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Study on new developments in card-based payment markets, including as regards relevant aspects of the application of the Interchange Fee Regulation

Final Report

Prepared by

Valdani Vicari & Associati

gdcc global data collection company

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Directorate-General for Competition
E-mail: comp-publications@ec.europa.eu

European Commission
B-1049 Brussels

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Authors:

VVA Valdani Vicari & Associati	• Pierre Hausemer (VVA Brussels) • Nelly Patroclou (VVA Brussels) • Ivan Bosch Chen (VVA Brussels) • Nessa Gorman (VVA Brussels)
gdcc global data collection company	• Kees-Jan Mars (GDCC) • Niels Bosland (GDCC)

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Abstract

This study provides an assessment of new developments in card-based payment markets, with a focus on the Interchange Fee Regulation's (IFR) impact on the market since 2018. The report reviews the recent evolution of the payment sector, focusing on the evolving trends regarding traditional means of payment versus new means of payment, as well as the rise of alternative forms of payments and the associated technologies required for their functioning. In the context of the IFR, it provides an analysis regarding the recent evolution of fees in the market – specifically scheme fees (though data was not collected from International Card Schemes) and interchange fees – as well as the impact of these fees on the development of merchant service charges (MSCs). Given the limited availability of data regarding these fees, a full and comprehensive analysis could not be completed on these trends. Therefore, this analysis is based on extensive stakeholder consultation for insight. The report also examines the prevalence of blended versus unblended fee schedules as well as the preferences of merchants. Finally, the concept of co-badging is explored with a focus on the complexities of co-badging in digital wallets and the obstacles to choice of application for merchants and consumers.

Résumé

Cette étude propose une évaluation des nouveaux développements sur les marchés des paiements par carte, en mettant l'accent sur l'impact du règlement sur les commissions d'interchange (IFR) dans le marché depuis 2018. Le rapport examine l'évolution récente du secteur des paiements, en se concentrant sur l'évolution des tendances concernant les moyens de paiement traditionnels par rapport aux nouveaux moyens de paiement, ainsi que sur l'essor des formes alternatives de paiement et des technologies associées nécessaires à leur fonctionnement. Dans le contexte du règlement IFR, il fournit une analyse de l'évolution récente des commissions sur le marché - en particulier les commissions des systèmes cartes (bien que les données n'aient pas été collectées auprès des systèmes de cartes internationaux) et les commissions d'interchange - ainsi que de l'impact de ces commissions sur l'évolution des commissions de services aux commerçants. Compte tenu de la disponibilité limitée des données relatives à ces commissions, il n'a pas été possible de réaliser une analyse complète et détaillée de ces tendances. Par conséquent, cette analyse est basée sur une consultation approfondie des parties prenantes pour obtenir des informations. Le rapport examine également la prévalence des barèmes de frais regroupés par rapport aux barèmes non regroupés, ainsi que les préférences des commerçants. Enfin, le concept de co-badgeage est exploré en mettant l'accent sur les complexités du co-badgeage dans les portefeuilles numériques et les obstacles au choix de l'application pour les commerçants et les consommateurs.

Zusammenfassung

Diese Studie bietet eine Bewertung der neuen Entwicklungen auf den Märkten für kartenbasierte Zahlungen, wobei der Schwerpunkt auf den marktrelevanten Auswirkungen der Interchange Fee Regulation (IFR) seit 2018 liegt. Der Bericht gibt einen Überblick über die jüngste Entwicklung des Zahlungssektors und konzentriert sich dabei auf die sich entwickelnden Trends in Bezug auf traditionelle Zahlungsmittel gegenüber neuen Zahlungsmitteln sowie auf die Zunahme alternativer Zahlungsformen und die damit verbundenen Technologien, die für deren Funktionieren erforderlich sind. Im Zusammenhang mit dem IFR wird eine Analyse der jüngsten Entwicklung der Gebühren auf dem Markt - insbesondere der Systemgebühren (obwohl von den internationalen Kartensystemen keine Daten erhoben wurden) und der Interbankenentgelte - sowie der Auswirkungen dieser Gebühren auf die Entwicklung der Händlergebühren (MSCs) vorgenommen. Angesichts der begrenzten Verfügbarkeit von Daten zu diesen Gebühren konnte keine vollständige und umfassende Analyse dieser Trends durchgeführt werden. Daher stützt sich das Ergebnis dieser Analyse auf eine ausführliche Konsultation der Interessengruppen. Der Bericht untersucht auch die Verbreitung von aufgeschlüsselten und nicht-aufgeschlüsselten Gebührenstrukturen sowie die Präferenzen der Händler. Schließlich wird das Konzept des Co-Badgings untersucht, wobei der Schwerpunkt auf die Komplexität des Co-Badgings in digitalen Wallets und die Hindernisse für Händler und Verbraucher bei der Wahl der Anwendung gelegt wird.

Executive Summary

This report, entitled '*Study on new developments in card-based payment markets, including as regards relevant aspects of the Interchange Fee Regulation'* provides an assessment of developments in the card-based payment market, with a particular focus on the impact of the Interchange Fee Regulation (IFR) since 2018.

The study employs several data collection tools including desk research, semi-structured interviews, and surveys to inform the analysis. The report covers the evolution of the payment market accounting for the emergence of "new" means of payment; Merchant Service Charges (MSCs) and their components, including interchange fees and scheme fees[1]; the prevalence of unblended fee schedules; and co-badging including choice of application at the point of sale.

Payment sector evolution

The study confirms that, across the EU, **card payments are the most frequently used form of electronic payment method accounting for just over half of payments**, and in the majority of Member States, this share has grown between 2018 and 2021, though to a varying degree. Further, in Member States where there is a domestic card scheme present, it is the domestic scheme that is most frequently used for domestic transactions, whereas the position of international card schemes remains relatively unchallenged for cross-border transactions.

Cash remains the most popular means of payment for in-store transactions, though the downtrend in cash usage appears to have accelerated during the Covid-19 pandemic (59% of in store transactions were made by cash in 2022, down from 72% in 2019). [2]

Furthermore, a key trend in recent years concerning card payments is the **increasing popularity and acceptance of contactless payment cards.** Though the extent to which contactless cards are used varies between Member States, a general upward trend in the use of this type of payment has been observed between 2019 and 2022[3].

Mobile payments via digital and mobile wallets have also become an increasingly popular means of payment in recent years. The study finds that the value of digital and mobile payments increased by 30% between 2018 and 2022[4]. In fact, the transaction value generated from mobile wallet POS payments in-store in the EU-27 increased in the last 5 years from EUR 4.8 billion in 2017 to EUR 223 billion in 2022, and is expected to increase at an average annual rate of 23% from EUR 300 billion 2023 to EUR 573 billion 2027.[5] The increase in the popularity of mobile payments may be the result of a combination of factors, including wallet solutions being introduced by big-tech TSPs and PSPs, the increase in smartphone penetration and the rise in e-commerce. In addition, technologies available today allow users to easily store and manage payment applications on their mobile devices.

With regard to the technologies which have facilitated this development in mobile payments, near-field communication (NFC) and QR-codes (Quick Response - codes) are

[1] *Though data collection of fee components was limited in particular, for scheme fees.*

[2] *ECB, (2022). Study on the payment attitudes of consumers in the euro area (SPACE) – 2022*

[3] *ECB. (2022). Study on the payment attitudes of consumers in the euro area (SPACE) – 2022*

[4] *Mark Stiltner. (2021). How digital wallets in Europe are reshaping payments. Rapyd. Online: https://www.rapyd.net/blog/how-digital-wallets-in-europe-are-reshaping-payments/*

[5] *Statista.(2022). Mobile POS Payments. Online: https://www.statista.com/outlook/dmo/fintech/digital-payments/mobile-pos-payments/eu-27#transaction-value*

the key technologies used in mobile wallets at physical POS terminals, with **NFC-based mobile wallets being the most commonly used in Europe.**

In addition to the aforementioned trends, a number of alternative payments are currently offered in EU Member States. **Instant payments are a new form of payment becoming increasingly available across the EU**. These are SEPA Credit Transfer (SCT) transactions that are processed instantly and allow for the transfer of funds from the payer to the payee's account within 10 seconds. Several alternative payment services provide **account-to-account (A2A) digital payment services** (i.e. the transfer of funds from one party's account to another party's account) such as Bluecode, Bizum, and Blik.

Finally, the study finds that **the market structure for issuing and acquiring services is changing due to new payment players entering the market**, in particular Fintechs. In addition, some traditional issuing and acquiring service providers (i.e. banks) have experienced **a market consolidation in order to become more competitive.**

Interchange and scheme fee evolution

The report analyses the evolution of interchange and scheme fees, as well insights on the impact of fee changes on costs for acquirers and subsequently merchants. The evidence collected derives from the study's survey of 61 large sized merchants and of seven card schemes,[6] as well as interviewing 14 payment associations and payment market players.

The study finds that, between 2018 and 2022, **the weighted average interchange fee for consumer debit and credit card transactions in the sample of 12 EU countries (the "EU-12") covered by the survey remained below the 0.2% and 0.3% caps respectively.** Specifically, in 2018, the weighted average interchange fee on consumer debit cards for the EU-12 was 0.143%, and this rose to 0.153% in 2022. Further, in a number of countries (e.g. Netherlands, Ireland and Italy) under their national law, caps for consumer debit card transactions are below the maximum rate of 0.2% stipulated in the EU Interchange Fee Regulation, at least for some specific transactions.

Overall, the **findings indicate that issuers have experienced an increase in interchange fee revenues over the past 5 years.** For instance, interchange fee revenues from German debit card transactions with ICS-cards (excluding the domestic debit card scheme) rose in terms of average annual growth rate by 64% between 2018 (€30m) and 2022 (€108m). Similarly, in Lithuania, the average annual growth rate of interchange revenue for domestic debit card transactions rose by 96% between 2018 (€5m) and 2022 (€25m). A possible reason for this increase in interchange fee revenue, lies in the increasing volume and value of transactions.

In terms of the development of scheme fees, only limited substantiated data could be collected directly from card schemes. However, a collection of input through other methods including interviews with industry stakeholders (including representatives of associations which represent card schemes) would seem to indicate that **overall, scheme fees have risen over this period – even if this cannot be verified empirically**. Based on a limited sample of three domestic card schemes, **the weighted average of domestic gross scheme fees paid by issuers increased for debit card transactions**. An analysis of the available data from this limited number of domestic schemes suggests scheme fees for consumer debit card transactions paid by issuers increased from 0.003% in 2018 to 0.007% in 2021. In terms of scheme fees imposed by international card schemes, industry stakeholders in interviews argue that an

[6] *International and domestic card schemes, namely: VISA, Mastercard, Cartes-Bancaires, Multibanco. Girocard. PagoBancomat and Dankort,*

increase in scheme fees per card transaction occurred during the past 5 years in the EU. Further, **payment institutions, acquirers, and merchants also argue in interviews that fee structures of ICS have become more complex and lack transparency**. More specifically, it was argued that four-party schemes have not offered a clear reason to acquirers for the rise in scheme fees nor for the introduction of new fees. Further, it was argued **that competition dynamics (or the lack thereof) have meant increases in scheme fees set by the ICS.**

At the same time, card schemes have argued that any rise in scheme fees is due to a combination of new regulatory requirements and new players joining the market, both of which require additional measures to enhance security and prevent fraud risks.

The report analyses the evolution of MSCs based on data from a survey of 61 merchants within the representative sample of 12 EU countries and complemented by interviews. Broadly, conclusions on the evolution of MSCs show a mixed picture. **Based on the limited data gathered from the merchant survey, the average EU-12 net MSC for debit card transactions increased from 0.27% in 2018 to 0.44% in 2022.** In addition, the limited survey data also shows that **merchants experienced lower MSCs for credit card transactions.** At the same time, some merchant associations argue that, while interchange fee caps have had a positive effect on lowering components of MSCs, the rise in card scheme fees and the introduction of new fees have meant overall increases in the costs that merchants face.

Blended and unblended fee schedules among merchants

The total merchant service charge (MSC) paid by a merchant to their acquirer includes interchange fees, scheme fees and acquirer fees. Unblended fee schedules provide merchants with a detailed, broken-down overview of these fees, whereas blended schedules combine all fees into one charge. According to Article 9 of the IFR, acquirers are required to provide details of the components of their MSCs, "*specified for different categories and different brands of payment cards with different interchange fee levels*", unless merchants opt out and request (in writing) a blended MSC.

The analysis in this chapter investigates the prevalence of unblended vs blended schedules among merchants. This analysis is based on a survey of 61 large sized merchants and is supported by insights drawn from a series of interviews. The majority of merchants in this sample (61%) receive an unblended fee schedule, while 30% have opted for a blended schedule. Several stakeholders representing merchants and payment service providers interviewed for this report argue that larger merchants tend to maintain the option of receiving unblended fee schedules, whilst smaller merchants tend to request blended fee schedules; even though blended fees can lead to higher costs per transaction because the acquirer may add a risk premium to compensate for variations in the payment mix.

Larger merchants may prefer the unblended schedule as an option, as it can **increase transparency and allow for more informed decisions** A card-based payment provider and an association representing merchants argued in interviews that **it is predominantly larger firms that have a preference for unblended schedules, as they have more capacity to analyse, compare and manage the individual costs behind card schemes**. In their view, smaller merchants do not have resources to process and analyse broken-down fee information and they may prefer blended schedules that are **easier to monitor and that allow them to anticipate costs easily and accurately.**

The report shows a mixed picture as to the perceived quality and usefulness of information according to merchants. The survey of merchants finds that 48% of respondents are satisfied with the quality of the information provided, 38% judge it to be of moderate quality and 11% indicated low or very low quality.

The analysis also explores obstacles that merchants may face when they wish to switch acquirers. The survey finds that just over half of respondents believe that switching services to a new acquirer is difficult, while 31% believe it to be an easy, or very easy process. Those that found it a difficult process indicated this was due to reasons such as **merchant size/bargaining power, and access to 'clear' information on pricing,** others pointed to challenges surrounding the costs that may be involved, for instance, regarding termination fees associated with exiting a contract, or due to technical obstacles.

Restrictions to co-badging (digital wallets and the equivalent) and choice of application at the Point-Of-Sale

Co-badging refers to the inclusion of two or more payment brands or payment applications of the same brand on one card-based payment instrument.[7]

The study finds that **co-badging in the context of a digital wallet can be complex and is dependent on a number of technical factors as well as collaborative agreements between the actors involved**. Indeed, to be able to digitalise a co-badged card in a wallet, two digital cards (i.e., two digital tokens) must be created. This must be facilitated by both the card issuer and the digital wallet provider, which according to stakeholders consulted for this report, requires investment on both sides. Further, domestic card schemes must have invested in the required tokenisation technology and must adhere to the required tokenisation operating methods as set by their token service provider (which is often an international card scheme). Findings further indicate that there may be a reluctance from these parties (card issuers, digital wallet providers and card schemes) to facilitate these requirements due to the complexity of the process and the investment it entails or for other motives, however, it is also apparent that the extent to which this is facilitated varies between Member States and is evolving over time.

With regard to 'priority selection', there is consensus among stakeholders, both those representing merchants and those representing PSPs, that in markets where card-based payment instruments carry multiple payment applications (i.e., co-badged), **merchants do have the technical ability to install automatic mechanisms in equipment, or on their website, to prioritise their preferred payment brand or application at payment terminals and online, though this may vary between Member States.**

Overall findings indicate that **large merchants are more likely to have the ability and capacity to implement a process for setting priority selection** whereas smaller merchants most likely have their priority selection pre-set by acquirers. Where merchants have priority selection in place, this is likely to be set for the cheaper option. In markets in which domestic card schemes are active and co-badged with international schemes, domestic schemes are cheaper.

The IFR stipulates that consumers have the right to override the priority selection put in place by the merchant. The exercise of this right appears to be impacted by the technology used to accept and make the payment, as well as the level of consumer interest in the selection and/or awareness regarding the choice of the application process.

Findings indicate that though **consumers often have the technical ability at point-of-sale to override merchant preselection, they rarely exercise this ability.** Interviews with merchant stakeholders have indicated that in their view from the

[7] *REGULATION (EU) 2015/751 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2015 on interchange fees for card-based payment transactions. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX%3A32015R0751*

perspective of the consumer there are often no direct financial benefits to choosing one payment brand or application over another. In addition, if choice is prompted automatically every time for contactless transactions, this would seem to defeat the purpose of seamlessness and speed for those transactions.

Finally, the study finds that **how this choice is facilitated, varies depending on the context of the transaction.** For instance, whether the transaction is chip-and-pin, contactless, mobile wallet or e-commerce.

Synthèse de l’étude

Ce rapport, intitulé "Study on new developments in card-based payment markets, including as regards relevant aspects of the Interchange Fee Regulation" (Étude sur les nouveaux développements du marché des paiements par carte, y compris en ce qui concerne les aspects pertinents du règlement sur les commissions d'interchange), fournit une évaluation des développements sur le marché des paiements par carte, avec un accent particulier sur l'impact du règlement sur les commissions d'interchange (IFR) depuis 2018.

L'étude utilise plusieurs outils de collecte de données, y compris des recherches documentaires, des entretiens et des enquêtes pour compléter et enrichir l'analyse. Le rapport couvre l'évolution du marché des paiements en tenant compte de l'émergence de "nouveaux" moyens de paiement ; les frais de service des commerçants (Commission commerçants) et leurs composantes, y compris les frais d'interchange et les frais des schémas de carte1; la prévalence des barèmes de frais non regroupés ; et le co-badgeage, y compris le choix de l'application au point de vente.

Évolution du secteur des paiements

L'étude confirme que, dans l'ensemble de l'UE, les **paiements par carte sont la forme la plus fréquemment utilisée de méthode de paiement électronique, représentant un peu plus de la moitié des paiements**, et dans la majorité des États membres, cette part a augmenté entre 2018 et 2021, bien qu'à un degré variable. En outre, dans les États membres où un système de cartes national est présent, c'est ce système qui est le plus fréquemment utilisé pour les transactions nationales, tandis que la position des systèmes de cartes internationaux reste relativement inchangée pour les transactions transfrontalières.

Les espèces restent le moyen de paiement le plus populaire pour les transactions en magasin, bien que la tendance à la baisse de l'utilisation des espèces semble s'être accélérée pendant la pandémie de Covid-19 (59 % des transactions en magasin ont été effectuées en espèces en 2022, contre 72 % en 2019).[2]

En outre, **la popularité et l'acceptation croissantes des cartes de paiement sans contact** constituent une tendance clé de ces dernières années en ce qui concerne les paiements par carte. Bien que le degré d'utilisation des cartes sans contact varie d'un État membre à l'autre, une tendance générale à la hausse de l'utilisation de ce type de paiement a été observée entre 2019 et 2022.[3]

Les paiements mobiles via les portefeuilles numériques et mobiles sont également devenus un moyen de paiement de plus en plus populaire ces dernières

années. L'étude constate que la valeur des paiements numériques et mobiles a augmenté de 30 % entre 2018 et 2022[4]. En fait, la valeur des transactions générées par les paiements par portefeuille mobile en magasin dans l'UE-27 a augmenté au cours des 5 dernières années, passant de 4,8 milliards d'euros en 2017 à 223 milliards d'euros en 2022, et devrait augmenter à un taux annuel moyen de 23%, passant de 300 milliards d'euros en 2023 à 573 milliards d'euros en 2027[5]. L'augmentation de la popularité des paiements mobiles peut être le résultat d'une combinaison de facteurs, y compris les solutions de portefeuilles introduites par les big-tech TSPs et PSPs ~~de grande technologie,~~ l'augmentation de la pénétration des smartphones et l'augmentation du commerce électronique. En outre, les technologies disponibles aujourd'hui permettent aux utilisateurs de stocker et de gérer facilement des applications de paiement sur leurs appareils mobiles.

En ce qui concerne les technologies qui ont facilité ce développement des paiements mobiles, le sans-contact NFC et les codes QR (Quick Response - codes) sont les technologies clés utilisées dans les portefeuilles mobiles sur les terminaux de point de vente physiques, **les portefeuilles mobiles basés sur le NFC étant les plus couramment utilisés en Europe.**
Outre les tendances susmentionnées, un certain nombre de paiements alternatifs sont actuellement proposés dans les États membres de l'UE. Les **paiements instantanés sont une nouvelle forme de paiement de plus en plus répandue dans l'UE**. Il s'agit de transactions de virement SEPA (SCT) qui sont traitées instantanément et permettent le transfert de fonds du compte du payeur vers celui du bénéficiaire dans un délai de 10 secondes. Plusieurs services de paiement alternatifs proposent des **services de paiement numérique de compte à compte (A2A)** (c'est-à-dire le transfert de fonds du compte d'une partie au compte d'une autre partie), tels que Bluecode, Bizum et Blik.

Enfin, l'étude constate que la **structure du marché des services d'émission et d'acquisition est en train de changer en raison de l'arrivée sur le marché de nouveaux acteurs du secteur des paiements**, en particulier les Fintechs. En outre, certains fournisseurs traditionnels de services d'émission et d'acquisition (c'est-à-dire les banques) ont connu une **consolidation du marché afin de devenir plus compétitifs.**

Évolution des commissions d'interchange et des frais de système

Le rapport analyse l'évolution des commissions d'interchange et des commissions de système de cartes, ainsi que l'impact des changements de commissions sur les coûts pour les acquéreurs et, par la suite, pour les commerçants. Les données recueillies proviennent d'une enquête menée auprès de 61 commerçants de grande taille et de sept systèmes de cartes[6], ainsi que d'entretiens avec 14 associations de paiement et acteurs du marché des paiements.

L'étude constate qu'entre 2018 et 2022**, la moyenne pondérée des commissions d'interchange pour les transactions par carte de débit et de crédit dans l'échantillon de 12 pays de l'UE (l'"UE-12") couvert par l'enquête est restée en dessous des plafonds de 0,2 % et 0,3 % respectivement**. Plus précisément, en 2018, la commission d'interchange moyenne pondérée sur les cartes de débit pour l'UE-12 était de 0,143 %, et elle est passée à 0,153 % en 2022. En outre, dans un certain nombre de pays (par exemple les Pays-Bas, l'Irlande et l'Italie), en vertu de leur législation nationale, les plafonds pour les transactions par carte de débit sont inférieurs au taux maximal de 0,2 % stipulé dans le règlement de l'UE sur les commissions d'interchange, au moins pour certaines transactions spécifiques.

Dans l'ensemble, **les résultats indiquent que les émetteurs ont connu une augmentation des revenus des commissions d'interchange au cours des cinq dernières années.** Par exemple, les revenus des commissions d'interchange des transactions de débit allemandes des cartes ICS (à l'exclusion du système national de cartes de débit) ont augmenté de 64% entre 2018 (30 millions d'euros) et 2022 (108 millions d'euros). En Lituanie également, le taux de croissance annuel des commissions d'interchange pour les transactions nationales par carte de débit a été de 96% en moyenne entre 2018 (5 millions d'euros) et 2022 (25 millions d'euros). L'augmentation du volume et de la valeur des transactions peut expliquer cette hausse des revenus des commissions d'interchange.

En ce qui concerne l'évolution des commissions des systèmes de cartes, seules des données limitées et étayées ont pu être collectées directement auprès des systèmes de cartes. Toutefois, une collecte d'informations par d'autres méthodes, y compris des entretiens avec des acteurs du secteur (notamment des représentants d'associations qui représentent les systèmes de cartes), semble indiquer que, **dans l'ensemble, les commissions des systèmes ont augmenté au cours de cette période, même si cela ne peut être vérifié de manière empirique**. Sur la base d'un échantillon limité de trois systèmes de cartes nationaux, **la moyenne pondérée des frais bruts payés par les émetteurs a augmenté pour les transactions de débit.** Une analyse des données disponibles provenant d'un nombre limité de systèmes nationaux suggère que les frais de système pour les transactions de débit des consommateurs payés par les émetteurs ont augmenté de 0,003 % en 2018 à 0,007 % en 2021. En ce qui concerne les frais imposés par les systèmes de cartes internationaux, les acteurs du secteur interrogés affirment qu'une augmentation des frais par transaction a eu lieu au cours des cinq dernières années dans l'UE. En outre, les **institutions de paiement, les acquéreurs et les commerçants affirment également dans les entretiens que les structures de frais des systèmes internationaux de cartes sont devenues plus complexes et manquent de transparence.** Plus précisément, il a été avancé que les systèmes quadripartites n'ont pas donné de raison claire aux acquéreurs pour expliquer l'augmentation des frais du système ou l'introduction de nouveaux frais. En outre, il a été avancé **que la dynamique de la concurrence (ou son absence) a entraîné des augmentations des commissions fixées par les ICS** (International Card Schemes ou systèmes internationaux de cartes).

Dans le même temps, les systèmes de cartes ont fait valoir que toute augmentation des cotisations était due à la combinaison de nouvelles exigences réglementaires et de l'arrivée de nouveaux acteurs sur le marché, qui nécessitent tous deux des mesures supplémentaires pour renforcer la sécurité et prévenir les risques de fraude.

Le rapport analyse l'évolution des Commissions commerçants ~~CSM~~ sur la base des données d'une enquête menée auprès de 61 commerçants de l'échantillon représentatif de 12 pays de l'UE et complétée par des entretiens. D'une manière générale, les conclusions sur l'évolution des Commissions commerçants sont mitigées. D'après les données limitées recueillies dans le cadre de l'enquête auprès des commerçants, la Commission commerçant nette moyenne de l'UE-12 pour les transactions par carte de débit est passée de 0,27 % en 2018 à 0,44 % en 2022. En outre, les données limitées de l'enquête montrent également que les **commerçants ont connu des Commissions commerçants moins élevés pour les transactions par carte de crédit**. Dans le même temps, certaines associations de commerçants font valoir que, bien que les plafonds des commissions d'interchange aient eu un effet positif sur la réduction des composantes des Commissions commerçants , la hausse des frais des systèmes de cartes et l'introduction de nouveaux frais ont entraîné des augmentations globales des coûts auxquels les commerçants sont confrontés.

Barèmes des commissions regroupées et non-regroupées des commerçants

Le total des frais de services aux commerçants (MSC) = Commission commerçants payés par un commerçant à son acquéreur comprend les frais d'interchange, les frais de système de cartes et les frais d'acquéreur. Les barèmes des commissions non-regroupées fournissent aux commerçants un aperçu détaillé et ventilé de ces frais, tandis que les barèmes des commissions regroupés regroupent tous les frais en une seule charge. Conformément à l'article 9 du règlement IFR, les acquéreurs sont tenus de fournir des informations détaillées sur les composantes de leurs Commissions commerçant, "spécifiées pour différentes catégories et différentes marques de cartes de paiement avec différents niveaux de commissions d'interchange", à moins que les commerçants ne choisissent de ne pas participer et demandent (par écrit) une Commission commerçants regroupée.

L'analyse présentée dans ce chapitre porte sur la prévalence des programmes de commissions regroupées et non regroupées parmi les commerçants. Cette analyse est basée sur une enquête menée auprès de 61 commerçants de grande taille et est étayée par des informations tirées d'une série d'entretiens. La majorité des commerçants de cet échantillon (61 %) reçoivent un barème de frais non regroupé, tandis que 30 % ont opté pour un barème de commissions regroupé. Plusieurs parties prenantes représentant les commerçants et les prestataires de services de paiement interrogés dans le cadre de ce rapport affirment que les grands commerçants ont tendance à conserver l'option de recevoir des barèmes de frais non regroupés, tandis que les petits commerçants ont tendance à demander des barèmes de frais regroupés, même si les frais regroupés peuvent entraîner des coûts plus élevés par transaction parce que l'acquéreur peut ajouter une prime de risque pour compenser les variations dans la gamme des paiements.

Un fournisseur de services de paiement par carte et une association représentant les commerçants ont fait valoir, lors d'entretiens, **que ce sont surtout les grandes entreprises qui ont une préférence pour les barèmes non regroupés, car elles ont une plus grande capacité d'analyse, de comparaison et de gestion des coûts individuels liés aux systèmes de cartes**. Selon eux, les petits commerçants n'ont pas les ressources nécessaires pour traiter et analyser les informations sur les frais ventilés et ils préfèrent les barèmes regroupés qui sont **plus faciles à contrôler et qui leur permettent d'anticiper les coûts facilement et avec précision.**

Le rapport dresse un tableau contrasté de la qualité et de l'utilité des informations perçues par les commerçants. L'enquête menée auprès des commerçants révèle que 48 % des répondants sont satisfaits de la qualité de l'information fournie, 38 % la jugent de qualité moyenne et 11 % indiquent une qualité faible ou très faible.

L'analyse explore également les obstacles auxquels les commerçants peuvent être confrontés lorsqu'ils souhaitent changer d'acquéreur. L'enquête révèle qu'un peu plus de la moitié des personnes interrogées estiment qu'il est difficile de passer à un nouvel acquéreur, tandis que 31 % pensent que le processus est facile ou très facile. Ceux qui estiment que le processus est difficile l'expliquent par des raisons telles que la **taille du commerçant/le pouvoir de négociation et l'accès à des informations "claires" sur les prix, tandis que** d'autres soulignent les difficultés liées aux coûts qui peuvent être encourus, par exemple en ce qui concerne les frais de résiliation associés à la sortie d'un contrat, ou à des obstacles techniques.

Restrictions au co-badgeage (portefeuilles numériques et équivalents) et choix de l'application au point de vente

Le co-badging désigne l'inclusion de deux ou plusieurs marques de paiement et d'applications de paiement de la même marque sur un instrument de paiement par carte.[7]

L'étude montre que **le co-badgeage dans le contexte d'un portefeuille numérique peut être complexe et dépend d'un certain nombre de facteurs techniques ainsi que d'accords de collaboration entre les acteurs concernés.** En effet, pour pouvoir numériser une carte co-badgée dans un portefeuille, deux cartes numériques (c'est-à-dire deux jetons numériques) doivent être créées. Cette opération doit être facilitée à la fois par l'émetteur de la carte et par le fournisseur du portefeuille numérique, ce qui, selon les parties prenantes consultées pour ce rapport, nécessite des investissements de part et d'autre. En outre, les systèmes de cartes nationaux doivent avoir investi dans la technologie de tokenisation requise et doivent adhérer aux méthodes d'exploitation de tokenisation requises, telles que définies par leur fournisseur de services de token (qui est souvent un système de cartes international). Les résultats indiquent en outre que les parties concernées (émetteurs de cartes, fournisseurs de portefeuilles numériques et systèmes de cartes) peuvent être réticentes à faciliter ces exigences en raison de la complexité du processus et de l'investissement qu'il implique, ou pour d'autres motifs ; toutefois, il apparaît également que le degré de facilitation varie d'un État membre à l'autre et évolue avec le temps.

En ce qui concerne la "sélection prioritaire", il ressort des entretiens que les parties prenantes, tant celles qui représentent les commerçants que celles qui représentent les prestataires de services de paiement, s'accordent à dire que, sur les marchés où les instruments de paiement par carte comportent plusieurs applications de paiement (c'est-à-dire des cartes co-badgées), **les commerçants ont la capacité technique d'installer des mécanismes automatiques dans l'équipement ou sur leur site web pour donner la priorité à la marque ou à l'application de paiement qu'ils préfèrent sur les terminaux de paiement et en ligne, même si cela peut varier d'un État membre à l'autre.**

Dans l'ensemble, les conclusions indiquent que les **grands commerçants sont plus susceptibles d'avoir la capacité de mettre en œuvre un processus de sélection prioritaire,** tandis que les petits commerçants ont plus de chances de voir leur sélection prioritaire préétablie par les acquéreurs. Lorsque les commerçants ont mis en place un système de sélection prioritaire, il est probable qu'il s'agisse de l'option la moins chère. Sur les marchés où les systèmes de cartes nationaux sont actifs et leurs cartes co-badgées avec des marques des systèmes internationaux, les systèmes nationaux sont moins chers.

Le règlement IFR stipule que les consommateurs ont le droit de passer outre la sélection prioritaire mise en place par le commerçant. L'exercice de ce droit semble être influencé par la technologie utilisée pour accepter et effectuer le paiement, ainsi que par le niveau d'intérêt du consommateur pour la sélection et/ou la sensibilisation au choix de la procédure d'application.

Les résultats indiquent que, bien que les **consommateurs aient souvent la possibilité technique, au point de vente, de passer outre la présélection du commerçant, ils l'exercent rarement.** Les entretiens avec les commerçants ont montré que, du point de vue du consommateur, il n'y a souvent pas d'avantages financiers directs à choisir une marque ou une application de paiement plutôt qu'une autre. En outre, si le choix est demandé automatiquement à chaque fois pour les transactions sans contact, cela semble aller à l'encontre de l'objectif d'homogénéité et de rapidité de ces transactions.

Enfin, l'étude montre que la **manière dont ce choix est facilité varie en fonction du contexte de la transaction.** Par exemple, selon qu'il s'agit d'une transaction par carte à puce ou en sans contact, ou d'une transaction par portefeuille mobile ou d'une transaction de commerce électronique.

Zusammenfassung

Dieser Bericht mit dem Titel "Study on new developments in card-based payment markets, including as regards relevant aspects of the Interchange Fee Regulation" (Studie über neue Entwicklungen auf den Märkten für kartengestützte Zahlungen unter Berücksichtigung relevanter Aspekte der Verordnung über Interbankenentgelte) liefert eine Bewertung der Entwicklungen auf dem Markt für kartengestützte Zahlungen mit besonderem Schwerpunkt auf den Auswirkungen der Verordnung über Interbankenentgelte (IFR) seit 2018.

Die Studie stützt sich auf verschiedene Datenerhebungsinstrumente, darunter Desk Research, halbstrukturierte Interviews und Umfragen. Der Bericht befasst sich mit der Entwicklung des Zahlungsmarkts unter Berücksichtigung des Aufkommens "neuer" Zahlungsmittel, der Händlergebühren und ihrer Komponenten, einschließlich der Interbankenentgelte und der Systemgebühren[8], die Verbreitung von nicht aufgeschlüsselten Gebührenstrukturen und des Co-Badgings einschließlich der Wahl der Applikation am Verkaufsort.

Entwicklung des Zahlungssektors

Die Studie bestätigt, dass **Kartenzahlungen** - EU-**weit mit etwas mehr als der Hälfte der Zahlungen - die am häufigsten genutzte Form des elektronischen Zahlungsverkehrs sind.** In, den meisten Mitgliedstaaten ist dieser Anteil zwischen 2018 und 2021 gestiegen, wenn auch in unterschiedlichem Maße. Außerdem wird in den Mitgliedstaaten, in denen es ein inländisches Kartensystem gibt, das inländische System am häufigsten für inländische Transaktionen genutzt, während die Position der internationalen Kartensysteme bei grenzüberschreitenden Transaktionen relativ unangefochten bleibt.

Bargeld ist nach wie vor das beliebteste Zahlungsmittel für Transaktionen in Geschäften, obwohl sich der Abwärtstrend bei der Bargeldnutzung während der Covid-19-Pandemie offenbar beschleunigt hat (59 % der Transaktionen in Geschäften wurden 2022 mit Bargeld getätigt, gegenüber 72 % im Jahr 2019).[9]

Ein weiterer wichtiger Trend der letzten Jahre bei Kartenzahlungen ist die **zunehmende Beliebtheit und Akzeptanz von kontaktlosen Zahlungen mittels Karten**. Auch wenn das Ausmaß der kontaktlosen Kartenzahlungen in den einzelnen Mitgliedstaaten unterschiedlich ist, ist zwischen 2019 und 2022 ein allgemeiner Aufwärtstrend bei der Nutzung dieser Zahlungsart zu beobachten[10].

Mobile Zahlungen über digitale und mobile Wallets sind in den letzten Jahren ebenfalls zu einem immer beliebteren Zahlungsmittel geworden. Der Studie zufolge steigt der Wert der digitalen und mobilen Zahlungen zwischen 2018 und 2022 um 30%[11]. Tatsächlich stieg der Transaktionswert von POS-Zahlungen mit mobilen Wallets in Geschäften in der EU-27 in den letzten fünf Jahren von 4,8 Mrd. EUR im Jahr

[8] *Die Datenerhebung zu den Gebührenbestandteilen war jedoch begrenzt, insbesondere bei den Systemgebühren.*

[9] *ECB, (2022). Study on the payment attitudes of consumers in the euro area (SPACE) – 2022*

[10] *ECB. (2022). Study on the payment attitudes of consumers in the euro area (SPACE) – 2022*

[11] *Mark Stiltner. (2021). How digital wallets in Europe are reshaping payments. Rapyd. Online: https://www.rapyd.net/blog/how-digital-wallets-in-europe-are-reshaping-payments/*

2017 auf 223 Mrd. EUR im Jahr 2022 und wird voraussichtlich mit einer durchschnittlichen jährlichen Rate von 23 % von 300 Mrd. EUR 2023 auf 573 Mrd. EUR 2027 steigen[12]. Die zunehmende Beliebtheit mobiler Zahlungen kann auf eine Kombination von Faktoren zurückzuführen sein, darunter die Einführung von Wallet-Lösungen durch große Technologieanbieter und Zahlungsdienstleister, die zunehmende Verbreitung von Smartphones und der Anstieg des Internethandels. Darüber hinaus ermöglichen die heute verfügbaren Technologien den Nutzern die einfache Speicherung und Verwaltung von Zahlungsanwendungen auf ihren mobilen Geräten.

Was die Technologien betrifft, die diese Entwicklung bei den mobilen Zahlungen ermöglicht haben, so sind die Nahfeldkommunikation (NFC) und QR-Codes (Quick Response - Codes) die Schlüsseltechnologien, die bei mobilen Wallets an physischen POS-Terminals eingesetzt werden, wobei **NFC-basierte mobile Wallets in Europa am häufigsten verwendet werden.**

Zusätzlich zu den oben genannten Trends werden in den EU-Mitgliedstaaten derzeit eine Reihe von alternativen Zahlungsmöglichkeiten angeboten. **Sofortige Zahlungen sind eine neue Form der Zahlung, die in der EU immer häufiger angeboten wird**. Dabei handelt es sich um SEPA-Überweisungen, die in Echtzeit verarbeitet werden und innerhalb von 10 Sekunden einen Geldtransfer vom Konto des Zahlers auf das Konto des Zahlungsempfängers ermöglichen. Mehrere alternative Zahlungsdienste bieten **digitale Konto-zu-Konto-Zahlungsdienste (A2A) an** (d. h. die Überweisung von Geldbeträgen von einem Konto einer Partei auf das Konto einer anderen Partei), wie Bluecode, Bizum und Blik.

Schließlich stellt die Studie fest, **dass sich die Marktstruktur für Issuing- und Acquiring-Dienste durch den Markteintritt neuer Zahlungsakteure,** insbesondere Fintechs, verändert. Darüber hinaus gab es zur Sicherung der Wettbewerbsfähigkeit im Segment der traditionellen Anbieter von Issuing- und Acquiring-Diensten (d. h. Banken) **eine gewisse Marktkonsolidierung.**

Entwicklung der Interbanken- und Systementgelte

Der Bericht analysiert die Entwicklung der Interbankenentgelte und der Systemgebühren sowie die Auswirkungen von Gebührenänderungen auf die Kosten der Acquirer und damit auf die Kosten der Händler. Die im Rahmen der Studie gesammelten Daten stammen aus der Befragung von 61 großen Händlern und sieben Kartensystemen[13] sowie aus der Befragung von 14 Zahlungsverbänden und Akteuren des Zahlungsmarktes.

Die Studie kommt zu dem Ergebnis, **dass die gewichteten durchschnittlichen Interbankenentgelte für Debit- und Kreditkartentransaktionen in der Stichprobe von 12 EU-Ländern (EU-12"), die in der Studie erfasst sind, zwischen 2018 und 2022 unter der Obergrenze von 0,2 % bzw. 0,3 % bleiben.** Im Jahr 2018 lag das gewichtete durchschnittliche Interbankenentgelt für Debitkarten in den EU-12-Ländern bei 0,143 % und stieg bis zum Jahr 2022 auf 0,153 %. In einer Reihe von Ländern (z. B. Niederlande, Irland und Italien) liegen die Obergrenzen für Debitkartentransaktionen nach nationalem Recht unter dem in der EU-Verordnung über Interbankenentgelte festgelegten Höchstsatz von 0,2 %, zumindest für einige bestimmte Transaktionen.

Insgesamt zeigen die Ergebnisse, dass die Emittenten in den letzten 5 Jahren einen Anstieg der Interbankenentgelte verzeichnen konnten. So stiegen

[12] Statista.(2022). Mobile POS Payments. Online: https://www.statista.com/outlook/dmo/fintech/digital-payments/mobile-pos-payments/eu-27#transaction-value Mark Stiltner. (2021). How digital wallets in Europe are reshaping payments. Rapyd. Online: https://www.rapyd.net/blog/how-digital-wallets-in-europe-are-reshaping-payments/

[13] Internationale und nationale Kartensysteme, nämlich: VISA, Mastercard, Cartes-Bancaires, Multibanco. Girocard, PagoBancomat und Dankort.

beispielsweise die Interbankenentgelte aus deutschen Debitkartentransaktionen mit ICS-Karten (ohne das inländische Debitkartensystem) zwischen 2018 (30 Mio. EUR) und 2022 (108 Mio. EUR) um 64 %. In Litauen betrug die jährliche Wachstumsrate der Interbankenentgelte für inländische Debitkartentransaktionen zwischen 2018 (5 Mio. EUR) und 2022 (25 Mio. EUR) im Durchschnitt 96 %. Ein möglicher Grund für diesen Anstieg der Interbankenentgelte liegt in dem zunehmenden Volumen und Wert der Transaktionen.

Was die Entwicklung der Systemgebühren betrifft, so konnten nur wenige fundierte Daten direkt von den Kartensystemen erhoben werden. Die Erhebung von Daten durch andere Methoden, einschließlich der Befragung von Interessenvertretern der Branche (einschließlich Vertretern von Verbänden, die Kartensysteme vertreten), scheint jedoch darauf hinzudeuten, dass **die Systemgebühren in diesem Zeitraum insgesamt gestiegen sind - auch wenn dies nicht empirisch überprüft werden kann**. Auf der Grundlage einer begrenzten Stichprobe von drei inländischen Kartensystemen ist **der gewichtete Durchschnitt der von den Emittenten gezahlten inländischen Brutto-Systemgebühren für Debit-Transaktionen gestiegen**. Eine Analyse der verfügbaren Daten einer begrenzten Anzahl inländischer Systeme deutet darauf hin, dass die von den Emittenten gezahlten Systemgebühren für Transaktionen mit Verbraucher-Debitkarten von 0,003 % im Jahr 2018 auf 0,007 % im Jahr 2021 gestiegen sind. In Bezug auf die von internationalen Kartensystemen erhobenen Systemgebühren geben die befragten Branchenvertreter an, dass die Systemgebühren pro Kartentransaktion in den letzten fünf Jahren in der EU gestiegen sind. Darüber hinaus gaben **Zahlungsinstitute, Acquirer und Händler in Interviews an, dass die Gebührenstrukturen der ICS komplexer geworden sind und es ihnen an Transparenz mangelt.** Insbesondere wurde angeführt, dass die Vier-Parteien-Systeme den Acquirern weder einen klaren Grund für den Anstieg der Systemgebühren noch für die Einführung neuer Gebühren geliefert haben. Ferner wurde argumentiert, dass die **Wettbewerbsdynamik (oder das Fehlen einer solchen) zu einer Erhöhung der von der ICS festgelegten Systemgebühren geführt hat.**

Gleichzeitig haben die Kartensysteme argumentiert, dass jeder Anstieg der Systemgebühren auf eine Kombination aus neuen regulatorischen Anforderungen und neuen Marktteilnehmern zurückzuführen ist, die beide zusätzliche Maßnahmen zur Verbesserung der Sicherheit und zur Vermeidung von Betrugsrisiken erfordern.

