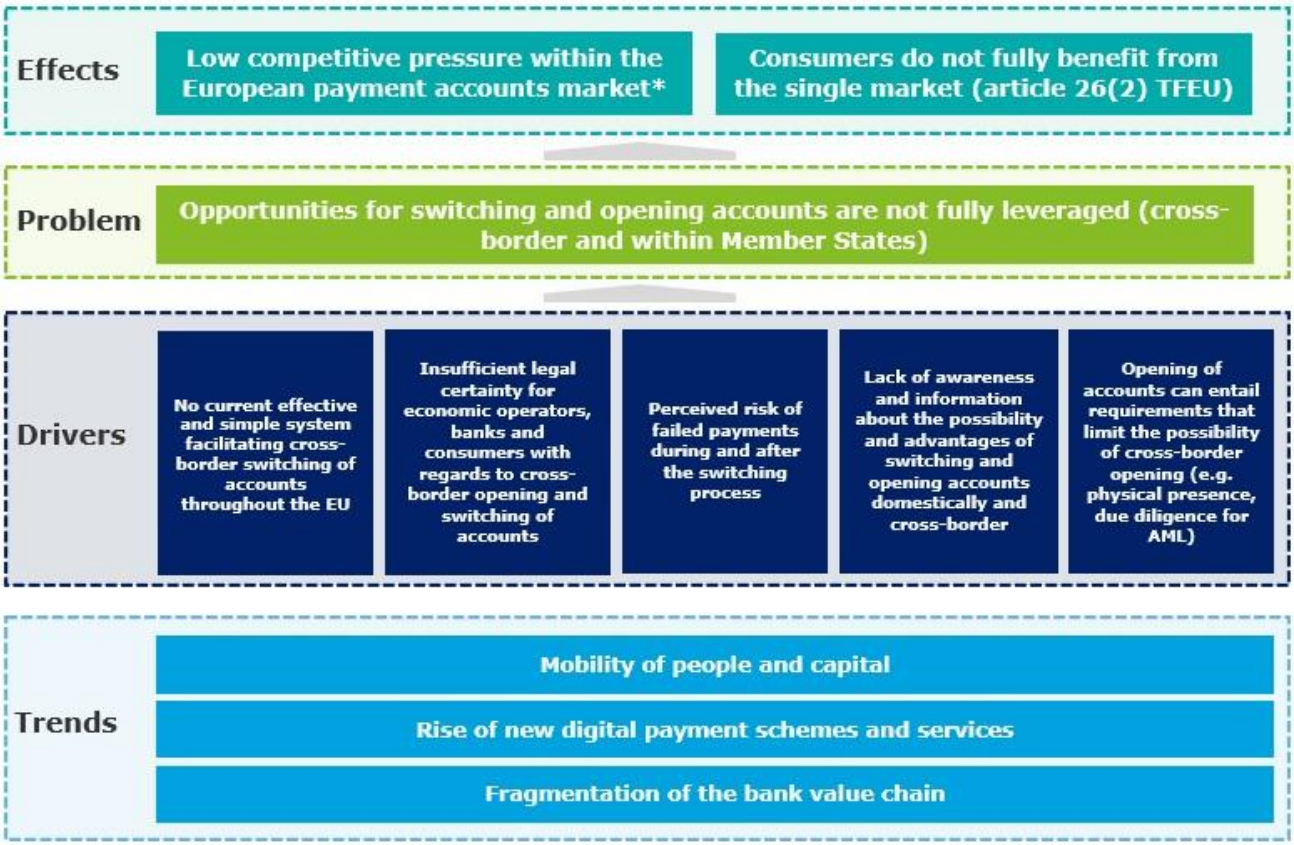
[89] BI-Switch - Applying behavioural insights to encourage consumer switching of financial products - Second Interim Report, including the literature review and the outline of the lab and online experiments, (2019) (not yet available online), p.38. [143]

European Commission, Impact Assessment accompanying the document Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the comparability of fees related to payment accounts, payment account switching and access to payment accounts with basic features, (2013), https://eur-lex.europa.eu/legalcontent/EN/TXT/PDF/?uri=CELEX:52013SC0164&from=en

[90]

[91] Ibid, p.3.

The Netherlands Authority for Consumers and Markets, ANP Switching to another bank without receiving a new account number: a contribution to the new cost-benefit analysis of EU-wide ANP, (2016): https://www.acm.nl/sites/default/files/old_publication/publicaties/15948_account-number-portability-2016.pdf; BISwitch - Applying behavioural insights to encourage consumer switching of financial products - Second Interim Report, including the literature review and the outline of the lab and online experiments, (2019) (not yet available online); Study on EU Payment Accounts Market, European Commission and Deloitte, 2020 (not yet published).



Source: Deloitte

As explained in the box above (i.e. the methodological note), these drivers, problems and effects can be translated into operational, specific and general objectives as presented in Figure 26. This is an important exercise as the objectives defined allow the team to assess the different options in function of their effectiveness (i.e. the extent to which they would achieve the objectives). The assessment of effectiveness, together with the assessment of efficiency, will allow us to identify the best options.

Concretely, based on the problem assessment, in order to foster healthier competition on the European payment accounts market and to achieve the full potential of the single market in this regard, opportunities for switching – both cross-border and domestically – and cross-border opening of payment accounts would have to be fully leveraged. For this, a series of operational objectives must be pursued. The figure below depicts these operational objectives, which mirror the problem drivers described above

Figure 26 – Objective tree

Source: Deloitte

By looking at different options for extending the switching process to the EU level (Switching tool 1), for implementing an automated redirection of payments (Switching tool 2); and for implementing the portability of identifiers (Switching tool 3), this study assesses to what extent these options contribute to the achievement of the operational objectives, thereby supporting the achievement of the specific and general objectives.

Annex G | Note on calculation methods and assumptions

As explained in the report, the efficiency assessment was based on an analysis of the incremental[92] costs and benefits that each option would entail, for each of the stakeholder groups identified (i.e. PSPs, creditors/debtors, micro-enterprises and self-employed, consumers, competent authorities and others). This exercise took into account a number of different cost and benefit categories which were assessed on the basis of data collected via desk research, surveys, interviews and/or expert judgement. The aim of this annex is to provide the building blocks behind the cost and benefit calculations, including the assumptions used. The annex is structured per stakeholder (in alphabetical order) and cost/benefit category.

a. Competent authorities

Population: Competent authorities are the authorities that are primarily responsible for a specific domain or task. Depending on the scope they could be the national competent authorities (27), or a competent authority at EU level.

[92] In other words, the change in costs and benefits as compared to the current (baseline) scenario.

Overview of benefits and costs

Table 20 - Estimation of the incremental costs and benefits for competent authorities (EUR million)

Cost/Benefit description	Stakeholder (born by)	Frequency	PO1.1	PO1.2	PO2.1 (MSlevel)*	PO2.1 (EUlevel)*	PO2.2 (MSlevel)*	PO2.2 (EUlevel)*	PO2.3 (MSlevel)*	PO2.3 (EUlevel)*	PO3.1	PO3.2	PO3.3
Costs for creating templates for communications in all EU languages	Competent authority	OOC	0.10	0.10	-	0.10	-	0.10	-	0.10	-	0.10	0.10
Change management for supervision	Competent authority	OOC	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70
Costs of supervising system changes (options 2.3 & 3.3)	Competent authority	OOC	-	-	-	-	-	-	9.74	3.35	-	-	9.98

Source: Deloitte elaboration

Costs for creating templates for communications in all EU languages

This cost category covers the costs of developing a template to facilitate communications, available in all EU languages. They would mainly support the exchange between national contact points (option 1.1) and communications for account changes between the EU platform and the PSPs and their customers (i.e. the creditors and debtors) (options 1.2, 2.1 (EU level), 2.2 (EU level), 2.3 (EU level), 3.2 and 3.3).

Assumptions and data sources

1. The overall costs to develop the template for standard communications in all EU languages would be EUR 100 000

Based on the study's experts' views, the overall costs to develop a template for standard communications in all EU languages is estimated to an overall figure of EUR 100 000, and is assumed the same to cover the needs of all options.

Change management for supervision

This cost category covers the costs for supervisors to be trained in order to adapt their supervision to the new systems, services and obligations foreseen by each option. Based on our experts' views, the same training costs would be required throughout the options to train the supervisors (the existing training schemes would require small modification to comprise also the necessary information about the redirection or ANP systems, but they would not involve any important additional costs per Member State).

Method of estimation

='cost of change management per national competent authority' x *'27 Member States'*

Assumptions and data sources

1. The overall costs to train the supervisory authority would be EUR 100 000 per Member State

Based on the study's experts' views, the necessary training to ensure the understanding of the implemented option, as well as the roles and responsibilities would cost on average EUR 100 000 per Member State.

Costs of supervising system changes (2.3 and 3.3)

Considering the significant one-off changes brought to the payment system by options 2.3 (creating a central clearing house) and 3.3 (migration of all account numbers to a new portable account number), an additional cost is considered for the first three years of the implementation so competent authorities can clarify questions and oversee the transition[93].

[93] For the options where the implementation is done at cross-border level (option 2.3 at EU level and option 3.3), three years of supervision by one FTE are accounted for by an EU level authority, as well as one year of supervision and support by one FTE by a national competent authority (this FTE year can be spread between the three years).

Method of estimation

='*Average labour costs for an FTE in a national and an EU competent authority'* x *'number of FTEs required at national level per Member State and at EU level'*

Assumptions and data sources

1. The average annual labour costs for an FTE in a national and an EU competent authority is EUR 118 820

The average labour costs for a FTE in a national competent authority is not publicly available. Consequently, the study used the estimated cost of an FTE in financial and insurance services, including 25% to consider overhead costs.

2. The required FTE to supervise system changes depends on the option The

following estimations were retained:

- The implementation of option 2.3 at national level would require one FTE at EU level for one year and three FTEs at national level for one year per Member State
- The implementation of option 2.3 at EU level would require three FTEs at EU level for one year and one FTE at national level for one year per Member State
- The implementation of option 3.3 would require three FTEs at EU level for one year and three FTEs at national level for one year per Member State

b. Consumers[148]

Population: In 2017, the total EU banked population was estimated at 346 751 709 in the EU-27.

To arrive at the total EU banked population, the study team has taken into consideration the proportion of the EU population aged over 15 that was banked in 2017, which is the most recent available data from the World Bank and applied it to the EU population aged over 15 in 2017, to arrive at a total of 346 751 709.

Estimated number of consumers who would switch (nationally or cross-border):

Table 21 - Estimations of the annual switching rates for consumers

[148] The number of payment accounts is not publicly available, only the number of EU-wide cards which is a relatively unreliable figure to estimate the number of payment accounts. Consequently, although there are more payment accounts than consumers and it cannot be considered that the number of consumers would thus be underestimating the switching potential, several aspects should be considered:

- The percentage of consumers with at least one payment account is publicly available, and from a reliable source (The World Bank's Global Findex database);
- Consumers are the ones deciding to switch payment accounts. To consider any evolution in the number of accounts, it would be necessary to have the average number of payment accounts per consumer, the number of consumers and an idea of how many of their accounts they would consider switching. Assuming that a consumer interested in switching would consider switching all his/her accounts is unfounded and would lead to overestimation.
- Although multibanking exists, the fact that free accounts become rarer will likely lead to holding several accounts being less interesting for consumers.

- Historic switching rates – that we use for our estimations – are already based on a ratio of number of accounts switched and number of consumers (banked population). Extrapolating this ratio in the future to assess the number of accounts switched should also base itself on the number of consumers.

Considering the above, we assume that consumers that express interest in switching will switch only one of their accounts at a given point in time. For the calculation of benefits, it will also be assumed that those consumers who will switch will do it only once in their remaining lifetime.

National switching	% Banked population	0.70%	0.70%	1.00%	1.00%
	Total number	2 427 261	2 427 261	3 467 517	3 467 517
Crossborder switching	% Banked population	0.10%	0.20%	0.30%	0.30%
	Total number	346 751	693 503	1 040 255	1 040 255

Source: Deloitte elaboration

Overview of benefits and costs

Table 22 - Estimation of the incremental costs and benefits for consumers (EUR million)

Cost/Benefit description	Stakeholder (born by)	Frequency	PO1.1	PO1.2	PO2.1 (MSlevel)*	PO2.1 (EUlevel)*	PO2.2 (MSlevel)*	PO2.2 (EUlevel)*	PO2.3 (MSlevel)*	PO2.3 (EUlevel)*	PO3.1	PO3.2	PO3.3
Benefits due to spending less time to carry out a switch	Consumers	RB	18.17	18.17	27.25	36.33	27.25	36.33	27.25	36.33	54.50	54.50	54.50
Time related benefits linked to not having to deal with failed payments	Consumers	RB	0.11	0.63	1.89	1.95	2.46	2.69	1.89	1.95	3.32	-	-
Time related costs linked to having to deal with an increased number of failed payments	Consumers	RC	-	-	-	-	-	-	-	-	-	2.24	1.49
Benefits linked to potential savings in account fees for consumers who switch	Consumers	RB	22.36	22.36	51.59	73.95	51.59	73.95	51.59	73.95	96.32	96.32	96.32

Source: Deloitte elaboration

Table 23 - Estimation of the additional incremental costs and benefits for micro-enterprises and self-employed, if the scope is extended to micro-enterprises and self-employed (EUR million)

Cost/Benefit description	Stakeholder (born by)	Frequency	PO1.1	PO1.2	PO2.1 (MSlevel)*	PO2.1 (EUlevel)*	PO2.2 (MSlevel)*	PO2.2 (EUlevel)*	PO2.3 (MSlevel)*	PO2.3 (EUlevel)*	PO3.1	PO3.2	PO3.3
Benefits due to spending less time to carry out a switch	Micro/ self-employed	RB	6.97	6.97	7.75	9.29	7.75	9.29	7.75	9.29	10.06	10.06	10.06
Time related benefits linked to not having to deal with failed payments	Micro/ self-employed	RB	0.09	0.17	0.26	0.32	0.35	0.43	0.26	0.32	0.34	-	-
Time related costs linked to having to deal with an increased number of failed payments	Micro/ self-employed	RC	-	-	-	-	-	-	-	-	-	0.21	0.14

Benefits linked to potential savings in account fees for micro enterprises and self-employed who switch	Micro/ self-employed	RB	1.58	1.58	2.14	2.99	2.14	2.99	2.14	2.99	2.99	2.99	2.99

Source: Deloitte elaboration

Benefits due to spending less time to carry out a switch

By using a switching service, consumers would be less burdened when switching payment accounts because they would not need to inform their creditors/debtors and the bank would fully support them in the switch. The estimation of this benefit is also based on the "value" of people's time and peace of mind.[94]

Method of estimation

='total number of additional switches' x *'time savings as compared to achieving the same result with switching performed directly by the consumer '* x *'value of people's time'*

Assumptions and data sources

1. Only the additional consumers who use the switching service because of the implementation of a specific option/switching tool are considered

As only the consumers who switch would be affected, the total banked population is multiplied by the rate of expected additional switches (domestic and cross-border).