Der Bericht analysiert die Entwicklung der MSC auf der Grundlage von Daten aus einer Umfrage unter 61 Händlern in einer repräsentativen Stichprobe von 12 EU-Ländern, die durch Interviews ergänzt wurden. Im Großen und Ganzen ergibt sich ein gemischtes Bild der Entwicklung von MSCs.Auf der Grundlage der begrenzten Daten aus der Händlerbefragung stieg der durchschnittliche EU-12-Netto-MSC für Debitkartentransaktionen von 0,27 % im Jahr 2018 auf 0,44 % im Jahr 2022. **.** Darüber hinaus zeigen die begrenzten Erhebungsdaten auch, dass die **Händler bei Kreditkartentransaktionen untere MSCs verzeichneten.** Gleichzeitig argumentieren einige Händlerverbände, dass sich die Begrenzung der Interbankenentgelte zwar positiv auf die Senkung der Komponenten der MSCs ausgewirkt hat, dass aber der Anstieg der Gebühren der Kartensysteme und die Einführung neuer Gebühren insgesamt zu einem Anstieg der Kosten für die Händler geführt haben.

Augeschlüsselte und nicht-aufgeschlüsselte Gebührenstrukturen für Händler

Die gesamte Händlergebühr (Merchant Service Charge, MSC), die ein Händler an seinen Acquirer zahlt, umfasst Interbankenentgelte, Systemgebühren und Acquirer-Gebühren. Aufgeschlüsselte Gebührenstrukturen bieten Händlern einen detaillierten, Überblick über diese Gebühren, während nicht-aufgeschlüsselte Verzeichnisse alle Gebühren zu einer einzigen Gebühr zusammenfassen. Gemäß Artikel 9 der IFR sind Acquirer verpflichtet, Einzelheiten zu den Bestandteilen ihrer MSC bereitzustellen, die "für die verschiedenen Kartenarten und -marken mit unterschiedlich hohen Interbankenentgelten individuell aufgeschlüsselte Händlerentgelte" aufgegliedert sind, es sei denn, die Händler entscheiden sich dagegen und verlangen (schriftlich) eine Bündelung der Händlerentgelte.

Die Analyse in diesem Kapitel untersucht die Verbreitung von nicht-aufgeschlüsselten und aufgeschlüsselten Gebührenstrukturen für Händler. Diese Analyse basiert auf einer Umfrage unter 61 großen Händlern und wird durch Erkenntnisse aus einer Reihe von Interviews gestützt. Die Mehrheit der Händler in dieser Stichprobe (61 %) erhält eine aufgeschlüsselte Gebührenübersicht, während sich 30 % für eine nicht-aufgeschlüsselte Darstellung entschieden haben. Mehrere Interessenvertreter von Händlern und Zahlungsdienstleistern, die für diesen Bericht befragt wurden, argumentieren, dass größere Händler tendenziell die Option beibehalten, aufgeschlüsselte Gebührenabrechnungen zu erhalten, während kleinere Händler eher nicht-aufgeschlüsselte Gebührenabrechnungen beantragen, obwohl nicht-aufgeschlüsselte Gebühren zu höheren Kosten pro Transaktion führen können, weil der Acquirer eine Risikoprämie aufschlagen kann, um Schwankungen im Zahlungsmix auszugleichen.

Ein Anbieter kartengestützter Zahlungsdienste und ein Händlerverband gaben in Interviews an, dass **vor allem größere Unternehmen aufgeschlüsselte Gebührenstrukturen bevorzugen, da sie über mehr Kapazitäten verfügen, um die einzelnen Kosten von Kartensystemen zu analysieren, zu vergleichen und zu verwalten**. Ihrer Ansicht nach verfügen kleinere Händler nicht über die Ressourcen, um aufgeschlüsselte Gebühreninformationen zu verarbeiten und zu analysieren, und bevorzugen daher möglicherweise nicht-aufgeschlüsselte Abrechnungen, die **leichter zu überwachen sind und die es ihnen ermöglichen, die Kosten leicht und genau vorherzusehen.**

Der Bericht zeigt ein gemischtes Bild in Bezug auf die von den Händlern wahrgenommene Qualität und Nützlichkeit der Informationen. Die Umfrage unter den Händlern ergab, dass 48 % der Befragten mit der Qualität der bereitgestellten Informationen zufrieden sind, 38 % schätzen sie als mäßig gut ein und 11 % gaben eine geringe oder sehr geringe Qualität an.

Die Analyse befasst sich auch mit den Hindernissen, auf die Händler stoßen können, wenn sie den Acquirer wechseln wollen. Die Umfrage ergab, dass etwas mehr als die Hälfte der Befragten den Wechsel zu einem neuen Acquirer für schwierig hält, während 31 % ihn für einfach oder sehr einfach halten. Diejenigen, die den Wechsel für schwierig hielten, gaben an, dass dies auf Gründe wie die **Größe des Händlers bzw. seine Verhandlungsmacht und den Zugang zu "klaren" Informationen über die Preisgestaltung zurückzuführen sei;** andere wiesen auf Herausforderungen im Zusammenhang mit den möglicherweise anfallenden Kosten hin, z. B. in Bezug auf die mit dem Ausstieg aus einem Vertrag verbundenen Kündigungsgebühren, oder auf technische Hindernisse.

Beschränkungen des Co-Badgings (digitale Wallets und dergleichen) und Wahl der Applikation am Verkaufsort

Co-Badging bezieht sich auf die Einbeziehung von zwei oder mehr Zahlungsmarken oder Zahlungsapplikationen derselben Marke in ein kartenbasiertes Zahlungsinstrument.[14]

Die Studie zeigt, dass Co-**Badging im Kontext eines digitalen Wallets komplex sein kann und von einer Reihe technischer Faktoren sowie von**

[14] *REGULATION (EU) 2015/751 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2015 on interchange fees for card-based payment transactions. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX%3A32015R0751*

Kooperationsvereinbarungen zwischen den beteiligten Akteuren abhängt. Um eine Co-Badged-Karte in einem Wallet digitalisieren zu können, müssen zwei digitale Karten (d. h. zwei digitale Token) erstellt werden. Dies muss sowohl vom Kartenherausgeber als auch vom Anbieter der digitalen Brieftasche ermöglicht werden, was nach Angaben der für diesen Bericht befragten Akteure Investitionen auf beiden Seiten erfordert. Darüber hinaus müssen die inländischen Kartensysteme in die erforderliche Tokenisierungstechnologie investiert haben und die von ihrem Token-Dienstleister (bei dem es sich häufig um ein internationales Kartensystem handelt) festgelegten Tokenisierungsverfahren einhalten. Die Ergebnisse deuten ferner darauf hin, dass diese Parteien (Kartenemittenten, Anbieter digitaler Wallets und Kartensysteme) aufgrund der Komplexität des Prozesses und der damit verbundenen Investitionen oder aus anderen Gründen möglicherweise zögern, diese Anforderungen zu erfüllen; es ist jedoch auch offensichtlich, dass das Ausmaß der Erfüllung dieser Anforderungen von Mitgliedstaat zu Mitgliedstaat variiert und sich im Laufe der Zeit weiterentwickelt.

vIn Bezug auf die "Prioritätsauswahl" sind sich die befragten Interessenvertreter - sowohl die Händler als auch die Zahlungsverkehrsdienstleister - einig, dass die **Händler** in Märkten, in denen kartengestützte Zahlungsinstrumente mit mehreren Zahlungsanwendungen ausgestattet sind (d. h. Co-Badged), **technisch in der Lage sind, automatische Mechanismen in ihren Geräten oder auf ihrer Website zu installieren, um ihrer bevorzugten Zahlungsmarke oder -anwendung an den Zahlungsterminals und online Vorrang einzuräumen, auch wenn dies von Mitgliedstaat zu Mitgliedstaat unterschiedlich sein kann.**

Insgesamt deuten die Ergebnisse darauf hin, dass **große Händler eher in der Lage sind, ein Verfahren zur Festlegung einer Prioritätsauswahl einzuführen**, während kleinere Händler ihre Prioritätsauswahl höchstwahrscheinlich von den Acquirern vorgeben lassen. Dort, wo Händler eine Prioritätsauswahl getroffen haben, wird diese wahrscheinlich für die kostengünstigere Option festgelegt. Auf Märkten, auf denen inländische Kartensysteme aktiv sind und mit internationalen Systemen gekoppelt sind, sind inländische Systeme billiger.

Die IFR sieht vor, dass die Verbraucher das Recht haben, sich über die vom Händler getroffene vorrangige Auswahl hinwegzusetzen. Die Ausübung dieses Rechts scheint von der für die Entgegennahme und Ausführung der Zahlung verwendeten Technologie sowie vom Interesse der Verbraucher an der Auswahl und/oder von der Bekanntheit der Wahl des Antragsverfahrens abhängig zu sein.

Die Ergebnisse deuten darauf hin, dass die V**erbraucher zwar häufig die technische Möglichkeit haben, die Vorauswahl der Händler zu umgehen, dass sie diese Möglichkeit aber nur selten nutzen.** Befragungen von Händlern haben ergeben, dass es aus Sicht der Verbraucher oft keine direkten finanziellen Vorteile gibt, wenn sie sich für eine Zahlungsmarke oder -anwendung entscheiden. Wenn zudem bei kontaktlosen Transaktionen jedes Mal automatisch eine Auswahl getroffen werden muss, würde dies den Zweck der Nahtlosigkeit und Schnelligkeit dieser Transaktionen unterlaufen.

Schließlich stellt die Studie fest, dass die **Art und Weise, wie diese Wahl erleichtert wird, je nach Kontext der Transaktion variiert**. Zum Beispiel, ob es sich um eine Chip-und-Pin-Transaktion, eine kontaktlose Transaktion, ein mobile Wallet-Transaktion oder E-Commerce-Zahlung handelt.

1. Introduction and objectives of the study

1.1 Introduction

This document is the final report of the study on new developments in card-based payment markets, including relevant aspects of the application of the Interchange Fee Regulation. The report provides details on the methodological approach, the fieldwork carried out, a description of the problems encountered and how the research team has mitigated them. The study findings are derived from a combination of desk research, interviews and survey data.

When a consumer makes a payment with a card-based payment instrument to a merchant, interchange fees usually apply. This often involves payment of a fee by the merchant's bank ('acquiring bank') to the bank of the consumer ('issuing bank'). The interchange fee regulation (IFR) came into effect in June 2015.

The regulation capped interchange fees for consumer debit card transactions at 0.2% and consumer credit card transactions at 0.3%. By capping the interchange fee, the IFR sought to have the acquirer face lower costs which would be translated into lower fees for merchants through Merchant Service Charges (MSCs).

Research on the topic to date[15] has indicated that since the implementation of the IFR, there has indeed been some downward pressure on interchange fees, which has been passed to merchants through lower (MSCs). However, further research is needed on the wider impacts of the IFR and whether it has had the intended impact.

This report provides an update on developments in the card-based payments market including aspects that are relevant to the Interchange Fee Regulation.

1.2 Objectives

The purpose of the study is to offer an insight into new developments in card-based payment markets, including the impact of the Interchange Fee Regulation (IFR) since 2018. The scope of the study is to analyse the extent to which objectives of the Interchange Fee Regulation have been achieved, and analyse new developments in card-based payment markets - not strictly limited to the scope of the Regulation.

More specifically, the study aims to provide insight on the following topics:

- **Payment market developments and trends accounting for the emergence of "new" means of payment** (including wallets and contactless/instant payment solutions), including in particular trends arising out of the COVID-19 crisis, the increased use of e-commerce and changing consumer habits. This also involved an analysis of developments in relevant markets, including acquiring, issuing and processing services.
- **Fees and costs:** Merchant Service Charges (MSCs) and their components, including interchange fees and scheme fees. The composition, degree of transparency and negotiability of these fees;
- **The prevalence of unblended fee schedules** offered by acquirers to merchants, timing and recurrence of this offering, and , particularly in the case of merchants who receive unblended fee schedules, assess the quality and

[15] European Commission. (2020). COMMISSION STAFF WORKING DOCUMENT: Report on the application of Regulation (EU) 2015/751 on interchange fees for card-based payment transactions. Brussels, 29.6.2020

interpretability of the information received. This section will also assess the ability of merchants to switch acquirers;

- **Co-badging and choice of application at the POS** particularly and restrictions to co-badging and the effective implementation of choice of application at POS in the context of co-badged card (both from the perspective of the merchant and their ability to set priority selection, and the consumer and their ability to override this selection).

The survey conducted for this study focused on twelve sample Member States: France, Germany, Italy, Poland, Ireland, Greece, Lithuania, Netherlands, Sweden, Czechia, Portugal and Denmark. These countries were chosen to ensure a balanced geographical representation, to capture important differences between the Member States, as well as significant developments in the card payments market. Insights from desk research and interviews have been gathered from other Member States to obtain an overview of trends throughout the EU.

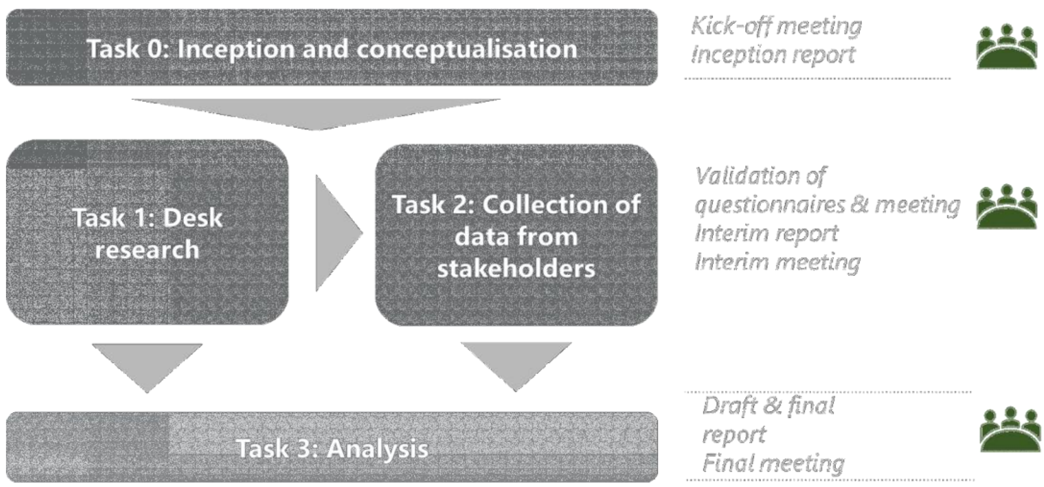
2. Methodological approach, limitations of the research and mitigation measures

This chapter presents the methodology applied throughout the study.

2.1 Overall methodological approach

The figure below presents the overall approach to the study and the different tasks.

Figure 1: Overall methodological approach of the study



To provide insight into the research topics, different data gathering methods were employed depending on the area of interest. This data was used to provide an analysis appropriate to each topic and research question, while accounting for any limitations and challenges that emerged in the data collection. The development of the study was further supported by a panel of experts, who provided advice, guidance and feedback at certain points over the course of the study.

The table below provides a detailed explanation on the methodology used for each research topic:

Table 1: Summary of methodologies used for each research topic

Research Topic	Data gathering method	Stakeholders	Description of data
Payment sector evolution	Desk research, semi-structured interviews	Retail associations consumer associations, associations of issuers, acquirers, and card schemes	Desk research was cross-checked and complemented by interviews with all stakeholder groups.
Analysis of new means of payment, such as mobile wallets, and other contactless or instant payment solutions, accounting in particular for the increase in e-commerce in the EEA, the impact of COVID-19 and changing consumer habits.	Desk research, semi-structured interviews	Retail associations consumer associations, associations of issuers, acquirers, and card schemes	Desk research and interviews with all stakeholder groups informed the analysis of new means of payment and changing consumer habits
Analysis of alternative business models to interchange fees accruing to the issuing side under a 4-party model.	Desk research, survey semi-structured interviews	Retail associations, issuers, acquirers, card schemes	The possible emergence of alternative business models was assessed through desk research, and interviews with all stakeholder groups except consumer associations.
Analysis of the market structure as regards issuing, acquiring and processing services in the EEA, identifying in particular which undertakings are solely issuers, solely acquirers or both.	Desk research, semi-structured interviews	Retail associations, issuers, acquirers, card schemes	Desk research and interviews with all stakeholders (except consumer associations) explored the presence of different market players and the level of competition between them in offering issuing, acquiring and processing services.
Analysis of the markets for (i) acquiring services and (ii) processing services, and of the degree of competition among processors and acquirers for all Member States.	Desk research, survey, semi-structured interviews	Retail associations, issuers, acquirers, card schemes	Desk research reviewed data sources per Member State on acquiring services, and processing services. Semi-structured interviews with all stakeholders (except consumer associations) gathered qualitative insight on the structure of these markets. Interviews also provided insights on the extent of competition in the processing and

Research Topic	Data gathering method	Stakeholders	Description of data
			acquiring market from companies functionally independent from card schemes.
Interchange and scheme fees evolution	Surveys, semi-structured interviews	Card schemes, issuers, acquirers, merchants	Surveys with card schemes, and merchants gathered the latest data on scheme fees, interchange fees, processing fees, card fees and merchant service charges. Semi-structured interviews will gather qualitative insights on trends in this area.
Information from card schemes (international and domestic from the selected Member States): • Interchange fees and revenues generated from those fees • Domestic card scheme fees charged to acquirers and issuers, excluding processing fees; • Insight into directly and indirectly card-related payments, incentives and rebates granted to issuers, acquirers and other market players.	Surveys, and interviews	Card-Schemes	Surveys gathered information from card schemes on interchange fees. Surveys gathered information on scheme fees from domestic card schemes. Interviews gathered information on other card related payments granted to issuers, acquirers and other market players.
Information from associations representing issuers: • On the development of scheme fees • transparency and negotiability of these fees.	Semi-structured interviews	Issuers	Interviews gathered information from associations representing issuers concerning the development of scheme fees. These interviews also sought to gather opinions concerning the negotiability and transparency of these fees.

Research Topic	Data gathering method	Stakeholders	Description of data
Information from acquirers, including acquiring banks and independent acquirers: • development of schemes fees paid on transactions; • Developments concerning MSC by scheme and type of cards • transparency and negotiability of these fees taking int account merchant size	Surveys, semi-structured interviews	Acquiring banks	Interviews gathered information from associations representing acquirers concerning the development of scheme fees and MSCs. Interviews also gathered issuers' opinions concerning the negotiability and transparency of these fees.
Information from merchants (survey of a representative sample in each selected Member State, to be completed by questionnaires to trade associations if relevant): • quantification of the increase/decrease of total fees for debit and credit cards, to be calculated in basis points by the Contractor; • identification and quantification of newly introduced scheme fees since 1 January 2018, acquiring and processing fees and their possible justification (e.g. new services); • quantification of increases in scheme, acquiring and	Surveys, semi-structured interviews	Retail associations, merchants	Surveys gathered information from a representative sample of merchants concerning, increases/decreases in debit and credit card fees, new scheme fees, acquiring and processing fees, and MSCs. Interviews were used to add qualitative information to these findings. Nevertheless, survey responses on these questions were very limited.

Research Topic	Data gathering method	Stakeholders	Description of data
processing fees already applied on 1 January 2018.			
Prevalence of blended and unblended fee schedules amongst merchants	Surveys, semi-structured interviews	Retail associations, acquirers, (other payment industry associations)	Surveys and semi-structured interviews gathered quantitative data from retail associations and acquirers to determine the prevalence of different fee schedules. Semi structured interviews asked payment industry associations for qualitative insight into the prevalence of such fee schedules
Information from merchants (survey of a representative sample in each selected Member State, to be complemented by trade associations if relevant):			
Acquiring contracts containing blended or unblended fee schedules and reasons for this (lack of administrative capacity, lack of interest, technical obstacles, lack of information or offering by acquirers);	Surveys, semi-structured interviews	Retail associations, merchants	Surveys and semi-structured interviews gathered quantitative data from retail associations and merchants to determine the prevalence of different fee schedules. Semi structured interviews will gather qualitative insights on this issue
Quality of the information provided by acquirers to distinguish fee elements (e.g. interchange fees, processing fees, acquiring fees, scheme fees) and offering of unblended fee schedules upon renewal of the contract;	Surveys, semi-structured interviews	Retail associations, merchants	Surveys gathered quantitative data from merchants to determine the type of information (as well as the timing) merchants can obtain. Interviews of retail associations and merchants gathered opinions concerning the quality of this information.
Obstacles to switching acquirers, including lack of transparency in pricing of acquiring services, contractual terms for acquiring contracts/indefinite duration of such contracts, possible lack of portability of POS terminals	Surveys, semi-structured interviews	Retail associations, merchants	Surveys gathered quantitative data from retail associations and merchants to determine the extent to which merchants can change acquirers. Interviews similarly gathered their opinions concerning the extent to which there are obstacles to doing so.

Research Topic	Data gathering method	Stakeholders	Description of data
and/or early termination fees for POS terminal contracts.			
Information from acquirers (survey of a representative sample in each selected Member State):			
information provided to merchants on unblended fee schedules;	Surveys, semi-structured interviews	Retail associations, merchants	Surveys gathered quantitative data concerning the type of information provided to merchants in unblended fee schedules. Interview feedback provided further qualitative insight as regards the information (and its quality) provided.
timing for providing information (for instance by default, or when contracts are renewed, or the first time a contract is entered into) and analysis of merchants' ability to switch from blended to unblended fees, identifying possible technical obstacles to merchants' switching;	Surveys, semi-structured interviews	Retail associations, merchants	Surveys gathered quantitative data concerning the timing of information provided to merchants as well as their ability to change from blended to unblended fees. Interviews similarly gathered retail associations' and merchants' insight on the timing as well as their opinions concerning their ability to switch fees.
provision of opt-out or opt-in options for merchants to choose unblended fees (differentiation by size of merchant and sector if appropriate).	Surveys	Retail associations, merchants	Surveys gathered quantitative data concerning the extent to which merchants are provided options to choose unblended fees.
Restrictions to co-badging (digital wallets and equivalent) and choice of application at the Point-Of-Interaction ("POI")	Surveys, semi-structured interviews	Consumer associations, retail associations, merchants, acquirers, issuers, (card schemes)	Surveys and interviews gathered quantitative and qualitative data on technical, legal, and other obstacles to payment application choice at POI from consumer associations, retail associations, merchants, and acquirers. Card schemes were interviewed on their insights.

Research Topic	Data gathering method	Stakeholders	Description of data
Examine, through a survey addressed to relevant interest groups or trade associations in the selected Member States, the technical or other restrictions preventing the effective implementation of the choice of payment application to be inserted on the payment instrument (i.e. co-badging)	Surveys, semi-structured interviews	Consumer associations, retail associations, merchants, acquirers, (card schemes)	Surveys and semi-structured interviews gathered insights from consumer and retail associations, merchants, and acquirers concerning technical or other restrictions preventing choice of application. Semi-structured interviews gathered opinions on this issue from card schemes.
Examine the prevalence of consumers and merchants choosing the payment application at the POI, including priority selection, through a survey of a representative sample of merchants in each selected Member State, to be complemented by trade associations if relevant, and a questionnaire to relevant consumer organisations.	Surveys, semi-structured interviews	Consumer associations, retail associations, merchants, acquirers, (card schemes)	Surveys and semi-structured interviews gathered insights from consumer and retail associations, merchants, and acquirers concerning priority selection. Semi-structured interviews sought to gather opinions on this issue from card schemes.
Analyse possible technical and legal/contractual obstacles to the choice of payment application at the POI (e.g. lack of awareness or limited transparency as to the practicalities of making a choice, lack of incentives including rebates), through a survey of a representative sample of issuers, acquirers and merchants in each selected Member State, to be complemented by trade associations if relevant, and a	Surveys, semi-structured interviews	Consumer associations, retail associations, merchants, acquirers, issuers, (card schemes)	Surveys and semi-structured interviews gathered insights from consumer and retail associations, merchants, acquirers and issuers on whether there are technical and legal/contractual obstacles to the choice of payment application. Semi-structured interviews gathered opinions on this issue from card schemes.

Research Topic	Data gathering method	Stakeholders	Description of data
questionnaire to relevant consumer organisations. Differentiate by merchant size and category where appropriate, taking into consideration the possible impact of lack of/cost of technical adaptation of terminals.			

The final interview guides are available in **Annex 1.** The final survey questionnaires for card schemes, issuers, acquirers and merchants can be found in **Annex 2 to 5** of the report. Lastly, details on the sampling of merchants for the survey can also be found in **Annex 6** of the report.

2.2 Challenges and limitations of the study

This section addresses the challenges and limitations that the consortium faced during the research undertaken for this study. Significant difficulties were faced in obtaining a high participation rate on the part of merchants, issuers, and acquirers. These stakeholders highlighted non-disclosure agreements with card schemes as well as the length of the survey as reasons for not participating. Furthermore, difficulties were faced with obtaining information on all issues of focus from international card schemes. These stakeholders highlighted confidentiality and availability of the requested data, as well as a parallel investigation launched by the Commission as key reasons not to provide certain data.

2.2.1 Survey data collection

As noted, obtaining thorough and extensive data from surveys was a key challenge in this study. As discussed in the methodology section of this report, an extensive sample of merchants, issuers, and acquirers was developed during the inception period of this study (see **Annex 6**). Nevertheless, there was limited willingness to participate in the survey on the part of merchants, issuers and acquirers and partial responses were received from the card schemes.

Below is a description of the issues faced as regards data collection for these stakeholders.

2.2.2 Merchants

Outreach methodology

The sampling frame for the merchant survey was compiled to ensure it covered both large merchants active in the e-commerce, travel, and accommodation sectors, as well as merchants with a lower revenue tier (i.e. national level). When composing the sample frame for each merchant (company), multiple individuals were identified. This ‘multi contact strategy’ could be an advantage for securing participation rates in the case one or more eligible person(s) in a company refuse to take part. Details on the sampling frame and selection criteria, can be found in Annex 5 of the report.

The (direct) data collection is deployed through a hybrid CATI/CAWI[16] approach. Via the CATI methodology, the ‘multi contact strategy’ was applied. At the initial stage of contacting the relevant stakeholders, the Commission’s accreditation letter was provided upon request along with a pdf version of the questionnaire. This allowed the participant to review and prepare for the questions required within the survey.

Difficulties encountered with participation

From the total sample frame of 6823 merchants, in total 6813 merchants were contacted to participate in the survey. Out of the 6813 contacted companies, 969 refused to participate in the survey. These merchants provided several reasons for not participating. Some indicated that they did not have time to complete the survey, others expressed a lack of interest, and others, after initially expressing strong interest in participating, reviewed the survey and indicated that it was too long for them to answer.

[16] *Computer Assisted Telephonic Interviewing (CATI) / Computer Assisted Web Interviewing (CAWI)*

Overall, there were difficulties in obtaining a high participation rate from the contacted stakeholders. Due to the data fields covered under the survey questionnaire, the interviewers were unable to initiate the survey on the spot. This is because the interviewees needed to spend time in collecting the information required. As a result, many participants tended to decline the survey invitation due the lengthy process of compiling internal information. In other cases, merchants requested to be called back at least after a month in order to compile the necessary information needed to respond to the survey. As a result, the survey link was shared with 465 merchants. This gave the participants the opportunity to review the questionnaire and provide the information when they were available to do so. In addition to this, some respondents indicated they did not have the information on fees required split per card scheme as it is not offered by their bank.

In total 55 merchants responded to the survey questionnaire. However, the data shared was not always complete. This was particularly the case with questions requesting annualised fee data. In most cases the respondents only provided fee details for 2022. In addition to this, most respondents did not provide data on the number and value of card payment transactions per card scheme (Mastercard, Visa, Domestic) or type of transaction (Debit, Credit or Commercial). Merchants indicated that they did not have information about the payments per card scheme since it is not provided by their acquirer. The same applies for the type of payment cards used to make payments. Overall, the companies reported that they are generally not interested in receiving information on the volume of card payments per card scheme from their acquirer. Lastly, most of the completed questionnaires submitted include limited information as regards the card related fees per card scheme.

In order to understand why certain questions within the survey were not answered, open ended questions were included in the survey to provide respondents the option of offering an explanation. This was intended to allow the research team to follow-up with the companies by requesting to offer a qualitative or quantitative insight for specific questions. Furthermore, the merchants who did not offer information on card schemes – and information by type of card transaction – were re-contacted in order to request their fee schedules. Merchants were nonetheless unwilling to provide fee schedules as an alternative to survey participation.

To address the issue of low levels of participation, the research team also contacted European (corporate) head offices. As a result of this outreach, a small number of survey responses were also obtained from merchants. Below is a summary of the merchants’ participation in the survey.

Table 2: Summary of the total number of merchants contacted by Member State

Country	Total companies contacted	Completed interviews
Czech Republic	530	7
Denmark	242	6
France	1091	6
Germany	1135	7
Greece	300	5
Ireland	110	2
Italy	1564	15
Lithuania	86	0
Netherlands	352	1
Poland	637	6
Portugal	339	1
Sweden	428	5
Grand Total	6814	61

Furthermore, the merchants that did participate often did not provide answers to all of the survey questions. The grand majority of respondents did not provide quantitative information on the increase or decrease of total fees for debit and credit cards, nor the identification and quantification of newly introduced scheme fees, acquiring fees or processing fees.

Mitigation measures

While there was limited participation on the part of merchants, the survey was still able to obtain 55 survey responses. The study therefore has compiled and analysed information regarding the presence of blended and unblended fee schedules amongst merchants, the reasons behind their choice, the quality of information in these fee schedules, and the possible obstacles to switching acquirers. Furthermore, information was gathered on the possible restrictions to co-badging and the choice of application at the point of sale. The insights from survey responses were complemented with qualitative insights from interviews with merchant associations. On the other hand, due to the limited information provided on the development of fees merchants faced, survey analysis was not performed on these issues. The study team instead relied on interviews with merchant associations and other associations of PSP to gather qualitative information and analyse the development of fees faced by merchants.

2.2.3 Issuers & acquirers

Outreach methodology

The sample frame for the issuing banks and acquirers was compiled via desk research. Based on this desk research, the research team created a list of companies which was then validated by the Commission and the consortium member EPCA, both of which added additional entities to the list. The individual entries in the list were then checked to assess whether each bank could be defined as an issuing bank, an acquiring bank or both. During this stage contact details of the respective banks and possible eligible department/contact names were also collected. Parallel to this verification process, desk research was conducted to identify banks not present in the compiled list. This included checking national associations and their respective membership to verify whether all of their issuers and acquirers were included in the sample frame. At the request of the Commission, a dataset with payment facilitators was composed at a later stage.

As with the merchant survey, the (direct) data collection was deployed through a hybrid CATI/CAWI approach. Via the CATI methodology the ‘multi contact strategy’ was applied. At the initial stage of contacting the relevant stakeholders, the Commission’s accreditation letter was provided upon request along with a pdf version of the questionnaire. This allowed the participant to review and prepare for the questions required within the survey.

Difficulties encountered with participation

In total the research team contacted 269 individuals via the CATI methodology. E-mail addresses of possible contact points collected via desk research were utilized to send out direct invitations to the respective individuals.

As noted above, several banks initially indicated their interest in participating in the study but after reviewing the questionnaire, the managers of the relevant banks rejected the survey invitation. Several others noted that they did not have the data requested; this is particularly because scheme licenses are used by several banks. They also did not have data for co-badged schemes. A number of other banks indicated that they would not be able to share information on the scheme fees, as they have non-disclosure agreements with Mastercard.

Parallel to this ‘direct’ approach, in order to encourage participation in the survey, an “indirect” approach was deployed to incentivise responses. This involved contacting all relevant national banking associations and informing them about the study. The associations were asked to inform their members about the study and to share with the consortium relevant contact points of their members.

As a whole, banking associations reacted positively to the research team’s request and indicated interest in encouraging their members to participate in the survey. When the associations involved did react positively to the research team’s request, the direct approach (via CATI) in the respective Member State was postponed in order to avoid burden on the entities originally contacted. Since the associations can be expected to be in contact with the individual entities, this was done to prevent individuals at these entities being contacted multiple times.. For the banks not responding on the request of the association, the direct approach was resumed within 2 weeks after the positive response of the respective association. Nevertheless, despite the significant interest from these national associations, and the positive responses they also obtained from their members, after reviewing the responses, the issuers and acquirers mostly rejected participation.

The following tables include the number of contacts GDCC made via the CATI approach and the number of contacts that were asked to participate directly via email.

Table 3: Summary of the total number of issuers contacted per Member States

Country	Total contacts GDCC called via CATI	Completed interviews
Czech Republic	10	0
Denmark	30	1
France	27	1
Germany	35	1
Greece	2	0
Ireland	20	0
Italy	26	0
Lithuania	12	0
Netherlands	13	0
Poland	56	0
Portugal	36	0
Sweden	16	0
Grand Total	283	3

Table 4: Summary of the total number of acquirers contacted per Member States

Country	Total contacts GDCC called via CATI	Completed interviews
Czech Republic	9	0
Denmark	16	0
France	4	0
Germany	26	0
Greece	10	0
Ireland	5	0
Italy	8	0
Lithuania	14	0
Netherlands	7	0
Poland	13	0
Portugal	11	0
Sweden	11	0
Grand Total	134	0

Mitigation measures

Ultimately, after extensive follow up with stakeholders as well as national and EU level associations, only 3 issuers participated in the survey and 0 acquirers provided responses to the questionnaire. As a result, the study did not include a quantitative analysis of survey responses from these market participants. The study instead relied on qualitative interviews with associations of banks to obtain insight onto the situation regarding fees that issuers and acquirers face as well as their perception on the issues regarding blended and unblended fee schedules amongst merchants and possible restrictions to co-badging and choice of application.

2.2.4 Card schemes

Outreach methodology

Apart from the survey dissemination of merchants, acquirers and issuers, the Consortium also disseminated a survey for international and domestic card schemes. The study aimed to collect data from the two international card schemes, VISA and Mastercard, as well as five domestic EU card schemes. These are: France (Cartes Bancaires), Italy (PagoBancomat), Denmark (Dankort), Germany (Girocard) and Portugal (Multibanco).

VVA collected the necessary contact details from each card scheme through a variety of methods. Directly for VISA, Mastercard, Cartes-Bancaires, Multibanco and Girocard. For PagoBancomat and Dankort, the team contacted payment card associations, such as the European Card Payment Association for their assistance. The table below offers an overall summary of card schemes' participation in the study.

Difficulties encountered with participation

The survey was ultimately disseminated to all seven card schemes. Ultimately, all card schemes participated in the survey. Nevertheless, the completeness of the survey responses varied across stakeholders. The international card schemes did not provide quantitative full responses to questions concerning their scheme fees and did not provide responses concerning bonuses, incentives and discounts. Mastercard provided on the other hand details on processing fees. On the part of domestic schemes, answers were provided responses on their scheme fees and interchange fees. No answers were provided on bonuses, incentives, and discounts as they noted these do not apply to them.

According to the two international card schemes, they did not respond to all the questions in the survey for a number of reasons:

1. Concerns about the level of confidentiality
2. The length of the questionnaire
3. The ongoing preliminary investigation launched by the European Commission (DG COMP) in relation to both schemes and pertaining to discounts and rebates.

As part of the consortium's mitigating strategy, the research team provided repeated assurances to the stakeholders that the information will be dealt with confidentially and taking into account their concerns (e.g., the Final Report, if published, would only contain non-confidential information). Furthermore, the research team has sought to encourage card schemes to provide at least some of the information they have available. Furthermore, it was reiterated that the information provided for this study would not be shared with the department undertaking the investigation by the European Commission.

Mitigation measures

As a result, the study performed quantitative analysis only for the survey responses received. As an example, scheme fees were not calculated for international card schemes. Instead, trends concerning these fees were described using interview insight from all of the market participants. Responses from one side of the market were analysed and cross-checked with responses from another side of the market. Below is a table detailing the participation of the card schemes.

Table 5: Summary of card scheme participants

Name of Card Scheme	Survey completed
Mastercard	Yes
Visa	Yes
Cartes Bancaires	Yes
Girocard	Yes
PagoBancomat	Yes
Mutlibanco	Yes
Dankort	Yes

2.2.5 Interviews

Methodology

Similar to the methodology used in the card scheme survey, the research team contacted relevant European associations in the field of payments, banking, merchants and consumers.

The research team sent interview invitations via email to specific contact points within each association. Similar to the card scheme survey invitations, the email introduced the scope of the study, shared the European Commission's accreditation letter and interview questionnaire. For time efficiency reasons, we asked participants to share their written feedback prior to conducting an interview. This allowed the research team to review the input and formulate follow up questions which would be discussed during the interview.

The table below offers a detailed summary of the participation level of the European Associations:

Table 6: Summary of the participation level of European associations

Name of organization	Received feedback
Association of Credit Card Issuers in Europe (ACCIE)	Yes
Payments Europe	Yes
Eurocommerce	Yes
European Digital Payments Industry Alliance (EDPIA)	Yes
Independent Retailer Europe	Yes
European Payments Institution Federation (EPIF)	Yes
BEUC	Yes
Electronic Money Association (EMA)	No
E-commerce Europe	Yes
European digital finance Association	No
European Savings and Retail Banking Group (ESBG)	Yes
European Banking Federation	No
European Association of Payment Service Providers For Merchants (EPSM)	Yes
European Mobile Payment Systems Association (EMPSA)	Yes
Euro Coop	No
European Association of Public Banks (EAPB)	No
European Third Party Providers Association (ETPPA)	No
European Association Of Cooperative Banks	No
European Payments Council (EPC)	No
European Card Payment Association	No
American Express	Yes
Card Payment Sweden (CPS)	Yes
SaltPay/Teya	Yes

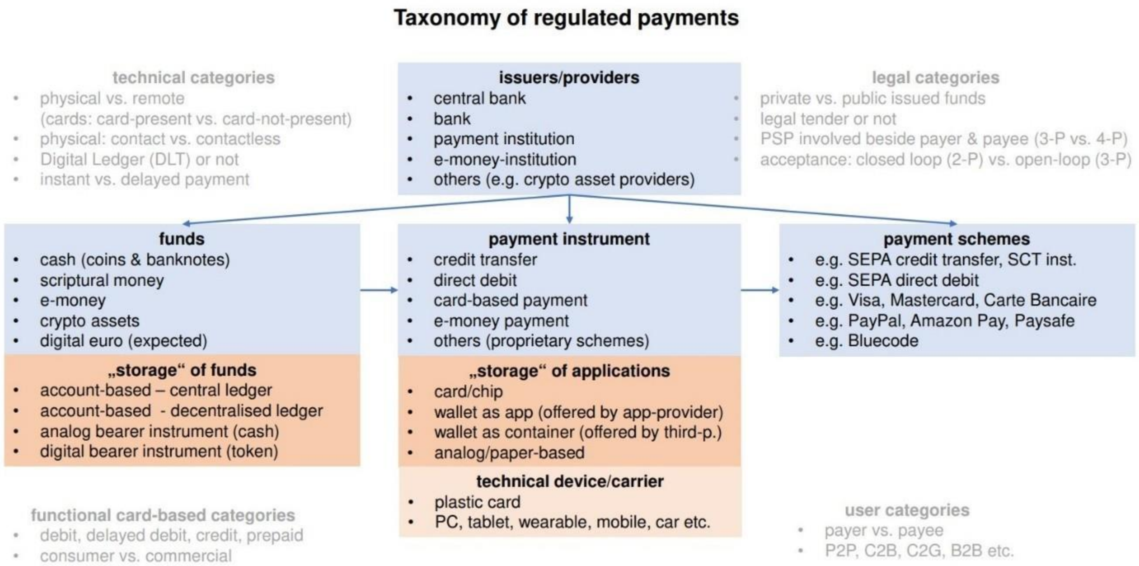
3. Findings from desk research, survey and interviews

Payment systems allow funds to be transferred between two or more economic agents[17]. In this report, the focus is on retail payment systems. [18] An effective and efficient payment system facilitates trade, commerce and financial transactions. It ensures consumers and businesses are able to sell or buy goods and services both domestically and across borders.

The European Commission has undertaken a range of initiatives to promote the development of the payments ecosystem across the Digital Single Market, make payments safer and cheaper and pave the way for innovative payment technologies. These include, among others, the Payment Services Directive (PSD2)[19] and the Interchange Fee Regulation (IFR).

The retail payments ecosystem in Europe is complex and constantly evolving, due to digital innovations bringing new payment services and new market players.[20,21] While there are different definitions of the payments ecosystem in the literature, this report will follow the definitions in the IFR, complemented (where necessary) by other EU law .[22,23] The figure below presents a taxonomy of the regulated payments ecosystem in the EU that is the focus of this report.

Figure 2: Taxonomy of the regulated payments system.



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[17] *i.e. households, businesses, governments and central banks.*

[18] *According to the ECB, the retail payments system is by definition payments or transactions between consumers and businesses, as well as with public authorities. These transactions include everyday consumer purchases, but could also include for example salary and tax payments made by businesses. What are retail payments? (europa.eu)*

[19] *Which aims at creating a unified framework for payment services across EU member states.*

[20] *ECB. (2022), Implications of digitalisation in retail payments for the Eurosystem's catalyst role Implications of digitalisation in retail payments for the Eurosystem's catalyst role (europa.eu)*

[21] *Examples of such alternative payment services include account to account and instant payments, new market players include BigTech and FinTech payment services. Identification of these alternative payment systems and new market players are further discussed in section 3.1.2 to 3.1.4. of the report.*

[22] *These could include PSD2 and the currently proposed PSD3, Payment Service Regulation and Consumer Credit Directive.*

[23] *Since different published papers interpret the definitions of the payments system differently to this report, any differences amongst the terminology will be highlighted in the report with a footnote.*

Within the EU retail payments market, Payment Service Users (PSUs) [24] **receive payment services from Payment Service Providers (PSPs)**.[25] Issuers[26] and/or PSPs hold funds (e.g. cash or e-money) on behalf of PSUs.[27] The funds can be stored in account-based central ledgers (e.g. central banks and financial institutions) or decentralised ledgers (e.g. blockchains).[28] Funds can be stored in the form of an analogue bearer instrument (i.e. cash) or as a digital bearer instrument. For the funds to be used, PSPs issue payment instruments.

Payment instruments are used to initiate payments and are agreed between the PSU and the PSP. Payment instruments include credit cards, debit cards, prepaid cards, credit transfers[29] or direct debit[30]. Cards, mobile phones, computers or other technological devices containing the payment application enabling the payer to initiate a card-based payment transaction are defined as card-based payment instruments. The cardholder (i.e. the PSU/payer) initiates a card-based payment transaction by using a payment application stored on a card-based payment instrument.).

Payment instruments may be used directly or through the use of payment applications. Payment applications usually consist of computer software (or equivalent), which is loaded on a device (e.g. a smartphone, computer or wearable) that enables a card based payment transaction[31] to be executed. For example, digital wallets are considered a payment application.[32] A digital wallet can contain one or several underlying payment applications and can itself be stored on one or several card-based payment instruments. Apple Pay and Google Pay are two examples of digital wallet payment applications.[33] In the case of Apple devices, the application called Apple Wallet allows cardholders to store their debit or credit cards and initiate payments via Apple Pay.

Payment schemes establish a set of rules that PSPs must follow to execute transactions via a payment instrument that run on the scheme. The most common payment schemes in the European payments ecosystem are the four-party

[24] *A payment service user is a natural or legal person making use of a payment service in the capacity of either payer or payee, or both*

[25] *Based on the definitions of the Payments Service Directive and Interchange Fee Regulation, issuer and PSPs are defined as: " means any natural or legal person authorised to provide the payment services listed in the Annex to Directive 2007/64/EC or recognised as an electronic money issuer in accordance with Article 1(1) of Directive 2009/110/EC. A payment service provider can be an issuer or an acquirer or both*

[26] *Based on the IFR, issuers are Payment Service Providers contracting to provide a payer (i.e. a consumer who holds funds through a payment account and allows a payment order to be made on their behalf) with a payment instrument to initiate and process the payer's card-based payment transactions.*

[27] *A payment service user is a natural or legal person making use of a payment service in the capacity of either payer or payee, or both*

[28] *Lopez.M. (2021). Distributed Ledger vs. Centralised Ledger. Link:(26) Distributed Ledger vs. Centralized Ledger | LinkedIn*

[29] *Based on the definitions of PSD2, a credit transfer is payment service for crediting a payee's payment account with a payment transaction or a series of payment transactions from a payer's payment account by the payment service provider which holds the payer's payment account, based on an instruction given by the payer.*

[30] *Based on the definitions of PSD2, a direct debit is payment service for crediting a payee's payment account with a payment transaction or a series of payment transactions from a payer's payment account by the payment service provider which holds the payer's payment account, based on an instruction given by the payer*

[31] *Card based payment transactions are service based on a payment card scheme's infrastructure and business rules to make a payment transaction by means of any card, telecommunication, digital or IT device or software if this results in a debit or a credit card transaction. Card-based payment transactions exclude transactions based on other kinds of payment services;*

[32] *REGULATION (EU) 2015/751 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2015 on interchange fees for card-based payment transactions. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX%3A32015R0751*

[33] *The definition of a digital wallet is in connection to the IFR's definition of a payment application, as well as the proposed Payment Service Regulation. EUR-Lex - 52023PC0367 - EN - EUR-Lex (europa.eu)*

card schemes and the schemes linked to the Single European Payments Area (SEPA). SEPA aims to harmonize payment systems and enable cross-border transactions within the Eurozone using standardized processes. Most of the euro direct debit and credit transfers rely upon the scheme set by SEPA. These are known as SEPA Credit Transfer (SCT) and SEPA Direct Debit (SDD) schemes.

The majority of card payments run under a four-party scheme. [34] In a four-party scheme, the following actors are involved:

i. The consumer (PSU or 'cardholder') and the issuer of the cardholder's card (the 'issuer');

ii. The merchant (retailer) and the PSP enabling the merchant to accept card payments (the 'acquirer'[35]).

iii. The card scheme, which regulates the four-party scheme.

PSPs (issuers and acquirers) have an agreement with card schemes which allows them to use the card scheme's brand name, technology, and services. This enables the issuing PSP to issue payment cards under the card scheme's brand and process transactions on the card scheme's network and the acquiring PSP to accept payments from the cards issued by the issuing PSP. Card schemes in the EU consist of international (e.g. VISA and MasterCard) and domestic schemes (e.g. Cartes Bancaires in France, Girocard in Germany and Pagobancomat in Italy).

3.1 Payment Sector Evolution

- The study confirms that, across the EU, **card payments are the most frequently used form of electronic payment method accounting for just over half of payments**, and in the majority of Member States, this share has grown between 2018 and 2021, though to a varying degree. Further, in Member States where there is a domestic card scheme present, it is the domestic scheme that is most frequently used for domestic transactions. Stakeholders argued that nonetheless, the position of international card schemes remains relatively unchallenged for cross-border transactions.
- **Cash remains the most popular means of payment for in-store transactions**, though the downtrend in cash usage appears to have accelerated during the Covid-19 pandemic (59% of in store transactions in volume were made by cash in 2022, down from 72% in 2019[36]).
- A key trend in recent years concerning card payments is the **increasing popularity and acceptance of contactless payment cards.** Though the extent to which contactless cards are used varies between Member States, a general upward trend in the use of this type of payment has been observed between 2019 and 2022[37].
- **Mobile payments via digital and mobile wallets have also become an increasingly popular means of payment in recent years**. The study finds that the value of digital and mobile payments increased by 30% between 2018 and 2022[38]. In fact, the transaction value generated from mobile wallet POS payments in-store in the EU-27 increased in the last 5 years from EUR 4.2 billion in 2017 to EUR 195.2 billion in 2022, and is expected to increase at an annual rate of 21% from 2023 to 2027.[39] The increase in the popularity of mobile

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[34] *In addition to the four-part card scheme, three-party card schemes are also one of the business models used to carry out a card-based payment transaction. In this report, only four-party card schemes will be taken into consideration.*

[35] *An acquirer is a payment service provider contracting with a payee to accept and process card-based payment transactions, which result in a transfer of funds to the payee.*

[36] *ECB. (2022). Study on the payment attitudes of consumers in the euro area (SPACE) – 2022*

[37] *ECB. (2022). Study on the payment attitudes of consumers in the euro area (SPACE) – 2022*

[38] *Mark Stiltner. (2021). How digital wallets in Europe are reshaping payments. Rapyd. Online: https://www.rapyd.net/blog/how-digital-wallets-in-europe-are-reshaping-payments/*

[39] *Statista.(2022). Mobile POS Payments. Online: https://www.statista.com/outlook/dmo/fintech/digital-payments/mobile-pos-payments/eu-27#transaction-value*

payments may be the result of a combination of factors, including wallet solutions being introduced by big-techs and other PSPs, the increase in smartphone penetration and the rise in e-commerce. In addition, technologies available today allow users to easily store and manage payment applications on their mobile devices.

- With regard to the technologies which have facilitated this development in mobile payments, near-field communication (NFC) and QR-codes (Quick Response - codes) are the key technologies used by mobile wallets at physical POS terminals, with **NFC-based mobile wallets being the most commonly used in Europe.**
- A number of alternative payments are currently offered in EU Member States. **Instant payments are a new form of payment becoming increasingly available across the EU**. These are SEPA Credit Transfer (SCT) transactions that are processed instantly and allow for the transfer of funds from the payer to the payee's account within 10 seconds. Several alternative payment services provide **account-to-account (A2A) digital payments** (i.e. the transfer of funds from one party's account to another party's account) such as Bluecode, Bizum, and Blik.
- **The market structure for issuing and acquiring services is changing due to new payment players entering the market**, in particular Fintechs. In addition, some traditional issuing and acquiring service providers (i.e. banks) have undertaken **market consolidation in order to become more competitive.**

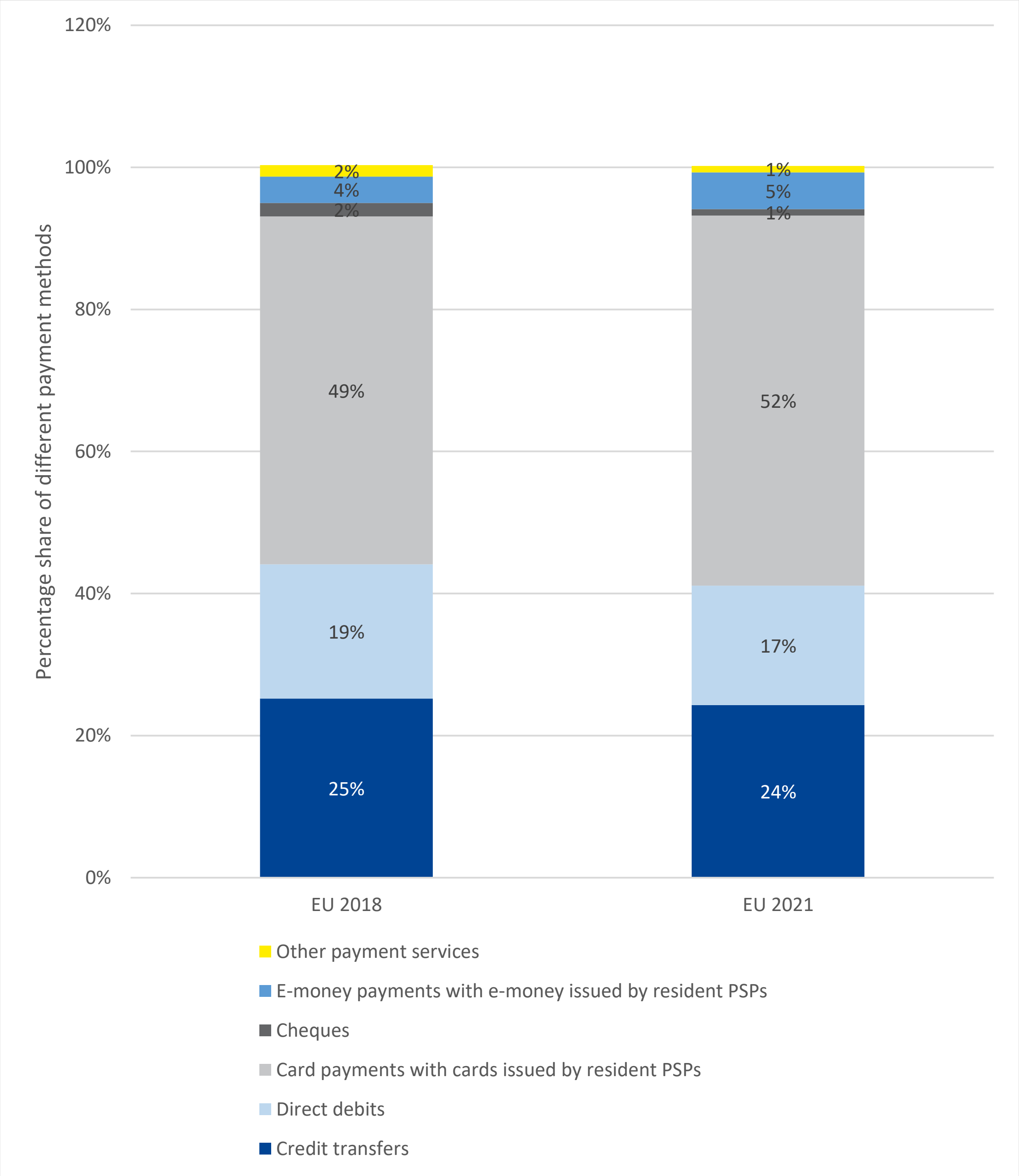
This section provides the findings on the evolution of the payments market in Europe. This includes trends regarding traditional means of payment such as cash and cards as well as new means of payment, such as instant payments or account to account payments used both in physical POS and/or e-commerce that may be supported by new technologies and innovations.

Section 3.1.1 provides an overview of the payments sector, Section 3.1.2 describes trends in cash usage as a traditional means of payment, Section 3.1.3. describes trends related to the use of contactless cards, Section 3.1.4 presents developments concerning mobile wallets, Section 3.1.5 highlights the emergence of other means of payments and Section 3.1.6 analyses the market for issuing, acquiring and processing services.

3.1.1 Overview of the payment sector

The figure below presents the share of transactions performed by electronic payment methods, excluding cash. **The figure indicates that across the EU, card payments remain the most frequently used form of payment** (when assessing the number of payments by a type of payment service as a share of the total number of all payments types). As shown in the figure below, card payments represented 52% of all electronic payments. This was followed by credit transfers at 24%, direct debits at 17%, e-money payments at 5%, and cheques as well as other payment services both at 1%.

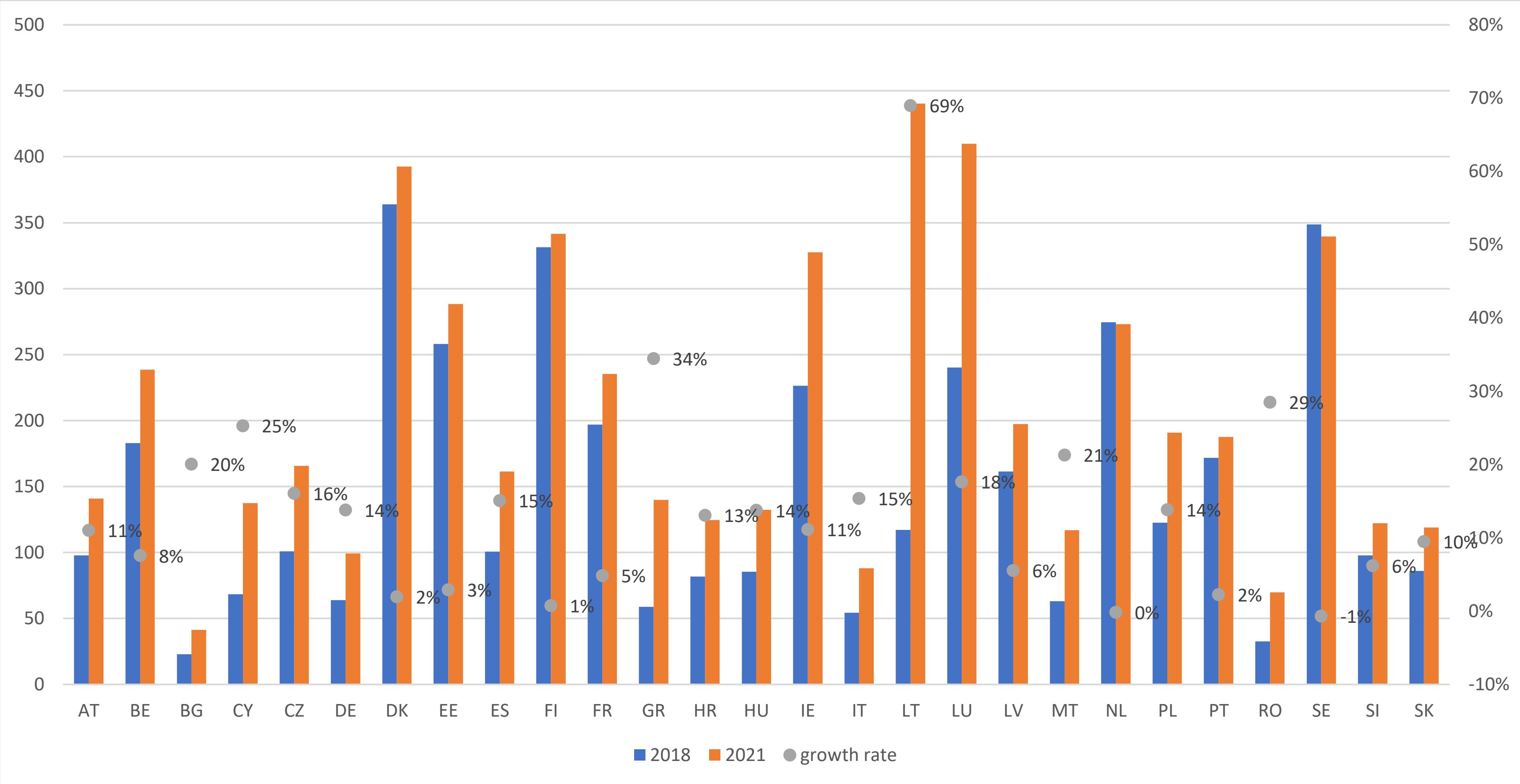
Figure 3: Relative importance of different payment methods in the EU, excluding cash



Source: ECB Payment Statistics[40]

[40] *ECB. (2021). Payment Statistics. Online: https://data.ecb.europa.eu/sites/default/files/2023-06/Payment%20Statistics%20%28full%20report%29.pdf*

Figure 4: Card payment transactions per capita



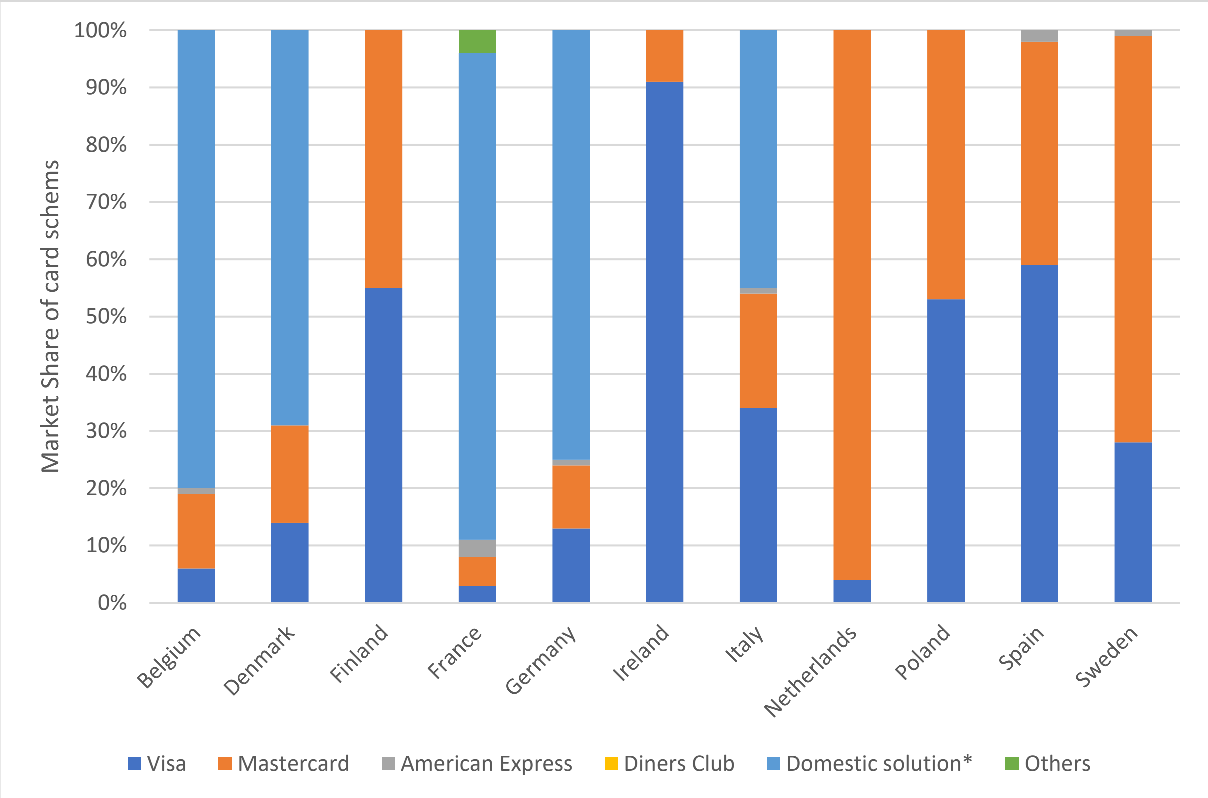
Source: ECB[41]

[41] *ECB. Payment statistics. Online: https://data.ecb.europa.eu/sites/default/files/2023-06/Paymenst_Statistics_General_Notes.pdf*

Furthermore, as noted above, in the overwhelming majority of Member States, the number of card payment transactions per capita has increased between 2018 and 2021. The rate at which this occurred varied with some Member States such as Lithuania, and Greece showing growth rates of 69% and 34% respectively, while others such as Finland, and Portugal experienced much lower growth rates of 1% and 2%.

The figure below shows the market share that international and domestic card schemes have in a selection of EU Member States. Noteworthy is the fact that in Member States where there is a domestic card scheme, it is the scheme most frequently used. This can be seen in the case of Belgium where 81% of consumer card payments in volume involved Bancontact, Denmark where 69% of consumer card payments in volume involved Dankort, France where 85% of consumer card payments in volume were performed with Cartes Bancaire, Germany where this figure was 75% in volume for Girocard, and Italy where 45% of consumer card payments in volume involved Pagobancomat. On the other hand, one association representing issuers and acquirers indicated that when it comes to cross-border transactions their position is relatively unchallenged since domestic card schemes can only be used in the domestic market from which they derive from.

Figure 5: Market share in volume of international and domestic payment card schemes in 11 countries in Europe in 2021 (online and offline transactions)



Source: Statista[42]

Means of payment in E-commerce

The figure below from the ECB shows the share of different payment instruments used online in the Euro area in 2022. **On average across the eurozone, 51% of all online payments were executed with cards, 24% were made with other e-payment**

[42] *Statista. (2023). Market share of international and domestic payment card schemes in 14 countries in Europe in 2021*

solutions ("including PayPal[43] and other online or mobile payment methods (e.g. Klarna, Sofort, and iDeal)"[44]), and 13% "other" ("includes loyalty points, vouchers and gift cards, crypto assets and other payment instruments"[45]).

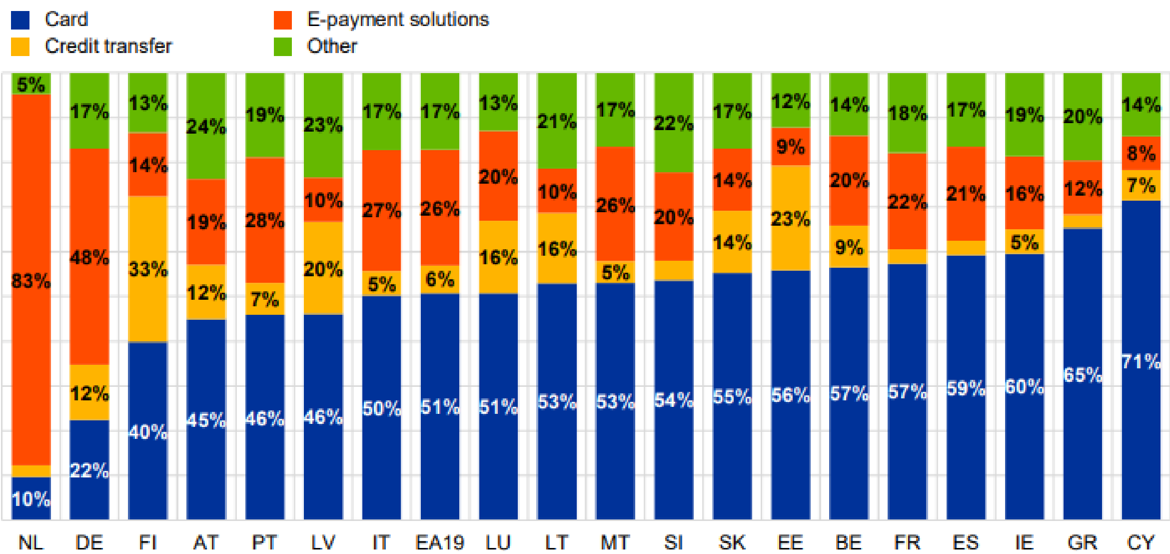
Notable cases in the EEA are Cyprus, Greece and Ireland with over 60% of online purchases being performed via payment cards. Nevertheless, most of the countries within the EEA had at least 50% of online payments executed via payment cards. Exceptions are: Finland, Austria, Portugal, Latvia, Netherlands and Germany (the latter two primarily due to the extensive use of e-payment solutions).

Outside the eurozone, online purchases via card payments were often below 50%.[46] In 2022 online purchases via card payments accounted for 36% in Hungary (still the most popular payment method),[47] followed by 30% in Switzerland (below the mostly widely used payment method of bank transfers at 50%).[48]

Buy-Now-Pay-Later (BNPL) – not a payment method but a way to defer a payment – offered by players including Klarna and PayPal (KKR has acquired most of PayPal's European BNPL loan portfolio) is an increasingly popular option adopted by consumers throughout Europe, in particular in e-commerce purchases. Some estimates indicate that it could represent 11% of the European e-commerce market by 2025.[49]

The evolution of alternative payment solutions, such as account-based mobile payments, as well as payments via BNPL are further analysed in the following parts of this section.

Figure 6: Online payments per payment instrument and country (volume)



Source ECB (2022)[50]

[43] *PayPal is a platform that allows payments online. The application is connected to either a customer's bank account, debit card or credit card. For this purpose, the source distinguishes PayPal payments from card payments.*
[44] *ECB. (2022). Study on the payment attitudes of consumers in the euro area (SPACE) – 2022*
[45] *ECB. (2022). Study on the payment attitudes of consumers in the euro area (SPACE) – 2022*
[46] *ECB. (2022). Study on the payment attitudes of consumers in the euro area (SPACE) – 2022*
[47] *PPRO. (2023). Payments and e-commerce in Hungary.*
[48] *Statista. (2023). Payment methods for digital transaction in Switzerland 2022.*
[49] *TechEU. (2023). A deep dive into the European 'buy now, pay later' (BNPL) market. Online: https://tech.eu/2023/04/18/bnpl-market-europe/*
[50] *ECB. (2022). Study on the payment attitudes of consumers in the euro area (SPACE) – 2022*

3.1.2 Traditional means of payment

This subsection explores the evolution of traditional means of payments. In particular, it focuses on cash and card payments.

Trends in cash payments at physical POS

In interviews for this study, two European payment associations highlighted that cash is still the most common payment method for in-store purchases. In 2019 almost three out of four in-store payments were settled in cash across the EEA.[51] In some Member States including Malta (77% of transactions), Austria (70%), Italy (69%), and Germany (63%) cash is still the most frequently used payment instrument in terms of the volume share of consumer transactions to pay for purchases at physical POSs.[52] [53] Outside the eurozone, the share of cash payment transactions in value out of the total payment transactions at POS in 2019 were high in Bulgaria (81.1%)[54], Croatia (73.1%)[55] and Czechia (61.3%).[56] Furthermore, in Hungary, while it is consistently decreasing, cash still represented the payment method with the highest share of the total volume of transactions at 55.9% in 2021.[57]

The Covid-19 crisis accelerated the move towards cashless in-store payments. One reason for the shift in payment behaviour was the consumer preference for reducing physical contact, and merchants' wider acceptance of electronic payments to meet consumer demand and protect the merchant personnel during the pandemic.[58] In a survey by De Nederlandsche Bank and the Dutch Payments Association (2022) and Deutsche Bundesbank (2022) compiled by the ECB, 54% of respondents indicated that they did not change their behaviour regarding cash usage due to the pandemic. On the other hand, 31% indicated that they use cashless options more often than before the pandemic, and 14% indicated that they used cash more often. Of those who indicated that they used cash less, 58% noted that this was because transactions done through electronic means was more convenient, 42% reported that this because they were advised against using cash, 29% noted that they did so in response to government recommendations, and 28% because of fear of virus infection. The findings suggesting that the Covid-19 crisis meant less use of cash were echoed by the payment associations consulted for this study. However, the ECB study also suggests that since the fear of virus infection from surface transmission was not wholly founded for health reasons (Covid-19 is predominantly spread through airborne transmission and significantly less so via surface transmission), it is possible that some of these trends can reverse.[59]

Nevertheless, data indicates that a down trend in cash usage was already present and appears to only have accelerated during the Covid-19 pandemic. In the EU, the share of cash transactions (number of transactions) was 79% in 2016. In 2019 it declined to 72% and by 2022 it fell to 59%. **The decline in cash usage can also be seen when assessing transaction values. Across the EU, cash accounted for 54% of in-store transaction value in 2016, 47% in 2019 and 42%**

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[51] European Central Bank (2020). Study on the payment attitudes of consumers in the euro area (SPACE).

[52] Kantar Public. (2022). Study on New Digital Payment Methods.

[53] ECB (2022). Study on the payment attitudes of consumers in the euro area (SPACE) – 2022

[54] Statista. (2022). Bulgaria: share of cash 2014-2021.

NOTE: Data for 2019 in Bulgaria was not available. We are therefore including data for 2020.

[55] Statista. (2022). Croatia: share of cash 2013-2021.

[56] Statista. (2022). Czechia: share of cash 2010-2021.

[57] Statista (2022). Share of cash estimate at point of sale (POS) in Hungary from 2001 to 2021

[58] Lone, S., Harboul, N. & Weltevreden, J.W.J. (2021). 2021 European E-commerce Report. Amsterdam/Brussels: Amsterdam University of Applied

Sciences & Ecommerce Europe

[59] ECB. (2022). Study on the payment attitudes of consumers in the euro area (SPACE) – 2022

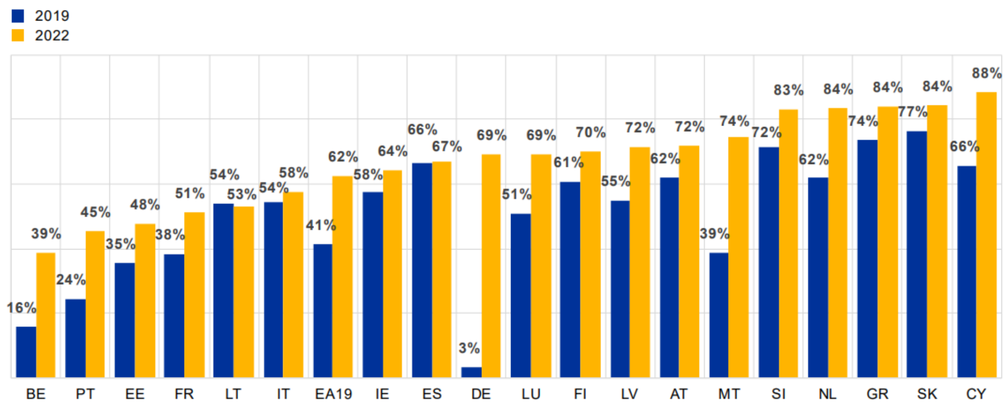
in 2022. [60] For instance, in Hungary, while it is consistently decreasing (69.8% in 2018 to 66.9% in 2019, 61.2% in 2020, and 55.9% in 2021) cash still represented the payment method with the highest total transaction value.[61] Similarly in Germany, the total number of transactions with cash declined from 74% on 2017 to 58% in 2021 for purchases of goods and services.[62]

3.1.3 Rise in contactless cards

A key trend in recent years concerning card payments is the increasing use and acceptance of contactless payment cards. Similarly to the decline in cash usage, the findings indicate that this trend was already established but accelerated due to changes in consumer habits driven by the Covid-19 pandemic.

In the past 3 years, contactless card payments[63] volume as a share of total card payments increased from 41%[64] in 2019 to 62% in 2022.[65] Aligned with the decrease in cash usage, the 2022 ECB study on payment attitudes in the euro area[66] notes that the use of contactless cards increased considerably, a trend which can be partly attributed to the COVID-19 pandemic and the related hygiene concerns among the population in response.

Figure 7: Share of contactless card payments in all card payments at physical POS (number of transactions)



Source: ECB (2022)

The use of contactless cards varies across Member States but there is a general upward trend. Slovakia and Greece were among the countries with the highest share of contactless card payments out of total card payments in 2022. While an increase in contactless card payments has been observed within the past 3 years in Belgium, Portugal, Estonia and France, these countries show the lowest share of contactless card payments in all card payments across the eurozone. There is also a significant difference in terms of the extent to which countries saw increases in the use of contactless card payments. For instance, in 2022 the country with the highest share of contactless card payments was Cyprus with 88%, up from 68% in 2019 in number of transactions. Other countries experienced even higher growth: Germany and Malta experienced growth from 3% and 39% respectively for 2019 to 69% and 74% for 2022

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[60] *ECB. (2022). Study on the payment attitudes of consumers in the euro area (SPACE) – 2022*

[61] *Statista (2022). Share of cash estimate at point of sale (POS) in Hungary from 2001 to 2021*

[62] *Deutsche Bundesbank, (2021). Payment behaviour in Germany in 2021. https://www.bundesbank.de/en/press/press-releases/payment-behaviour-in-germany-in-2021-894120.*

[63] *Contactless payment is done by holding cards or electronic devices a few centimetres away from a retailer's payment terminal.*

[64] *These include mobile wallets and physical cards (debit or credit).*

[65] *ECB. (2022). Study on the payment attitudes of consumers in the euro area (SPACE) – 2022*

[66] *ECB. (2022). Study on the payment attitudes of consumers in the euro area (SPACE) – 2022*

in the share of card transactions carried out with contactless technology.[67] Trends appear to indicate a continuing upward trend with one stakeholder indicating that in Italy for example, contactless payments increased by 55% since 2022, amounting to €186 billion and representing more than 60% of total transactions.

Similar trends can also be observed in countries outside the eurozone. For example, in Norway 65% of payments at physical POS were contactless in 2020 (in number of transactions),[68] increasing to 80% in 2021.[69] In Hungary, there has been a significant increase in the use of contactless payments. In 2012, contactless payments amounted to 183,000 while in 2021 this figures was 1.1 million.[70] Furthermore, the share of POS terminals which accepted contactless payments reached 89.2% in 2019, an increase from 20.7% in 2012 and 75.9% in 2016.[71] [72] In the case of Hungary, the increased use of contactless card payments was facilitated by government policy implemented in 2016 which provided funding to support PSPs who provided POS terminals with contactless functionality to their merchants.[73] In Poland the share of contactless payments of the total number of non-cash card payments in Poland rose from 77.3% in Q1- 2018 to 97.9% in Q1-2022.[74]

Box 1: Contactless cards payments are used to pay for lower value transactions

According to one interviewee in this study, contactless tends to be used to execute payments of lower value. Since 2019, authorisation of a transaction with PIN is not required for payments under €50 (previously the limit was set at €25[75]). More specifically, contactless card payments under €50 per transaction or the cumulative amount of the five previous consecutive contactless transactions below €150, are exempt from being authenticated via strong customer authentication (SCA). This results in users viewing contactless as a smoother payment method than e.g. cash. The limits set on contactless payments contrasts with the case of wallets for which there are no spending limits and authentication is always required. The exemption from authentication requirements for lower value payments aims to ease payments for purchases such as tickets for an event or local transport fares.[76] In 2023, it was reported that in Ireland, in terms of value, contactless card and mobile-wallet card payments represented a smaller share of all card payment transactions,

[67] It should be noted that the data point for Germany is for 2017 and not commencing from 2019.

[68] Ingenico.(2022). The Nordic countries ready to say goodbye to cash.

[69] Norges Bank. (2022). Retail payments services 2021.

[70] Ingenico. (2022). Contactless 2021: Hungary's journey to cashless payments.

[71] Kajdi, Laszlo., Kiss, Milan. (2021) Impact of policy effects on the Hungarian payments card market. Journal of Banking Regulation 2022

[72] Statista (2023). Contactless card acceptancy within POS terminals and debit and credit cards issued in Hungary from 2012 to 2019

[73] Kajdi, Laszlo., Kiss, Milan. (2021) Impact of policy effects on the Hungarian payments card market. Journal of Banking Regulation 2022

[74] Statista. (2023). Share of contactless payments in the total number of non-cash card payments in Poland from the 3rd quarter of 2017 to 2nd quarter of 2022

[75] Based on Article 3(l) of PSD2 excludes payment transactions by providers of electronic communication networks or services provided in addition to electronic communications services for a subscriber, up to given limits. The value of transaction does not exceed EUR 50 and the cumulative value of the payment transactions of an individual subscriber does not go beyond EUR 300 per month.

Source: Directive (EU) 2015/ of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC (europa.eu)

[76] European Commission, Directorate General for Financial Stability, Financial Services and Capital Markets Union, Bosch Chen,I., Fina,D., Hausemer, P., et al (2023) A study on the application and impact of Directive (EU) 2015/2366 on Payment Services (PSD2), Publication Offices of the European Union.

indicating that contactless card payments are typically used for payments of lower value.[77]

3.1.4 Mobile payments

Mobile payments (both card and non-card based) have become an increasingly popular mean of payments in the last few years. It has been highlighted that digital and mobile payments have increased by around 30% between 2018 and 2022 in value.[78] Mobile payments are made through mobile devices (such as smartphones, tablets, and wearables) where payment applications (i.e. digital wallets) and virtual cards can be stored. Digital wallets can be issued by third parties (e.g. Apple Pay, Android or Google Pay, PayPal), issuers, schemes, as well as telecommunication companies and retailers.

A digital wallet may allows users to make payments by accessing funds directly through a chosen card. Examples of digital wallets include, ApplePay, Google Pay, and other applications which can be used in one, or a specific selection of Member States. Examples include MobilePay (used in FI) Bizum (used in ES), Payconiq (used in NE, LU & BE), Lydia (used in FR), and Satispay (used in IT[79]). Cards that are stored in a digital wallet often via a process called tokenisation. Through tokenisation, sensitive consumer data, such as the card primary account number (PAN) is replaced with a random set of numbers (the token). When a payment is executed, instead of transmitting the user's sensitive card information (card credentials), the token stored in the digital wallet is sent. The token will be of no use for a third-party as he/she will not be able to link it to the cardholder's card details and so no card transaction can be executed. As such tokenization enhances security by reducing the exposure of sensitive cardholder data, ultimately reducing the risk of theft or fraud.[80]

Box 2:Tokenisation and choice of application

Tokenisation has resulted in possible issues as regards co-badging and the ability of consumers to upload both brands of a co-badged card onto a mobile wallet (see also Chapter 4.4). According to two payment associations, tokenization has changed the way PSPs manage the card lifecycle, as they transfer a part of the card management activity to the card scheme, often an ICS (International Card Scheme).

Card schemes may act as subcontractors for tokenisation. In some cases, services such as tokenisation are being mandated by international card schemes. According to these associations, most domestic card schemes do not have such relationships with wallet providers as the ICSs have and are more dependent on the active involvement of merchants at the POS as a result. Merchants may only request verbally that consumers pay with a physical card instead if the token of the domestic card scheme is not operative/the Application Identifier (AID) of the domestic scheme is not sent to the terminal. This is disruptive in the context of promoting seamless transactions.

On the other hand, some stakeholders argue that choice of payment application with co-badged cards through digital wallets may in effect be impacted when used at POS. Stakeholders consulted argued that when using digital wallets such as Apple Pay, prior to presenting the card at the POS terminal, the consumer is not obliged to

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[77] *Irish Central Bank (2023). Contactless payments make up 84% of all card transactions. Online: https://www.centralbank.ie/statistics/statistical-publications/behind-the-data/monthly-credit-and-debit-card-spending-data#:~:text=New%20data%20shows%20that%20contactless,payment%20transactions%20(Chart%202)*

[78] *Mark Stiltner. (2021). How digital wallets in Europe are reshaping payments. Rapyd. Online: https://www.rapyd.net/blog/how-digital-wallets-in-europe-are-reshaping-payments/*

[79] *Satispay is seeking to expand throughout Europe. It has already trialed its app in Luxembourg and France.*

[80] *EBA. (2023, 04 11). Tokenised card details as a SCA possession element. Retrieved from EBA Europa: https://www.eba.europa.eu/single-rule-book-qa/-/qna/view/publicId/2019_4827*

choose which brand's AID is sent to the terminal, both are sent since they are on the physical card. On the other hand, on other wallets such as Samsung Pay consumers are obliged to choose one of the two card brands on the app which results in only one AID being sent to the terminal. It has been noted that in the former case, since both AIDs are sent to the terminal, the merchant can have a priority selection in place, and the consumer has the ability to override this, consumer choice is facilitated. In addition, it has been noted that the consumer still has the ability to technically choose not to go on with the merchant's priority selection. In the latter case, as only one AID is sent to the terminal, consumer choice and merchants' priority selection at POS are no longer facilitated.

Mobile wallets can be characterised as "passthrough" or "staged" wallets:[81]

- **Passthrough wallets facilitate payments from a bank card. Card information is passed-through and used directly during the transaction**.[82] Popular passthrough mobile wallets include Apple Pay and Google Pay (based on Android) and Samsung Pay. In 2022, Apple Pay and Google Pay were the passthrough wallets that were most popular among consumers in Germany, France, Italy and Spain according to a survey conducted by Statista. 63% of respondents in France indicated that they used Apple Pay in restaurants, stores, and other POS in the last 12 months. This figure was 45% in Germany, 35% in Italy and 25% in Spain. Similarly, this share for Google Pay was 31% in Italy, 26% in France, 25% in Germany and 22% in Spain.[83] [84] [85] [86] [87]
- **In a staged wallet, the user must top up the wallet with funds before making a payment**.[88] In 2022, PayPal[89] (which also provides passthrough wallet services) was one of the most commonly used staged wallets in Germany (48%), France (38%), Italy (46%) and Spain (43%) at physical POS terminal devices. The share of users who reported having used PayPal in restaurants, stores and other POS in the last 12 months was 49% in Germany, 48% in Italy, 42% in Spain and 39% in France. [90] [91] [92] [93] The figures provided above are taken as an indication of consumer preferences but do not represent market share of the wallet brands.

This increase in popularity of mobile payments may be the result of a combination of factors including wallet solutions being introduced by Big-Techs and other PSPs, the increase in smartphone penetration and the rise in e-commerce. Furthermore, findings point to the convenience inherent in using a

[81] *The same applies to digital wallets*

[82] *European Commission, Directorate-General for Competition, Pavel, F., Kornowski, A., Knuth, L., et al., (2020). Study on the application of the Interchange Fee Regulation : final report, Publications Office.*

[83] *The source is not clear on the extent to which respondents used these apps. The source does not specify e.g. that this was "at least once a year".*

[84] *Statista .(2022). Most used mobile payments by brand in Germany as of March 2023*

[85] *Statista .(2022). Most used mobile payments by brand in France as of March 2023*

[86] *Statista .(2022). Most used mobile payments by brand in Italy as of March 2023*

[87] *Statista .(2022). Most used mobile payments by brand in Spain as of March 2023*

[88] *European Commission, Directorate-General for Competition, Pavel, F., Kornowski, A., Knuth, L., et al., (2020). Study on the application of the Interchange Fee Regulation : final report, Publications Office.*

[89] *PayPal is a traditional online payment method, which entered the POS-segment (proximity payments) market*

[90] *Statista. (2022). Mobile payments by brand in Germany.*

[91] *Statista. (2022). Mobile payments by brand in France.*

[92] *Statista. (2022). Mobile payments by brand in Italy.*

[93] *Statista. (2022). Mobile payments by brand in Spain.*

mobile phone for payments as a reason behind its increased use, both in e-commerce and at the physical POS.

Increase in smartphone penetration

A study conducted by Ericsson[94] concluded that smartphone subscriptions rose from 371.8 million in 2018 to 440.23 million in 2022 across Western Europe and they are expected to increase further in the next 5 years to 459 million.[95]

As smartphone penetration increases across Europe, and Big-techs as well as PSPs are offering more payment solutions through these devices, the use of digital payment applications is becoming an increasingly important payment method in e-commerce and in-store. Smartphones can be used to support payment applications therefore enabling payments for goods and services online and in-store, as well as to transfer money to other users via Peer-to-Peer (P2P) transfers.

In addition, technologies available today allow users to store and manage payment applications (e.g. card-based tokens), on their mobile devices, including smartphones, tablets and wearables. These devices can contain mobile wallets which are typically used at a physical Point-of-Sale (POS) and they can be card-based or account-based,[96] or digital wallets (also known as e-wallets) which are mostly used to pay online and they can also be card or account-based or a combination thereof.