As regards domestic switches, consumers already have access to a switching service at domestic level as part of the baseline. Therefore, the estimated domestic switching rate of the baseline is subtracted from the estimated new domestic switching rate of the specific tool.

As regards cross-border switching, we assume that the switching at cross-border level, currently conducted by consumers themselves by opening a new account and closing the old one (referred to as "manual switching" hereinafter), fully turns into switching through the switching service in the Switching tools 1, 2 and 3. This entails that we do not deduct the baseline cross-border switching rate from the new estimated cross-border switching rate under the options in Switching tools 1, 2 and 3 for the calculation of the time saved for switching.

2. The value of a consumer's time is EUR 10.48 per hour, and we assume that they would need 2.5 hours to achieve, by themselves, the same results as with the switching service

The time needed to carry out the required steps to achieve the same result as through the switching service was estimated at 2.5 hours, leading to an estimate of EUR 26.2 benefits per consumer due to the time saved by using the switching service.

Time related costs/benefits linked to (not) having to deal with an increased number of failed payments

This category can be both a cost or a benefit depending on the option put in place, and is based on the "value" of people's time and peace of mind, how long it takes them to solve a failed payment. It considers the expected increase or decrease in the risks of failed payments, compared to the current level of failed payments, arising from the implementation of the different options[95].

[94] We assume that all switches would take place through the switching service (domestic or cross-border) once this switching service is in place. Consequently, all consumers who choose to switch would benefit from savings linked to the time they would have spent without a switching service.
[95] See the effectiveness assessment detailed in section 5.1

Method of estimation

='switching rate' x *'time to solve a failed payment'* x *'value of people's time'* x *'% increase/decrease of failed payments' x 'number of credit transfers and direct debits that fail due to an account being closed'*

Assumptions and data sources

1. *The number of credit transfers and direct debits that fail due to an account being closed together amounts to 27 352 086 annually.*

Based on data provided by the European Payments Council, in 2019, the number of failed payments due to an account being closed amounted to 0.07% of credit transfers and 0.13% of direct debits. Although all payments that fail because of a closed account are not necessarily linked to a consumer having switched payment accounts, we consider this percentage as the most reliable proxy available and assume this proportion applies to all switches.

The ECB data warehouse provides the number of credit transfers and direct debit payment having taken place in the year 2019 (35 402.1 million and 26 681.0 million respectively), this does not differentiate between the stakeholders involved (B2B or G2B or C2B), which is why the following assumption was made based on expert judgement: 5% of the credit transfers are payments from businesses to customers, and 95% of direct debits are linked to consumers[96].

Finally, these figures cover consumers and micro-enterprises. As it is not possible to reliably differentiate, the split was calculated based on the number of accounts each has (estimated at, on average, 1.5 for consumers and 3 for businesses) and the number of recurrent transactions we assume they carry (10 for consumers and 20 for businesses), multiplied by their respective populations leads to consumers carrying out 81.25% of transactions while micro-enterprises carry out 18.75%, which are rounded to 80% and 20% respectively.

2. *The value of a consumer's time is EUR 10.48 per hour, and we assume it would take them an hour to sort out a failed payment*

The average "worth" of a consumer's time was calculated based on the average net annual wage of a single person without children working full time (2017 EU27 - EUR 21 793.34). This annual wage broken down into an hourly wage (based on a 40 hour week, and 52 weeks – including paid vacation) results in EUR 10.48 per hour.

It is assumed that it takes an hour of a consumer's time to investigate what has gone wrong and solve it.

3. *Only consumers who switch would be impacted*

As only the consumers who switch would be affected, the total banked population is multiplied by the expected switching rate (domestic and cross-border).

4. *The expected effectiveness potential of each option to mitigate the effect of failed payments for consumers (see section 5.1) is translated into a rate of mitigated or additional payment failures*

Figure 27 – Rate of additional or mitigated payment failures based on the potential to achieve the objective of mitigating failed payments

[96] It was also assumed that the ratio of failed payments are the same across the different stakeholder categories.

Potential to achieve the objectives	- - - - -	- - - -	- - -	- -	-	Current situation	+	++	+++	++++	+++++
Failed payments	+100%	+80%	+60%	+40%	+20%	0	-20%	-40%	-60%	-80%	-100%

Source: Deloitte elaboration

Based on the above table and the effectiveness assessment in section 5.1, the potential impact per option is the following:

- Option 1.1: 20% less failed payments
- Option 1.2: 40% less failed payments
- Option 2.1: 80% less failed payments
- Option 2.2: 100% less failed payments
- Option 2.3: 80% less failed payments
- Option 3.1: 100% less failed payments
- Option 3.2: 60% more failed payments
- Option 3.3: 40% more failed payments

Benefits linked to potential savings in account fees for consumers who switch (nationally or cross-border)

These benefits are linked to the savings in account fees for (additional) consumers who switch (nationally and/or cross-border). They arise from switching to a potentially less expensive account (nationally or cross-border).

Method of estimation

='total number of additional switches' x *'50% of consumers who reach savings in fees by switching to another account'* x *'3 years of effective full potential savings due to lower fees'*

Assumptions and data sources

1. Switching with the purpose of getting a better deal and/or being able to achieve this better deal, only represents 50% of the switches, and lower fees are not effective perpetually (we assume full savings only during three years)

Looking for better deals is not always the aim of a switch and consumers are not always able to find the best deal (although thanks to PAD they already have more tools at their disposal to compare payment accounts). In fact, based on the replies from the first survey to consumers, only 50% of respondents identified lower fees as the motivation to switch. Moreover, markets are dynamic, and prices evolve over time (the receiving PSP might increase its prices after some time, and/or the transferring PSP might choose to decrease them). Consequently, although a person who switches an account could ultimately have potential savings throughout his/her life time, we assume that this is not the case, and that potential fee savings decrease as time passes and disappear after three years, but during these three years they achieve them in full.

2. Only consumers who use the switching service because of the implementation of a specific option/switching tool are considered

As only the consumers who switch would be affected, the total banked population is multiplied by the expected additional switches (domestic and cross-border).

As consumers already have access to a switching service at domestic level as part of the baseline, the estimated domestic switching rate of the baseline is subtracted from the estimated new domestic switching rate. The same principle applies for cross-border switching: switching at cross-border through manual switching also delivers savings in account fees (in an assumed 50% of the cases), hence the baseline cross-border switching rate is subtracted from the estimated new cross-border switching rate that applies to the different options.