E-commerce in digital and mobile payments

One payment association interviewed for this report highlighted that European digital and mobile payment[97] transaction value has increased by more than 30% during the last three years and it is expected to increase further. According to the same stakeholder, it is predicted that by 2024 mobile payment transactions will account for almost 30% of e-commerce transactions in Europe.

Payment trends in 14 European Union markets in the Worldpay global payments report indicates that **the share of transaction value of e-commerce payments via digital wallets accounted for (on average) 29% of total e-commerce transactions in 2022.** The report further predicts that e-commerce payments via digital wallets in 2026 is to reach 32% of total payments.[98] At a country level, the table below shows Worldpay's estimates on the share of e-commerce payments that are performed via digital wallets in 2022.

[94] Statista. (2023). Number of smartphone subscriptions in Western Europe from 2011 to 2028.

[95] The source does not specify which countries are included within their analysis.

[96] This report will follow the IFR's definition of Point-of-sale (POS). The definition can be found in Annex 8 of the report.

[97] Payments with digital and mobile payments often rely on debit and credit cards to enact the transaction.

[98] Worldpay. (2022). The Global Payments Report.

Table 7: Estimated share of e-commerce transaction value via digital wallets in a selection of EU Member States

Country	Estimated share of e-commerce transaction value via digital wallets
Belgium	15%
Denmark	29%
Finland	24%
France	27%
Germany	29%
Ireland	29%
Italy	35%
Netherlands	9%
Poland	15%
Spain	31%
Sweden	21%

Source: Worldpay. (2022).

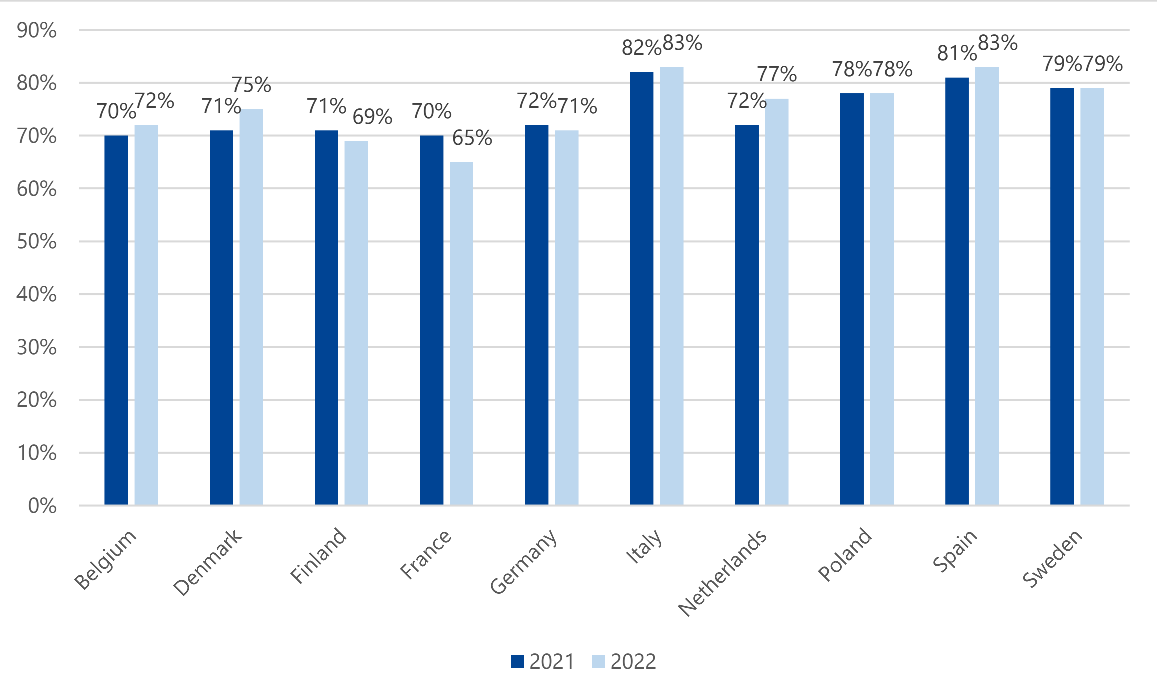
These results are corroborated by a survey conducted by Postnord[99] in a selection of European countries (Belgium, Denmark, Finland, France, Germany, Italy, the Netherlands, Norway, Poland, Spain, Sweden and the UK). The study shows the percentage of respondents who indicated that they use their mobile phone or tablet for e-commerce and finds that – across all countries in the study - **at least 70% of respondents reported that they use these devices for e-commerce, up to 82-83% in Italy.**[100][101] These figures are illustrated in the figure below for some EU Member States.

[99] *Postnord. (2021). E-commerce in Europe p. 26.*

[100] *Source does not provide indication on the extent of use. It is, for example, not clear whether this means "at least once a year".*

[101] *The evolution of e-commerce payments can be seen in section 3.1.2 of the report.*

Figure 8: Percentage of European e-commerce consumers paying with a mobile phone



Source: elaboration of data from Postnord (2021)[102]

Use of mobile wallets at physical POS

Two payment associations have argued in interviews that the use of mobile wallets has increased in recent years in Europe at the Point-of-Sale (POS) in physical stores. According to these stakeholders, mobile wallets provide additional convenience and friendlier user experience compared to physical card-based payments. For instance, several mobile wallets use biometric authentication via face recognition instead of PIN codes, which in this case are contactless by default. In addition to the convenience of paying contactless, most consumers always carry their smartphone with them, making paying with them, instead of a card within a physical wallet, more convenient.[103] [104] Biometric authentication also provides enhanced security as verifying a consumer's identity via unique customer characteristics – e.g. facial recognition, fingerprint – can be less prone to fraud than the use of PINs, which may be stolen.[105] [106] Additionally, mobile wallets can provide for an enhanced user experience as well as an enhanced level of security, for example by allowing the user to upload different cards – if tokenisation is possible (this will be elaborated upon in section 3.4) as well as use other functions integrated in the wallet such as loyalty cards, BNPL options, and apps that provide instant account statements such as Monese.[107]

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[102] *Postnord. (2021). E-commerce in Europe p. 26.*

[103] *Kantar Public. (2022). Study on New Digital Payment Methods.*

[104] *Oxera. (2020). The competitive landscape for payments: a European perspective.*

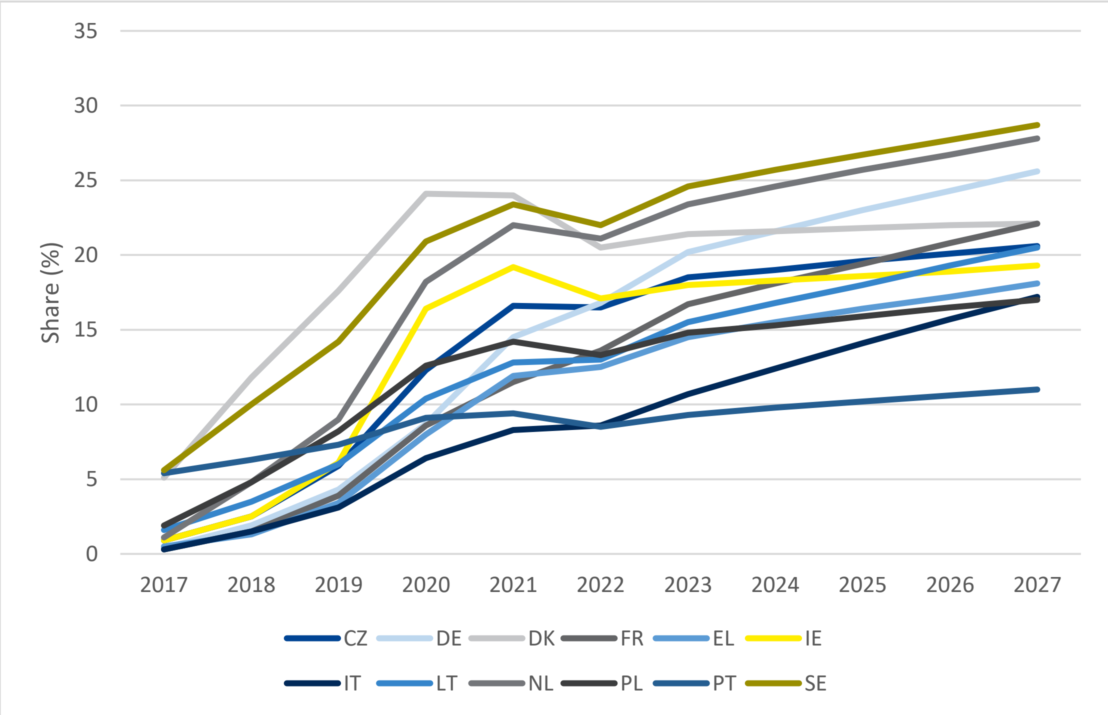
[105] *Logintc. Biometric Authentication. Online: https://www.logintc.com/types-of-authentication/biometric-authentication/#:~:text=Biometric%20authentication%20refers%20to%20a,that%20user%20accesses%20their%20account.*

[106] *Biometricupdate. Biometrics and the digital wallet revolution. Online: https://www.biometricupdate.com/202304/biometrics-and-the-digital-wallet-revolution*

[107] *Airship. Mobile Wallets Explained. Online: https://www.airship.com/resources/explainer/mobile-wallets-explained/*

The transaction value generated from mobile wallet POS payments in-store (i.e. not including e-commerce) in the EU-27 increased in the last 5 years from EUR 4.2 billion in 2017 to EUR 195.20 billion in 2022, and is expected to increase at an annual rate of 21% from 2023 to 2027, with a projected total transaction value of EUR 498.10 billion in 2027.[108] The figure below sheds light on another factor highlighting the increased use of mobile wallets. It indicates that the share of active paying customers using Mobile[109] in-store POS payments has increased which the source considers as a proxy for the increased penetration of mobile wallet use[110] in twelve EU Member States and is expected to increase further.[111] Sweden, The Netherlands and Denmark experienced the highest penetrations as of October 2022 (22%, 21.1%, 20.5%, respectively). Emphasizing the significant penetration of mobile payments among Swedish consumers, one payment association argued that mobile wallets were being used in a variety of settings such as parking, food orders, healthcare and in-store payments. Additionally, according to one stakeholder consulted, in Italy mobile payments spending doubled every year from 2020 to 2022 reaching €20.3 billion.

Figure 9: Share of active paying customers using Mobile in-store POS payments in twelve Member States



Source: own elaboration based on Statista data[112]. Projection made in April 2023.

[108] *Statista.(2022). Mobile POS Payments. Online: https://www.statista.com/outlook/dmo/fintech/digital-payments/mobile-pos-payments/eu-27#transaction-value*

[109] *With payments processed via mobile wallets we refer to a contactless interaction of a customer's smartphone app with a suitable payment terminal belonging to the merchant. The data transfer can be made, for example, via wireless standard NFC (Near Field Communication) or by scanning a QR code to initiate the payment.*

[110] *According to the source used Penetration rate is defined as "the share of active paying customers from the total population of the selected market (market segment, region) for each year." The data includes the current (2017-2022) and expected penetration rate (2023-2027).*

[111] *Payment transactions with physical debit or credit cards at contactless terminals and mobile POS systems (e.g. Square, SumUp) as well as place-independent "Carrier Billing" are not included in this segment.*

[112] *Statista (2022) Mobile POS Payments.*

Technologies used in mobile wallets when paying at a physical POS

Near-field communication (NFC) and QR-codes (Quick Response - codes) are the key technologies used in mobile wallets at physical POS terminals. Other technologies also include Bluetooth, in particular Bluetooth Low Energy (BTLE). These technologies secure proximity payments and customer authentication.

NFC-based mobile wallets are commonly used in Europe. Near-field communication (NFC) chips allow cards/smartphones to communicate with physical POS terminals located within a few centimetres (typically up to 4-5 cm). Payments value generated via NFC in Europe was worth EUR 58,219 million in 2020 and is expected to increase to EUR 207,888 million by 2024.[113] [114] The secure element validation has a similar validation process as that of an EMV[115] [116] chip commonly used in payment cards. In summary, the customer unlocks a digital wallet app, selects a card or wallet to pay with and holds the phone close to the payment reader. A chip, also known as the secure element, authorizes and validates the transaction, assigning it a unique digital signature. Upon validation, the payment is processed like a standard card or wallet transaction.[117] When it comes to Android users, security is often also achieved through the use of Host Card Emulation (HCE) technology. HCE enables NFC applications within an Android powered device to emulate smart cards having critical payment credentials being stored in a cloud (issuer data centre or private), rather than a phone which are then sent to the mobile device when a contactless payment is going to be made.[118] HCE also has several security features which protect applications from hackers including, code obfuscation, hacking and modification detection, anti-tamper and code integrity, debug/anti-instrumentation, device binding, white-box cryptography, payment tokenisation, hardware protection such as a Trusted Execution Environment ("TEE") in the CPU and user verification (e.g. fingerprint, passcode). In this way, the NFC Host-based Card Emulation (HCE) provides security over payments without making use of 'secure element' functionality. One recent paper[119] has argued that the susceptibility to security threats can be found equally in Secure Element and HCE based payment models. This paper noted that this was largely due to the fact that threats tend to arise from the "enrolment and provisioning process" which are similar in these two models.

In contrast, QR codes, are gaining traction at a slower rate in Europe. In 2019 only 3% of consumers surveyed in the EU reported that they use QR code-based solutions, whereas in China 85% of consumers reported to have used them in 2020.[120] [121] QR-codes contain information which enables a customer or a merchant to initiate a payment transaction. The QR code can be presented by the merchant or the consumer. In the former case, the merchant presents the QR code to the consumer containing the relevant information to allow the merchant to receive a payment. The consumer scans

[113] *This includes both swiping a physical card or a mobile wallet over a card reader.*

[114] *Statista. (2023). Market size of contactless payments in various regions worldwide in 2020 with forecasts from 2021 to 2024 (in million U.S. dollars)*

[115] *As highlighted by EMVCo, the EMV is a trademarked label that is applied on products, services, and solutions that align with EMV specifications enabling payments to work seamlessly and securely across in-store, ecommerce, and remote payment environments.*

[116] *EMVCo. Overview of EMVCo. Online: https://www.emvco.com/about-us/overview-of-emvco/*

[117] *ThePowerBusinessSchool. What are NFC payments and how do they work? Online: https://www.thepowermba.com/en/blog/nfc-payments*

[118] *Thales. What is Host Card Emulation (HCE) and HCE Payment? Online: https://cpl.thalesgroup.com/faq/hardware-security-modules/what-host-card-emulation-hce*

[119] *UL Solutions. (2021). White Paper: Card and Mobile Payment Threat Models. Online: https://au-nz.ul.com/sites/g/files/qbfpbp576/files/2022-05/CS676435_-_Global_Payment_Security_for_Tech_providers_White_paper_vDIGITAL1.pdf*

[120] *The source is not clear on the extent of use. It is for example, not clear on whether this means "at least once a year".*

[121] *Copenhagen Economics. (2022). Standardising QR Code Payments in Europe.*

the QR code by using an appropriate mobile application. If the QR-code is dynamic the application on the smartphone of the consumer will automatically enter the amount due. If the merchant QR-code is static the consumer needs to input the correct amount of the transaction. In both cases the consumer authorizes the execution of the transaction. In the event the QR-code is presented by the consumer to the merchant, the merchant's scanner will read the QR-code and send a payment request to the consumer app for the amount due through the merchant's payment app. The consumer would then need to authorize the payment request.

The comparatively slow uptake of QR technology in Europe has been explained as a result of a lack of interoperability between QR codes of European PSPs as well as the fact that contactless card payments are already embedded in the payment ecosystem. For each separate payment provider a merchant has to present a different QR code which creates a barrier to the adoption within the European payments market.[122] Additionally, it has been noted that NFC technology is now embedded in terminals due to the extensive use of contactless cards, meaning merchants do not have significant incentives to change to other payment ecosystems not involving cards. Increasing the adoption of QR payments would require creating a new payment ecosystem which would not only involve merchants having to invest in terminals that would provide for QR code functionality but would also require issuers and acquirers investing time and resources to create a value proposition for merchants and consumers to adopt these payment methods.

To be attractive, this would have to provide added value in terms of coverage, cost, security and user experience compared to the already established payment ecosystem oriented around contactless payments. Furthermore, experts note that QR codes (as well as Bluetooth) are not currently built for standardized means of communication in in-store payment situations. This means each payment solution, terminal and operating system treats these communications forms differently, creating slower adoption, uneven user experiences and more risk of failure. Therefore, in addition to upgrading or changing POS terminals, issuers and acquirers across the payments market would have to invest in adapting the processing value chain to allow for such payments in a standardised way. All of these investments could therefore entail significant costs in an environment in which the use of QR code payment solutions is not significant and the use of contactless is well-established. Nevertheless, according to one stakeholder consulted, a potential increase in use of QR code payments could be advantageous for merchants because they are charged lower fees when a QR-code triggers a wallet payment transaction than for card acceptance.

A report by Copenhagen Economics[123] also pointed towards the need for QR code payments to become standardised before large adoption would be possible. The report argues that through standardisation, merchants' costs would reduce as they would only need to invest in a single mechanism which would accept QR code payments. The report estimated that by ensuring a standardised QR code payment ecosystem, total annual merchant costs savings could amount to approximately EUR 3 billion. In this way, QR code payments on average would lead to "up to a quarter less than the cost of accepting a cash or card transaction."[124] The report further notes that card payments cost a merchant around EUR 0.68 per EUR 100 spent by consumers at the merchant, whilst QR code payment solutions that trigger an A2A or e-money payment can cost around EUR 0.44 for the same amount spent by consumers. [125]

[122] *Copenhagen Economics. (2022). Standardising QR code payments in Europe.*
[123] *Copenhagen Economics. (2022). Standardising QR code payments in Europe*
[124] *Copenhagen Economics. (2022). Standardising QR code payments in Europe*
[125] *Copenhagen Economics. (2022). Standardising QR code payments in Europe*

In addition to NFC and QR-codes, Bluetooth Low Energy (BLE) were introduced in recent years to enhance user experience and offer additional services and functionalities.[126] BLE is a wireless technology which creates personal area networks. Unlike NFC technologies, BLE technology work at a longer distance, reaching theoretically up to 50 meters. [127] BLE payments have been implemented in several Nordic countries such as Sweden, Finland and Denmark. Swish is an example of a digital wallets which uses BLE technology.

BLE payments can occur in three ways:

- Virtual cards are stored in a device connected via BLE to a terminal connected to a payment network[128]
- The consumer's device connects to a "POS beacon" through BLE.[129] Bluetooth beacons can detect devices (i.e. smartphones) nearby, which can notify consumers of deals, personalised offers and promotions. Beacon-based mobile payments can, therefore be effective in ensuring brand loyalty amongst consumers.[130] When a device connects with a POS beacon, a merchant can receive the picture and name of the device owner.[131]
- Payment data of the consumer is stored on a cloud. The device then connects with the POS terminal beacon using BLE which then connects the POS terminal to the cloud and payment network.[132]

For BLE beacon payments to be applied, investments in physical beacons need to be made. The investment cost of implementing a BLE payment solution is rather high. This is due to challenges related to decreasing chip size and cost, limited resistance to interference, relatively short transmission distance, and reduced information security.[133] In the case of MobilePay, Bluetooth payments are not considered as convenient and easy as NFC solutions. This is because there could be a delay in communication between the payment terminal and the consumer's phone. Consumers therefore may be required to open the Mobile Pay application and authorise a transaction manually.[134] Nevertheless, experts have noted that at this stage Bluetooth payments in Europe are largely insignificant with low demand from consumers and merchants, and few terminal providers offering BLE.

3.1.5 Instant payments, account to account (A2A) payments and BNPL

This subsection addresses a number of alternative means of payment that are currently being offered in some EU Member States, including instant payments, account-to Account payment methods and BNPL.

Despite the importance that cash payments still retains in Europe, some European payment associations argued that there has been a gradual shift away from cash payments and that new alternative payments enabled by

[126] *European Payments Council. (2019). Non-NFC based Mobile SEPA Card Proximity Payments. White Paper.*

[127] *MokoBlue. (2022). How can Bluetooth Beacons Revamp Contactless Payments.*

[128] *Comviva, Mahindra. (2015). What is BLE mobile payment? Online: https://medium.com/@MahindraComviva/what-is-ble-mobile-payment-5e9ff9c6f703*

[129] *FIS. (2017). To Beacon or Not to Beacon. Online: www.fisglobal.com/de-de/insights/what-we-think/2017/july/to-beacon-or-not-to-beacon*

[130] *European Payments Council. (2019). Non-NFC based Mobile SEPA Card Proximity Payments. White Paper.*

[131] *Comviva, Mahindra. (2015). What is BLE mobile payment? Online: https://medium.com/@MahindraComviva/what-is-ble-mobile-payment-5e9ff9c6f703*

[132] *Comviva, Mahindra. (2015). What is BLE mobile payment? Online: https://medium.com/@MahindraComviva/what-is-ble-mobile-payment-5e9ff9c6f703*

[133] *MokoBlue. (2022). How can Bluetooth Beacons Revamp Contactless Payments.*

[134] *QVIK. (2021). Mobile payments in Finland – These services are available right now. Online: https://qvik.com/news/mobile-payments-in-finland-these-services-are-available-right-now/*

contactless and mobile technologies **have risen.**[135] [136] In addition to mobile wallets such as Apple Pay and Google Pay described in the previous section, other alternatives have become available to consumers including instant payments, local payment applications such as Payconiq (BENELUX) and iDeal (Netherlands), and new digital methods such as BNPL.

Instant payments

Instant payments are a new form of payment becoming increasingly available across the EU. Instant payments are SEPA Credit Transfer (SCT) transactions that are processed instantly and allow the transfer of funds from the payer to the payee's account within 10 seconds. A such after 10 seconds from the execution of the payment by the payer the payee will be able to spend the funds. The European Payments Council (EPC) developed a pan-European instant payment scheme which was launched in 2017. The scheme, 'SEPA Instant Credit Transfers (SCT Inst)' is based on the EPC's existing SEPA credit transfer (SCT) scheme.[137]

Overall progress with the mainstreaming of SCT Inst has been slow. In December 2020, SCT Inst was used for just 7.7% of all SEPA credit transfer transactions, and its uptake varies across Member States.[138] More recently, the European Commission published its new legislative proposal on instant payments with the intention of amending Regulations (EU) No 260/2012 and (EU) 2021/1230 to facilitate economic agents' ability to transfer payments from one account to another in a matter of seconds (for accounts held in the EU and EEA).[139]

At country level, the total volume of instant payments in the Netherlands increased from 201 million in 2019 to 372 million in 2020. The value of transaction also increased between 2019 and 2020 from €149 billion to €276 billion.[140] In the Netherlands instant payments account for around 90% of all single credit transfers between Dutch banks. Banks offering instant payments in the Netherlands include, ABN-AMRO, ASN Bank, ING, knab, Rabobank, RegioBank and SNS.[141]

Similarly, in 2021, Belgium saw a 67% rise in instant payment volumes making up 15% of all credit transfers. Instant payments in Belgium are used both by consumers and businesses. Consumers use it for P2P payments, the delivery of goods and for charitable donations, with almost 100 million instant credit transfers. Businesses use instant payments to reimburse consumers, settle invoices, and pay salaries on the same day.[142]

In France, while there was a significant increase in volume (+85%) and value (138%), between 2021 and 2022, instant payments still only represented 3.8% of all bank transfers in 2022.[143] One retail association consulted for this study noted that in France, the reason that the share of instant payments is low in POS transactions is that these transactions are often not free for consumers. The table below

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[135] As previously noted, value generated from mobile wallet POS payments in-store in the EU-27 increased in the last 5 years from EUR 4.8 billion in 2017 to EUR 223 billion in 2022, and is expected to increase at an average annual rate of 23% from EUR 300 billion 2023 to EUR 573 billion 2027.

[136]Statista.(2022). Mobile POS Payments. Online: https://www.statista.com/outlook/dmo/fintech/digital-payments/mobile-pos-payments/eu-27#transaction-value

[137] ECB. (2023). What are instant payments?

[138] ECB. (2023). What are instant payments?

[139] European Commission (2022), Proposal for a Regulation amending Regulations (EU) No 260/2012 and (EU) 2021/1230 as regards instant credit transfers in euro.

[140] Worldpay. (2022). The Global Payments Report.

[141] Dutch Payments Association. (2023). Instant Payments. https://www.betaalvereniging.nl/en/focus/giro-based-and-online-payments/instant-payments/

[142] Worldpay. (2022). The Global Payments Report.

[143] Banque de France. (2023). Observatoire de la sécurité des moyens de paiement. Rapport Annuel 2022

indicates that this appears to be the case in several Member States although in at least one country, Finland, customers faced 0 charges for using SCT instant payments.

Table 8: SCT Instant cost range

Member State	SCT Instant cost range
Belgium	€0 - €1.25
Finland	€0
France	€0 - €1.00
Germany	€0 - €1.25
Italy	€0.60 - €5.90
Lithuania	€0.41
Netherlands	€0 - €0.10
Portugal	€1.35 - €5.20
Spain	€0.95 - €12.00

Source: Data from Numeral.[144] The data source did not have information from additional Member States

This retail association indicated that this is expected to change as a result of the recent Commission legislative proposal on instant payments which mandates that PSPs may not charge consumers more for SCTinst vs. SCT. This association argued that as a whole, banks do not have incentives to promote the use of instant payments as they would prefer customers to pay with Mastercard and Visa as this is more lucrative for them.

Buy-Now-Pay-Later

In contrast to instant payments, Buy-Now-Pay-Later (BNPL) has managed to establish a greater foothold in the European payments market. While Buy-Now-Pay-Later is not a payment instrument but rather a way to defer payments, when asked about the impact of new means of payment, three payment and two merchant associations noted that consumers have increasingly been using BNPL services. BNPL is described as a new digital payment deferal tool which allows consumers to purchase goods and services and pay for them over time.[145] In some cases, BNPL providers allow consumers to pay an initial proportion of the total amount required and the rest in instalments over an agreed period. In other cases, BNPL providers allow consumers to repay their credit within 30 days or through monthly instalments with no upfront amount.

In 2021, BNPL options accounted for 8.1% of e-commerce payments at the European level according to a report by Worldpay from 2023.[146] This increased by 2 percentage points in 2022.[147] According to one payment provider interviewed, the use of BNPL schemes further accelerated in e-commerce during the Covid-19 Crisis. BNPL is particularly strong in German and Nordic retail payment markets. In 2021 in Sweden BNPL accounted for 25% of the e-commerce transaction value, in Germany for 20%, in

[144] *Victor Mithouard. (2022). The importance of EU regulation for instant payments in 2023. Numeral Online: https://www.numeral.io/guide-article/instant-payments-2023*

[145] *This definition is based upon the European Council's proposal to revise the Consumer Credit Directive. Source: https://data.consilium.europa.eu/doc/document/ST-9433-2022-REV-1/en/pdf.*

[146] *Worldpay. (2022). The Global Payments Report.*

[147] *Worldpay. (2023). The Global Payments Report.*

Finland for 13% and in Denmark for 12%.[148] The BNPL market in these countries is primarily dominated by players including Klarna, Scalapay, Sezzle and PayPal (as noted earlier, KKR has now acquired most of PayPal's European BNPL loan portfolio).[149] One study indicated that Klarna represented 70% of the BNPL market in terms of app downloads.[150]

Table 9: Market share of buy now, pay later (BNPL) in domestic e-commerce payments in a selection of EU Member States[151]

Country	2016	2019	2020	2021	2022
Sweden	12%	25%	23%	25%	24%
Germany	3%	18%	0%	20%	23%
Belgium	5%	6%	0%	9%	14%
Netherlands	6%	8%	9%	12%	13%
Finland		8%	12%	13%	13%
Denmark	5%	7%	8%	12%	12%
Italy		1%	2%	4%	6%
France	1%	2%	4%	4%	5%
Ireland				2%	4%
Spain		1%	2%	2%	3%
Poland			2%	2%	2%

Source: Statista[152]

The incentive for consumers to use a BNPL option when making a purchase is that it enables them to make purchases of larger value they would not usually make if they had to pay the full amount upfront. It also gives consumers an opportunity to try a product and return it before paying the full price.[153]

On the other hand, there are risks associated with customers becoming too indebted. As some reports[154] [155] have indicated, BNPL can stimulate impulse purchases and fees may grow significantly if users are late in pay off instalments.[156] as additional fees may apply when instalments became overdue. These charges are set out in the agreement that is signed between the consumer and the BNPL provider.[157] While Klarna does not charge an interest fee to consumers, some providers do. For example, Clearpay charges consumers €6 after seven days of overdue payments for a product

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[148] *Worldpay. (2023). The Global Payments Report. It should be noted that the source uses a wider definition of BNPL, as it also includes retailers providing the option for the consumer to pay deliverance by credit transfer. Regardless, this provides a preliminary indication of the existing trend in BNPL.*

[149] *Howell, E., & Krulišová, Z. (2021). EU Banks Are Missing the Boat on BNPL. Flagship Advisory Partners LLC.*

[150] *SensorTower. (2022). European Adoption of Buy Now, Pay Later Apps Reached a Record 10 Million Installs in H1 2022*

[151] *The source compiles data from other sources and indicates that it is not clear on whether this refers to transactions or value but notes that it is most likely referring to value. The source omitted 2017 and 2018 figures.*

[152] *Statista. (2023). Market share of buy now, pay later (BNPL) in domestic e-commerce payments in 41 countries and territories worldwide from 2016 to 2022. Online: https://www.statista.com/statistics/1233850/online-bnpl-penetration-country/*

[153] *ECCireland. (2023). BUY NOW PAY LATER, A Quick Guide. Retrieved from EuropeanConsumer Centre Ireland: https://www.eccireland.ie/buy-now-pay-later-a-quick-guide/#Why_use_BNPL*

[154] *ECCireland. (2023). BUY NOW PAY LATER, A Quick Guide. Retrieved from EuropeanConsumer Centre Ireland: https://www.eccireland.ie/buy-now-pay-later-a-quick-guide/#Why_use_BNPL*

[155] *Shaw, Vicky. (2020). Warning buy now, pay later schemes may encourage impulse buys and over-spending. Walesonline*

[156] *ECCireland. (2023). BUY NOW PAY LATER, A Quick Guide. Retrieved from EuropeanConsumer Centre Ireland: https://www.eccireland.ie/buy-now-pay-later-a-quick-guide/#Why_use_BNPL*

[157] *ECCireland. (2023). BUY NOW PAY LATER, A Quick Guide. Retrieved from EuropeanConsumer Centre Ireland: https://www.eccireland.ie/buy-now-pay-later-a-quick-guide/#Why_use_BNPL*

being purchased under €24 and 25% for products over €24. In the case of Laybuy and Openpay, late payment fees are already charged 24-48 hours after an instalment is overdue.[158]

For merchants, sources indicate that BNPL services typically charge between 2% and 8% of the transaction value and a fixed value for each transaction.[159] In the case of Klarna, this is typically a fixed transaction fee of €0.30 as well as 4.99% of the total transaction value.[160]

Account-to-Account (A2A) based payments

An Account-to-Account (A2A) payment is the transfer of funds from one party account to another party account. A2A payments can include payments connected to the purchases of goods and services or fund transfers between different accounts.[161] Many popular alternative payment services which can be linked with A2A digital payments include local mobile payment solutions (such as Blik and Bizum described below)[162], instant credit transfers[163] and the potential future use of the Digital Euro.[164]

According to payment associations interviewed for this study, A2A payments have become more popular largely as a result of the Revised Payment Services Directive (PSD2). The PSD2 (EU Directive 2015/2366) fostered innovation and introduced a diversity of actors into the EU payments ecosystem. PSD2 allowed for the entry of Third-Party Providers (TTPs), Account Information Service Providers (AISPs), and Payment Initiation Service Providers (PISPs) on the European payments markets. According to one payment association, this created an environment where market players, such as Trustly, who initiate payments on behalf of consumers could become popular.

The popularity of these solutions meant an increase in the use of account-based payments. As noted above, this was facilitated by 'open banking' which increased accessibility to customer account data.[165] Open banking allows licensed players – TPPs, Payment Service Providers (PSPs) and banks (ASPSPs) – to access customer payment account data with the customer explicit consent. This is done through a secure channel by using an Application Programming Interface (API) or the customer online banking interface. Through APIs or customer online banking interface, TPPs are thus able to trigger payments directly from the consumer's account(s) on his/her behalf, providing an alternative to using payment cards.[166]

Local cardless digital payment solutions in Europe

One payment association consulted on the presence of alternative business models to interchange fees arising in the issuing side under a 4-party model, pointed towards local A2A payment applications including Bluecode, Bizum, and Blik amongst others. As reported by this payment association, under these A2A payment applications, there is an arrangement between the bank(s) who perform the processing services to transfer funds from one account to another. The fees charged to merchants are on a per-transaction basis or a monthly flat fee mainly to cover the

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[158] *BEUC. (2022). FACTSHEET: Buy Now Pay Later Products*

[159] *Penser. Buy Now Pay Later (BNPL), Is It Feasible?*

[160] *Mollie. Buy now, pay later (BNPL): Is it right for your business?*

[161] *For example, this payment includes charitable donations, pocket money or gifts.*

[162] *This also takes into account SCT based payments, like Payconiq.*

[163] *According to a number of market players including the WorldPay Report (2022), Instant or Real time payments are linked with A2A, as payments are transferred from one account to another in a few seconds.*

[164] *As it is stated later on in this section the Digital Euro is expected to facilitate more A2A payments. Consumers will then not have to rely on card schemes to make payments. As this statement was made only by one stakeholder, the research team aims to conduct additional interviews. The research team will also follow up with the stakeholder who made the link between digital euro and A2A payments to get additional information on the link between the two.*

[165] *ECB.(2019). Annual Report of the Euro Retail Payments Board 2018-2019, ERPB Secretariat*

[166] *IMF Working Paper.(2020). Fintech in Europe: Promises and Threats*

operational costs of the bank. Processing fees could be charged to process the transactions, but the stakeholder consulted indicated that this is rarely implemented.

One **payment association** noted that while the lower costs of these payment methods mean a potential for greater uptake from merchants, the widespread adoption of these payment methods would imply a loss of revenue for issuers[167], so they have no incentives to promote such methods with their customers as they do with payment cards. Data presented below indicates that for some of these payment methods (iDEAL, Swish, Bizum, and BLIK), when used in-store, they are the most frequently used option or the second most used option (in the case of payconiq in Belgium). There is also some emerging evidence that they are competitive in e-commerce with some of these methods becoming the most popular when shopping online (such as Swish[168] [169], and Blik[170] [171]) or the second most popular (in the case of Bizum[172]).

The boxes below present the business models of a selection of local A2A payment applications.

Box 3: Overview of Bluecode

Bluecode is a European mobile cross border payment solution mainly used in Austria and Germany. Bluecode is a mobile payment solution that facilitates payments directly from the bank account of the consumer to the bank account of another party, either an individual or a merchant. The creation of Bluecode arose from an interest in developing a mobile payment scheme run by European entities.[173] This tool allows for cashless payments at a POS terminal from a smartphone or smart watch (iOS and Android). It is based on a unique barcode generated for every payment request, which then makes a direct payment from the consumer's bank account. As part of its business model, banks sign an issuing licence with Blue Code and integrate it into their banking app. Regarding how merchants can accept Bluecode payments, their acquiring bank must first sign up for an acquiring licence with Bluecode.[174] For this mobile payment solution, merchants pay a fee for each transaction to their acquiring bank or PISP. The fee is negotiable, but in most cases involves a fixed amount plus a variable component. As an example, this could be €0.07 + 0.3% of transaction value. Therefore, in the case that the transaction costs €30, the merchant pays to the acquirer/PISP € 0.16. Furthermore, the issuing bank is paid for allowing real time access and guaranteeing the transfer of funds. Bluecode indicates that the issuer is paid in the form of MIFs (Multilateral interchange fees that do not involve four-party schemes), and the residual between the issuing fee and the

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[167] This would depend on the effective level of the interchange fee. In the case of the Netherlands and Belgium, according to the analysis presented in section 3.2, the national interchange fee cap is set below the IFR's interchange fee cap meaning that in this case, the loss of revenue for issuers would not be as significant.

[168] According to a survey conducted by Kantar Sifo on behalf of Swish, 29% of respondents indicated that Swish was their preferred method for online payments, followed by 28% for invoicing, 18% for debit card payments, 7% for direct payments via internet bank, and 5% for credit card payments.

[169] Swish. (2021). Swish is the preferred payment method online for the second year in a row. Online: https://www.swish.nu/newsroom/news/swish-is-the-preferred-payment-method-online-for-the-second-year-in-a-row

[170] According to a survey done by Kantar

[171] Blik. (2022). BLIK EFFECT IN E-COMMERCE - CASE STUDY - Direct payments in Interia's Mail Service [Poczta Interia]. Online: https://blik.com/en/blik-effect-in-e-commerce-case-study-direct-payments-in-interia-s-mail-service-poczta-interia

[172] Europa Press. (2022). Bizum ya es el Segundo método de pago en comercios electrónios en España, según Monei

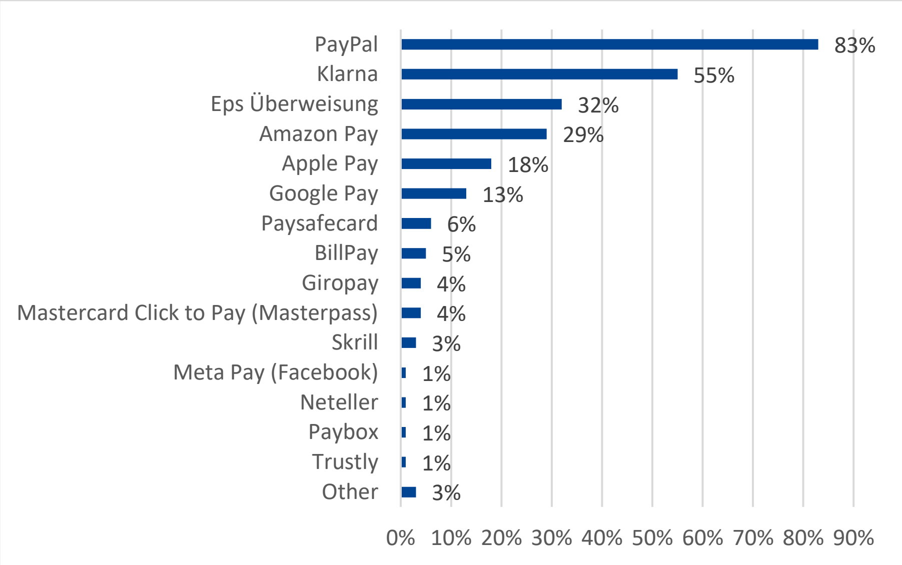
[173] European Commission. (2019). The Smartphone Payment Scheme for Europe. CORDIS EU Research Results.

[174] Bluecode. A Mobile Payment Solution for Europe. Online: https://www.ecb.europa.eu/paym/intro/events/shared/pdf/tipsapp_event/tipsapp_event_secure_payment_technologies_bluecode.pdf

merchant fee is distributed to Bluecode (receiving 40% of this residual fee), the acquirer/PISP (receiving 40% of this residual fee), and the app provider which receives 20% of the residual fee (for more details please consult the source indicated in the footnote provided below).[175] .

Below are figures for the most popular online payments by brand in Austria and Germany respectively. As demonstrated below, in Austria, Bluecode is not among the most widely used mobile payments whilst in Germany 7% of surveyed respondents indicated that they had used the brand in the last 12 months at a Point of Sale. The figures below therefore show that in both Austria and Germany, Bluecode has a significantly smaller market presence when compared to PSPs such as Paypal, Apple Pay, Google Pay, and Klarna. Nevertheless, in Austria, another A2A mobile payment application, EPS Uberweisung does have a large enough market presence to compete with Apple Pay, Google Pay as well as PSPs with smaller market presence such as Klarna and Paypal.

Figure 10: Most used online payments by brand in Austria 2023 (e-commerce)[176]

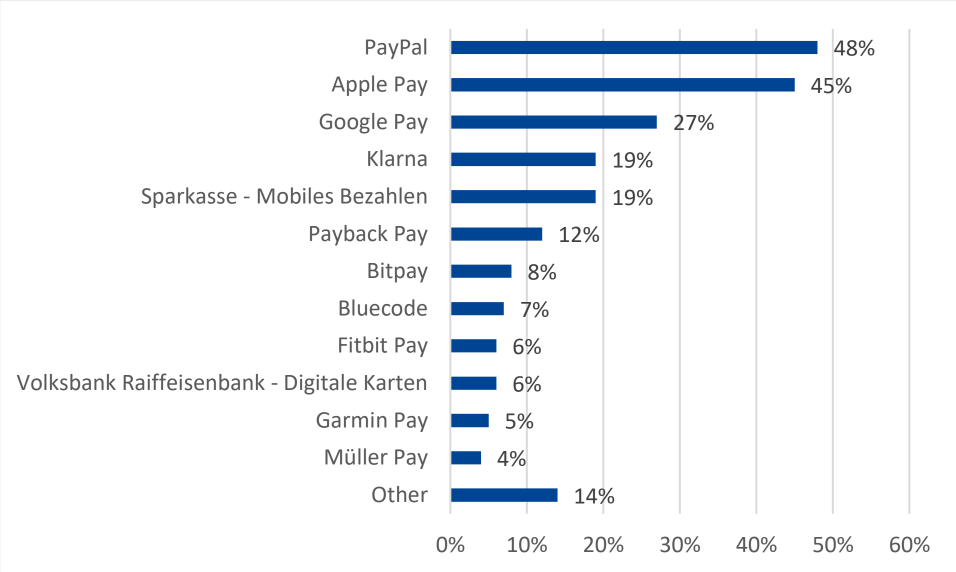


Source: Statista. (2023). Most used online payments by brand in Austria as of March 2023

[175] *Bluecode. A Mobile Payment Solution for Europe. Online:* https://www.ecb.europa.eu/paym/intro/events/shared/pdf/tipsapp_event/tipsapp_event_secure_payment_technologies_bluecode.pdf

[176] *This data is based on a survey which asked respondents whether they had used these apps in the past 12 months. The source is not clear on the extent to which these applications were used. It does not indicate e.g. whether this meant "used at least once in the past year". This data is not transactions by volume or value.*

Figure 11: Most used digital and mobile payments by brand in Germany 2023 (e-commerce)[177]



Source: Statista. (2023). Most used online payments by brand in Germany as of March 2023

Box 4: Overview of Payconiq

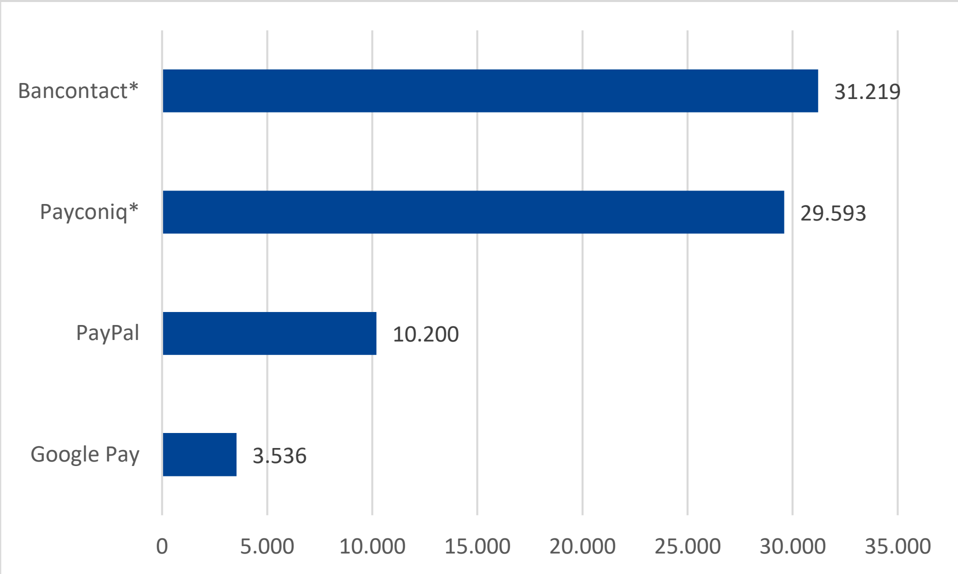
Another example of a mobile payment platform is Payconiq, a Luxembourg based company that provides a mobile payment solution in Luxembourg, and Belgium. Payconiq is a mobile based system that was created as a fintech startup within ING banking group to create an efficient way for consumers in the Benelux to make secure mobile payments directly from their bank account. It is now a payment solution technology provider which has partnerships with banks, payment services providers, and merchants.

This platform is primarily a payment solution that allows the user to make payments by transferring funds directly from a consumer's account to the account of a peer or a merchant. The app allows users to pay in-store, online, pay bills and invoices. Payconiq can integrate with a bank and allows the user to download the app of their bank if partnered with Payconiq. As with other similar solutions, Payconiq has the added benefits of allowing merchants, especially SMEs, to accept payments without the need to invest in additional hardware. Payments are facilitated through a QR code which can be accessed by the consumer at POS. The consumer must scan the QR code, which will allow them access to the payment gateway of the merchant, which facilitates the payment. The payment can then be accepted by the merchant using a tablet, smartphone or computer. Payconiq can also be integrated with a merchants existing payment system or used through a terminal which can be purchased from a Payconiq partner. Payment information is also encrypted, adding a layer of security. There is no direct fee for the consumer when using Payconiq. On the other hand, the merchant is charged on a per transaction basis, regardless of the

[177] As above, This data is based on a survey which asked respondents whether they had used these apps in the past 12 months. The source is not clear on the extent to which these applications were used. It does not indicate e.g. whether this meant "used at least once in the past year". This data is not transactions by volume or value.

transaction amount. The amount of the merchant fee is based on the number of payments the merchant receives.[178, 179] The figure below highlights the popularity of both Payconiq and the bancontact app (the latter allows for online payments via the Bancontact domestic card). In terms of the average number of daily active users, Payconiq has 19,393 more users than its next competitor PayPal, and 26,057 more users than Google Pay.

Figure 12: Average number of daily active users (DAU) of selected mobile payment apps in Belgium in 2018



Source: Statista. (2018). Ranking of mobile payment apps in Belgium, based on DAU 2018

Box 5: Overview of iDEAL

IDEAL is a digital payment method based in the Netherlands. As demonstrated in the figure below, IDEAL is the most widely used payment instrument by Dutch customers for in-store transactions. Evidence also indicates that it is the most used payment method for e-commerce with one source indicating that 59% of purchases online were performed with iDEAL.[180] In 2021, 70% of transactions in e-commerce were made using iDEAL.[181] iDEAL allows consumers to make payments online, directly through their bank either through their mobile banking app or through their bank's online banking. iDEAL sends funds directly from the consumers account to the merchant account and is facilitated through a SEPA credit transfer using the IBAN of the payer and the IBAN of the payee. iDEAL can also be used to pay bills, pay local taxes, and provide payments requests. The iDEAL QR code also allows users to make payments in any retail setting (in-store) where they see the iDEAL QR code.

The main stakeholders involved in an iDeal transaction are the consumer, the retailer/ merchant, and the banking partners. The banking partners hold an iDEAL payment service provider (PSP) licence and facilitate payments behind the scenes. The main banking partner players consist of the payer's bank, the merchant

[178] *Payconiq. (Accessed April 2023). Pricing. Retrieved from payconiq.lu: https://payconiq.lu*

[179] *These fees are not publicly available.*

[180] *Ecommerce News. (2019). iDeal used for 59% of Dutch online purchases. Online: https://ecommercenews.eu/ideal-used-for-59-of-dutch-online-purchases/*

[181] *Statista. (2022). Brand share of different payment methods for online shopping in the Netherlands from 2014 to 2021. Retrieved from Statista: https://www.statista.com/statistics/558358/market-share-of-online-payment-methods-in-the-netherlands/*

acquirer and the collecting payment service provider (CPSP). Under this payment model, the user selects their bank when making a transaction online. Once the payment is made by the consumer using the QR code or payment link, the consumer confirms the payment in their online banking environment and then the acquirers, CPSP or C2C providers make the payment to the beneficiary. Once the payment is completed the payee's bank sends a payment confirmation to the merchant via the acquirer. The payee will then show or send a confirmation to the consumer[182].

Under iDEAL, a number of fees and costs are imposed to the players involved. A business must have a contract with an iDEAL partner acquirer or CPSP to accept payments. The fee structure is fixed fees per transaction. Issuers, acquirers, and CPSPs must obtain a licence in order to offer iDeal payments. These are nonetheless associated with different costs which vary depending on the type of licence needed and is facilitated through the relevant acquirer or CPSP who holds the iDeal licence. Apart from licensing fees, routing fees per transaction might also be applied to merchants, acquirers and issuers.[183] In the case of acquirers and issuers, the fees charged per transaction might range from 0.003 EUR to 0.005 EUR.[184]

Merchants are able to offer a variety of payment options, such as QR code or a payment link to their customers through iDEAL. They face lower costs when it comes to payment transactions in comparison to a four-party card scheme model. Although financial institutions need to pay a licencing fee, the cost of offering iDEAL, is lower to the costs faced within a four-party scheme model to accept transactions of most values.

Consumers, do not pay a fee for the majority of iDeal transactions. However, a merchant can add a discretional fee, but they must declare this charge to the customer prior to the execution of the transaction. There is a € 0.30 charge for a C2C payment request using an ideal QR codes. This can be paid by the payee or the payer.[185] As indicated in the figure below, the survey cited suggests that IDEAL was the most used payment method in the Netherlands with 53% of respondents indicating that they had used iDEAL in the last 12 months to make a payment at a POS.[186] [187]

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[182] *Ideal. (2023) Retrieved from ideal.net: https://www.ideal.nl/en/consumers/frequently-asked-questions/*

[183] *Ideal. (2023). Businesses. Retrieved from Ideal.nl: https://www.ideal.nl/en/businesses/*

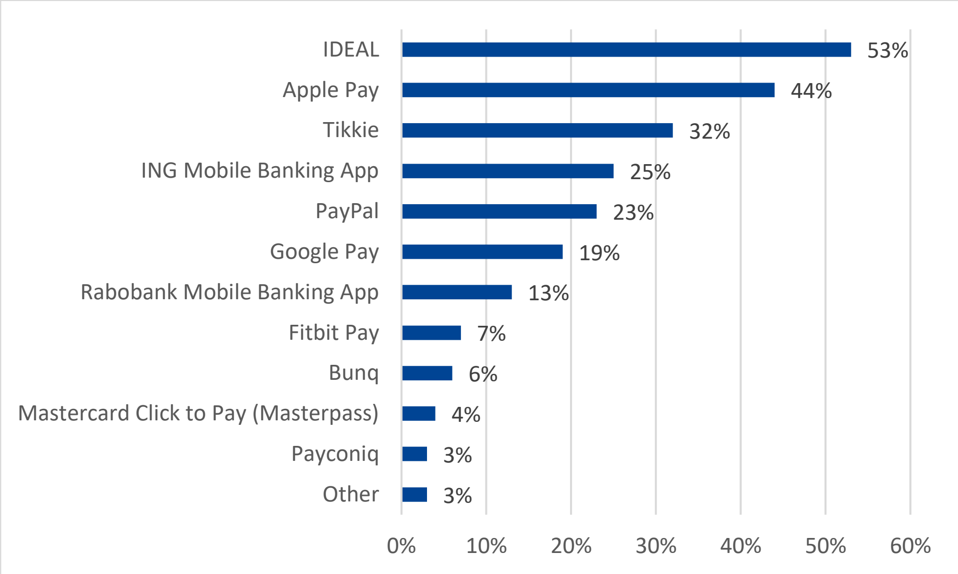
[184] *Currence. (2023). Ideal fees. Retrieved from Currence.nl: https://www.currence.nl/en/products/ideal/fees-ideal/*

[185] *Ideal. (2023) Retrieved from: https://www.ideal.nl/en/consumers/frequently-asked-questions/*

[186] *The source is not clear on the extent to which the apps were used. It does not, for example, indicate whether this refers to "at least once a year".*

[187] *This data is based on a survey which asked respondents whether they had used these apps in the past 12 months. The source is not clear on the extent to which these applications were used. It does not indicate e.g. whether this meant "used at least once in the past year". This data is not transactions by volume or value.*

Figure 13: Most used mobile and digital payments by brand in the Netherlands 2023 in-store



Source: Statista. (2023). Most used mobile payments by brand in the Netherlands 2023

Box 6: Overview of Swish

Swish is a Swedish digital payments app with over 8 million users. Swish provides Swedish users with the ability to make payments quickly through the app. The Swish payment app is a cooperation between Swedish banks. It started as a cooperation between six of the largest banks in Sweden and expanded as additional banks connected to Swish. Businesses can sign up to Swish through their bank as long as their bank is a partner.[188]

Similar to Bluecode, Ideal and Payconiq, Swish allows users to make payments in-store and online. From a consumer perspective, the Swish app allows a user to connect their phone number to their bank account. Then the user can transfer funds to other users or companies by inputting their Swish number and approving the transaction with their connected bank through a Mobile bank ID.[189] This allows a payment to be made directly from their bank account to the recipient's account. There is also an option to make faster payments using a unique QR code. From a business perspective, Swish allows businesses to accept payments in-store and online, provide a self-service shopping experience, give pay-outs to their customers, and receive invoice payments quickly through QR codes.

The Swish app does not entail any direct costs for users, and there are no fees to send and receive payments. However, there is a standard fee per transaction of approx. 2 kronors (€ 0.17).[190] charged to businesses accepting payments This fee, however, can vary depending on the company's size and requirements.

As demonstrated below, Swish was the most widely used mobile payment method in Sweden with 78% of respondents indicating that they had used the app in the last 12 months at a restaurant, store or other POS.

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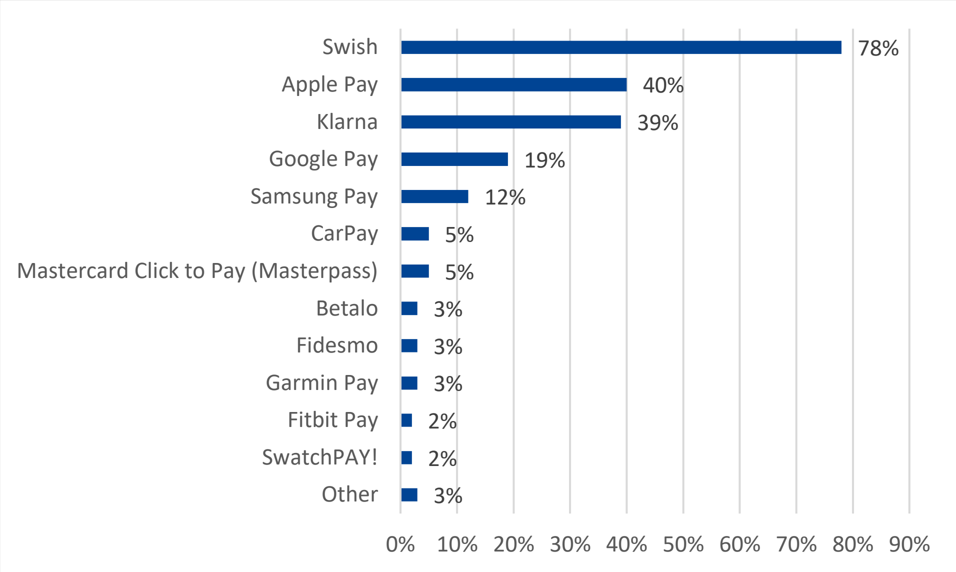
[188] *Swish. (2023, 04 19). Retrieved from Swish: https://www.swish.nu/*

[189] *A BankID or Mobile Bank ID allows any user with a Swedish identification number and bank account to use certain services and online banking securely*

[190] *Nordea. (2019). The benefits of Swish for businesses in Sweden: https://www.nordea.com/en/news/the-benefits-of-swish-for-businesses-in-sweden*

Figure 14: Most used mobile payments by brand in Sweden 2023 in-store[191]



Source: Statista. (2023). Most used mobile payments by brand in Sweden 2023

Box 7: Overview of Bizum

Bizum, is a Spanish payment app established by a collective of Spanish banks. Bizum is owned by 23 Spanish banks. Since its establishment, other banks have signed up as partners, leading to a total of 34 banks being affiliated with the app. Depending on how the bank has set up and integrated with Bizum, it may be accessible for users through a mobile application, an e-wallet or through e-banking.

There are two ways in which Bizum can be used by consumers. Users can access Bizum from the app of their bank or make use of the Bizum app directly. Users can then send money to a payee (who has a Bizum account) by entering the payee's phone number[192] or by selecting a payee from the user's contact list. Merchants can also register through their bank and can provide the option to users to pay in store or online using BIZUM. At physical POS, payments occur similarly to online transactions. When in-store merchants have BIZUM activated, payments are facilitated through the merchant payment gateway.[193] For online purchases with online retailers who accept Bizum, banks often require that users input a four-digit password for transfers to be made from the users' bank account to the merchant. With e-commerce and in-store purchases, funds are transferred directly from the user's bank and this is executed through the banking channel. [194]

Similar to Swish, Bizum consumers make and receive payments for no direct fee, however, fees for online retailers may vary depending on their bank. By signing up, online retailers have the ability to accept Bizum payments. To do this, they must sign up through their bank who can then facilitate the transaction. The

[191] The source is not clear on the extent to which the apps were used. It does not, for example, indicate whether this refers to "at least once a year".

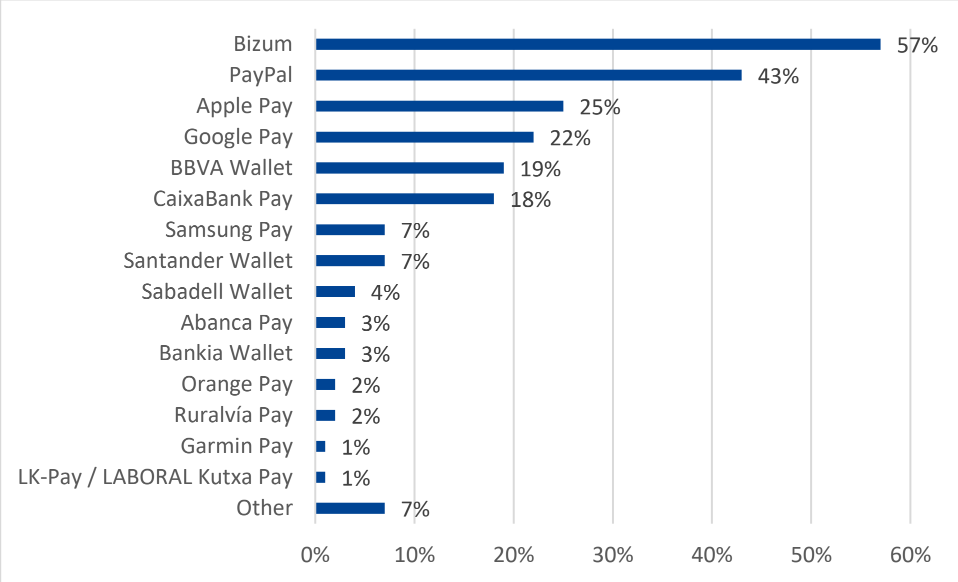
[192] The payee has to have a Bizum account. To set up a Bizum account the payee must provide their IBAN number and a mobile number. When a payer sends money to the payee by noting down the latter's phone number, the payee receives the funds as their IBAN will be linked to their phone number.

[193] N26. (2022). Bizum: How it works and what you need to know before you use it. Online: https://n26.com/en-es/blog/how-does-bizum-work

[194] N26. (2022). Bizum: How it works and what you need to know before you use it. Online: https://n26.com/en-es/blog/how-does-bizum-work

fees for retailers depend on the agreement with the connecting bank.[195] Similar to the previous examples, in Spain Bizum was the most widely used payment app by consumers with 57% of respondents indicating that they had used the app to make a payment at a POS in the past 12 months when the survey was conducted.[196] [197]

Figure 15: Most used mobile payments by brand in Spain 2023 in store



Source: Statista. (2023). Most used mobile payments by brand in Spain 2023

Box 8: Overview of Blik

BLIK, is a Polish mobile payment system and a cooperation between Polish banks. It was set up in 2015 by six Polish banks.

BLIK's services allow users to pay in-store as well as online, and send and receive money to/from other users. It also allows users to deposit and withdraw cash at ATMs if the bank in question is one of 15 banks that have agreements with BLIK.[198] BLIK payments work through a banking app. In e-commerce, the user selects the BLIK payment option on the merchant's website, a BLIK code is retrieved from the banking app and then inputted on the online retailer's payment page. The transaction is made when it is confirmed in the banking app. Regarding in-store payments, consumers can pay using the BLIK code, or using contactless payment through the NFC function. In the former case, the user has to inform the retailer that they wish to pay using the banking app. The user then has to open the banking app which will display a BLIK code. The user then has to enter this code on the merchant's terminal and subsequently confirm the transaction with their PIN in their banking app. In the latter case, the user has to inform the seller verbally that they wish to pay contactless with the BLIK app. The merchant then has to prepare the terminal as it would do for a contactless card transaction. The payment will occur once the phone communicates with the terminal through NFC. If the payment is more than PLN 100 (around €22[199]) the user will have to unlock the mobile phone (with PIN or face recognition), or insert

[195] *Bizum. (2023, 04 19). Retrieved from Bizium.es: https://bizum.es/en/about-us/*

[196] *Statista. (2023). Consumer Insights Database. Link: Consumer Insights | Statista*

[197] *This data is based on a survey which asked respondents whether they had used these apps in the past 12 months. The source is not clear on the extent to which these applications were used. It does not indicate e.g. whether this meant "used at least once in the past year". This data is not transactions by volume or value.*

[198] *BLIK.com (2023). How to use BLIK. Retrieved from: https://blik.com/en/how-to-use-blik#cash-deposits-and-withdrawals*

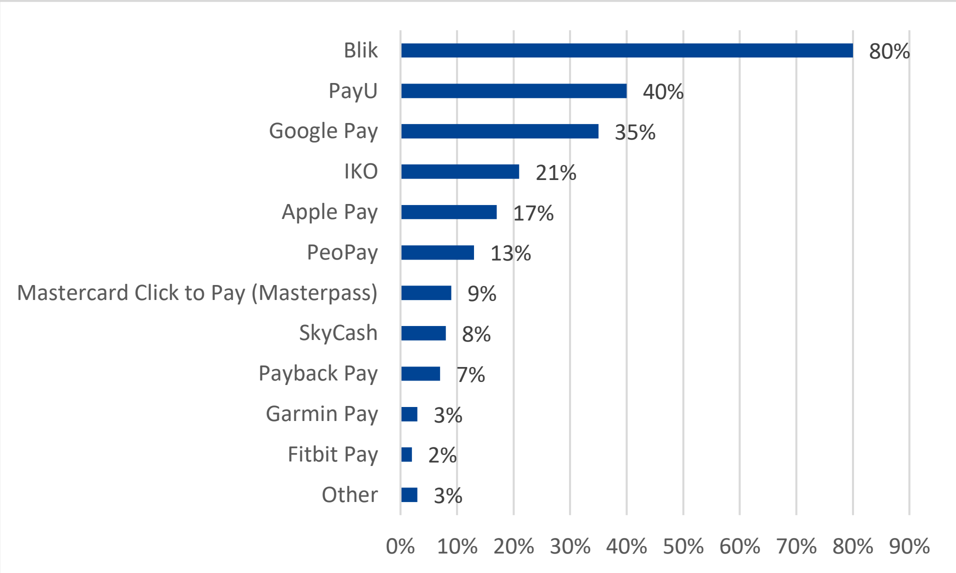
[199] *€22.44. Exchange rate on 7 November 2023*

a PIN in their mobile phone app. Merchants can set up the functionality to accept contactless BLIK payments through payment services providers that are integrated with the BLIK payment system.[200]

Security is enhanced for the user as the transaction is made directly from the user's account to the retailers account through the banking system. There is also an added convenience as no card or additional app is required besides a banking app.

Banking institutions can provide merchants with the ability to accept BLIK payments online and in stores. PSP (Polski Standard Płatności) clear the funds in this process and calculate the liabilities and receivables of each participant in the BLIK system. They decide the fees due to issuers and acquirers that will be paid for each transaction. Mobile transactions are cleared in net amounts, accounting for fees due to issuers and acquirer which are settled monthly. [201] In the case of Poland, Blik was found to be the most widely used payment app with 80% of respondents indicating that they had used the application in the last 12 months at a POS.[202] A consumer survey conducted by Statista reported that based on the total share of respondents, the use of Blik by Polish consumers rose by 4 percentage points between 2021 (22%) and 2023 (26%).[203]

Figure 16: Most used mobile payments by brand in Poland 2023 in store



Source: Statista. (2023). Most used mobile payments by brand in Poland 2023

[200] *BLIK.com (2023) Retrieved from: https://blik.com/en/solutions#physical-stores*

[201] *BLIK. (2023). Regulations of the BLIK Mobile Payments System. Retrieved from BLIK: https://blik.com/en/documentation*

[202] *This data is based on a survey which asked respondents whether they had used these apps in the past 12 months. The source is not clear on the extent to which these applications were used. It does not indicate e.g. whether this meant "used at least once in the past year". This data is not transactions by volume or value.*

[203] *Total number of respondents in the first quarter of 2021 for Poland were 2094 and for Spain in 2022 were 2035. The total number of respondents in the first quarter of 2023 for Spain were 2035 and for Poland 2029. Statista. (2023). Consumer Insights Database. Link: Consumer Insights | Statista*

Figure 17: A2A application comparison

Payment Application	Region(s) covered	Type(s) of transaction	How are payments facilitated?	Integrated into the banking app?	Direct fee for customer?	Fee for merchant?
Bluecode	Austria and Germany	POS and e-commerce	Based on a Unique barcode	Yes	No	Yes, per transaction
Payconiq	Luxembourg and Belgium	POS e-commerce	QR code	Yes	No	Yes, per transaction
iDeal	Netherlands	POS and e-commerce	QR code or online link	Yes- or through online banking	Instore No, but the merchant can add a fee. 30c charge for C2C payment	Yes, per transaction
Swish	Sweden	POS and e-commerce	QR code or through Swish number	No	No	Yes, per transaction
Bizum	Spain	POS or e-commerce	POS: through payment gateway Online: passcode	Yes or through a separate app	No	Yes, per transaction
Blik	Poland (expanding acceptance)	POS, e-commerce and cash withdrawal	Passcode or contactless NFC payment	Yes	Subject to bank	Subject to bank

3.1.6 Emerging means of payment that are currently under development

A number of stakeholders highlighted the digital euro and the European Payments Initiative (EPI) as emerging means of payment that are currently under development. As these methods are being developed, the findings reported in this study are based on the most recent publications available.

Digital euro

The digital euro is a Central Bank Digital Currency (CBDC).[204] The aim of the digital euro is to foster a Pan-European payment solution.[205] As identified in previous sections of the report, digital payments are increasingly used by European consumers. As envisaged by the ECB, the digital euro will allow digital payments and transactions through public money (i.e. the money issued by a central bank)[206] to be made through a card, app or digital wallet. **The ECB aims to create a user-friendly experience by designing a digital euro to be used both offline and online.** Offline payments will allow users to make payments with some level of privacy similar to the features of

[204] *It should be noted that the digital euro falls under the funds in the payments ecosystem.*
[205] *ECB.(2023). A digital euro: widely available and easy to use, Press Release*
[206] *ECB.(2022). The digital euro and the importance of central bank money.*

cash payments.[207] The digital currency does not aim to replace cash and digital payments instead it is intended to act as a complementary element.[208] The European Commission proposal[209] issued in June 2023 further notes that the Digital Euro will be similar to cash but issued in a digital format. Each digital euro would be directly backed by the ECB which would guarantee its safety and that it maintains its value. Furthermore, the ECB would guarantee that a digital euro can be exchanged for cash. As part of the Commission proposal, the digital euro would be legal tender in the Euro Area. In addition to the aim of having the digital euro not replace cash, the proposal sets out rules on mandatory acceptance of cash to ensure that individuals and businesses can continue to use this form of payment. In line with this principle, Member States will be required to monitor and report the cash access levels in their territory.[210]

The Commission indicates that the proposal has four principal objectives[211]:

- To ensure consumers, businesses, and public entities can have access to a public digital currency.
- Provide a digital currency that allows for the same level of privacy that cash use (and holding a bank account) entails (which it notes is not always the case with existing digital payment solutions). It furthermore notes that the proposal seeks to ensure that the currency is accessible to all citizens including the unbanked (which would be allowed e.g. by having entities such as local and regional authorities, and postal offices, enabled to distribute the digital euro).
- Foster competition and innovation in the retail payments market, including by providing alternative digital payment solutions to consumers.
- Support the Euro's role as an international currency, strengthening Europe's open strategic autonomy.

Furthermore, in line with aims to ensure access to all citizens, the Commission notes that the proposal will seek to allow digital payment seamlessly throughout the Euro Area and can be used to pay digitally including without internet access. [212]

Additionally, according to the ECB, one of the aims of the digital euro is to create a more competitive payments market. [213] The Euro Retail Payments Board (ERPB) foresees that the "core principles for the compensation model" suggested by the ECB,[214] could offer an indication on how competition will be achieved and how payment intermediaries will be compensated for the services they offer.[215]

[207] *ECB.(2022). The digital euro and the importance of central bank money*

[208] *Based on the 6th ERPB digital euro technical session- this is still being decided and debated on how it will it will be designed. We will monitor the continuous publications made in the ECB and will make amendments to this section wherever possible.*

Source: [Written feedback after 6th ERPB technical session (compensation model and rollout approach) (europa.eu)]

[209] *European Commission. (2023). Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the establishment of the digital euro. Online: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52023PC0369*

[210] *European Commission. (2023). *Questions and answers on the Single Currency Package. Online: https://ec.europa.eu/commission/presscorner/detail/en/qanda_23_3502*

[211] *European Commission. (2023). *Questions and answers on the Single Currency Package. Online: https://ec.europa.eu/commission/presscorner/detail/en/qanda_23_3502*

[212] *European Commission. (2023). *Questions and answers on the Single Currency Package. Online: https://ec.europa.eu/commission/presscorner/detail/en/qanda_23_3502*

[213] ECB. (2023). 6th ERPB technical session on digital euro – agenda. *[Written feedback after 6th ERPB technical session (compensation model and rollout approach) (europa.eu)]*

[214]*ECB. (2023). Compensation model for the digital euro. Euro Retail Payments Board, Digital euro project team.*

[215] *Which will follow the same method as that currently done with digital payments*

An ECB report[216] argues that the compensation model behind the proposed digital euro has four key principles:

- "**Free for basic use by private individuals**"[217]: the services should be free for people wishing to pay and receive money in the form of the digital euro for basic functions such as onboarding, account opening and holding, and performing and receiving payments amongst others.
- "**Network effects generating economic incentives for acquiring PSPs and merchants**"[218]: PSPs should be able to impose a fee on merchants for their services as is the case with cash and other payment methods but these fees cannot exceed fees applied for similar digital payment methods. The report notes that "Co-legislators could decide to implement safeguards to prevent potential abuse and ensure that merchant service charges are reasonable". **This principle could ensure merchant costs will not exceed the current levels for comparable payment solutions**.
- "**Comparable economic incentives for distributing PSPs**"[219]: PSPs should receive compensation for distributing the digital euro to consumers from PSPs involved in acquiring. This should occur through an inter-PSP fee that is capped. In this way, PSPs will be incentivised to provide a good quality when it comes to user experience and usability.
- "**Eurosystem bears its own costs, as with production and issuance of banknotes**"[220]: PSPs will not incur fees from the Eurosystem for the latter's costs arising from scheme management and settlement processing.

Concerning costs, the European Commission proposal[221] issued in June 2023 suggests in Article 17 that the associated "Merchant service charge or inter-PSP fee are regulated to ensure that they do not exceed the lowest of the following amounts: (i) the relevant costs incurred by payment services providers, including a reasonable margin of profit and that (ii) fees or charges requested for comparable means of payment". It further proposes that the ECB monitor on a regular basis the costs, fees and charges associated

[216] *ECB. (2023). A stocktake on the digital euro: Summary report on the investigation phase and outlook on the next phase. Online: https://www.ecb.europa.eu/paym/digital_euro/investigation/profuse/shared/files/dedocs/ecb.dedocs231018.en.pdf?6fbcce71a4be7bb3b8fabc51fb5c7e2d*

[217] *ECB. (2023). A stocktake on the digital euro: Summary report on the investigation phase and outlook on the next phase. Online: https://www.ecb.europa.eu/paym/digital_euro/investigation/profuse/shared/files/dedocs/ecb.dedocs231018.en.pdf?6fbcce71a4be7bb3b8fabc51fb5c7e2d*

[218] *ECB. (2023). A stocktake on the digital euro: Summary report on the investigation phase and outlook on the next phase. Online: https://www.ecb.europa.eu/paym/digital_euro/investigation/profuse/shared/files/dedocs/ecb.dedocs231018.en.pdf?6fbcce71a4be7bb3b8fabc51fb5c7e2d*

[219] *ECB. (2023). A stocktake on the digital euro: Summary report on the investigation phase and outlook on the next phase. Online: https://www.ecb.europa.eu/paym/digital_euro/investigation/profuse/shared/files/dedocs/ecb.dedocs231018.en.pdf?6fbcce71a4be7bb3b8fabc51fb5c7e2d*

[220] *ECB. (2023). A stocktake on the digital euro: Summary report on the investigation phase and outlook on the next phase. Online: https://www.ecb.europa.eu/paym/digital_euro/investigation/profuse/shared/files/dedocs/ecb.dedocs231018.en.pdf?6fbcce71a4be7bb3b8fabc51fb5c7e2d*

[221] *European Commission. (2023). Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the establishment of the digital euro. Online: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52023PC0369*

with the digital euro and publish this data. Furthermore, it is the intention of the proposal that users of the digital euro do not face fees for purchases of the digital currency nationally or cross-border.[222] [223]

European Payments Initiative

The European Payments Initiative (EPI) is an initiative developed by 16 European financial institutions[224] which aims to create a unified Pan-European payment solution, with account-to-account instant payments (SEPA Instant Credit Transfer-SCT Inst), through the support of an EPI digital wallet solution.

The solution aims to become a new standard in payments for European consumers and merchants to enable payments not only for P2P payments but also for physical POS, e-commerce and person-to-professional (P2Pro) payments. At present, EPI would be launched in four European countries: Belgium, France, Germany and the Netherlands.

The EPI, however, is still in its implementation phase and it is too early to indicate how and to what extent it will impact consumers, merchants and the payments market as a whole. It is expected that by the end of 2023, a pilot of P2P instant payments will be launched in France and Germany. The commercial launched is expected in 2024.[225]

3.1.7 The market structure of issuing, acquiring and processing services in the EEA and the evolution of acquirers and processors.

The final section of this overview of the payments sector provides findings from desk research and interviews on the market structure for issuing, acquiring and processing services. Three main observations have been made by the associations interviewed for this study. First, as noted by one card scheme and one association of issuers and acquirers the market structure for issuing and acquiring services is changing as new payment players are entering in particular Fintechs. Second, traditional issuing and acquiring services providers (i.e. banks) have experienced a market consolidation in order to become more competitive. Lastly, stakeholders disagree on the extent to which there has been a de-facto separation between payment card schemes and processing entities as reflected under the IFR article 7.

Issuing and acquiring services

According to the research for this study**, the number of traditional banks (i.e. not neo-banks or fintechs providing banking services) across Europe, especially in the eurozone has fallen during the past decade.** According to a report by the EBF, in 2015, the number of banks in the EU totalled 6,688, whereas in 2021 they totalled

[222] European Commission. (2023). Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the establishment of the digital euro. Online: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52023PC0369

*[223] European Commission. (2023). *Questions and answers on the Single Currency Package. Online: https://ec.europa.eu/commission/presscorner/detail/en/qanda_23_3502*

224 These are namely ABN-AMRO, Belfius, Groupe BPCE, ING, Credit Agricole, Rabobank, KBC, Credit Mutuel, BNP Paribas, Deutsche Bank, Societe Generale, WorldLine, Nexi DZ Bank , Deutscher Sparkassen-und Giroverband, la Banque Postale and DZ Bank

[225] BNP Paribas. (2023). The European Payments Initiative (EPI) launches a payment solution in Europe and strengthens its position through two acquisitions and additional shareholders. Online: https://group.bnpparibas/en/news/the-european-payments-initiative-epi-launches-a-payment-solution-in-europe-and-strengthens-its-position-through-two-acquisitions-and-additional-shareholders

5,263, a trend attributed to consolidation in the market (rather than exit).[226] **According to two payments associations, despite this, and the fact that not all traditional banks issue payment cards, they are nonetheless still the main players in card issuing.[227]** One association, representing issuers and acquirers indicated that this is the case in Member States such as Finland, Greece, Portugal, Romania, Spain, and Sweden. In other countries such as Czechia, Germany and Italy, this is still largely the case but there are increasingly more new players with a foothold in the market such as neo-banks as well as Fintech players. It was noted by one stakeholder that in response to the entry of the latter, issuers began focusing on providing service offers increasingly based on digital engagement channels, which allow simple and quick use of banking services (instant issuing, digital card, and instant lending, amongst others), as well as collaborating with Big Tech companies to provide cardholders mobile payment solutions on their wallet.

On the acquiring market one association representing issuers and acquirers indicated that in Member States such as Portugal[228], Spain[229], and Romania[230], traditional banks are still both the main issuers and acquirers in their markets, whilst in Member States such as Czechia[231], Denmark[232], Germany[233], Italy [234], and Finland[235], the main players

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[226] *European Banking Federation. (2022). Banking in Europe: EBF Facts & Figures 2022 - 2021 banking statistics .*

[227] *Especially in the case of issuing debit cards.*

[228] *In Portugal, the main players in the issuing market are the retail banks, and new global fintechs players as well as neobanks. In the acquiring market the main player is a national acquirer (that competes with other PSPs).*

[229] *In Spain, banks are the main issuers and acquirers as most of them offer both issuing and acquiring services, mainly for global card schemes. They represent 95% of in-store acquiring services while only 68% in online payments where international acquirers are rapidly growing in market share.*

[230] *In Romania the local banks (Banca Transilvania, BCR, BRD, ING Bank, Raiffeisen Bank, CEC Bank, UniCredit Bank, Alpha Bank, OTP Bank, Eximabank) remain the main competitors. They provide both type of services: issuing and acquiring. On the acquiring side, there are also cross-border acquirers offering only acquiring/processing services. On the issuing side, the Fintechs that entered the market are also competing with local banks in terms of payment products offered to consumers.*

[231] *In Czech Republic the main issuers are Airbank, Česká Spořitelna, ČSOB, Komerční banka, Moneta Money Bank, Raiffeissenbank, and Unicredit Bank, while the main acquirers are Adyen, ČSOB, Global Payments, Worldline, UniCredit Bank. The processing providers are Adyen, GPE and Nexi.*

[232] *Nets/Nexi is the main service provider to issuers and acquirers in Denmark providing both processing as well as other services to issuers and acquires. In addition, Nets/Nexi is also a major acquirer on the Danish payment market.*

[233] *In Germany cards are mainly issued by banks. Germany has a very competitive banking market with commercial banks, cooperative banks and saving banks providing various card and payment products to their clients. In the last few years, in addition to traditional banks, "Neobanks" have emerged. Historically, acquiring was performed by banks in Germany but over time their acquiring activities were sold or split-up. In the last few years, a lot of acquirers merged reducing the total number of acquirers in the market. Nevertheless, FinTechs are beginning to enter the acquiring market. The processing market for debit cards in Germany was in the past largely concentrated in the banking sector. In the last few years, the market has gotten more diverse with a lot of (international) players establishing a foothold in the market. Credit card processing was already in the past done mostly by international players.*

[234] *In Italy, the previously mentioned consolidation accelerated by the COVID-19 crisis, has been observed with the merger between SIA and Nexi providing these two entities a large market share. The other main players in Italian merchant acquiring market are some domestic banks and international players but with very limited market penetrations. At the same time, new players are appearing on the scene, such as Italian and foreign fintechs, which are driving innovation and stimulating competition by offering new competitive and technologically advanced solutions. As regards processing, the above-mentioned merger has had an important impact especially as regards the processing of transactions of the domestic debit card scheme and to a lesser extent the processing of international schemes' credit-debit card transactions. On the issuing market, the situation is more fragmented. There are many players (Banks, Fintechs, and Neobanks) which offer a diversified payment card proposition, and consumers can choose from several solutions that are different both in terms of prices and services.*

[235] *In Finland most cards are debit cards and these are issued by banks. The leading banks in Finland are OP Financial Group, Nordea, Danske Bank, S-Bank, Handelsbanken, SEB, Aktia, Bonum Bank, Ålandsbanken. There are also several independent savings banks and co-operative banks issuing debit cards. Credit cards*

in acquiring are the international entities arising out of market consolidation. On the other hand, in Greece, since 2022, more than 90% of acquiring services are provided by Greek payment institutions and e-money institutions, and in Sweden, acquiring is being provided increasingly less by traditional banks and more by non-bank PSPs.

Acquiring services maintain the relationship with merchants and in several instances install POS terminals.[236] They offer a number of services to businesses over and above payment processing. These include business reporting, fraud and subscription management and bill payments. Examples of well-known acquirers are Worldpay, Adyen, Worldline, Nexi Payments, Ingenico, Concardis and Servired. Acquiring services can be provided also by different types of financial institutions, including traditional banks (or fintechs.)

Over the past 4 years, the acquiring market has seen significant changes. Payments and merchant associations interviewed noted that businesses are relying less on business relationships with traditional banks and they are moving towards non-bank payment service providers. One stakeholder consulted noted that in response to these developments, acquiring banks have expanded their range of offerings, providing for example, innovative acceptance solutions such as allowing for use of smartphones at POS terminals, and expanding their acceptance network to new use cases such as accepting contactless payments at electric charging columns.

According to one association, the introduction of payment services offered by Fintech players in the recent past has impacted the competitiveness of these established acquirers. As a result of increased competition stakeholders report that the acquiring market has been characterised by significant market consolidation. To take some examples, large acquirers such as AfterPay and Worldpay closed M&As agreements[237] to become more competitive and gain further strength to expent into new markets.[238] Between 2010 and 2017, there were more than 40 M&A deals among European acquiring players.[239] In the past 4 years, M&A activities peaked. Between 2017 and 2021 an additional 71 deals were closed.[240] Examples of such consolidation include Worldline merging with Ingenico in 2021 and in the same year Nexi merging with SIA and just a few months later with Nets.[241] [242]

In addition to the possible previous effects of the 2008 financial crisis, one association representing issuers and acquirers explained the market consolidation as being a result of reduced bank margins. It was argued that in addition to increased market pressure from the entrance of new players, this reduction is due to increased fees imposed by

are issued both by banks as well as other payment service providers, electronic money institutions and card schemes. The main stakeholders providing payment card acceptance and related services to the merchant side are Nexi Group, Worldline, Verifone and Adyen. The market has grown overall during the years and is in constant change. At the moment there are 210 banks and 117 payment service providers listed on the local FSA site. There are some stakeholders providing both issuing and acquiring services as Nexi Group and Worldline. Finland has experienced new entrants take advantage of the low barriers to access to merchant services and issuing in this jurisdiction.

[236] A device allowing the use of payment cards at a physical (not virtual) point of sale. The payment information is captured either manually on paper vouchers or by electronic means. Source: https://www.ecb.europa.eu/services/glossary/html/act7p.en.html

[237] Mergers and Acquisitions

[238] Deloitte. (2020). Payment providers| The race to scale and expansion into new markets. Deloitte Financial Advisory Netherlands.

[239] European Commission, Directorate-General for Competition, Pavel, F., Kornowski, A., Knuth, L., et al., (2020). Study on the application of the Interchange Fee Regulation : final report, Publications Office.

[240] Deloitte. (2020). Payment providers| The race to scale and expansion into new markets. Deloitte Financial Advisory Netherlands.

[241] Fava.M .(2020). Consolidation in payments – upsides, downsides, challenges, The Paypers.

[242] Deloitte. (2020). Payment providers| The race to scale and expansion into new markets. Deloitte Financial Advisory Netherlands.

card schemes on issuers and acquirers. According to this account, this has meant that for issuers and acquirers, profitability is frequently only attainable through increases in volume (and thus permitting greater economies of scale). This has in turn meant consolidation of acquiring companies via recruitment and mergers.

As noted by a merchant association, in addition to consolidation, there have been significant new entries into the acquiring market, particularly from payment facilitators including, Square, Stripe, SumUP and Zettle. Payment facilitators are intermediaries as they provide a network infrastructure that allow merchants to accept electronic payments. This network infrastructure is set up through an acquirer and is then made available to merchants.[243] A payment facilitator has to contract with an acquirer to access deposits of a merchant as well as PSPs that can ensure the processing of payments. Merchants contract with payment facilitators for acquiring services as setting up an account with such a PSP has been found to be quicker than onboarding with a traditional acquirer, allowing the business to launch their business operations more quickly. In these cases, the merchants only have to purchase a POS terminal and once registered with the payment facilitator, they can begin accepting card payments immediately. The payment facilitator contracts with the payee to provide the latter with acquiring services in line with the IFR Article 2 (1) definition of an acquirer.

Box 9: Issuers, acquirers and the interchange fee cap

It has been argued in one paper[244] that capping the level of interchange fees (at a low level) might have the effect of reducing the attractiveness for PSPs to act both as issuers and acquirers. Under this argument, when interchange fees are high and these fees are at a relatively high level when compared to the MSCs, PSPs that represent both sides of these markets would have a comparative advantage. This is because for transactions between a cardholder and a merchant in which the PSP plays both the issuer and acquirer, there are no interchange fees to be paid. Therefore, these PSPs can provide acquiring services at a lower price. Furthermore, this paper argues that since such entities represent both the issuing and acquiring side of the market, they are able to negotiate lower scheme fees with card schemes than competitors that are not involved in both sides of the market as they represent a larger share of the market.