3. The maximum potential savings for a consumer who switches domestically is EUR 33.06 per year, and for a consumer who switches cross-border is EUR 43.00 per year

The estimation of the maximum potential savings was built on the basis of the fixed fees collected as part of the Study on the Payment Accounts Market[97]. The study included the collection of information on standard and basic accounts for the five largest credit institutions of 16 Member States, including the main services included in those accounts and their fixed fees.

As payment accounts vary between credit institutions and between Member States, the type of account that was used for the calculation was the "standard" payment account, i.e. the payment account offered to the average consumer and most commonly used, as defined in Article2(3) Directive 2014/92/EU (PAD). If an extra fee is required for a debit card, this fee has been added. The study acknowledges that consumers can be charged additional variable fees for their payment account, but these are not a constant factor of the fees required to hold and use a payment account. These depend on each credit institution's practices and the consumer's habits and services used. In order to have a stable fee for which information is available, the fixed fee and the fee for a debit card were the fees considered to build the assumption.

The average potential savings linked to switching domestically in the EU was estimated by:

1. Calculating the average annual fee in the 16 different Member States;
2. Calculating the average savings when switching domestically based on the spread between the average annual fee and the lowest fee available in the 16 different Member States;
3. Multiplying the average savings when switching domestically per Member State by the Member State's estimated banked population to achieve the potential total savings per Member State;
4. Dividing the sum of the total savings per Member State by the sum of the total estimated banked population per Member State (resulting in EUR 33.06 per year).

The table in the following page provides the data used for the calculations.

Figure 28 – Data required to calculate the estimated potential savings linked to switching to the least expensive standard payment account within the same Member State, based on the five largest credit institutions in 16 Member States (EUR)

[97] https://op.europa.eu/en/publication-detail/-/publication/5bec1d2b-65d2-11eb-aeb5-01aa75ed71a1/languageen/format-PDF/source-199923900

Country	Average annual fee (incl. costs for debit card)	Cost of the account with the lowest fee	Average savings when switching domestically[98]	Estimated banked population (2017)	Total savings per country based on the average savings when switching domestically
Belgium	15.60	0.00	15.60	9 293 637	144 980 734.46
Bulgaria	30.00	24.00	6.00	4 404 805	26 428 827.43
Czechia	41.60	32.47	9.13	7 231 414	66 008 344.75
Finland	46.08	0.00	46.08	4 601 867	212 054 024.06
France	86.72	40.00	46.72	51 310 811	2 397 241 110.73
Germany	102.36	58.80	43.56	70 850 011	3 086 226 485.05
Greece	0.00	0.00	0.00	7 877 939	0.00
Hungary	54.29	37.30	16.99	6 278 076	106 677 066.14
Ireland	31.60	18.00	13.60	3 598 986	48 946 209.92
Italy	66.00	24.00	42.00	49 152 606	2 064 409 443.63
Latvia	11.94	0.00	11.94	1 534 347	18 326 237.74
Luxembourg	27.00	13.00	14.00	488 880	6 844 321.07
Netherlands	24.96	18.60	6.36	14 245 410	90 600 810.59
Poland	0.00	0.00	0.00	27 961 991	0.00
Spain	47.20	0.00	47.20	37 035 652	1 748 082 792.25
Sweden	25.74	21.25	4.49	8 214 774	36 917 196.44
Total				**304 081 206**	**10 053 743 604.27**

Source: Deloitte elaboration

As for the average potential savings linked to switching cross-border in the EU, this was estimated by:

1. Calculating the total fees per Member State based on the average annual fee of the Member State multiplied by its estimated banked population;
2. Dividing the sum of the total fees per Member State by the sum of the total estimated banked population (resulting in EUR 60.96);
3. Subtracting the average lowest fee based on the lowest fee in each Member State, EUR 17.96, as consumers would be able to choose amongst the lowest fees in other Member States, although this does not mean that they would always choose the lowest (e.g. because of language barriers, currency preferences) (resulting in EUR 43.00 per year).

[98] The average savings when switching nationally is calculated based on the spread between average annual fee and the lowest fee available.

The table in the following page provides the data used for the calculations.

Figure 29 – Data required to calculate the estimated potential savings linked to switching to the least expensive standard payment account cross-borders, based on the five largest credit institutions in 16 Member States (EUR)

Country	Cost of the account with the lowest fee in EUR	Estimated banked population (2017)	Total fees per country based on the average level of fees in that MS
Belgium	0.00	9 293 637	144 980 734.46
Bulgaria	24.00	4 404 805	132 144 137.14
Czechia	32.47	7 231 414	300 812 349.36
Finland	0.00	4 601 867	212 054 024.06
France	40.00	51 310 811	4 449 673 568.55
Germany	58.80	70 850 011	7 252 207 139.80
Greece	0.00	7 877 939	0.00
Hungary	37.30	6 278 076	340 849 298.20
Ireland	18.00	3 598 986	113 727 958.34
Italy	24.00	49 152 606	3 244 071 982.85
Latvia	0.00	1 534 347	18 326 237.74
Luxembourg	13.00	488 880	13 199 762.07
Netherlands	18.60	14 245 410	355 565 445.35
Poland	0.00	27 961 991	0.00
Spain	0.00	37 035 652	1 748 082 792.25
Sweden	21.25	8 214 774	211 481 153.82
Total		**304 081 206**	**18 537 176 583.97**

Source: Deloitte elaboration

All costs and benefits depicted under the section on "consumers" and their corresponding assumptions are applicable to micro-enterprises and self-employed.

All costs and benefits depicted under consumers and their corresponding assumptions are applicable to micro-enterprises and self-employed.

The main change to the assumptions is linked to the population and to the current level of estimated failed payments (assumption explained under the "Benefits linked to potential savings in account fees for consumers who switch").

Population: Based on Eurostat data, the number of enterprises with 0 to 9 persons employed in the EU was around 20 million[99] in 2017. Under this assessment they are considered as potential users, in the same way as consumers, of the switching tools in case the scope of PAD would be extended to them. Consequently, the cost and benefit categories are the same as for consumers.

Estimated number of micro-enterprises and self-employed who would switch (nationally or cross-border):

Table 24 - Estimations of the annual switching rates for micro-enterprises and self-employed

		Baseline	EU-wide switching service	Automated redirection	ANP
National switching	% Banked population	0.058%	0.116%	0.166%	0.166%
	Total number	11 600	23 200	33 143	33 143
Cross-border switching	% Banked population	0.017%	0.033%	0.050%	0.050%
	Total number	3 300	6 600	9 900	9 900

Source: Deloitte elaboration

c. Creditors/Debtors

Population: As mentioned in chapter 4 on the description of the options, in the context of this study, the term creditors/debtors refers to all third parties with whom consumers may have recurrent payments, direct debits or standing orders (e.g. economic operators – such as utility companies, their employers, tax institutions, other consumers, etc.).

As it is not possible to define a reliable estimation of this population, this study resorts to a direct estimation of the number of recurrent transactions to develop estimations linked to the costs and benefits of creditors and debtors, rather than an estimation of the total creditor/debtor population and an average number of their transactions. The only exception is the one-off costs required to adapt the IT systems to recognise the alias, which considers only part of the creditor/debtor population.