According to this analysis, since interchange fee caps have been set at a relatively low level, this comparative advantage would be limited, and it would foster entry of PSPs that only provide acquiring services. Statistics in Hungary indicate that this has to a degree occurred as the market share of PSPs that only provide acquiring services has increased from 2015 to 2019. In Q1 of 2015, acquiring only PSPs represented 10% of the market share in 2016, 8% in 2017, in 2018 it represented 16%, and in 2019 it represented 18%.[245]

Two payment associations highlighted a number of entities in the European market operating as both issuers and acquirers (e.g. BNP Paribas as well as the most popular issuers in Sweden i.e. Nordea, Swedbank, SEB, Handelsbanken, LF Bank and Danske Bank). The table below indicates the number of issuers and acquirers in each country of focus in the year 2022 within the sample of PSPs created for the purpose of surveying market participants.

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[243] *Infinicept. What is a payment facilitator?*

[244] *Kajdi, Laszlo., Kiss, Milan. (2021) Impact of policy effects on the Hungarian payments card market. Journal of Banking Regulation 2022*

[245] *Kajdi, Laszlo., Kiss, Milan. (2021) Impact of policy effects on the Hungarian payments card market. Journal of Banking Regulation 2022*

Country	Only issuer	Only acquirer	Both issuer & acquirer	% of all entities providing both issuing & acquiring services
CZ	24	12	5	12%
DE	70	19	2	2.2%
DK	25	5	4	11.8%
FR	56	18	10	11.9%
GR	27	10	5	11.9%
IE	28	16	1	2.2%
IT	42	15	7	10.9%
LT	16	11	6	18.2%
NL	30	41	3	4.1%
PL	41	18	4	6.3%
PT	38	11	4	7.5%
SE	34	13	6	11.3%

Processing services

A payment association identified the largest card processors in the EU as being, Nexi Payments, Tieto/Evry, RedSys. Domestic processing operators are in place and available to process card transactions for authorisation, clearing and settlement either for domestic card transactions or ICS transactions (International card schemes).

The IFR mandated a functional separation between card schemes and processing entities. This separation entailed opening up the market for the processing of transactions with global card scheme brands. **According to two payment associations, it was expected that this separation would allow for increased market share for processors independent of international card schemes as such card schemes would no longer be involved in card payment processing. In the opinion of these two associations this has not occurred, even if no evidence to support this statement was provided.**

One of the reasons behind this would be that it is difficult for independent processors to break into the card processing market of card-based mobile transactions because large global card scheme brands still play a significant role in determining which actors can act as processors.[246] Card-based mobile payments rely on tokenisation services and two associations argued that card schemes have made it mandatory for issuers to use their tokenization services for mobile payments even if there is no technical requirement for this to be the case and processors often have had such services already operating. Furthermore, to become a European payment processor of transactions derived from international card schemes, it is a prerequisite for processing entities to be accepted by international card schemes as trusted processors. This has been suggested as a barrier preventing other market players, besides the established card schemes, to become payment processors for those transactions.[247] Similarly, one association representing issuers and acquirers indicated that for off-us transactions, processing tends to be done by international card schemes due to the complexity of having to enter into multiple bilateral agreements.

[246] *EDPIA. (2020). Position Paper on the EU Interchange Fee Regulation (Regulation (EU) 2015/751*
[247] *EDPIA. (2020). Position Paper on the EU Interchange Fee Regulation (Regulation (EU) 2015/751*

According to two payment associations, there is some evidence that new and innovative payments processors are emerging, e.g. via payment aggregators such as Stripe and Worldline. These systems claim to provide innovation through among other things, enhanced security, simplicity and integration capabilities. Stripe in particular offers different payment solutions, including processing and payment gateway services. While they offer some acquiring functions, in most cases they act as an infrastructure provider and offer technological solutions which facilitate payments. Additional examples of PSPs offering both processing and gateway services include Worldline, Elavon, Printec Group and JCC Payments Systems Limited.[248]

[248] *Deloitte. (2022). Key Players in the EU Payments Landscape: 2022 EDITION*

3.2 Interchange and scheme fees evolution

- The survey and interviews conducted for this study provide some evidence on the evolution of interchange and scheme fees, as well as insights on the impact of fee changes on costs for acquirers and subsequently merchants.
- The study finds that, between 2018 and 2022, **the weighted average interchange fee for debit and credit card transactions in the sample of 12 EU countries (the "EU-12") covered by the survey remained below the 0.2% and 0.3% caps respectively.** Specifically, in 2018, the weighted average interchange fee on debit cards for the EU-12 was 0.143%, and this rose to 0.153% in 2022. Further, in a number of countries (e.g. Netherlands, Ireland and Italy) under their national law, caps for debit card transactions are below the maximum rate of 0.2% stipulated in the EU Interchange Fee Regulation, at least for some transactions.
- Overall, the **findings indicate that issuers have experienced an increase in interchange fee revenues over the past 5 years.** For instance, interchange fee revenues from German debit card transactions of ICS-cards (excluding the domestic debit card scheme) rose in terms of average annual growth rate by 64% between 2018 (€30m) and 2022 (€108m). Similarly, in Lithuania, the average annual growth rate of interchange revenue for domestic debit card transactions rose by 96% between 2018 (€5m) and 2022 (€25m). A possible reason for this increase in interchange fee revenue, lies in the increasing volume and value of transactions. Additionally, interchange fee revenues to issuers from debit card transactions in the EU-12 were significantly greater than those from credit card transactions.
- In terms of the development of scheme fees, only limited data could be collected directly from card schemes. However, findings derived from a combination of data collection methods would seem to indicate that **overall, scheme fees have risen over this period**– even if this cannot be verified empirically. Based on a sample of three domestic card schemes, **the total weighted average of domestic gross scheme fees paid by issuers increased for debit card transactions**. An analysis of the available data suggests scheme fees for consumer debit card transactions paid by issuers increased from 0.003% in 2018 to 0.007% in 2021 In terms of scheme fees imposed by international card schemes, industry stakeholders argue that an increase in scheme fees per card transaction occurred during the past 5 years in the EU. Further, **interviews with payment institutions, acquirers, and merchants would indicate that fee structures of ICS have become more complex and lack transparency**. More specifically, it was argued that four-party schemes do not offer a clear reason to acquirers for the rise in scheme fees nor for the introduction of new fees. Further, it was argued **that competition dynamics (or the lack thereof) have meant increases in scheme fees set by the ICS.**
- At the same time, card schemes have argued that any rise in scheme fees is due to a combination of new regulatory requirements and new players joining the market, both of which require additional measures to enhance security and prevent fraud risks.
- **The report analyses the evolution of MSCs based on data from a survey of merchants within the representative sample of 12 EU countries** and complemented by interviews. Broadly, conclusions on the evolution of MSCs show a mixed picture. **Based on the limited data gathered from the merchant survey, the average EU-12 net MSC for debit card transactions increased from 0.27% in 2018 to 0.44% in 2022.** In addition, the survey data also shows that **merchants experienced lower MSCs for credit card transactions.** At the same time, some merchant associations argue that, while interchange fee caps have had a positive effect on lowering components of MSCs, the rise in card scheme fees and the introduction of new fees have meant overall increases in the costs that merchants face.

This section shares insights from the study survey and interviews on the evolution of interchange and scheme fees since the introduction of the IFR. The findings in this section mainly stem from the study's survey on card schemes and merchants and from interviews conducted with payment, merchant and consumer associations at EU level. As discussed in Chapter 2.2, the survey participation rate of merchants, issuers, and acquirers was low due to the existence of non-disclosure agreements with card schemes and to the length of the survey. While a comprehensive quantitative cross-analysis among market players could not be conducted, qualitative information was also gathered through interviews with associations to ensure representation of all sides of the market.

3.2.1 Interchange fees

This section presents the development of interchange fees imposed by card schemes in the EU for the period 2018 to 2022. The results and trends are based on a representative sample of 12 Member States (EU-12). The 12 Member States covered in the sample are France, Germany, Italy, Poland, Ireland, Greece, Lithuania, Netherlands, Sweden, Czechia, Portugal and Denmark. The analysis is based on data compiled from the study's survey of card schemes.[249] Alongside the survey analysis, this section includes insights obtained from interviews conducted with payment, merchant and consumer associations at EU level. To evaluate the trends in the card-payments markets in the EEA, this chapter will compare the effects across Member States. This is done by using the averages[250] calculated in this report from the EU-12 Member States and comparing these results with the previous study ("EY/Copenhagen Economics study"). This approach will enable this section to extrapolate to the EU-27 the developments on the card-payments market.

The interchange fee rate was calculated by dividing the total EUR value of interchange fees by the total EUR value of transactions reported by respondents. The data used to analyse the evolution of interchange fees were mainly collected from international[251] and domestic schemes[252] for the 12 Member States in the sample. The study reports interchange fees in the form of weighted average interchange fees in percentage of transaction value. The weights were determined by the transaction value in relation to the overall transaction volume reported by each participant. This report uses the same calculations as the EY/Copenhagen Economics study to allow for a comparison of findings between the two reports.[253]

In this study, interchange fees were measured by considering three specific components. These were:

1. **The type of card (consumer debit or credit card).** The IFR sets caps on interchange fees for consumer debit and credit cards. These are 0.2% for debit and 0.3% for credit card transactions. Based on Article 1 §3 of the IFR, the interchange fee cap applies to consumer card-based transactions but not to commercial ones. Commercial cards are issued to undertakings,[254] are limited in use for business expenses with payments directly charged to the account of the entity.
2. **Type of scheme (i.e. international and domestic).** This study focuses on seven card schemes: VISA (ICS), Mastercard (ICS), Pagobancomat (Italy), Multibanco (Portugal), Girocard (Germany), Cartes Bancaires (France) and Dankort (Denmark).

[249] Data from issuers and acquirers will not be considered in this study, due to a low participation rate and the limited data shared by the 3 participants. The interviews conducted with payment associations, instead will provide an insight into the acquiring and issuing market.

[250] More specifically, the weighted averages calculated for interchange fee transactions on debit and credit cards for domestic and cross border transactions (inter-regional and intra-regional), as well as interchange fee revenue to issuers.

[251] Mastercard and Visa

[252] Three domestic schemes shared the relevant data for calculating the interchange fees. These were Pagobancomat from Italy, Multibanco from Portugal and Dankort (Nets) from Denmark.

[253] To ensure data robustness, an outlier specification was investigated by identifying the lower and upper bounds. This was done by calculating the Interquartile Range at year-scheme level for each Member State. The upper and lower bound where then identified through the ±1.5 x IQR calculation.

[254] Or self-employed natural persons and public entities. Please use the correct legal wording

3. **Type of transaction (i.e. domestic and cross border transactions).** Interchange fee caps apply to domestic and cross-border transactions where both issuer and acquirer are located in the EU (i.e. domestic and cross-border intra-regional transactions). Interchange fee caps do not apply to inter-regional transactions, as the Regulation does not apply to cards issued outside the EEA. Instead, in 2019, a commitment decision by the European Commission required international card schemes to reduce inter-regional interchange fees to or below the binding caps. These were, for card present transactions 0.2% for debit and 0.3% for credit and for non-card present transactions 1.5% for debit and 1.5% for credit. [255]

The findings of this chapter are divided into three subsections. The chapter will primarily explore the interchange fee evolution of consumer debit and credit card transactions. This will be followed by analysing interchange fees in domestic and cross-border transactions (i.e. intra-regional and inter-regional) across the two card types. Lastly, the chapter will explore the growth rate of interchange fee revenues between 2018 and 2022. Interchange fees and revenues for commercial cards are further explored in subsection 3.2.4 of the report.

3.2.1.1 Interchange fees for debit and credit card transactions

Figures 17 and 18 present the weighted average of interchange fees for debit and credit card transactions for the 12 EU Member States covered in the survey between 2018 and 2022. The results reported in this subsection combine domestic and intra-regional transactions. More information on the annualised weighted average interchange fee as a percentage of transaction values across the 12-Member States is only available in the confidential version of the report.

Between 2018 and 2022, the weighted average interchange fee[256] for debit card transactions in the EU-12 remained below the 0.2% cap. Indeed, in 2018, the weighted average interchange fee on debit cards for the EU-12 was at 0.143%. This, however, increased in 2022 to 0.153%. Regardless of this increase, the weighted average interchange fee for the EU-12 remained below the EU-28 of 0.168% reported by the EY/Copenhagen Economics study for 2017.Given that the EU-12 weighted average for 2022 is not substantially different from the EU-28 average reported by EY/Copenhagen Economics study for 2017, the EU-12 findings can be extrapolated to the EU-27. Similarly, to the results obtained in the EY/Copenhagen Economics study, the Netherlands, continued to have the lowest interchange fees for domestic transactions (0.05%) for all 5 years. This is because, in the Netherlands under the national law, the caps set for debit card transactions are below the maximum rate of 0.2% **stipulated in the EU** Interchange Fee Regulation, at least for some transactions.[257] Since 2015, the interchange fee for domestic consumer debit card transactions in the Netherlands, was set to a maximum of 0.02 EUR per transaction.[258] There are also national interchange fee legislations in some countries, such as Ireland and Italy. In the case of the Irish statutory instrument, PSPs are not allowed to request a weighted average interchange fee for debit card transactions of more or equal to

[255] European Commission. (2019) Antitrust: Commission accepts commitments by Mastercard and Visa to cut inter-regional interchange fees.

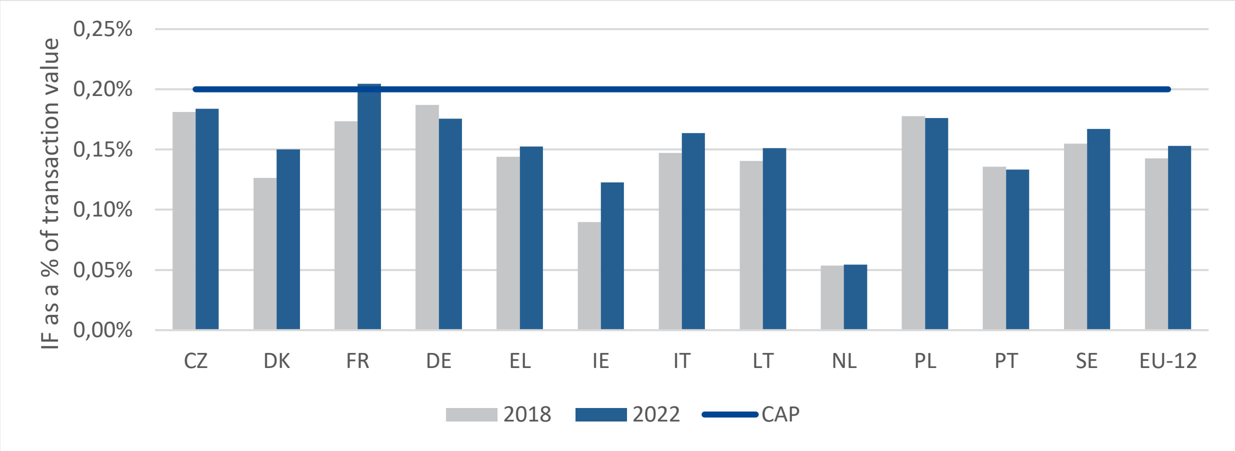
[256] The average interchange fee is weighted by the participant's transaction value to correspond the average fee on the market.

[257]Paysys. (2020). Paysys report: Issue 6-October 2020. Online: [2020_6 Report Oktober 2020 (paysys.de)]

[258] Overheid. (2020). wijziging besluit uitvoering EU-verordeningen financiele markten (MIF). Online: [Overheid.nl | Consultation amending the decree implementing EU financial markets regulations (MIF) (internetconsultatie.nl)]

0.10%. In Italy, the domestic interchange fee for debit card transactions is set at 0.18% for values below 5 EUR.[259][260][261]

Figure 18: Weighted Average Interchange fees for debit card transactions for 2018 and 2022



Note: The survey asked participants to share the annual data of interchange fees paid from acquirers to issuers for payment transactions only. The figures are calculated based on the data provided by VISA, Mastercard, Pagobancomat, Multibanco and Dankort. The data includes the total of interchange fees for debit cards by aggregating domestic and intra-regional transactions. The horizontal line represents the interchange fee cap of 0.2 for debit card transactions.

Source: Study's survey.

For the remaining eight countries, the weighted average interchange fees below the cap may be due to policies set by the International Card Schemes (ICS). For instance, Mastercard sets the interchange fee below the cap for transactions equal to or below a certain threshold.[262] For example in the case of Lithuania, interchange fees are set below the cap for transactions amounting to less than or equal to 6.00 EUR.[263] In Greece, Mastercard sets an interchange fee cap on government and utility transactions at a maximum of 0.08 EUR per transaction. [264] Based on these findings in a representative sample of 12 Member States, there is evidence that average interchange fees across the EU fall below the interchange fee cap for debit card transactions.

The weighted average interchange fee for credit card transactions in the EU-12 also remained below the 0.3% cap between 2018 and 2022. In 2018, the weighted average interchange fee for credit card transactions for the EU-12 was at 0.26%. Between 2018 and 2021, the interchange fees for credit card transactions remained constant at a rate of 0.26%. In 2022, the weighted average interchange for credit card transactions reached 0.27% (almost in line with the average EU interchange fee for credit card transactions of 0.289% for EU-28 found in the EY/Copenhagen Economics study). Given the weighted average interchange fee for credit card

[259] *Gazzetta Ufficiale Della Repubblica Italiana. (2020). Martedì, 26 maggio 2020* *pdf (gazzettaufficiale.it)*

[260] *Paysys. (2020). Paysys report: Issue 6-October 2020. Online: 2020_6 Report Oktober 2020 (paysys.de)*

[261] *Belgium, Denmark, Malta and Spain are other countries whose national legislation have set interchange fees below the cap.*

[262] *Mastercard. Understanding interchange. Online: https://www.mastercard.com/europe/en/regulatory/european-interchange.html*

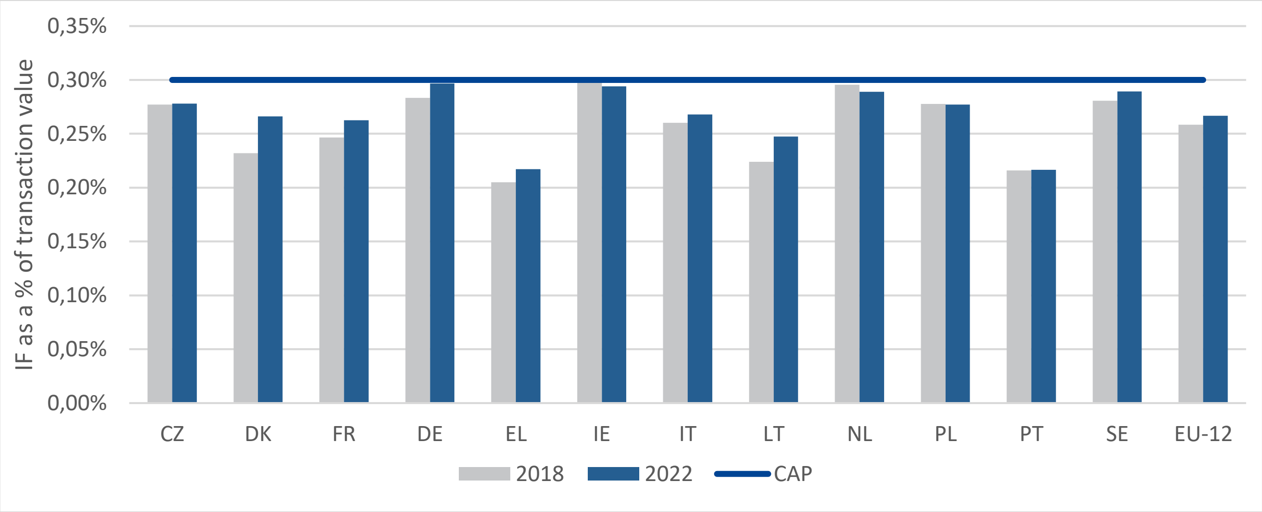
[263] *Mastercard. (2020). Lithuania-Domestic Interchange Fees. Online: https://www.mastercard.com/content/dam/public/mastercardcom/eu/europe-lfi/europeaninterchange/pdfs/29LithuaniaIntracountryInterchangeFees.pdf*

[264] *Mastercard. (2020). Greece – Domestic Interchange Fees. Online: https://www.mastercard.com/content/dam/public/mastercardcom/eu/europe-lfi/europeaninterchange/pdfs/18GreeceIntracountryInterchangeFees.pdf*

transactions for EU-12 are not materially different from the numbers found in the EY/Copenhagen Economics study, the EU-12 findings can be extrapolated to the EU-27.

Compared with 2017, interchange fees for credit card transactions decreased in most Member States. This was especially the case for countries like Greece, Denmark and Lithuania where interchange fees in 2017 were at 0.30% in Greece (0.24% in 2022) and Denmark (0.24% in 2022) and above 0.25% for Lithuania (0.2% in 2022). However, in Sweden the weighted average interchange fees for credit card transactions increased in comparison to the EY/ Copenhagen Economics study, from <0.20% in 2017 to 0.29% in 2022. These results can partly be explained by transaction thresholds set by ICS. For example, both Visa[265] and MasterCard, set lower interchange fees for specific types of payments (i.e. payment of bills) in Greece[266, 267] and Portugal[268, 269] below a particular value.

Figure 19: Weighted Average Interchange fees for credit card transactions for 2018 and 2022



Note: The survey asked participants to share the annual data of interchange fees paid from acquirers to issuers for payment transactions only. The figures are calculated based on the data provided by VISA, Mastercard. The data includes the total of interchange fees for credit cards by aggregating domestic and intra-regional transactions. The horizontal line represents the interchange fee cap of 0.3 for credit card transactions.

Source: Study's survey.

3.2.1.2 Interchange fee for domestic and cross border transactions

In this subsection, the weighted average interchange fee on domestic and cross-border transactions are explored separately for consumer debit and credit cards between 2018 and 2022. Cross-border transactions can be categorised as intra-regional (cards issued within the EEA for transactions made in the EEA) and inter-regional (cards issued outside the EEA for transactions made in the EEA). Intra-

[265] *Visa. Interchange Fees. FAQs. Online: https://www.visa.co.uk/about-visa/visa-in-europe/fees-and-interchange.html*

[266] *Visa. (2021). Greece | Domestic Multi-lateral Interchange Fees. Online: https://www.visa.co.uk/dam/VCOM/regional/ve/unitedkingdom/PDF/fees-and-interchange/greece-21.pdf*

[267] *Mastercard. (2020). Greece – Domestic Interchange Fees. Online: https://www.mastercard.com/content/dam/public/mastercardcom/eu/europe-lfi/europeaninterchange/pdfs/18GreeceIntracountryInterchangeFees.pdf*

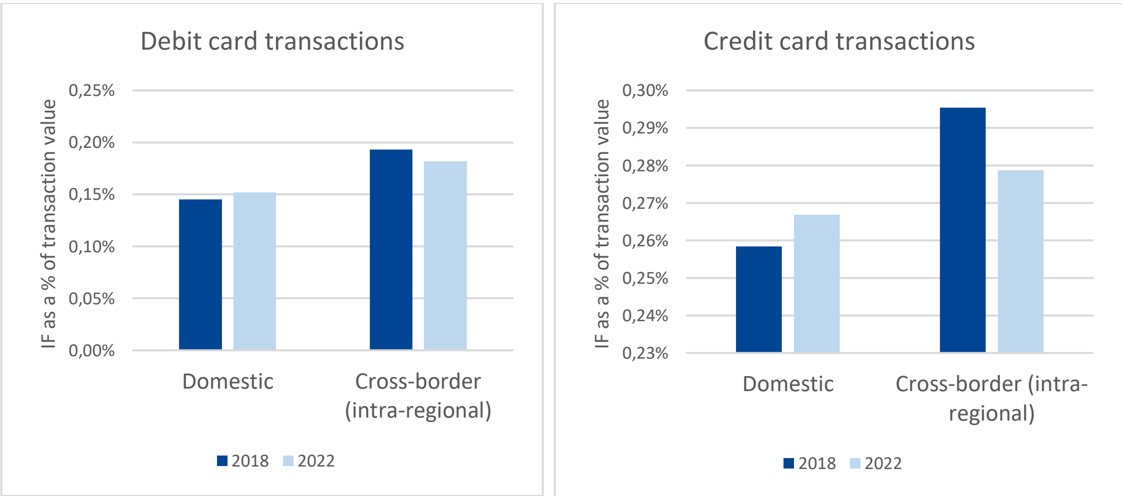
[268] *Visa. (2021). Greece | Domestic Multi-lateral Interchange Fees. Online: https://www.visa.co.uk/dam/VCOM/regional/ve/unitedkingdom/PDF/fees-and-interchange/greece-21.pdf*

[269] *Mastercard. (2020). Portugal – Domestic Interchange Fees. Online: https://www.mastercard.com/content/dam/public/mastercardcom/eu/europe-lfi/europeaninterchange/pdfs/Website-Portugal-Intracountry-Interchange-Fees-1-September-2023.pdf*

regional transactions are firstly explored as they are subject to the same interchange fee cap (0.2% for debit and 0.3% credit) as domestic transactions. Inter-regional transactions are explored at the end of this subsection.

The weighted average interchange fee for domestic and cross-border transactions for both consumer debit and credit card transactions were below their respective cap (see figure below)**.** Compared with the results of the EY/Copenhagen Economics study, interchange fees for domestic consumer debit card transactions between 2018 and 2022 remained at the similar level as in 2017 (0.15%). A similar observation could also be made for interchange fees for cross-border consumer debit card transactions for 2022, as the weighted average interchange fee for 2017 was at 0.18%. The weighted average interchange fee for both cross-border and domestic consumer credit card transactions were lower than the 2017 interchange fees presented in the EY/Copenhagen Economics study. In 2022, the weighted average interchange fee for intra-regional credit card transactions amounted to 0.28% and for domestic consumer credit transaction to 0.27%. With the findings from the EU-12 and those of the previous study's EU-28 not being materially different, the EU-12 results can be extrapolated to the EU-27 for both domestic and cross border transactions for consumer debit and credit cards.

Figure 20: Weighted average interchange fees for domestic and cross-border transactions, for EU-12 for 2018 and 2022



Note: For domestic debit card transactions, the figures are calculated based on the data provided by VISA, Mastercard, Pagobancomat and Multibanco. Data for domestic credit and intra-regional debit and credit card transactions were collected from the data provided by VISA and Mastercard. It should be noted that the two card schemes have a different list of countries for intra-regional payments. For overseas, intra-regional payments Visa includes areas such as Faroe Islands, Greenland; Åland Islands; all French overseas territories, excluding Andorra and Monaco; Svalbard and Jan Mayen; the Azores and Madeira; Canary Islands, Ceuta and Melilla. For overseas, intra-regional payments, Mastercard includes Azores and Madeira; Canary Islands, Balearic Islands, Ceuta and Melilla.

Source: Study's survey.

As previously mentioned, in 2019 the European Commission made a commitment decision regarding the inter-regional interchange fees charged by Visa and Mastercard.[270] The two international card schemes committed to reducing their interchange fees for inter-regional transactions for card present (CP) transactions to 0.2% for debit and 0.3% for credit. For non-card present (CNP) transactions the commitment was to keep interchange fees to 1.15% for debit and 1.5% for credit. Since the data for inter-regional interchange fees were provided by only one card scheme,

[270] *European Commission. (2019). Antitrust: Commission accepts commitments by Mastercard and Visa to cut inter-regional interchange fees.*

the findings on the weighted average interchange fee for inter-regional transactions across the EU-12 for 2018 and 2022 are only available in the confidential version of the report.

3.2.1.3 Interchange fee revenue

The remaining analysis of this chapter focuses on the revenues card issuers receive from interchange fees. Interchange fee revenues were calculated by multiplying the total number of transactions by card type with the weighted average interchange fee as a percentage of transaction value across the 12 EU Member States between 2018 and 2022. To ensure these results are robust, data published by the ECB on the total number of debit and credit card transactions was multiplied by the calculated weighted average for the EU-12.[271] Figure 21 shows the interchange fee revenue received by issuers for consumer debit card transactions. In particular, the revenues are calculated for the two ICS for 2018 and 2022 across the EU-12. The figure additionally indicates the revenue growth rate for all 12 Member States (% labels within the graph).[272]

Overall, issuers experienced an increase in interchange fee revenue within the past 5 years. More specifically, in terms of the average annual growth rate[273], interchange fee revenues from German consumer debit card transactions with ICS-cards (excluding the domestic debit card scheme) for example, rose by 64% between 2018 (€30m) and 2022 (€108m). Similarly, in Lithuania, the growth rate of interchange fee revenue for domestic consumer debit card transactions rose by 96% between 2018 (€5m) and 2022 (€25m). In terms of value, the highest revenue from interchange fees was from Italy in 2022 of (€281m). One possible reason for the increase in interchange fee revenue, lies in the increasing volume and value of transactions.

Figure 22 similarly presents the interchange fee revenue received by card schemes for consumer credit card transactions. In this case, the revenues accounted for are only for the two ICS. **The interchange fee revenues card schemes pass through from consumer debit card transactions in the EU-12 were significantly greater than those from consumer credit card transactions.** The highest interchange fee revenue was € 195m in 2022 from Germany.[274] Regardless, interchange fee revenues from consumer credit card transactions also increased across the 12 Member States between 2018 and 2022. In terms of the average annual growth rate, interchange fee revenues from Lithuanian transactions for instance rose by 200% within the past 5 years.

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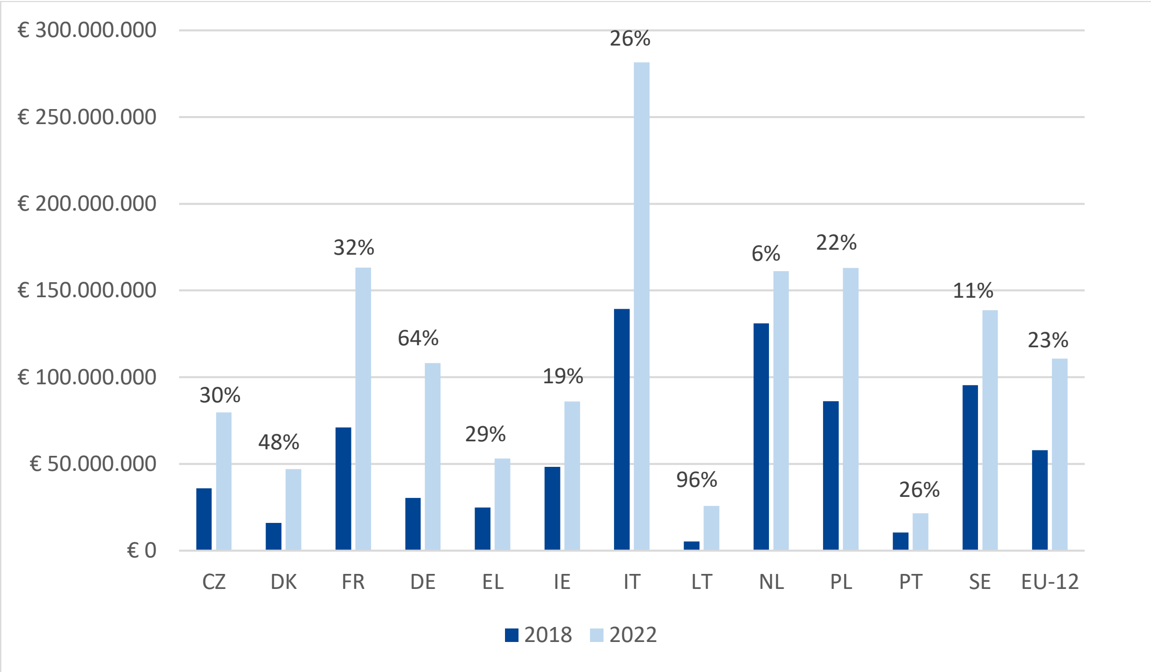
[271] To exclude inter-regional transactions from the ECB data, the research team estimated a 10% reduction from the total number of payments with a debit or credit function. It should also be noted that this robustness check was made to indicate and confirm the possible revenue range each MS would lie on.

[272] In this section an extrapolation to EU-27 was not made due to limited data availability.

[273] The growth rate presents the percentage change of interchange fee revenues for debit card transactions for the years 2018 and 2022.

[274] It should be noted that the interchange fee revenue of issuers for credit card transactions in Germany between 2018-2022 may be presented at a lower level in this study due to lower intra-regional volumes.

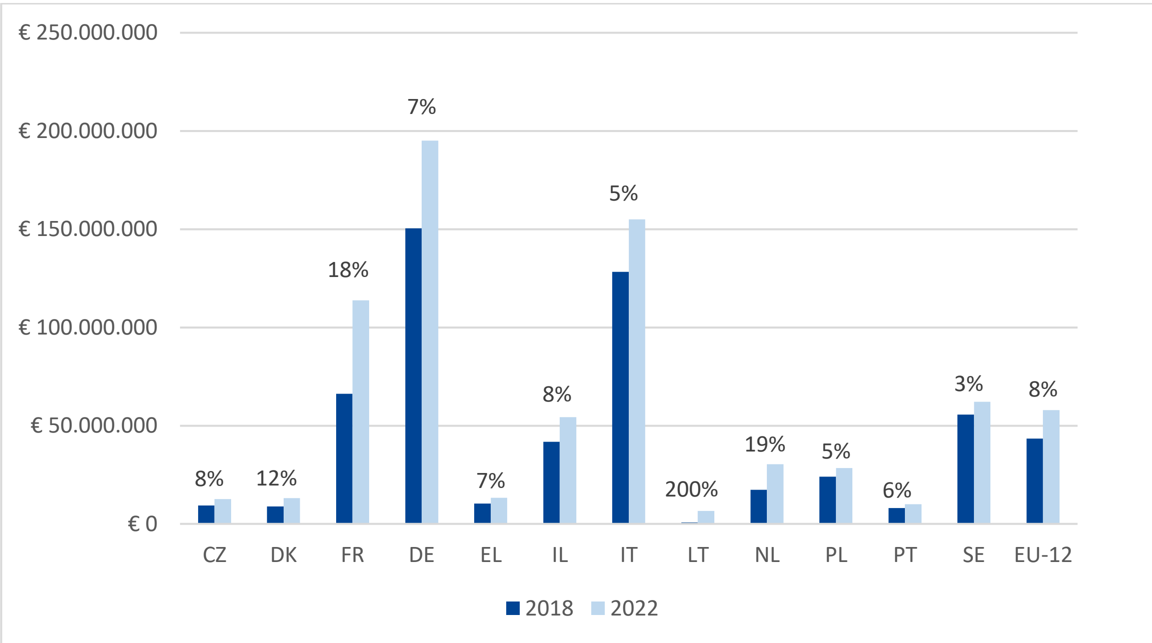
Figure 21: Estimated interchange fee revenue and the average annual growth rate for consumer debit card transactions, 2018 to 2022.



Note: The figures are calculated based on the data provided by VISA, Mastercard, Pagobancomat and Multibanco.

Source: Study's survey.

Figure 22: Estimated interchange fee revenue and the average annual growth rate for credit card transactions, 2018 to 2022



Note: The figures are calculated based on the number of credit card transactions reported by VISA, Mastercard.

Source: Study's survey.

3.2.2 Scheme fees

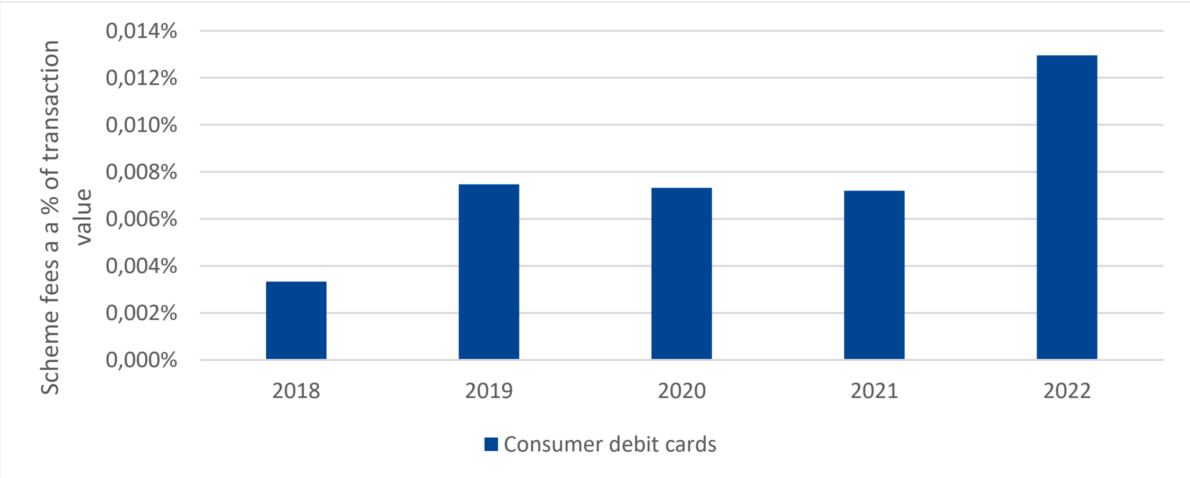
This section presents the development of scheme fees imposed by card schemes in a sample of 12 Member States between 2018 to 2022. The analysis of scheme fees is based on data collected from the study's card scheme survey. Overall, survey participants shared limited data for this section. As a result, the empirical findings for card scheme fees present only a small portion of the market. More specifically out of the seven card schemes (ICS and domestic), only three domestic card schemes shared data relevant to this section: Cartes Bancaires (France), Pagobancomat (Italy) and Multibanco (Portugal). Therefore, the findings are not necessarily fully representative of all card schemes.

Similar to the methodology used for calculating interchange fees, card scheme fees are broken down into different card types, types of transactions and schemes. The study presents the weighted average scheme fees of the three Member States with a domestic scheme in percentage of transaction value. The weights were determined by the transaction value divided by the overall transaction volume reported from each participant. The survey results only allow reporting on gross scheme fees (i.e. the sum of fixed[275] and variable[276] scheme fees divided by the total value of transactions).

This chapter analyses the evolution of domestic scheme fees and international scheme fees individually. It investigates the emergence of new fees and the provision of rebates and benefits from scheme fees to issuers and acquirers. The analysis of domestic scheme fees is based on data gathered from the study's survey of card schemes, whereas for ICS an analysis is made through the interviews conducted with payment, merchant and consumer associations at EU level.

The total weighted average of domestic gross scheme fees paid by issuers, increased for debit card transactions across the EU-3. As shown in Figure 23, scheme fees for consumer debit card transactions paid by issuers increased from 0.003% in 2018 to 0.007% in 2021.

Figure 23: Gross domestic scheme fees for debit card transactions paid by issuers.



Note: The figures for gross scheme fees for debit and credit card transactions paid by issuers are calculated based on the data provided by three domestic schemes. These are Cartes Bancaires (FR), Pagobancomat (IT) and Multibanco (PT). Data on scheme fees from Visa and Mastercard were not shared due to confidentiality reasons. Out of the three domestic schemes, Cartes-Bancaires was the only domestic scheme issuing credit card transactions. For this reason the findings for scheme fees on credit card transactions were removed from the non-confidential version. It should also be noted that Cartes Bancaires did not have any data available

[275] *Fixed scheme fees refer to non-transaction-based fees.*

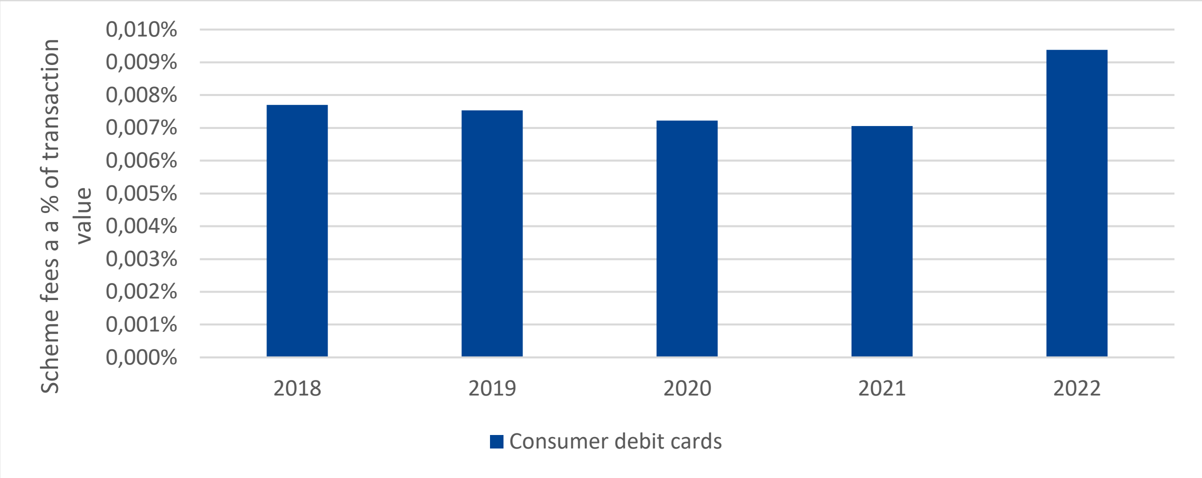
[276] *Variable scheme fees refer to transaction-based fees.*

for 2022 for both debit and credit card transactions. In addition, Multibanco did not provide any data for debit card transactions for 2018.

Source: Study's survey.

In 2018, the total weighted average of domestic gross scheme fees paid by acquirers for debit card transactions across the EU-3, was greater than for issuers. As shown in Figure 24, scheme fees for consumer debit card transactions paid by acquirers in 2018 were at 0.008%. In 2022, domestic scheme fees paid by acquirers increased only by 0.001 percentage point.

Figure 24: Gross domestic scheme fees for debit card transactions paid by acquirers.



Note: The figures for gross scheme fees for debit and credit card transactions paid by acquirers are calculated based on the data provided by three domestic schemes. These are Cartes Bancaires (FR), Pagobancomat (IT) and Multibanco (PT). Data on scheme fees from Visa and Mastercard were not shared due to confidentiality reasons. It should also be noted that Cartes Bancaires did not have any data available for 2022 for both debit and credit card transactions. With Pagobancomat and Multibanco not issuing credit cards, scheme fees for credit card transactions were only shared by Cartes Bancaires. For this reason, scheme fees on credit cards are only available in the confidential version of the report.

Source: Study's survey.

It should be noted that the calculations for gross domestic scheme fees only include variable fees, as fixed fees were not provided by the survey participants. Nevertheless, a payment association argued that domestic card schemes generally impose very low scheme fees. According to the association, this is because, the costs for running these schemes are paid for by the owner banks in their issuing capacity.

Since ICS did not share data on their scheme fees, insights received from interviews with payment, merchant and consumer associations at EU level was used instead to analyse their evolution. **Payment and merchant associations argued that the scheme fees imposed by international card schemes per average card transaction increased during the past five years in the EU**. In addition to this, associations representing merchants and acquirers, argued that new fees had been introduced by international card schemes.[277, 278] However, there are differing views regarding the reasons for the alleged rise of scheme fees and the introduction of new fees.

Several associations representing payment institutions, acquirers, and merchants argued that the fee structures of ICS have become more complex and lack transparency. In their opinion, four-party schemes do not offer a clear

[277] *These include the EMV 3DvS fee, Dynamic Currency Conversion enablement fees and market development and innovation funds.*

[278] *Additional fees such as "behavioural" / "performance"/ "compliance" / "integrity" fees, were also mentioned although they were not explained in depth*

reason to acquirers for the rise of scheme fees nor the appearance of new fees. One particular example offered by an acquirer involved a rise of the Total Payment Value (TPV)[279] as part of their scheme fees due to a larger transaction volume. They reported that between 2021 to 2022, TPV increased by 20% in relative terms. This stakeholder further indicated that it was difficult to identify which card type the increase was attributable to. Nevertheless, as a result of this rise in TPV, the acquirer alleged an increase in total card scheme fees since 2019. It was further explained by this acquirer that controlling for an increase in total transactions processed, as well as different types of transactions being undertaken (e.g. whether they are debit, credit, or commercial, and whether domestic or cross-border) the fees from Visa and Mastercard appear to have increased. They argue that the fee increases do not appear to be linked to improvements to current services or new services. Additionally, they indicate that acquirers are not informed prior to increases in fees to enable them to unsubscribe from services where fees are to be introduced or increased. This acquirer argues that the situation they face in Europe regarding ICSs is similar to that in the UK where the UK Payment Systems Regulator indicated that increases have been justified by ICS as "reflecting the value of the service", but that in most cases, the fee schedules, "do not include any quantitative estimate of this value" [280]. The PSR further notes that the schedules do not, "include data on the costs associated with the scheme and processing services affected by fee changes."[281]

Additionally, one merchant association argued that competition dynamics (or the lack thereof) have meant increases in scheme fees set by the ICS. According to this association, merchants usually cannot afford to accept only one ICS, as doing so may result in losing their customers to competing merchants who accept both. As a result, the demand for card acceptance by merchants may be relatively inelastic. Additionally, according to this association, a proportion of the revenues from the acquirer scheme fees is used by the schemes to compete for issuers by offering them incentives to promote their brand over others or other lower-cost alternatives. [282] One association representing acquirers and independent processors noted that, while their members have reported increases in scheme fees and costs, relatively greater competition in the acquiring and processing market has meant downward pressure on prices for these services.

However, associations representing card schemes argue that the rise in scheme fees is due to a combination of new regulatory requirements and new players joining the market,[283] both of which required additional measures to enhance security and prevent fraud risks. Examples mentioned by the association include card credential tokenization, and EMV 3DS.[284] According to these associations, scheme fees have risen to cover additional costs. In the study's survey, card schemes (international and domestic) were asked to describe if new components of gross scheme fees were paid to them by issuers and acquirers since 2018. **Only one card scheme indicated the introduction and removal of components of gross scheme fees**

[279] *These represent the value of payments processed.*

[280] *Payment Systems Regulator. (2023). Market review into card scheme and processing fees: Recent changes to scheme and processing fees.*

[281] *Payment Systems Regulator. (2023). Market review into card scheme and processing fees: Recent changes to scheme and processing fees.*

[282] *Such as cash or payment initiation services*

[283] *Such as Fintechs. Scheme fees would have helped to cover significant investments in security due to the increase of cyber and fraud threats in the digital economy.*

[284] *Europay, Mastercard and Visa Three-Domain Secure (EMV 3DS). The EMV 3DS helps payment card issuers and merchants safeguard Card Not Present (CNP) digital payments from being subject to fraud and increases security for e-commerce payments. Through this security system, payments can be securely authenticated. EMV 3DS enables the secure exchange of data between merchants and issuers, allowing them to verify the consumer and approve transactions. This data helps issuers to quickly and accurately detect and prevent fraudulent card transactions while maintaining a smooth payment experience. Source Link: https://www.emvco.com/emv-technologies/3-d-secure/*

for issuers and acquirers across the EU-12. According to this card schemes' response, the scheme regularly introduces, removes, or modifies programmes for issuers and acquirers. This leads to introductions, removals, or changes in gross scheme fees. Changes in scheme fees are driven by changes in card schemes initiatives. For example, when the card scheme introduces an initiative for contactless payments, this can impact several scheme fees. The initiatives in many cases tend to be pan-European and depending on the initiative they may or may not be limited to one type of card or type of transaction.

A payment association representing card schemes, acquirers, and issuers, argued that scheme fees have increased in order to comply with both Article 7 of the IFR [285] and Article 97 PSD2[286]. They argued that to comply with the separation in processing and schemes, the card network operators had to change their organisational structures, operating models and pricing structures which all entailed costs. Furthermore, prices rose because these operators could not cross-subsidise scheme fees in general through their processing services (as these are now functionally separate). Consequently, volume discounts could only be applied to services that the card schemes are providing (i.e. the volume discounts cannot apply on processing services as well as network services as the former is no longer jointly offered). As regards Article 97 of PSD2, scheme fees rose as major upgrades were required in the fraud prevention technology used in card payment services and because of the need for tokenisation of card payment credentials, as well as contactless technologies. In the view of this association, while fees have risen, these investments allow the card schemes to comply with the IFR and the PSD2. **During interviews, merchant, and payment associations made note of their disagreement concerning the reasons put forward by card schemes for imposing fees such as EMV 3DS.** For example, they argued that the EMV 3DS fee[287] was meant to pay for the card scheme investments for the introduction of SCA. In their view, this fee should therefore have been temporary but to date it has still not been withdrawn. Similarly, merchants and acquirers argue that risks in online purchasing are the same as for card-present transactions due to PSD2 requirements on SCA, while payment associations representing card schemes argue their fees cover generally higher fraud risks associated with e-commerce.

In the card scheme survey, participants were asked to provide annual data on the value of direct and indirect card payments, bonuses and incentives to issuers and acquirers. Whilst no quantitative data was shared by the participants, five domestic cards schemes indicated the types of incentives and rebates (if any) they offered to issuers.[288] Out of the five card schemes, **only one domestic card scheme indicated that they offer discounts linked to volume transactions and other discounts** (i.e. incentives). Two domestic card schemes highlighted that they do not provide any rebate nor discounts on scheme fees to their members. From the five schemes, four schemes further added that they do not provide Market Development Funds and Innovation Funds mechanisms to their members. **Only one scheme confirmed that they do provide Market Development Funds and Innovation Funds mechanisms.** These are funds set up and financed by card schemes using resources collected from both issuers and acquirers and are reinvested as a market wide initiative, supposedly to promote the performance and growth of the payments system. Example of such initiatives include marketing and incentives to install POS terminals.

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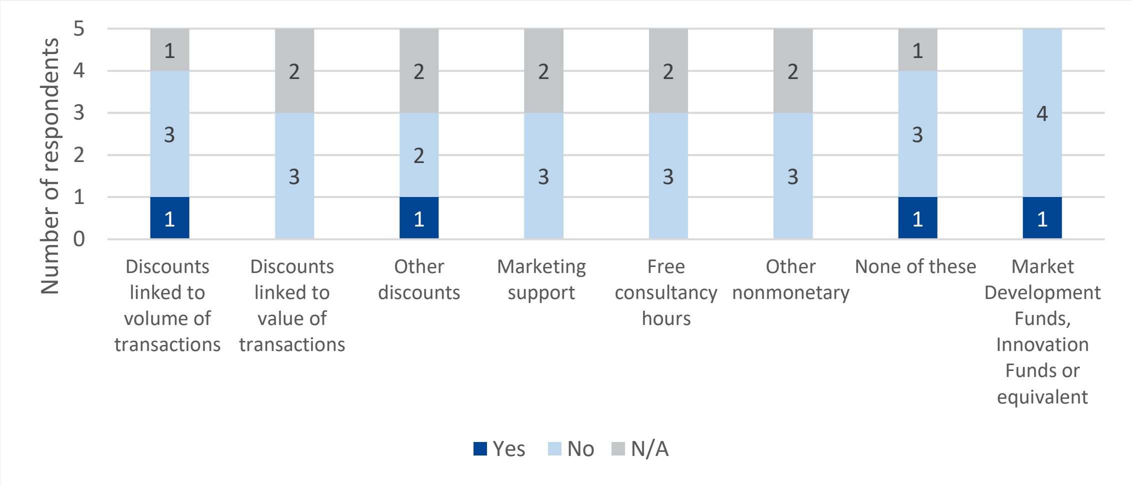
[285] *Which mandate the separation of card schemes and processing entities*

[286] *Imposing requirements to perform Strong Customer Authentication (SCA)*

[287] *Europay, Mastercard and Visa 3D Secure fee. EMV 3DSv2 is a tool that collects information about the payee for authentication to ensure e-commerce payments are secure. The information is exchanged between the merchant, acquirer, and issuer.*

[288] *No input was shared in relation to acquirers.*

Figure 25: Types of direct and indirect card payments, bonuses, and incentives



Source: Study's survey on card schemes.

Associations representing card schemes argue that market development funds are mainly reinvested to promote card acceptance in the market. For instance, they point out that market development and innovation funds are re-invested into the market via spending on innovation or to promote electronic payments, marketing, and incentives to install POS terminals. In the case of Mastercard, market development funds would finance customer related activities, building brand awareness and card activation, increasing purchase volumes, as well as cross-border card payments. In Poland specifically, the rate collected on market development funds accounts for 1,5bps on reported purchase of Mastercard, Maestro and Mastercard Electronic branded volumes. Innovation funds are also charged in Poland at 4,5bps to support new and innovative projects within the Polish card industry. [289] Another example, highlighted by a payment association, was the use of these funds to install contactless card payment terminals on public transportation. As explained by this association, while transport authorities are interested in having upgraded payment systems in public transportation (which make payments more efficient than e.g. the use of cash), making such upgrades can entail high upfront costs, a barrier particularly if there is limited funding from public authorities. Market development funds would therefore be used to make such upgrades to permit contactless card payments and, as reported by this association, would help reduce passenger onboarding times, increase revenue collection, and enhance the attractiveness of using public transportation. Nevertheless, one association representing issuers and acquirers argued that there is a lack of transparency in market development funds. The association believes there is no correlation between the amounts charged by card schemes and the amounts re-invested into the market.

One merchant association argued that Dynamic Currency Conversion (**DCC**) **enablement fees have been introduced.** Dynamic Currency Conversion (DCC) is a service offered at a POS by merchants or acquirers that allows a card user to choose which currency to pay with when travelling abroad: their billing currency or the currency of the local economy they are visiting. DCC fees involve fees paid on the currency conversion margin shared between an acquirer, merchant, and a DCC provider. DCC enablement fees are an additional set of fees that, according to this association, are set by schemes when they offer this service.[290] It was argued that Mastercard, Visa and

[289] *https://www.mastercard.pl/content/dam/public/mastercardcom/eu/pl/pl/Punkty-handlowo-uslugowe/Pricing-tabela-eng-poprawka.pdf*

[290] *It should be noted that DCC is not a card scheme product or service, Card schemes instead offer a set of standards and act as an intermediary during the transaction and currency conversion to ensure there is transparency.*

their issuers make significant profits from cross-border transactions through a combination of currency conversion (FX) margins (applied by the schemes), and non-domestic transaction fees (applied by schemes or issuers). They argued that Dynamic Currency Conversion is a service that allows merchants and customers to bypass these additional fees (e.g. currency conversion margins and non-domestic transaction fees). To compensate for this, this association argues that schemes and issuers have imposed DCC enablement fees (a fee for the enablement of this service) on merchants and acquirers to compensate for fees lost if DCC is used.

Consumer, acquirer, digital payment, and merchant associations have suggested the existence of incentives, rebates, and introduction of new fees could indicate potential circumvention of the interchange fee caps. Article 5[291] of the IFR prohibits circumvention of the interchange fee caps. A Paysys study highlighted that in several Member States, acquirers participating in international four party schemes reported facing continuous increases in fees for services, as well as what they have called 'creative' new fee types.[292] Some acquirers see these increases in scheme fees as possible indication of monies accruing to issuers. In the IFR, net compensation to the issuer "with an equivalent object or effect of the interchange fee" would be considered part of the interchange fee and cannot lead to interchange fees above the caps.

One association argued that, while merchants and/or acquirers may benefit from incentives, it is common practice for rebates and discounts imposed by card schemes to be negotiated with issuers and in its opinion the majority of the benefit generated by these incentives goes to issuers. One association representing digital payment providers and acquirers argued that this forms part of a trend whereby the ICS have increased fees on the card acceptance side of the market (where they allegedly face little competition) to increase revenues or fund issuer incentive agreements. At the same time, the interviewees also noted that incentives can be used to encourage certain types of behaviours from market players seen as mutually desirable, e.g. the use of network tokens by merchants. Card schemes who issue tokens have provided incentives for merchants to use them in order to reduce fraud. Tokens are not stored by the acquirer but by the network and can be used across acquirers.

Associations representing merchants and acquirers argued that the alleged rise in scheme fees, the alleged introduction of new fees and lack of transparency have had an important impact on merchants and acquirers. First, merchants and acquiring members from the consulted associations argued that the introduction of new fees is usually linked to common practices, such as preventing fraud (e.g., introduction of SCA related fees, otherwise known as EMV 3DS fee). In addition, the perceived lack of transparency and clarity in pricing and provision of scheme and processing services would have as a consequence that merchants do not understand the reasons for price changes, and they are unable to assess what services they purchase, and which ones are in fact needed. Furthermore, one merchant acquirer argued that if an acquirer decides to unsubscribe from additional services linked to new fees[293], card schemes are either unresponsive or charge cancellation fees. As a result, the interviewee argued that acquirers take on board all the services and corresponding fees including optional ones, the cost of which is ultimately passed down to merchants through the MSC. The following chapter investigates the evolution of MSCs between 2018 and 2022 for the EU Member States.

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[291] *Article 5 of the IFR states: "For the purposes of the application of the caps referred to in Articles 3 and 4, any agreed remuneration, including net compensation, with an equivalent object or effect of the interchange fee, received by an issuer from the payment card scheme, acquirer or any other intermediary in relation to payment transactions or related activities shall be treated as part of the interchange fee."*

[292] *8 PAYSYS. (2019). Paysys report Issue 8 – November 2019.*

[293] *As they are uncertain what the purpose of these services are*

3.2.3 Merchant Service Charges

The aim of this section is to describe the evolution of Merchant Service Charges (MSC) across the EU-12 for the period 2018 to 2022. The analysis is based on data gathered from a survey of merchants from a representative sample of 12 EU countries. Similar to the sections on interchange and scheme fees, the results of the survey analysis are complemented by insights gathered in interviews. [294]The study calculates average MSC in percentage of transaction value for debit and credit transaction value. Similar to card schemes, MSC have fixed and variable cost components, as well as benefits and rebates which are provided by acquirers to merchants. By definition, MSC is the fee paid by merchants for using the services of the acquirer and enabling the merchant to receive payments from payment cards. The MSC is the sum of the interchange fees, acquirer's scheme fee, and the acquiring service fees. The acquiring margin covers the costs and profit of the acquirer. MSCs can be determined by the acquirer or by the acquirer and the merchant through bilateral agreements.

The survey conducted for this study asked merchants across the 12 Member States whether they experienced an increase in their Merchant Service Charge. The question was made to merchants who opted for an unblended fee. Participants were asked to quantify fees per scheme (Mastercard, Visa, local/domestic card scheme if relevant, others) that they pay as part of the Merchant Service Charge (MSC), net of any discounts they may receive. Out of the 61 large sized merchants who responded to the survey, ten merchants shared relevant data on the MSC. From the ten merchants, three represented the German market, two represented the Czech market and the remaining five represented the Italian, French, Portuguese, Swedish, and the Netherlands, respectively. Out of the ten merchants, five represented the food retail sector, four other types of retail and one the accommodation sector. E-commerce was available among six merchants, with four food retail representatives not selling their goods and services online.

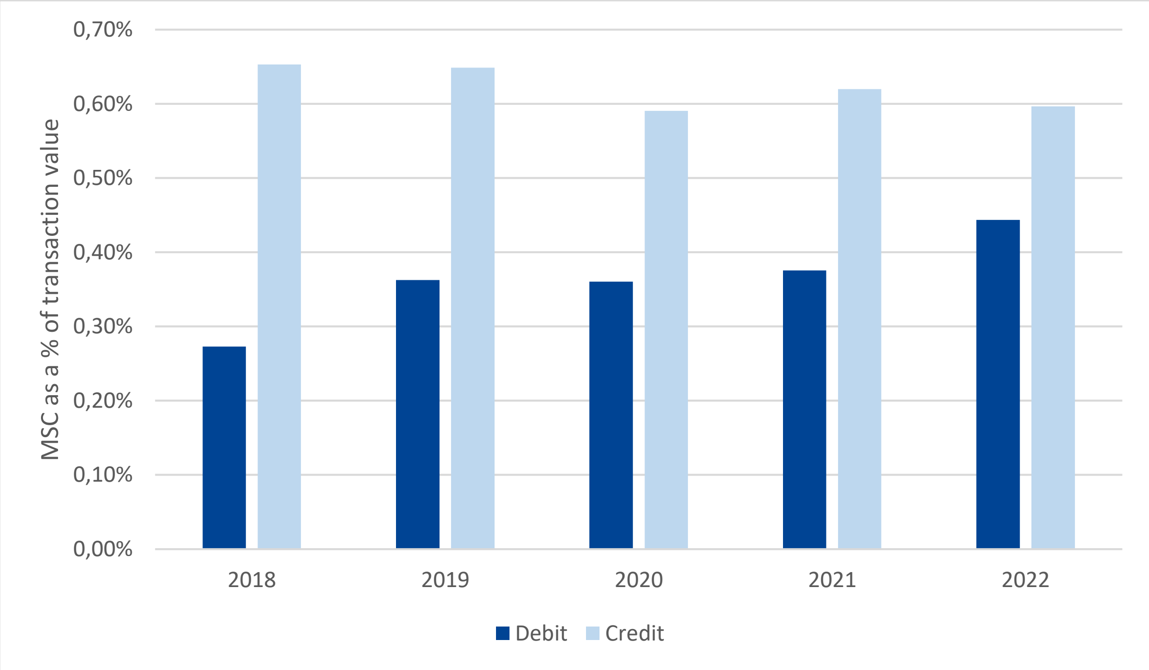
Based on the data gathered from the merchant survey, the average EU-12 net MSC for debit card transactions increased from 0.27% in 2018 to 0.44% in 2022. In contrast, merchants experienced lower MSCs for credit card transactions. The highest MSC was reached in 2018 with 0.65% of transaction value. In 2022, however, the MSC for credit card transactions reduced by 0.5 percentage points in comparison to 2018.

To confirm data robustness, the research team calculated the Average Transaction Value (ATV) [295] to confirm that the merchant's revenue aligns with the data they provided. It should be noted that the data provided by the merchants does not cover all five years. Only five merchants in particular shared relevant data for the year 2021. In addition to this, the sample size is limited, meaning the average MSC might not fully reflect that of the entire EU-27. Due to this limited data, a comparison between findings from the current study and the EY/Copenhagen Economics study cannot be made to extrapolate these results to the whole EU-27.

[294] *Extrapolation to the EU-27 was not made in this case as there is limited data available for a cross comparison to be made between the current study and the EY/Copenhagen economics study.*

[295] *To ensure it was not above a particular threshold based on the size of the merchant (this would range from 20-100 ATV). ATV was calculated by the total number with the total value of transactions.*

Figure 26: Merchant Service Charges for debit and credit card transactions 2018-2022



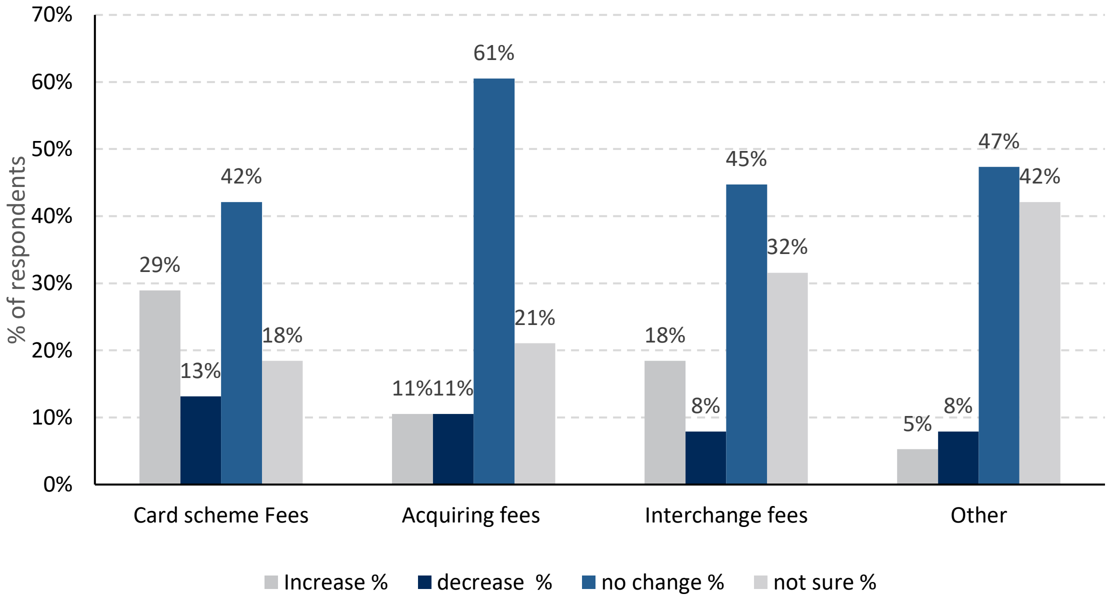
Note: The figures are calculated based on the data provided by merchants on the total value of card payment transactions they process based on the type of card scheme and the fees imposed on them. It should be noted that the data received for by the survey participants varied across years.

Source: Study's survey

Merchants with unblended fees were asked in the survey to highlight whether they experienced a change in their fees for card scheme, acquiring and interchange before 2018. As shown in Figure 27, a plurality of merchant respondents indicated they had no changes in their fees, while 29% of respondents experienced an increase in card scheme fees.[296]

[296] *As analysed in the previous sections of this chapter, interchange fees have on average remained below the interchange fee cap. IFs decreased before 2018 and yet only 8% of merchants report this, which may raise questions as to the accuracy of the survey responses.*

Figure 27: Changes in fees for merchants before 1 January 2018.



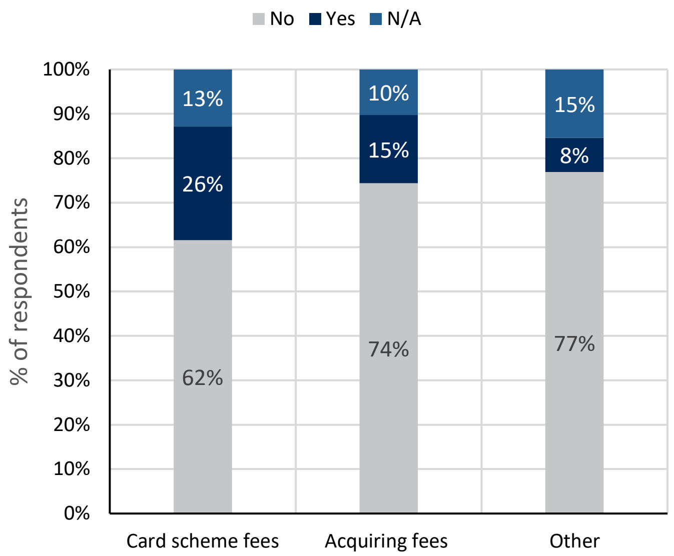
Note: The results for this figure are based on the merchant survey fee. From the 61 participants, only 39 responded to this question. This question was directed to merchants who pay an unblended fee.

Source: Study's survey.

Four surveyed merchants with unblended fees further described the evolution of credit and debit card scheme fees between 2019 and 2022. Out of the four, three highlighted that scheme fees for credit card transactions increased during the last 5 years. In the case of one merchant, scheme fees for consumer credit card transactions increased by 0.05 percentage points (0.144% to 0.149%). In addition to this, the same merchant further reported the evolution of acquiring fees for consumer debit and credit card transactions. The acquiring fees were reduced by 0.006 percentage points respectively for both credit (0.035% to 0.029%) and debit card transactions (0.039% to 0.033%). Another merchant, however, experienced an increase of acquiring fees for both debit and credit card transactions. The acquiring fees for both debit and credit card transactions rose by 0.17 percentage points respectively between 2020 and 2022 (0.13% to 0.30%).

Merchant participants were additionally asked to express whether they experienced the introduction of new card payment related fees (i.e. card scheme fee, acquiring fee, or other fee) since January 2018. **The majority of the survey participants argued that they experienced no increase in acquiring fees (74%) or scheme fees (62%).** Out of the 39 merchant participants, 26% indicated that they had an increase in card scheme fees, whilst 15% experienced an increase in acquiring fees.

Figure 28: Introduction of new card payment related fees to merchants.



Note: The results for this figure are based on the merchant survey fee. From the 61 participants, only 39 responded to this question. This question was directed to merchants who pay an unblended fee.

Source: Study's survey.

An association representing card schemes argued that despite the rise in scheme fees, card acceptance costs have gradually reduced over the past four years. In their view, increases in scheme fees have helped fund innovations, such as contactless payments, tokenised payments and EMV 3DS, which benefit merchants in achieving higher sale returns and lower costs on card acceptance.

Contrary to these survey results, interviewed merchant associations argue Merchant Service Charges (MSCs) have increased in the past few years. According to these merchant associations, while the interchange fee caps have had a positive effect on lowering components of the cost of MSCs, the rise in card scheme fees and the introduction of new fees have meant overall increases in the costs merchants face. Merchant associations, in particular, cited a paper published by EuroCommerce,[297] which argued that the average cost of card payments in the EU was greater than before the IFR came into force. It argues that between 2018 and 2020, annual costs to merchants of accepting cards have increased by €1.06 billion annually. These costs also impact consumers as merchant costs are passed through to the price on their purchases.[298]

Additionally, one merchant association and one payment association highlighted the difference in costs for merchants between international card schemes and domestic card schemes. According to the two associations, while international card schemes appear to have increased scheme fees and introduced new fees, domestic card schemes have kept their fees stable. Furthermore, this association indicated that domestic card schemes tend to charge lower fees compared to international card schemes (about 1/3 of the cost imposed by international schemes). On the other hand, in their view, domestic card schemes offer a less detailed breakdown of their fees, which makes it harder to identify the contribution of different types of fees to overall cost for merchants.

[297] *Eurocommerce. (2020). Benefit of Interchange Fee Regulation now nullified by fee increases.*

[298] *Eurocommerce. (2020). Benefit of Interchange Fee Regulation now nullified by fee increases.*

3.2.4 Commercial cards

This section explores the development of commercial cards and the effects of the exemption of commercial cards from the interchange fee caps between 2018 to 2022. More specifically, it assesses the development of interchange fees and MSCs in the context of commercial cards.

The analysis is based on data compiled from the study's survey of card schemes, mainly from Mastercard.[299] In addition to the survey analysis, this section includes insights from interviews conducted with payment, merchant and consumer associations at EU level to ensure that all sides of the European payments market are represented.

Commercial cards under the IFR are defined as card-based payment instruments issued to undertakings, public-sector entities or self-employed natural persons that are limited to the use for business expenses where the payments made with such cards are charged directly to the current account of the undertakings, public-sector entity or self-employed natural persons.[300] Commercial cards are different from consumer cards, as they are limited in use. Commercial cards can only be used for business expenditure and payments are charged directly to the enterprise's account. As previously mentioned, interchange fee caps are applicable to consumer cards (Article 3 and Article 4 of the IFR), whereas commercial cards are exempted (Article1 §3a).

Some stakeholders suggested that there has been an increase in issuing commercial cards. If more commercial cards are issued (including virtual and physical cards) this could mean that the IFR fee caps (which do not cover such cards) become less relevant.

Since the data for commercial cards were provided by only one card scheme, the findings on commercial card market share, weighted average interchange fees and interchange fee revenues for issuers are only available in the confidential version of the report.

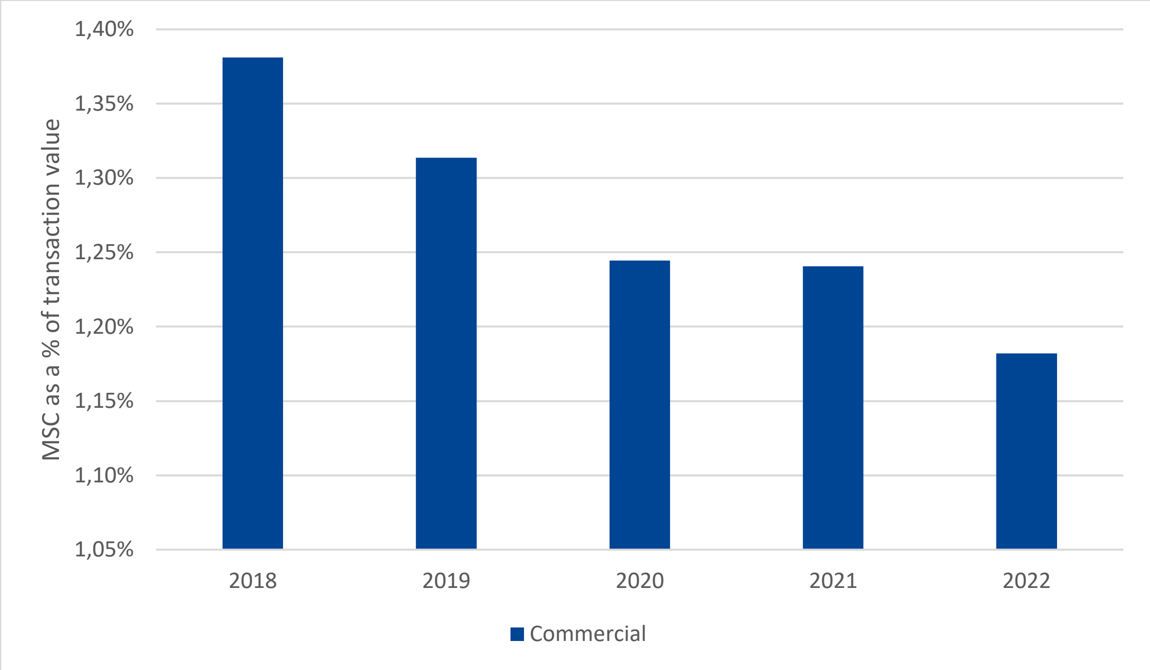
3.2.4.1 Merchant service charge on commercial card transactions.

The aim of this section is to describe the evolution of Merchant Service Charges (MSC) across the EU for the period 2018 to 2022 for commercial card-based transactions. The analysis is based on data gathered from the group of surveyed merchants (N=10) who provided the relevant information on MSCs for debit and credit card transactions.

[299] *Data from issuers and acquirers will not be considered in this study, due to their low participation rate and the limited data shared. The interviews conducted with payment associations, instead provide insights into the acquiring and issuing market.*

[300] *REGULATION (EU) 2015/751 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2015 on interchange fees for card-based payment transactions.*

Figure 29: Merchant Service Charges for commercial card-based transactions 2018-2022



Note: The figures are calculated based on the data provided by merchants on the total value of card payment transactions they process based on the type of card scheme and the fees imposed on them. It should be noted that the data received by the survey participants varied across years.

Source: Study's survey (N=10)

Based on the data gathered from the merchant survey, the average MSC applied to merchants for commercial card transactions has decreased between 2018 and 2022. As indicated in the EY/Copenhagen Economics study, the MSC on commercial cards in 2017 was at 1.20% compared with 1.18% in 2022. It should be noted that the dataset for this analysis is very limited (N=10), and not all merchants provided data for all five years. Indeed, only three merchants shared data on MSCs for 2018 compared with 9 responses for 2022. The limited response rate means that this analysis should be treated with caution and should not be extrapolated to the EU-27.

3.3 Blended and unblended fee schedules amongst merchants

- The total merchant service charge (MSC) paid by a merchant to their acquirer is, in reality, not one fee but is made up of a number of different fees including an interchange fee, a scheme fee and an acquirer fee. Unblended fee schedules provide merchants with a detailed, broken-down overview of these fees, whereas blended schedules combine all fees into one charge. According to Article 9 of the IFR, acquirers are required to provide details of the components of their MSCs, "*specified for different categories and different brands of payment cards with different interchange fee levels*", unless merchants opt out and request (in writing) a blended MSC.
- The analysis in this chapter investigates the prevalence of unblended vs blended schedules among merchants. This analysis is based on a survey of merchants and is supported by insights drawn from a series of interviews. The majority of merchants surveyed (61%) receive an unblended fee schedule, while 30% have opted for a blended schedule. As reported by several stakeholders representing merchants and payment service providers interviewed for this report, larger merchants tend to maintain the option of receiving unblended fee schedules, whilst smaller merchants tend to request blended fee schedules; even though blended fees can lead to higher costs per transaction because the acquirer may add a risk premium to compensate for variations in the payment mix.
- While larger merchants may prefer an unblended schedule to **increase transparency and allow for more informed decisions**, interviews with a card-based payment provider and an association representing merchants indicated that **it is predominantly larger firms that have a preference for unblended schedules, as they have more capacity to analyse, compare and manage the individual costs behind card schemes**. Smaller merchants do not have resources to process and analyse broken-down fee information and they may prefer blended schedules that are **easier to monitor and that allow them to anticipate costs easily and accurately.**
- **The report shows a mixed picture as to the perceived quality and usefulness of information according to merchant**s. The survey of merchants finds that 48% of respondents are satisfied with the quality of the information provided, 38% judge it to be of moderate quality and 11% indicated low or very low quality.
- The analysis also explores obstacles that merchants may face when they wish to switch acquirers. The survey finds that just over half of respondents believe that switching services to a new acquirer is difficult due to **merchant size/bargaining power, and access to 'clear' information on pricing**. Merchants may also face difficulties switching due to the costs that may be involved, for instance, regarding termination fees associated with exiting a contract, or due to technical obstacles. Further, **the decision to switch requires that merchants have access to transparent information on pricing and services from potential service providers** which some merchants have noted can be difficult to come by as prices are not typically published.

This section of the report addresses the prevalence of blended and unblended fee schedules amongst merchants. The total merchant service charge (MSC) paid by a merchant to their acquirer is in reality not one fee but is made up of a number of different fees including an interchange fee, a scheme fee and an acquirer fee.

Unblended[301] fee schedules provide a detailed, broken-down overview of these fees. As described by associations representing acquirers interviewed for this report, unblended fee schedules, also known as Interchange ++, consist of

- **Interchange fees** (that goes to the card issuing bank – interchange is regulated on consumer cards under the EU Interchange Fee Regulation).
- **The first +** represents the scheme fees. This may vary depending on the type of payment made.
- **The second ++,** represents the acquirer fee, this may be set or vary according to transaction volume.

[301] *Otherwise known as Interchange++*

In contrast to this, blended schedules combine all fees into one charge.

This section explores the likelihood of merchants choosing one fee schedule over another and the reasons behind their decision. The findings indicate that there are both benefits and challenges associated with each option and the decision depends on a variety of factors, including the size of the merchant and the resources available to them.

This section of the report also considers stakeholder views concerning the quality of information available to merchants when they opt for unblended fee schedules. The information provided to the merchant is, according to merchant associations in particular, often not of the quality needed to thoroughly understand the charges. Additionally, these stakeholders have argued that layers of complexity allow some fees to be 'hidden'.

Finally, this section explores obstacles that may arise for merchants when choosing to switch acquirer or when evaluating their options. The findings suggest that switching acquirer is more accessible to some merchants than others and that costs, a lack of clear information, and technical challenges present significant obstacles to switching.

The findings in this section are based on merchant survey data, as well as interviews with industry stakeholders, including merchants associations, payment service providers, and card schemes.

3.3.1 Prevalence of blended and unblended fee schedules

According to Article 9 of the IFR[302], acquirers are required to provide details of the components of their MSCs, "specified for different categories and different brands of payment cards with different interchange fee levels", unless merchants opt-out and request (in writing) a blended MSC. In other words, merchants will be given an unblended fee schedule as a default unless a blended schedule is requested. In blended schedules the details of the fees paid are not specified or broken down by fee category and card brand.

Unblended fee schedules are encouraged under the IFR as a way of enhancing the transparency of price information for merchants. Additionally, unblended fee schedules, more clearly show changes in specific fees (for instance a reduction in interchange fees), making it more likely that these changes are 'passed-through' to merchants immediately [303]. At the same time, merchants on an unblended pricing schedule are also more likely to be impacted quickly by an increase in fees which means that (especially smaller) merchants may opt for a blended fee schedule for reasons of price stability [304].

In contrast, blended fee schedules account for variations in the pricing mix by charging merchants a risk premium and changes in individual fees may not immediately change a merchant's overall charge. Under a blended schedule, merchants may only benefit from reduced MSCs when their contract is renewed.[305]

[302] Regulation (EU) 2015/751 of the European Parliament and of the Council of 29 April 2015 on interchange fees for card-based payment transactions.

[303] Edgar, Dunn & Company.(2020). Interchange fee Regulation Impact Assessment Study, pg 2

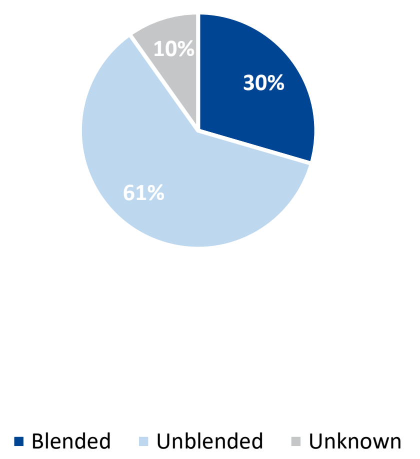
[304] EDPIA. (2020). Position Paper on the EU Interchange Fee Regulation (Regulation (EU) 2015/751

[305] European Commission, (2020) 'Report on the application of Regulation (EU) 2015/751 on interchange fees for card-based payment transactions'. Pg. 13.

According to the sample of merchants surveyed for this study, 61% receive an unblended fee schedule[306], while 30% have opted for a blended schedule (figure 30a). A breakdown of this information by Member States is shown in figure 30b. While the survey sample size is too small to be representative, the results are consistent with previous research conducted by the European Commission in 2020, which found that 60% of merchants remain on an unblended fee schedule. [307] A separate report on the Hungarian payments market, indicated that half of merchants in Hungary relied on blended fee schedules in 2021.[308]

Figure 30: Merchants fee schedules: Blended VS Unblended

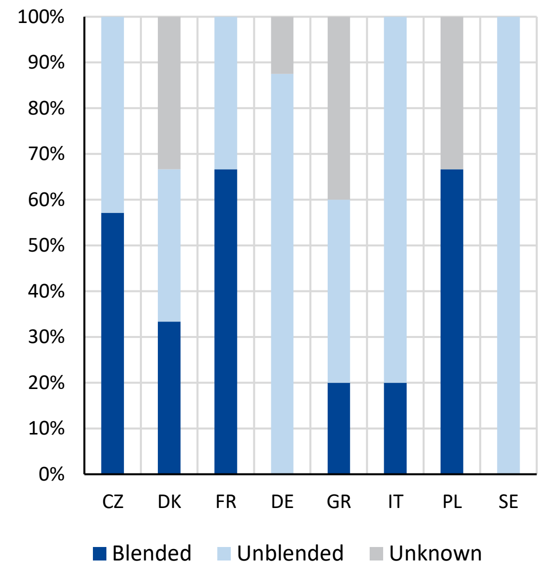
Figure 30a



Source: Based on survey data from 61 merchants based in CZ, DK, FR, DE, EL, IE, IT, NL, PL PT, SE

Based on pricing model of first acquirer.

Figure 30b



Source: Based on survey data from 57 merchants (country samples with over five survey participants only) based in CZ, DK, FR, DE, EL, IT, PL, SE

As reported by both the merchants and payment service providers interviewed for this report, larger merchants tend to maintain the option of receiving unblended fees, whilst smaller merchants tend to request blended fee schedules. This is despite the fact that blended fees can lead to higher costs per transaction because the acquirer may add a risk premium to compensate for variations in the payment mix.

Looking at merchant size, according to the survey conducted for this study 68% of large merchants[309] indicated that they receive unblended fee schedules from their acquirers, 16% received blended fee schedules, while a further 16% had a mix of blended and unblended from different acquirers. For small and mid-sized business[310], 55% indicated they receive unblended schedules, while 31% receive

306 According to 61 merchants surveyed.

307 European Commission & EY, (2020) Study on the application of the IFR

308 Kajdi, Laszlo., Kiss, Milan. (2021) Impact of policy effects on the Hungarian payments card market. Journal of Banking Regulation 2022

309 For the purpose of this report a large business is that with a revenue of over EUR 500 million. 19 survey respondents.

310 For the purpose of this report any business with a revenue of less than EUR 500 million. 42 survey respondents.

blended schedules.[311] Outside of this study there is little research on fee schedules by merchant size. However, survey research covering the period 2016-2018 conducted by an international card scheme[312]also notes that larger merchants are more likely to be on unblended fee schedules than smaller merchants.[313]

A stakeholder representing the European banking sector also discussed the prevalence of blended vs unblended fee schedules among large and smaller merchants according to their banking sector representatives in various Member States.

According to these banking sector representatives in Denmark and Italy, blended fee schedules are preferred by small and medium-sized merchants for fees related to both in-store and e-commerce. In their view, this is due to a lack of administrative capacity. Specifically, small and medium-sized merchants prefer simple fee structures (blended), where there is no difference per scheme and/or card, because of its simplicity, and the immediacy of understanding regarding what they are paying. Conversely, according to these banking sector representatives, the large merchants prefer a more detailed fee structure, where all fees are differentiated by scheme, card type, etc.

This was echoed by banking representatives of the Romanian and Spanish markets; they argued that traditionally small merchants prefer flat fees (blended) while big merchants prefer fees which can respond to their needs (unblended).

Reasons for merchants to prefer unblended fee schedules

As noted, it is a requirement under the IFR that acquirers first offer unblended fees. Merchants can then opt out if they wish to and choose to receive a blended fee schedule.

An interviewee representing merchants and a stakeholder representing card schemes, issuers and acquirers noted that **unblended pricing provides merchants with detailed information from their acquirer concerning the three fee components** (interchange fees; to the card issuing bank; scheme fees; to the card scheme and the acquirer fee).

This information is important because of the way in which some of these fees can vary. Card scheme fees may be set against a number of variables such as card type; country of merchant and/or issuer; merchant segment; or transaction type (e.g. physical or online transaction). Acquirer fees on the other hand may be determined by the transaction volume of a merchant, with discounts offered to higher-volume merchants.

According to these stakeholders, the **increased transparency associated with an unblended schedule allows merchants to make more informed decisions**, for example, regarding what cards to accept. Additionally, they have the capacity to adjust their behaviour as charges increase or decrease to improve their efficiency. This is because merchants can, to some degree, compare the transactions they record against acquirer fee schedules, and optimise how they structure transaction volumes to allow for better pricing. This optimisation can allow merchants to make savings which can be reallocated to other business lines. If a larger merchant operates across different regions, unblended fees also allow them to manage the variation in rates across different regions with greater efficiency.

Furthermore, according to an interviewee representing PSPs, the ability to clearly see each fee component, **allows merchants to assess whether decreases in any individual fees have translated into lower costs for them overall**, which can put them in a better position to bargain with their acquirer to get the best deal.

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[311] 14% were unaware of this data

[312] Edgar, Dunn & Company. (2020). Interchange fee Regulation Impact Assessment Study, p. 2

[313] Edgar, Dunn & Company. (2020). Interchange fee Regulation Impact Assessment Study, p. 2

In practice, however, interviews with a card-based payment provider and an association representing merchants indicated that **larger firms have a preference for unblended schedules, as they have more capacity to analyse, compare and manage the individual costs behind card schemes**.