[99] Eurostat, 2017 data for EU27 (without the UK), https://ec.europa.eu/eurostat/databrowser/view/sbs_sc_sca_r2/

Overview of benefits and costs

Table 25 - Estimation of the incremental costs and benefits for creditors/debtors (EUR million)

Cost/Benefit description	Stakeholder (born by)	Frequency	PO1.1	PO1.2	PO2.1 (MSlevel)*	PO2.1 (EUlevel)*	PO2.2 (MSlevel)*	PO2.2 (EUlevel)*	PO2.3 (MSlevel)*	PO2.3 (EUlevel)*	PO3.1	PO3.2	PO3.3
IT adaptation costs to recognise and support new account identifiers (option 3.2)	Creditors/ Debtors	OOC	-	-	-	-	-	-	-	-	-	23.99	-
Costs of updating all customers' account identifiers (option 3.3)	Creditors/ Debtors	OOC	-	-	-	-	-	-	-	-	-	-	12 730.28
Personnel costs linked to implementing account changes after a switch	Creditors/ Debtors	RC	6.75	6.75	20.26	33.77	20.26	33.77	20.26	33.77	-	33.77	-
Benefits from savings in personnel costs linked to implementing account changes after a switch	Creditors/ Debtors	RB	-	-	-	-	-	-	-	-	87.81	-	87.81

Source: Deloitte elaboration

Table 26 - Estimation of the additional incremental costs and benefits for creditors/debtors, if the scope is extended to micro-enterprises and self-employed (EUR million)

Cost/Benefit description	Stakeholder (born by)	Frequency	PO1.1	PO1.2	PO2.1 (MSlevel)*	PO2.1 (EUlevel)*	PO2.2 (MSlevel)*	PO2.2 (EUlevel)*	PO2.3 (MSlevel)*	PO2.3 (EUlevel)*	PO3.1	PO3.2	PO3.3
Personnel costs linked to implementing account changes after a switch	Creditors/ Debtors	RC	0.58	0.58	0.84	1.10	0.84	1.10	0.84	1.10	-	1.10	-

Benefits in savings in personnel costs linked to implementing account changes after a switch	Creditors/ Debtors	RB	-	-	-	-	-	-	-	-	1.68	-	1.68

Source: Deloitte elaboration

IT adaptation costs to recognise and support new account identifiers (option 3.2)

This category covers the one-off costs for creditors/debtors to implement changes in their bookkeeping systems and administrative client relation systems for them to be able to support aliases (option 3.2). All other options maintain the traditional IBAN structures.

Method of estimation

='cost for updating an ERP system' x *'number of businesses large enough to have a 'perpetual license' ERP'*

Assumptions and data sources

1. *Most companies resort to software as a service or external providers for services linked to accounting and payroll, and would not have to take on (significant) costs*

2. *Only larger companies have/invest on a 'perpetual license' type of ERP*

We assume such costly systems are more often used by large companies while smaller ones use other service providers or applications because their needs are less sophisticated. Consequently, we assume that from the approximately 22 million businesses in the EU, only those that have at least more than 500 employees (i.e. 2 272 companies[100]).

3. *The cost for an update of a 'perpetual license' ERP would be EUR 10 560 per company*

Based on expert opinion, the cost of implementing an update to a 'perpetual license' type of ERP would be of approximately EUR 10 560 per company.

Costs of updating all customers' account identifiers (option 3.3)

As part of option 3.3, everyone (including businesses and public bodies[101]) would have to initially change their account number to the portable account identifier, and the creditors/debtors would need to update their account information accordingly.

Method of estimation

=((*'total banked population'* x *'average number of recurrent transactions a consumer has')* + *('total number of businesses' x '2 payment accounts' x 'average number of recurrent transactions'))* x *'Average hourly labour costs for FTE in administrative and support service activities' x 'time effort to process a change in customer account information'*

Assumptions and data sources

1. *All the banked population (346 751 709) and businesses (22 234 234) would receive a new payment account number*

2. *On average, the banked population has, on average, 1.5 accounts and businesses have three*

3. *On average, consumers have 10 recurrent payments and businesses have 20*

[100] CEPS on behalf of the European Commission (DG FISMA), Study on the Non-Financial Reporting Directive.
[101] It has proven difficult to identify the exact number of administrations in each Member State. In the calculations, it was decided not to include them since their number was negligible in comparison with the number of businesses.

According to a report issued by the Independent Commission on Banking in the UK, the average amount of direct debits per current account in the UK in 2011 was 7. No other estimates for this figure were found. Moreover, to account for standing orders, 3 additional transactions have been added.

This figure was assumed as double (per account) for businesses.

The use of recurrent payments allowed the estimation of the total number of updates that would need to be done by creditors/debtors, once multiplied by the estimated number of accounts per consumer.

4. The average hourly labour costs for a FTE in administrative and support service activities is EUR 23.375

Based on Eurostat data, the average hourly labour costs for a FTE in in administrative and support service activities was of EUR 18.7 in 2017 (EU27 considering the UK's withdrawal). To this figure the study has added a 25% to consider overhead costs.

5. The amount of time effort to implement the switch by PSP personnel would be 0.08 hours

It was estimated that the average time needed to update the account registered in the system would be 5 minutes, i.e. 0.08 hours.

Personnel costs linked to implementing account changes after a switch

This cost category covers the costs in personnel for creditors/debtors to implement the account change of the consumers who switch in their bookkeeping. Today, creditors/debtors already have to conduct such tasks, so the current switching rate needs to be subtracted in order to only consider the expected evolution of the switching demand brought by the different options. Since option 3.2 still requires the update of consumer account numbers when they switch to an alias, this cost category would equally apply for this option – to the extent that current switching rates are expected to increase.

Method of estimation

='total number of additional switches linked to the option' x *'number of recurrent payments'* x *'Average hourly labour costs for FTE in administrative and support service activities' x 'time effort to process a change in customer account information'*

Assumptions and data sources

1. Only the additional number of consumers switching because of the implementation of a specific option/switching tool are considered

Creditors/debtors already had to update the account number of their customers when they switched (both domestically and cross-border), so this would not change for the number of consumers who would have switched if the baseline situation would have remained.

Consumers already have access to a switching service at domestic level as part of the baseline

Consequently, only the additional consumers who switch due to the implementation of one of the options would be affected, so the estimated domestic and cross-border switches of the baseline are subtracted from the estimations.

2. On average, consumers have 10 recurrent payments

3. The average hourly labour costs for a FTE in administrative and support service activities is EUR 23.375

Based on Eurostat data, the average hourly labour costs for a FTE in in administrative and support service activities was of EUR 18.7 in 2017 (EU27 considering the UK's withdrawal). To this figure the study has added a 25% to consider overhead costs.

4. The amount of time effort to implement the switch by creditor/debtor administrative personnel would be 0.08 hours

It was estimated that the time needed for to update the account registered in the system would be 5 minutes, i.e. 0.08 hours.

Cost applicable to micro-enterprises and self-employed

The main change to the above assumptions would be that, on average, micro-enterprises and selfemployed have 20 recurrent payments.

Benefits from savings in personnel costs linked to implementing account changes after a switch

This benefit category represents the savings of creditors/debtors because of not having to implement an account change if their customers decide to switch. This category is relevant for options 3.1 and 3.3 as the account numbers of consumers would be immediately portable when they switch. It is not for option 3.2, since it is assumed that the alias is provided at the time of the first switch, and that no subsequent switch occurs.

Method of estimation

='total number of additional switches linked to the option' x *'number of recurrent payments'* x *'Average hourly labour costs for FTE in administrative and support service activities' x 'time effort to process a change in customer account information'*

Assumptions and data sources

1. Only the additional number of consumers switching because of the implementation of a specific option/switching tool are considered

Creditors/debtors already had to update the account number of their customers when they switched (both domestically and cross-border), so this would not change for the number of consumers who would have switched if the baseline situation would have remained.

2. On average, consumers have 10 recurrent payments

3. The average hourly labour costs for a FTE in administrative and support service activities is EUR 23.375

See above.

4. The amount of time effort to implement the switch by creditor/debtor administrative personnel would be 0.08 hours

Benefit applicable to micro-enterprises and self-employed

The main change to the assumptions above would be that, on average, micro-enterprises and selfemployed have 20 recurrent payments.

See above.

d. PSPs

Population: 5 698 credits institutions were active in the EU-27 in 2018[157]. Although PSPs include different types of institutions[158], reliable information on the other types of institutions was not available which is why only the number of credit institutions is considered for the estimated number of PSPs.

Moreover, the study team has differentiated the PSPs between larger ones (assumed at 115[159]) and smaller ones (5 583) as the costs they incur are expected to be very different[160].

157 6088 credit institutions in the EU-28, minus 390 credit institutions in the UK. European Banking Federation: https://www.ebf.eu/facts-and-figures/statistical-annex/?lang=en 158 The PAD definition of Directive 2007/64/EC7 of PSPs includes a wide range of actors, namely: (a) credit institutions, (b) electronic money institutions, (c) post office giro institutions which are entitled under national law to provide payment services, (d) payment institutions, (e) the European Central Bank and national central bank when not acting in their capacity as monetary authority or other public authorities, (f) Member States or their regional or local authorities when not acting in their capacity as public authorities. 159 European Central Bank, List of supervised entities, cut-off date 1 January 2021. For more information, see: https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.listofsupervisedentities202102.en.pdf?d44578f617b9cb1931e643c1522e28d3 160 Part of the smaller institutions work together as a network in order to share costs and make savings (e.g. Germany's Savings Banks), which would represent a third category that could be differentiated in the context of the cost calculation. However, the data available does not allow to make a reliable estimate so this distinction has not been made in this study.

Overview of benefits and costs

Table 27 - Estimation of the incremental costs and benefits for PSPs (EUR million)

Cost/Benefit description	Stakeholder (born by)	Frequency	PO1.1	PO1.2	PO2.1 (MSlevel)*	PO2.1 (EUlevel)*	PO2.2 (MSlevel)*	PO2.2 (EUlevel)*	PO2.3 (MSlevel)*	PO2.3 (EUlevel)*	PO3.1	PO3.2	PO3.3
Costs of updating all customers' account identifiers (option 3.3)	PSPs	OOC	-	-	-	-	-	-	-	-	-	-	95.61
Costs of adapting the IT infrastructure	PSPs	OOC	544.97	544.97	3 429.27	3 487.80	726.63	726.63	726.63	726.63	5 427.49	5 427.49	4 369.42
Cost for change management	PSPs	OOC	290.65	290.65	571.55	581.30	326.98	326.98	326.98	326.98	1 879.47	1 879.47	1 879.47
Personnel costs to offer the services foreseen in the policy options	PSPs	RC	41.60	41.60	62.40	124.79	62.40	124.79	62.40	124.79	118.85	124.79	118.85
Personnel costs to notify creditors/debtors of the new EU-wide payment account number (option 3.3)	PSPs	OOC	-	-	-	-	-	-	-	-	-	-	3 267.66
Operational costs	PSPs	RC	108.99	108.99	685.85	697.56	145.33	145.33	145.33	145.33	1 085.50	1 085.50	873.88

Source: Deloitte elaboration

Cost/Benefit description	Stakeholder (born by)	Frequency	PO1.1	PO1.2	PO2.1 (MSlevel)*	PO2.1 (EUlevel)*	PO2.2 (MSlevel)*	PO2.2 (EUlevel)*	PO2.3 (MSlevel)*	PO2.3 (EUlevel)*	PO3.1	PO3.2	PO3.3
Personnel costs to offer the services foreseen in the policy options	PSPs	RC	2.55	2.55	3.79	4.54	3.79	4.54	3.79	4.54	1.61	3.22	1.80

Table 28 - Estimation of the additional incremental costs and benefits for PSPs, if the scope is extended to micro-enterprises and self-employed (EUR million)

Source: Deloitte elaboration

Costs of updating all customers account identifiers (option 3.3)

As part of option 3.3, everyone (including businesses and public bodies) would have to initially change their account number to the portable account identifier, and the PSPs would need to update their account information.

Method of estimation

='Costs of adapting IT infrastructure to manage new EU accounts and the interface with the central repository' x *'2.5%'*

Assumptions and data sources

1. The costs of adapting the IT infrastructure to manage new EU accounts and the interface with the central repository is EUR 3 765 923 000

Based on expert knowledge, this process could be automated and the cost would be a fraction of the cost of updating IT systems to manage the new EU wide identifiers and the interface with the central repository (so excluding the IT costs for the switching services), i.e. EUR 3 487 800 000 linked to the IT costs to cover the requirements to allow exchanges of data with the central registry and an additional EUR 336 650 000 for PSPs to fully adapt to and allow ANP.

2. The cost would be 2.5% of that of adapting the IT systems

Based on expert knowledge, this process is foreseen to be automated and the cost would be between 1 to 5% of the cost of adapting the IT systems. For this assumption, the study retained 2.5%.

Costs of adapting the IT infrastructure

This category represents the one-off costs for PSPs to adapt their IT infrastructure in order to offer the services foreseen in each policy option.

Method of estimation

= ('Cost to adapt the IT for an individual large PSP' x '0.5 because of synergies' x 'Number of large PSPs') + ('Cost to adapt the IT for an individual large PSP' x '0.5 because of synergies' x '0.5 because of smaller size of the PSP' x 'Number of smaller PSPs')

Assumptions and data sources

1. The cost to adapt the IT infrastructure for an individual large PSP per option

As costs for such infrastructures were not available, the study team had to rely on estimations provided by stakeholders responding to the second survey. However, an expert in the area of IT architecture in the banking sector was also used as a sounding board, providing expertise to validate, to the extent possible, the retained estimates. The retained estimations per policy option were the following:

- Options 1.1[102] and 1.2: EUR 375 000 for a large PSP;
- Option 2.1 (domestic and cross-border): EUR 2.4 million for a large PSP;
- Option 2.2 (domestic and cross-border): EUR 500 000 for a large PSP;

[102] Although we assume that, for the decentralised implementation, some of the 13 Member States (with an existing national central switching system) could already have similar procedures/IT infrastructure, it is unknown whether they

- Option 2.3 (domestic and cross-border): this option is considered to entail similar costs as option 2.2 even if the solutions are different, since the differences broadly cancel each other out. While option 2.3 would need to ensure a connection with the clearing house, it would not need to keep track in the PSPs' systems of the new IBANs of their former clients in order to be able to fill in the new error messages as is the case in option 2.2;
- Options 3.1 and 3.2: EUR 375 000 per large PSP linked to the switching system, EUR 2.4 million linked to the requirements of the central registry (which would keep the information allowing the routing of payments), and an additional EUR 1 million per large PSP to fully adapt to and allow ANP.
- Option 3.3: the same as Options 3.1 and 3.2, with the exception that, based on our experts' opinion, the additional cost per large PSP to fully adapt to and allow ANP would be five times less expensive than EUR 1 million, as the identifier would follow the IBAN format with an "EU" country code. In fact, this option would not fundamentally change how PSPs function in this regard, and the costs for PSPs to adapt would be lower than for options 3.1 and 3.2, as the system would be similar as the one today with the BIC. This option would consequently involve less burdensome changes for PSPs in spite of the need to initially renumber all EU payment accounts.

2. The implementation of the IT changes by all PSPs allow synergies and allow the overall cost to be divided in two (multiplied by 0.5)

Given that the estimate provided for the costs was for a large bank to implement such a change in isolation, while such a change would have to be done by all PSPs allowing synergies, the study's expert in the area of IT architecture in the banking sector deemed it more appropriate to divide this cost by two to account for the synergies.

3. A smaller PSP would have half the costs (multiplied by 0.5) than a large PSP

Given that the estimate provided for the costs was for a large PSP, the study's expert in the area of IT architecture in the banking sector deemed it more appropriate to divide this cost by two for smaller PSPs. *4. The Netherlands already has a national redirection system in place for option 2.1 (national level)*

The Netherlands already has a redirection system in place that has inspired option 2.1. Consequently, the costs for setting up a central registry and the subsequent costs for PSPs in the case of a national implementation have only been calculated for 26 Member States and their respective PSPs (i.e. 6% of large PSPs – 7 credit institutions – and 1.5% of smaller PSPs – 87 credit institutions, which represent the Dutch PSPs, were excluded when calculating this cost).

Cost for change management

This category represents the one-off costs for change management for PSPs, which include the costs to develop new procedures, information tools, trainings, etc. to adapt to the new system proposed by each option.

would be in line with the needs of option 1.1 and how many PSPs have them. Consequently, we assume all PSPs require IT infrastructure changes and the costs are thus the same as option 1.2.

Method of estimation

= ('Cost for change management for an individual large PSP' x '0.5 because of synergies' x 'Number of large PSPs') + ('Cost for change management for an individual large PSP' x '0.5 because of synergies' x '0.5 because of smaller size of the PSP' x 'Number of smaller PSPs')

Assumptions and data sources

1. The cost for change management for an individual large PSP per option

These costs were not available and the study team had to rely on estimations provided by stakeholders responding to the second survey. However, the team used expert judgment to validate the retained estimates. The retained estimations per policy option were the following:

- Options 1.1 and 1.2: EUR 200 000 for a large PSP;
- Option 2.1 (domestic and cross-border): EUR 400 000 for a large PSP; Options 2.2 and 2.3 (domestic and cross-border): EUR 225 000 for a large PSP; Options 3.1, 3.2 and 3.3: EUR 700 000 for a large PSP.

2. A smaller PSP would have half the costs (multiplied by 0.5) than a large PSP

Given that the estimate provided for the costs was for a large PSP, the study's expert in the area of IT architecture in the banking sector deemed it more appropriate to divide this cost by two for smaller PSPs.

3. The implementation of the IT changes by all PSPs allow synergies and allow the overall cost to be divided in two (multiplied by 0.5)

Given that the estimate provided for the costs was for a large bank to implement such a change in isolation, while such a change would have to be done by all PSPs allowing synergies, the study's expert in the area of IT architecture in the banking sector deemed it more appropriate to divide this cost by two to account for the synergies.

4. The Netherlands already has a national redirection system in place for option 2.1 (national level)

The Netherlands already has a redirection system in place that has inspired option 2.1. Consequently, the costs for setting up a central registry and the subsequent costs for PSPs in the case of a national implementation have only been calculated for 26 Member States and their respective PSPs (i.e. 6% of large PSPs – 7 credit institutions – and 1.5% of smaller PSPs – 87 credit institutions, which represent the Dutch PSPs, were excluded when calculating this cost).

- **Personnel costs to offer the services foreseen in the policy options**

This cost category refers to labour costs for PSPs to provide the service foreseen in each policy option.

Method of estimation

='total number of additional switches' x *'Average hourly labour costs for FTE in financial and insurance services'* x *'time effort to implement the switch by PSP personnel'*

Assumptions and data sources

1. Only the additional consumers who use the switching service because of the implementation of a specific option/switching tool are considered

As this cost would only affect PSPs when consumers use the switching service, the banked population is multiplied by the expected number of additional switches (domestic and cross-border).

As regards domestic switches, consumers already have access to a switching service at domestic level as part of the baseline. Therefore, the estimated domestic switching rate of the baseline is subtracted from the estimated new domestic switching rate of the specific tool.

As regards cross-border switching, we assume that the manual switching at cross-border level fully turns into switching through the switching service in the Switching tools 1, 2 and 3. This entails that we do not deduct the baseline cross-border switching rate from the new estimated cross-border switching rate under the options in Switching tools 1, 2 and 3 for the calculation of the costs to offer the services foreseen in these options.

2. The average hourly labour costs for a FTE in financial and insurance services is EUR 57.13

Based on Eurostat data, the average hourly labour costs for a FTE in financial and insurance services was of EUR 45.7 in 2017 (EU27 considering the UK's withdrawal). To this figure the study has added a 25% to consider overhead costs.

3. The amount of time effort to implement the switch by PSP personnel would vary depending on the options

This estimation includes the time effort for both the transferring and receiving PSPs to process the switch (on average 30 minutes each, so 1h of work in total), and for the creditors/debtors' PSPs to notify their customers (the relevant creditors/debtors who have recurrent transactions with the consumer who has switched) of the new account number (3 minutes per account on average, or 30 minutes for 10 accounts). These estimations are applicable for all options under Switching tool 1 and 2, and for option 3.2 (as there would need to be a first change in account identifier to be notified to and recorded by creditors/debtors).

For options 3.1 and 3.3, only the estimations for the time effort for both the transferring and receiving PSPs to process the switch would be applicable. The 3 additional minutes for the creditors/debtors' PSPs to notify their customers would not be relevant as the account number would remain the same.

Cost applicable to micro-enterprises and self-employed

The main change to the assumptions for consumers would be the number of switches (based on the estimates for self-employed and micro-enterprises), and that the necessary time efforts linked to creditors/debtors' PSPs notifying their customers of the account change would be twice as high as for a consumer as we assume they have twice the number of recurrent transactions as consumers.

- **Personnel costs to notify creditors/debtors of the new EU-wide payment account number (option 3.3)**

For option 3.3 all accounts in the EU would initially need to be updated. This cost category refers to labour costs for the creditors/debtors' PSPs to notify their customers of the new EU-wide portable account number which would change once, assuming such an exercise would be done manually by the creditors/debtors[103].

Method of estimation

=((*'total banked population'* x *'average number of recurrent transactions a consumer has')* + *('total number of businesses and public bodies' x '2 payment accounts' x 'average number of recurrent transactions'))* x

[103] See "Costs of updating all customers' account identifier" under creditors/debtors.

'Average hourly labour costs for FTE in financial and insurance services' x *'time effort to notify creditors/debtors of a new account'*

Assumptions and data sources

1. All the banked population (346 751 709) and businesses (22 234 234) and public bodies would receive a new payment account number

2. On average, the banked population has, on average, 1.5 payment accounts and businesses have three

3. On average, consumers have 10 recurrent payments and businesses have 20

4. The average hourly labour costs for a FTE in financial and insurance services is EUR 57.13

Based on Eurostat data, the average hourly labour costs for a FTE in financial and insurance services was of EUR45.7 in 2017 (EU27 considering the UK's withdrawal). To this figure the study has added a 25% to consider overhead costs.

5. The amount of time effort to implement the switch by PSP personnel would be of 3 minutes on average

This estimation includes the time effort for the creditors/debtors' PSPs to notify their customers (the relevant creditors/debtors who have recurrent transactions with the consumer who has switched) of the new account (3 minutes per account).

- **Operational costs**

This cost category includes the recurrent costs for PSPs to run and maintain their IT systems supporting the different policy options.

Method of estimation

='Costs of adapting IT infrastructure' x *'20%'*

Assumptions and data sources

1. Operational costs amount to 20% of IT adaptation costs

As these costs are not available, the stakeholders were asked to estimate the amount. The resulting estimations were assessed together with the IT expert and the best estimate for these costs was deemed to be 20% of the IT adaptation costs.

e. Others

Population: This last stakeholder group refers to either PSPs acting collectively, national competent authorities, or EU competent authorities as any of these stakeholders could bear the costs listed below. However, as it is not clear at this stage which stakeholder would be bearing them, they are included in a blended category.

Overview of benefits and costs

Table 29 - Estimation of the incremental costs and benefits for the category "other" stakeholders (EUR million)

Cost/Benefit description	Stakeholder (born by)	Frequency	PO1.1	PO1.2	PO2.1 (MSlevel)*	PO2.1 (EUlevel)*	PO2.2 (MSlevel)*	PO2.2 (EUlevel)*	PO2.3 (MSlevel)*	PO2.3 (EUlevel)*	PO3.1	PO3.2	PO3.3
Costs for setting up the decentralised or centralised hub solution	Other	OOC	7.00	1.50	71.50	5.50	-	-	67.50	5.00	7.00	7.00	7.00
Operational costs of the decentralised or centralised hub solution	Other	RC	2.05	0.30	14.30	1.10	-	-	13.50	1.00	1.40	1.40	1.40
Benefits linked to savings in operational costs of the national switching service	Other	RB	-	0.19	-	-	-	-	-	-	0.19	0.19	0.19

Source: Deloitte elaboration

Costs for setting up the decentralised or centralised hub solution

The costs related to "setting up" the decentralised/central hub (national contact points, EU platform, central registry, etc.) cover all necessary one-off costs for establishing the new hub or institution(s), including IT and change management, e.g. training, setting up new processes and communication tools.

Method of estimation

Dependent on the specificities of each option. See specific assumptions per option below.

Assumptions and data sources

1. Option 1.1 requires the creation of only 14 new institutions (estimated at EUR 500 000 each)

For this policy option, the costs cover the set-up of the national contact points which, based on the data collected in the second survey, would be around EUR 500 000. Existing institutions can take-up this new role or new institutions be created to assume this role. Based on our experts' opinion, we assume there are 13 existing institutions in the EU that could and would take up such role, hence only 14 new institutions would need to be created.

2. Option 1.2 would require a EUR 1.5 million investment to set-up the EU portal

For this policy option, those costs cover the set-up of the EU portal. As part of the second survey, rough estimations were provided between EUR 1 million and EUR 1.5 million for setting up the EU portal. The latter estimation was retained based on our experts' views.

3. Option 2.1 would require a EUR 2.75 million investment per Member State (except one) for a national implementation and a EUR 5.5 million investment at EU level for the EU level implementation

For this policy option, those costs cover the set-up of the central registry, including setting up the IT solution and infrastructure and testing it in all the Member States, which makes it particularly expensive, and also ensuring that it complies with the highest standards of cybersecurity. The costs differ whether the option is implemented at the EU or national level. As part of the second survey, different figures were provided for the set-up of this registry at the national level, coming down to an average of EUR 2 750 000 per Member State. In total, this figure needs to be multiplied by 26 Member States as the Netherlands already has a similar solution and would just need to adapt its existing redirection service.

For the set-up of a central registry that would be centralised at the EU level, based on our experts' views, the costs should be scaled up in order to account for the increase in complexity when creating a central registry for all PSPs in the EU and not only for the PSPs of one Member State. At the same time, only one solution needs to be created overall, instead of 26 different solutions. Based on our experts' views, the overall costs could amount to approximately EUR 5 500 000 if this option would be applied at the EU level.

4. Option 2.3 would require a EUR 2. 5 million investment per Member State for a national implementation and a EUR 5 million investment at EU level for the EU level implementation

The EU level estimation (EUR 5 000 000) has been defined on the basis of available data from the EBA CLEARING (a provider of pan-European payment infrastructure solutions) and expert views. In order to arrive at an estimation for a national implementation, this cost estimation was divided by half to scale the

solution to a national level (similar to what is done under 2.1), and then multiplied by 27 Member States as this solution is not currently in place in any of them.

5. Options 3.1, 3.2 and 3.3 would necessitate EUR 7 million each as they would require the same components

As the main components required for the options under Switching Tool 3 are the EU portal and a Central Registry, the cost is estimated as the sum of the costs of options 1.2 and 2.1.

Operational costs of the decentralised or centralised hub solution

This cost category includes the recurrent costs linked to running and maintaining the solution supporting the different policy options. It encompasses all IT related recurrent costs, as well as personnel and corresponding over-head.

Method of estimation

='Costs for setting up the decentralised or centralised hub solution' x *'20%'*

Assumptions and data sources

1. Operational costs amount to 20% of IT costs

In line with the approach taken for the operational costs for PSPs, these costs were estimated as 20% of the IT investment costs, in this case the costs for setting up the decentralised or centralised hub solution.

Benefits linked to savings in operational costs of the national switching service

This benefit category is only valid for the cross-border options with a centralised solution and it covers the savings in operational costs from not having to run the existing national solutions that currently support the national switching service.

Method of estimation

='estimated number of Member States with a body supporting the domestic switching service' x *'half of the operational costs of these institutions'*

Assumptions and data sources

1. There are 13 Member States with existing institutions supporting domestic switching services

2. These solutions would be replaced if the Switching Tool implemented would be a centralised EU-wide tool (not just at domestic level)

This assumption entails that these benefits would only be applicable for options 1.2, 3.1, 3.2 and 3.3.

3. The operational costs of the existing national switching solutions are EUR 29 286 on average per Member State

Taking into account the assumptions defined above for calculating the costs for setting up a centralised or decentralised solution, it was estimated that the cost of setting up the existing national switching solutions was, on average, EUR 146 429 per Member State. This initial investment cost was then multiplied by 20% to achieve the operational costs of the existing national switching solutions.

4. Only half of the operational costs would be saved

The study assumes that the other half would be reallocated to support the new switching service within the Member State.

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