This was echoed by a stakeholder representing the European banking sector who discussed the prevalence of blended vs unblended fee schedules among merchants according to their banking representatives in various Member States. These representatives in Spain and Romania have reported that in the view of banks, large merchants prefer unblended schedules as they allow them to make adjustments according to their needs.

Further, the banking representatives from Denmark and Italy agreed, also noting that in their view, unblended schedules are preferred by larger merchants who can afford sophisticated enterprise resource planning systems (ERPs) and cash management systems.

Reasons for merchant to prefer blended fee schedule

Despite the benefits of unblended fees outlined above, some merchants still opt for a blended schedule. According to the survey conducted in this study, 38% of merchants[314] indicated that they are *not interested in an unblended fee schedule, nor do they consider the composition of card payment-related fees to be important*. Other reasons provided include, *a lack of administrative capacity*, (7%), *unblended fee was not provided upon signing the contract* (14%) and *other reasons* (41%). Of those who indicated other reason the primary reason given was that the stakeholder in question had limited knowledge on the topic.

Smaller merchants, for instance, do not have as many resources to process and analyse the broken-down fee information. According to several stakeholders interviewed for this report representing merchants, and card payment providers[315], smaller merchants tend to opt for a blended fee schedules for reasons of convenience and efficiency.

One acquirer noted that when merchants opt for blended fee schedules it tends to be because it is easier to monitor, and it allows them to anticipate the cost. Two merchant associations agreed and highlighted that smaller merchants tend to rely on blended pricing as it allows them to know the exact rate they will be paying against each transaction when a card payment is accepted and to manage their revenue and costs more easily, giving them an element of price stability. Merchant representatives nonetheless also noted that there are drawbacks to blended pricing as it does not allow merchants to analyse in depth or challenge their bills.

Similarly, the aforementioned stakeholder from the European banking sector noted that representatives in Spain and Romania have reported that according to banks in their respective countries smaller merchants tend to prefer blended fee schedules.

This was echoed by representatives from Denmark and Italy who expanded on this noting blended fee schedules are according to banks preferred by small/medium merchants in their experience due to a lack of administrative capacity. Further, they benefit from quickly understanding what they are being charged.

Switching between blended and unblended fee schedules

As has been mentioned above, it is a requirement under the IFR that acquirers first offer unblended fees. Merchants can then opt out if they wish to and choose to receive a blended fee schedule. Interviews with stakeholders representing PSPs, including ac-

[314] Based on 29 survey participants who have opted for blended fee schedules.

[315] Members of this association include card issuers, acquirers, and card schemes.

quirers suggest that merchants can switch between a blended or unblended fee schedule with relative ease throughout their contract. However, it was less clear whether or not an unblended fee schedule is always presented first, necessitating the merchant to request a blended pricing model in writing.

A stakeholder representing the retail banking sector noted that to their knowledge merchants are indeed offered an unblended fee schedule and only upon request receive a blended total price contract.

This was supported by a stakeholder representing the banking industry in France who noted that from their perspective, merchants can change at any time and opt for a blended schedule over an unblended one. There is no commitment on a given option.

On the other hand, a stakeholder representing PSPs, e-money institutions and acquirers noted that providers affiliated with their organisation have indicated that the choice between blended and unblended fee schedules is given to merchants at the beginning of their contract, and throughout the merchant's contract agreement, however, no indication was made as to whether unblended fee schedules are offered first. Similarly, a stakeholder representing the European banking sector noted that in their experience during the commercialisation process, prior to formalising the agreement, prices are offered to the merchant, who then chooses the agreement which best suits their needs.

3.3.2 Information quality

This section assesses the quality and comprehensiveness of fee-related information provided to merchants who obtain an unblended fee schedule, it examines how the quality of that information is perceived by industry stakeholders, and why in some instances it may be considered inadequate.

As reported by one stakeholder representing payment service providers and e-money institutions, it is important to note that with regard to interchange and scheme fees, **the acquirer is dependent on the quality and transparency of the information it receives from the card scheme**, in order to provide quality information to the merchant. Therefore, there are a number of stakeholders in the chain responsible for the quality of information that is ultimately provided.

Information provided

According to the IFR under Article 9, '*acquirers shall include in their agreements with payees individually specified information on the amount of the merchant service charges, interchange fees and scheme fees applicable with respect to each category and brand of payment cards*.[316] According to the IFR Article 12, contracts between acquirers and payees may include a provision that allows for the provision of when information is provided, however, this information should be provided, *at least once a month,* [317]

- In interviews with stakeholders from associations representing PSPs, e-money institutions, and acquirers, stakeholders were of the opinion that **fee information provided to merchants is in compliance with the IFR's provisions.** As reported by one interviewee representing PSPs and e-money institutions, organisations affiliated with their association provide merchants with a breakdown of the fees they are being charged by the acquiring company. This breakdown generally includes information on interchange fees, card scheme

[316] *REGULATION (EU) 2015/751 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCLI of 29 April 2015 on interchange fees for card-based payment transactions*

[317] *REGULATION (EU) 2015/751 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCI Lof 29 April 2015 on interchange fees for card-based payment transactions*

fees, and acquiring fees, which appear to align with the requirements of the IFR. In terms of the frequency with which information is provided, however, this stakeholder noted that information on fees is provided when a contract is entered into when the contract is renewed, and upon request, though there was no indication of information being provided once a month without a request first being made. An association representing the banking and financial industry in France noted that their members share merchant information relating to the different categories of fees as instructed by Articles 9.1 and 9.2 of the IFR: This includes information for type of transaction (online vs point of sale, by type of card, geographical area, and by scheme). In terms of frequency, this French banking representative indicated their members do comply with the requirements of the IFR noting that to their knowledge acquiring banks provide; a monthly and annual summary of fees to merchants,

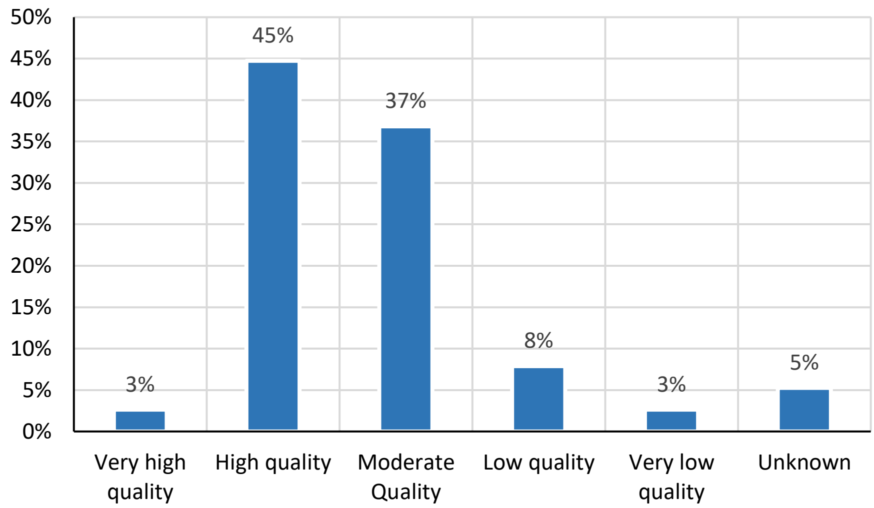
- information relating to the applicable fees transmitted to the merchant when subscribing to contracts and in the event of renegotiation and/or renewal of contracts.
- Finally, price reviews and information for merchants can be put in place in the event of significant changes in the contract, especially in case of evolution on the ICS offer or price.

Further, a stakeholder representing the European banking sector noted that banking representatives from Spain, Italy and Romania, have argued that information on fees is provided when a commercial agreement takes place and/or is modified.

Quality of information

The survey of merchants conducted for this study (**figure 31**) provides an overview of how respondents perceive the quality of information provided to them by acquirers. **While 48% of respondents expressed satisfaction with the quality of information provided, 38% indicated it was of moderate quality while 11% indicated, low or very low quality.**

Figure 31: Information Quality



Source: Based on survey data from 38 merchants who receive unblended fee schedules, based in CZ, DK, FR, DE, EL, IE, IT, NL, PL PT, SE

Merchant perception concerning the quality of information about unblended rates provided by acquirers

The mixed picture with regard to the quality of information provided was corroborated by some interviewees who expressed dissatisfaction with the quality and interpretability of the fee information provided. For instance, several interviewees thought that, while comprehensive information may be provided, the complexity of the fees described in the fee schedule makes them difficult to read and interpret. One stakeholder representing PSPs and e-money institutions noted that information for newly introduced fees, for instance, often includes several conditions, components and parameters rather than a straightforward fee per transaction, making it harder to interpret.

Furthermore, two stakeholders representing payment service providers (including e-money institutions, acquirers, and other PSPs) argued that **IFR transparency requirements for acquirers (specifically articles 9 and 12) are not fit for purpose considering current market practices.**

Furthermore, merchant associations claimed a lack of transparency in fee schedules in relation to processing (by the schemes) versus genuine scheme fees. It was argued by a merchants association that IC++ only sheds light on interchange, acquiring and scheme fees; but that processing fees would be combined with scheme fees.

3.3.3 Main obstacles for merchants in switching acquirers.

This section reviews obstacles that can arise for merchants when they wish to switch acquirer.

According to interviews with merchant stakeholders, and PSPs (including acquirers), merchants can face significant obstacles that prevent them from switching acquirer. **The merchant survey results conducted for this study confirm that just over half (51%) of respondents believe that switching services to a new acquirer is difficult, or very difficult,** while 31% believe it to be an easy, or very easy process (**figure 32a**). These results vary somewhat by member state, with the most respondents reporting difficulty with changing acquirer in France, the Czech Republic and Denmark.

Figure 32: Level of difficulty when switching acquirer

Figure 32a

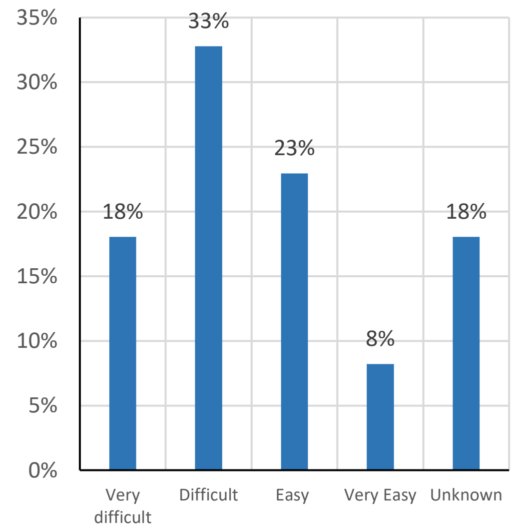
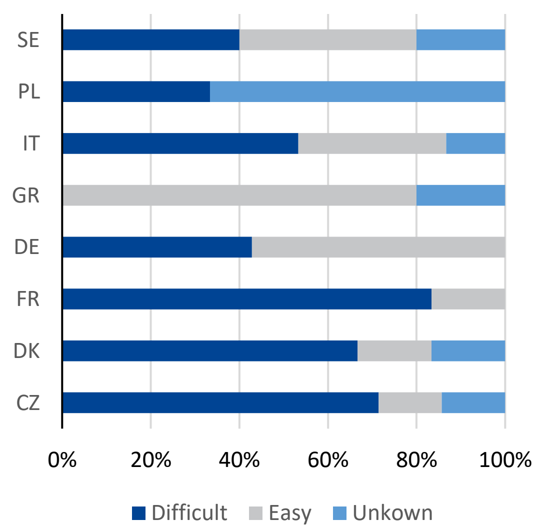


Figure 32b



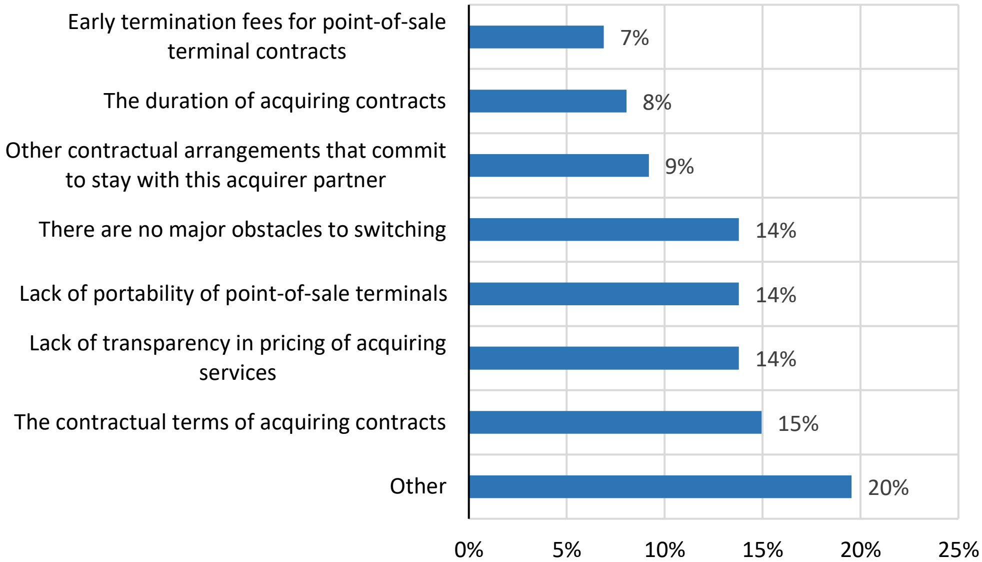
Source: Based on survey data from 61 merchants based in CZ, DK, FR, DE, EL, IE, IT, NL, PL PT, SE

Source: Based on survey data from 57 merchants (country samples with over five survey participants only)

Difficult consists of those who answered Difficult & Very Difficult. Easy consists of those who responded Easy & Very Easy.

When questioned on the reasons why switching acquirer is difficult, as shown in **figure 33,** respondents indicated a range of **obstacles including *contractual terms of acquiring contracts* (15%) and a *lack transparency in pricing* and a *lack of portability of POS terminals* (14%).** A further 14% indicated that there are *no major obstacles.*

Figure 33: Main obstacles to switching acquirer



Source: Bases on 87 responses from a survey of 61 merchants based in CZ, DK, FR, DE, EL, IE, IT, NL, PL PT, SE

Of those who answer 'other' six indicated technical issues while four indicated other cost issues, the rest did not comment.

These obstacles were explored in greater detail through interviews with industry stakeholders. The interviews found that **challenges arise for merchants when switching acquirers due to merchant size/bargaining power, and access to 'clear' information on pricing**.

They may also face limitations due to the costs that may be involved, for instance termination fees associated with exiting a contract, or technical obstacles. Indeed, according to interviews with merchant stakeholders, and associations representing PSPs (including acquirers), a significant barrier for SME merchants is the connection between an acquirer contract and the POS terminal rental agreement. Two stakeholders representing merchants noted that Article 55 of PSD2 stipulates that switching acquirers should be free for merchants after a period of six months. It was argued that in reality this is difficult because SME merchants remain bound by their terminal rental agreement. In several cases, SME merchants rent a terminal, with a rental agreement of 5 years. The fees to cancel this agreement in their view are often prohibitively high. Furthermore, the purchase of a terminal is expensive, and it is rare to rent a terminal from one party and use it for another acquirer. Therefore, despite merchants' having the ability to technically switch acquirers, the need to rent POS terminals from acquirers creates obstacles to being able to do so.

Furthermore, several stakeholders representing merchants, and one representing the retail banking sector indicated that merchants face a number of **technical obstacles to switching acquirers.** The process of switching acquirer can be technically complex depending on the level of technical integration a merchant payment system has with the acquirer**.** Switching acquirer may require a merchant to change their POS system, as merchants will often purchase or lease a terminal from their acquirer. It can also impact other systems that the merchant uses, such as accounting software and inventory management. Therefore, switching would require a complex change to the merchant's systems and to the entire payment infrastructure of the merchant. According to stakeholders representing merchants and one representing PSPs (including e-money institutions and acquirers), these changes can be costly, merchants are likely to face **additional costs associated with updating systems or training staff on a new system**. Two stakeholders representing large merchants agreed with this, one representative noted that switching can require large financial outlays, related to the changing and updating of their payment infrastructure.

An interviewee from a retail association stated that this is even more complex in groups of independent retailers operating under a common brand, as they may all have different payment infrastructures.

One merchant association noted that these technical obstacles are less relevant in an e-commerce environment than for in-person payment setups (i.e. at the physical premises of a merchant) as switching systems and updating POS terminals used in person transactions is more complex.

Transparent information

It has been stressed by stakeholders representing merchants, and one stakeholder representing a PSP, that **the decision to switch requires that merchants have access to transparent information on pricing and services from potential service providers**. One merchant association stated that acquirers and independent sales organisations do not typically publish their prices and their pricing structures, and because approaches to headline rates can vary significantly, this makes it very difficult to determine the benefits of one over the other. A stakeholder representing a large merchant noted that when searching for the most suitable acquirer, in their experience, fees are not transparent.

One merchant argued that this **lack of information and understanding about current pricing and services makes it difficult for merchants to compare providers**. This reduces the likelihood of a small business switching and therefore, precludes their access to better pricing and more innovative services. In their view, the introduction of **pricing display standardisation** for acquirers and card schemes would be beneficial, meaning the way in which the prices of each provider are described and publicised would be standardised and comparable. This could allow smaller merchants in particular, to better understand the offer on the market and compare service providers, which it may increase the likelihood of switching.

3.4 Restrictions to co-badging (digital wallets and the equivalent) and choice of application at the Point-Of-Sale

- Co-badging refers to the inclusion of two or more payment brands or payment applications of the same brand on one card-based payment instrument.[318]
- The study finds that **co-badging in the context of a digital wallet can be complex and is dependent on a number of technical factors as well as collaborative agreements between the actors involved**. Indeed, to be able to digitalise a co-badged card in a wallet, two digital cards (i.e., two digital tokens) must be created. This must be facilitated by both the card issuer and the digital wallet provider, which according to stakeholders consulted for this report, requires investment on both sides. Further, domestic card schemes must have invested in the required tokenisation technology and must adhere to the required tokenisation operating methods as set by their token service provider (which is often an international card scheme). Findings further indicate that there may be a reluctance from these parties to facilitate these requirements due to the complexity of the process and the investment it entails, however, it is also apparent that the extent to which this is facilitated varies between member states and is evolving over time.
- With regard to 'priority selection', there is consensus among stakeholders, both those representing merchants and those representing PSPs, that in markets where card-based payment instruments carry multiple payment applications (i.e., co-badged), **merchants do have the technical ability to install automatic mechanisms in equipment to prioritise their preferred payment brand or application at payment terminals and online, though this may vary between Member States.**
- Despite this, stakeholders representing the payment industry and merchants had mixed views as to whether merchants are setting priority selection themselves or whether this is pre-set by the acquirer on the terminal. Overall findings indicate that **large merchants are more likely to have the ability and capacity to implement a process for setting priority selection** whereas smaller merchants most likely have their priority selection pre-set by acquirers. Where merchants have priority selection in place, they are likely to set this for the cheaper option. In markets in which domestic card schemes are active and co-badged with international schemes, domestic schemes are in general cheaper.
- The IFR stipulates that consumers have the right to override the priority selection put in place by the merchant. The exercise of this right appears to be impacted by several factors related to the technology used to accept and make the payment, as well as the level of consumer interest in the selection and/or awareness regarding the choice of the application process.
- Findings indicate that though **consumers often have the technical ability at point-of-sale to override merchant preselection, they rarely exercise this ability.** Interviews with merchant stakeholders have indicated that in their view this is because of a lack of awareness and because from the perspective of the consumer there are often no direct financial benefits to choosing one payment brand or application over another.
- Finally, the study finds that **how this choice is facilitated, varies depending on the context of the transaction.** For instance, whether the transaction is chip-and-pin, contactless, mobile wallet or e-commerce.

This section considers co-badging and the effective implementation of choice of payment application in the context of card-based payment instruments. It first considers co-badging, defining what it is and any technical or other restrictions that prevent co-badging on a card-based payment instrument [319]. It then considers choice of payment brand or application at point of sale. It considers this from the perspective of the merchant's ability to set a priority selection regarding their preferred

[318] *REGULATION (EU) 2015/751 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2015 on interchange fees for card-based payment transactions. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX%3A32015R0751*

[319] *'payment instrument' means any personalised device(s) and/or set of procedures agreed between the payment service user and the payment service provider and used in order to initiate a payment order;*

payment application, and the prevalence of how often this is set. It also reviews the consumer's ability to override priority selection as well as the prevalence of how likely a consumer is to perform this action. This is examined for four use cases, *physical co-badged cards at a terminal* (contact based*), physical co-badged cards* (contactless), *mobile wallets* (contactless) and *in ecommerce.*

Co-badging refers to the inclusion of two or more payment brands or payment applications of the same brand on one card-based payment instrument.[320] Typically, co-badging is used when a national or domestic card scheme 'co-badge' with an international card scheme. For instance, in countries where a domestic card scheme is present (such as giro card in Germany), the domestic scheme will 'co-badge' with an international card scheme (such as Visa or Mastercard) to facilitate international transactions. This allows the cardholder to make use of both a domestic scheme, for domestic transactions and an international scheme, for both domestic and international (or cross border) transactions, all using one card-based payment instrument. Co-badged card-based payment instruments can also contain two applications of the same brand with one facilitating debit and the another facilitating credit card transactions.[321]

A key objective of co-badging is to increase competition between card schemes at point of sale. In the past, when cards were co-badged, the domestic scheme was used for domestic transactions and the international scheme was used for international transactions only. After the introduction of SEPA, regulations were brought in to enhance competition between schemes and the division in the market between domestic and international card schemes ended. In addition, with the introduction of the Interchange fee regulation in 2015 and the interchange fee cap, fees on accepting international cards became lower. Today, in countries where a domestic card scheme is present, the vast majority of domestic cards are co-badged with an international scheme. [322]

The IFR sought to encourage competition by prohibiting card schemes from preventing or placing obstacles to co-badging. When entering into a contractual relationship with a payment service provider, according to the IFR, a consumer is entitled to request their issuing bank to include two or more different brands on their card-based payment instrument, as long as this is offered by the provider. In addition, the payment service provider shall provide the consumer with clear information regarding the brands available to be co-badged, as well as key characteristics such as functionality and cost. As will be explored later in this section, the choice regarding which brand to use at point of sale should then be determined by both the retailer and the consumer. Retailers can promote the most cost-efficient brand for them using priority selection, and consumers can override this selection, thus promoting competition between the card schemes, and allowing both retailers and consumers the opportunity to minimise costs.

Data collection for this section incorporates a survey of merchants carried out for this report, extensive data collection through interviews with stakeholders from associations representing payment service providers including card schemes, acquirers and e-money institutions, as well as the banking sector, retail associations and merchant associations. This is supported by comprehensive desk research where necessary.

[320] *REGULATION (EU) 2015/751 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2015 on interchange fees for card-based payment transactions. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX%3A32015R0751*

[321] *European Commission, Directorate-General for Competition, Pavel, F., Kornowski, A., Knuth, L., et al., (2020). Study on the application of the Interchange Fee Regulation : final report, Publications Office.*

[322] *PAYSYS Report, (2021))*

3.4.1 The effective implementation of two or more payment brands or applications on a card-based payment instrument

This section examines whether any obstacles arise regarding co-badging, particularly when it comes to card-based payment instruments, in the context of a mobile wallet (i.e. the technical ability of a consumer to upload one or more card brands from a co-badged card onto a wallet).

For co-badging to promote competition, consumers must be able to add multiple brands or applications to their card-based payment instrument. Stakeholders representing merchant associations, consumer associations, card issuers, acquirers and card schemes identified a number of obstacles to effective implementation of co-badging.

First, as regards physical co-badged cards, while no limitations to the insertion of two or more payment brands or applications on the co-badged card were raised by stakeholders, it was argued by one consumer organisation that **co-badging of cards may be affected as international card schemes discontinue popular co-badged cards (for example Mastercard discontinuing the Maestro brand), though the alleged potential impact is as of yet unclear.** A report consulted for this study explored this noting that Mastercard announced that in June 2023, their Maestro card would no longer be supported and that they would instead be promoting a Mastercard Debit card. It is important to note that issuers will have the opportunity to co-badge domestic schemes with the new debit card brand.

According to several interviewees, including a stakeholder who represents card-based PSPs and a stakeholder representing credit card issuers, **co-badging in the context of mobile wallets is more complex as it needs to a) be facilitated by the commercial agreement between the wallet provider and the card issuer and b) it must be technically possible.** However, stakeholders representing domestic card schemes and the banking sector noted that issuing banks may be reluctant to support co-badged cards in a mobile wallet, due to the additional costs they are likely to incur from enrolling and managing two brands in a mobile wallet.

According to stakeholders representing the European retail banking sector, to be able to digitalise a co-badged card in a wallet, two digital cards (i.e., two digital tokens) must be created and this must be facilitated by both the card issuer and the digital wallet provider. According to this stakeholder, and another representing a domestic card scheme, not all issuers offer digitised co-badged cards, and not all **digital** wallet providers facilitate co-badged cards. The extent to which mobile wallets facilitate the functioning of a co-badged card or **card-based** application appears to vary between Member States. For instance, according to a stakeholder representing the banking sector in France, in their opinion, the use of co-badging is technically possible in France, the technical solutions are either in the process of being deployed or in the process of technical development. Similarly, according to a **stakeholder** representing the banking sector in Portugal, in the Portuguese market, co-badged cards can technically be used in digital wallets **however this is dependent on** an agreement the issuer must have with the wallet provider, under a service that is provided by these companies in partnership with international card schemes. On the other hand, according to a stakeholder in Italy, there is no mobile payment solution that allows the digitization of a co-badged card for all the schemes supported by the physical card.

According to the stakeholder representing the European retail banking sector, one of the key reasons it may not be facilitated is that when an issuing bank offers co-badged cards in a digital environment, this will increase the processing costs for the 'enrolment' of the brands into the wallet. This is because they must then manage two token requests with two different token providers. Further, according to a domestic card scheme in France, few issuers or wallet providers support co-badged cards due to the expense related to the increased processing fees for enrolment. In their experience because of this, when the domestic card is co-badged with an international card scheme and this card is digitalised in a wallet, in the majority of cases both schemes or applications are not facilitated, and it is uploaded as a mono-branded international card scheme only.

Another deterrent according to the stakeholder representing the European retail banking sector, is that card issuers need to provide a unique SCA (Strong customer authentication), which is expensive to develop. The application of SCA in digital wallets is included in the PSD2 and instructs that a card issuer is required to apply an SCA when enrolling a card into a digital wallet, due to the risk and exposure of this action to fraud or abuse. Though the requirements of the SCA may be outsourced to a third party (for example the digital wallet provider), the issuer remains responsible[323].

Further to the above, another obstacle that may arise is if one of the brands on a co-badged card has not invested in the required tokenisation technology to operate in a mobile wallet. According to a stakeholder representing card-based payment providers, both brands (or payment applications) must have the tokenisation technology required to be compatible with mobile wallets. The stakeholder added that, while the tokenisation technology required is available to all schemes, international schemes are more likely to have invested in its use. Therefore, if a consumer uploads a co-badged card to a mobile wallet resulting in only one card scheme or brand, this may be because only one scheme has invested in and enabled the relevant technology.

Further to this, a stakeholder representing the European banking sector, noted that typically, when a domestic scheme is co-badged with an ICS, the ICS is often the token service provider. According to a stakeholder representing payment service providers, ICSs make this technology available for domestic card schemes to effectively co-badge within digital wallets, however this is subject to the domestic card schemes complying with the operating methods of tokenisation and is subject to the terms and capabilities of the wallet provider.

In Italy for instance according to this stakeholder, it is not always possible for consumers to upload the co-badged card's payment application of their choice in their mobile wallets. The main issue is that wallets with cross-border coverage (e.g., Apple and Samsung) rely on platforms provided by the ICS, as they are the entities that technically allow card tokenization on the wallet for cross-border transactions (i.e., any card enrolment is subject to ICS rules).

This was further confirmed by a domestic card scheme which noted that not all mobile payment solutions allow the digitization of a co-badged cards for all the schemes supported by the physical card. It can be observed that the operating methods envisaged by the international schemes contrast with the position of some wallet providers which – in the case of a co-badged card digitalized in the wallets - would replicate the same payment user experience (UX) as contactless physical cards (no application selector embedded into the wallet).

3.4.2 The effective implementation of choice of application at the POS

This section examines any obstacles that arise in the effective implementation of choice of payment application at the POS, including in the context of payments using digital wallets or wearables.

In the context of transactions being made with co-badged payment instruments, under the IFR, both the payer (the consumer) and the payee (the merchant) have the right to exercise choice over the application. The payee

[323] *European Banking Authority, 2023, https://www.eba.europa.eu/eba-clarifies-application-strong-customer-authentication-requirements-digital-wallets*

retains the option to install automatic mechanisms in the equipment used at the point-of-sale, allowing them to make a priority selection of a particular payment brand or payment application. This is typically the cheaper application for them to accept and in the context of a co-badged payment instrument, is most likely to be the domestic card scheme in the Member States where they are present. The payer, on the other hand has the right to override the pre-selection of the payee, and to have the final say as regards the payment application selected, provided it is accepted by the merchant.

The IFR also mandates that the payee must not prevent the payer from overriding their priority selection for the brands or payment applications accepted by the payee.[324,325] Furthermore, article 8.6 of the IFR stipulates that card schemes, issuers, acquirers, processing entities and other technical service providers shall not hinder or limit the choice of payment brand or payment application at the POS, by the payer or the payee when using a co-badged payment instrument[326]. This also applies for mobile wallets[327].

3.4.2.1 Setting of priority selection

Under the IFR, merchants can install mechanisms, which prioritise a particular payment brand or payment application at the Point of Sale (POS), provided the payer has the ability to override such a selection for the categories of cards or related instruments accepted by the payee[328]. This section assesses the prevalence of priority selection being used by merchants at POS. It also analyses any technical or other obstacles that may arise regarding its implementation, or its effective use by merchants. This section uses data collected from our merchant survey, as well as interviews with payment service providers, and merchant associations to determine the prevalence of priority selection and any obstacles that arise.

Practice in the market

During our survey, merchants were asked whether or not they have priority selection in place which can be initiated at POI (physical terminal, e-commerce), favouring a particular payment application for co-badged cards or other co-badged payment instruments. In response to this, **54% reported that they did not have priority selection in place at point of sale**, while 46% indicated they had it in place either at physical point of sale terminals, in the context of e-commerce transactions, or both. (**figure 34a**). While the sample is not large enough for statistical inference, it provides an insight into the practice within the market and is discussed in conjunction with interviews from merchant associations to challenge and validate the positions of merchants regarding priority selection. The positions of card schemes and other payment service providers are also considered through interviews with stakeholders from the industry[329].

Indeed, stakeholders agreed that the practice of priority selection varies from country to country. One stakeholder representing the banking sector across Europe noted that representatives from Denmark have reported that in their experience the Dankort is

[324] REGULATION (EU) 2015/751 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2015 on interchange fees for card-based payment transactions. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX%3A32015R0751

[325] When technically feasible.

[326] Regulation of the European Parliament and the Council on interchange fees for card-based payment transactions (2015). Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX%3A32015R0751

[327] European Commission (2020), Study on the application of the interchange fee regulation:: https://ec.europa.eu/competition/publications/reports/kd0120161enn.pdf

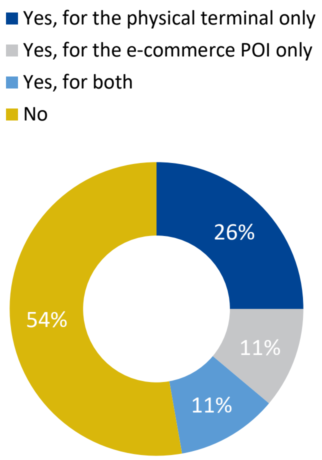
[328] Regulation of the European Parliament and the Council on interchange fees for card-based payment transactions (2015). Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX%3A32015R0751

[329] Associations represent card issuers, card acquirers, card schemes and other stakeholders that offer card-based payment solutions

the priority selection for all the major merchants, and it is not common for a merchant, who accepts Dankort to have a different priority.

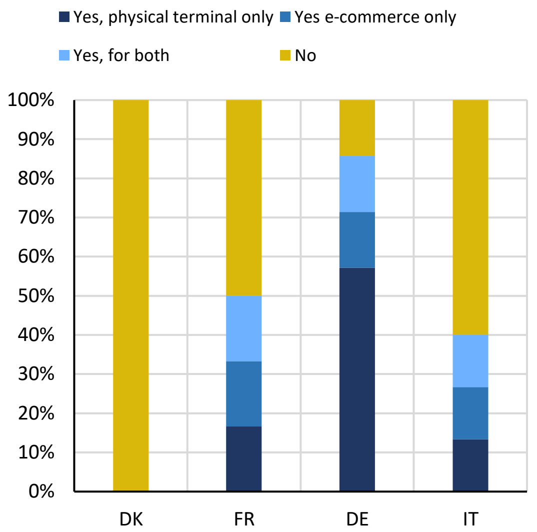
Figure 34: Priority Selection

Figure 34a



Source: Based on survey data from 35 merchants based in Member States which have a domestic card scheme in DK, FR, DE, IT, PT

Figure 34b



Source: Based on survey data from 34 merchants based in member states which have a domestic card scheme (country samples with over five survey participants only)

While the interviews indicate that merchants generally do have priority selection in place at POS, which favours a particular payment brand or application[330] how and why this selection is made is dependent on a variety of factors described below.

Firstly, to have the ability to make a priority selection, merchants must technically have this ability at the POI, whether online using a payment platform or during an instore purchase using a terminal. They must also have knowledge on how to implement this selection or change the selection if it has been set by the acquirer or payment service provider. There has been consensus among stakeholders, both from those representing merchant associations and those representing PSPs, that **in markets where card-based payment instruments carry multiple payment applications (i.e. co-badged), merchants have the technical ability to install automatic mechanisms in equipment to prioritise their preferred payment brand or application at payment terminals and online.** Indeed, an association representing digital payment providers (non-bank owned acquirers and processors) indicated that in their experience, merchants do have a degree of discretion in selecting their preferred payment brands or applications and therefore tend to have priority selection in place at payment terminals and at e-commerce checkouts.

A stakeholder representing the banking sector in France also agreed stating that to their knowledge most merchants have set up a brand pre-selection solution at the points of sale.

Despite this however, both merchant representatives and those representing payment service providers have agreed that in practice setting or changing priority selection to

[330] *Indicated by two stakeholders representing payment service providers and two merchant retail associations, that in their experience, merchants do have priority selection in place at POS.*

an option best suited to their needs and wants, is not always a straightforward process, in particular for small merchants. The reasons for this are discussed below.

Firstly, stakeholders representing the payment industry and merchants, had **mixed views as to whether merchants are setting priority selection themselves based on their preference for the most** cost-efficient **brand/application, or whether this is pre-set by the acquirer on the terminal.**

A stakeholder representing a merchant association noted that in their experience merchants which have priority selection in place fall into two categories.

- **Large merchants, as they are more likely to have the ability to make more cost-conscious decisions (having the resources to investigate cost-cutting measures) and therefore are more likely to have a process in place for setting priority selection.** This may be implemented through their payment teams, based on customer journey assessments and costs.
- **Smaller merchants most likely have their priority selection pre-set by acquirers** (this is explored in more detail below).

Two associations representing e-money institutions and card-based payment solutions,[331] argued, that in their opinion, whilst merchants generally do have priority selection in place at POS, in some instances, particularly in the case of smaller merchants an off-the-shelf solution is often purchased from their acquirer which has priority selection pre-set. According to a stakeholder representing payment service providers and e-money institutions in the latter case whether a merchant can technically change this preselection depends on the technical ability of the terminal provider, online acceptance provider or acquirer. Separate to this, whether merchants are likely to change a pre-set priority selection is dependent on a variety of factors, for instance, whether they have an agreement with the acquirer to retain the preselection; whether they have an agreement with a card scheme to prioritise their scheme; or other factors such as a lack of transparency in the process (which is described below). According to a stakeholder representing payment service providers and e-money institutions, some merchants have agreements with certain card schemes or issuers to prioritise their payment scheme of application over others. Though no quantifiable data could be retrieved regarding how often terminals are pre-set with priority selection, this was reflected in interviews with several stakeholders, including those representing merchants.

Financial and other motivations of merchants

Associations representing card issuers and merchants indicated that merchants can be motivated by the costs involved with different brands and payment applications as well as agreements they may have with certain card schemes. According to a stakeholder representing merchants, through surcharges and/or rebates, merchants can steer consumers towards using one brand over another at POS, this ultimately benefits merchants and consumers, as costs of more expensive payment means are ultimately passed on to them through higher retail prices.

In markets in which domestic card schemes are active and co-badged with international schemes, domestic schemes are in general cheaper and therefore popular among consumers. In France, for instance, the domestic card scheme is widely used when co-badged with an international card scheme. As the domestic card scheme, according to a report consulted for this study, tends to have lower scheme fees, merchants are likely to prioritise this brand, however, international card schemes may also appeal to merchants due to their cross border acceptance.

It is therefore in the interest of the merchants to encourage consumers to use the cheaper card brand (domestic brand) at the point of sale. According to one

[331] *Including card issuers, card acquirers and card schemes*

stakeholder representing merchants, lower costs are a good incentive for merchants to steer consumers. Further, an interviewee representing card-based payment solutions noted that in their opinion merchants can steer consumers verbally (during in-person transactions only) and with signage to a particular brand or application. Further, according to a stakeholder representing an international card scheme, merchants can also steer consumers to select one brand over another by using visuals and signage that promote a certain scheme; and by offering discounts or other incentives when using one scheme over another.

Associations representing merchants indicated that merchants can be motivated as to what card scheme or application to prioritise by agreements they may have with certain card schemes. An interviewee representing digital PSPs echoed this and highlighted that certain merchants may have agreements with different card schemes to prioritise some payment applications over others.

Priority selection at e-commerce point of sale

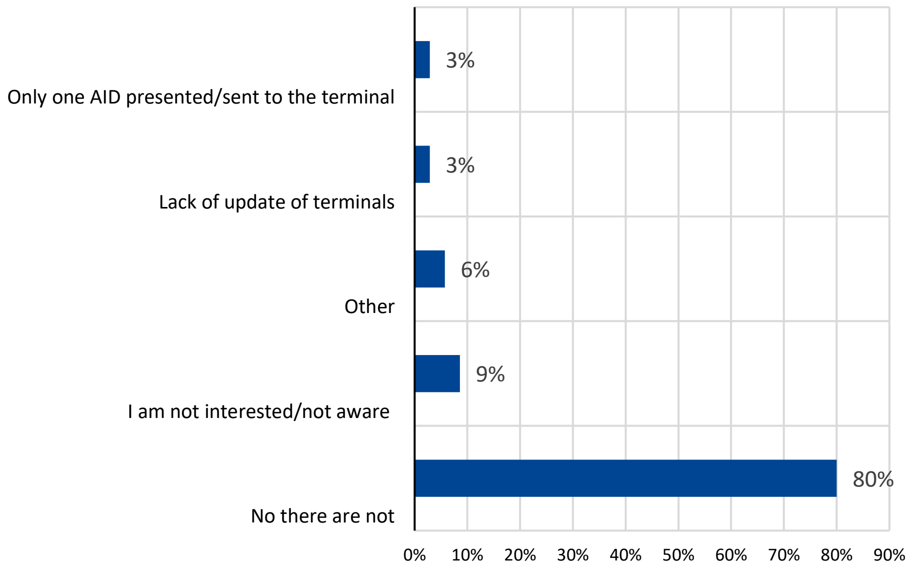
In relation to e-commerce transactions, views from stakeholders were more limited as to how priority selection is facilitated. According to the merchant survey in this study[332] **approximately 22% of merchants indicated that they have priority selection in place at e-commerce checkouts** (**figure 34a**). A stakeholder representing PSPs, including acquirers and card schemes, noted that in their opinion merchants do have priority selection in place at e-commerce checkouts. Further, another stakeholder representing payment service providers and e-money institutions argued that it is common practice in e-commerce for merchants to list the payment applications and/or brands they prefer at the top of the list; in their view, because consumers do not really benefit from one option over the other, they are therefore likely to choose the option at the top of the list.

Obstacles to Priority Selection

According to our survey, (figure 35), 80% of respondents indicated that there are no obstacles (technical, legal or otherwise) to setting priority selection. Of those that did specify obstacles, three merchants from Denmark noted they were *not aware or not interested in priority selection*, whilst one merchant from Germany noted that in the context of payments made by mobile wallets *only one AID gets sent to the payment terminal* which restricts the ability of the merchant to set priority selection. These obstacles are explored in more detail below.

[332] *According to respondents from 35 merchants from member states which have a domestic card scheme.*

Figure 35: Obstacles to Priority Selection



Source: Based on survey data from 35 merchants based in DK, FR, DE, IT, PT.

One obstacle that was raised in the context of choice of application and priority selection for the merchant, is the **potential violation of the right of the merchant to set a priority selection in the context of payments made through mobile wallets when only one brand or application is sent to the payment terminal at POS.** When a co-badged card is added to a mobile wallet, it will either be uploaded as two separate mono-branded cards, or one co-badged card. A stakeholder representing a card scheme indicated that this is dependent on the wallet. While some wallets (the interviewee specified the example of Apple wallets) present the card as one single card, both applications are sent to the terminal. Other wallets (example, Samsung) upload the card as two mono-branded cards. In the instance when a co-badged card is uploaded as one single card, as described earlier, due to the technology of the co-badged application, there is a concern that **because all payment brands on a co-badged card may not be technically compatible with the wallet (i.e. only one application has invested in the required tokenisation technology), the one that is, becomes the default payment method**. In this instance, according to one stakeholder representing PSPs and e-money institutions, the payment terminal may only receive one Application Identifier (AID). Evidence collected for this study (as described at the beginning of section 3.4) indicates that this is likely to be an international payment brand over a domestic brand. According to another stakeholder representing merchants, in this latter case, the merchant is no longer aware that there might be a cheaper application on the card that matches their priority selection, and therefore the right of merchants to set a priority is violated.

This is also a concern **if a co-badged card has been uploaded as two separate cards,** since only one payment application or brand, will be sent to the payment terminal (in store) or payment gateway (online). This is because the payer is obliged to set a preselection. This prevents the payee from setting a priority selection, and therefore does not align with article 8§6 of the IFR. According to a stakeholder representing the banking sector in France the IFR indicates that the choice of brand must be made during the transaction and not upon enrolment within a wallet, if choice can be made in the wallet there is no possibility for choice of application at POS. While a stakeholder representing card issuers, card acquirers and card schemes expressed the opinion that cases where only one payment brand (or application) from a co-badged card is presented to the terminal as a result of the consumer preselected one brand or application of a co-badged card on a digital wallet would be fine, this is not the case since **merchants' priority selection is effectively prevented**.

Another issue raised among stakeholders was that **though priority selection may be technically installed at POS, it may be pre-set on the terminal or payment gateway, and not be set by the merchant themselves – although it derives from a contractual agreement between the two**. In the opinion of a stakeholder representing card issuers, card acquirers and card schemes, smaller merchants often rent or purchase off the shelf solutions from acquirers, terminal providers or payment gateway, that have a priority selection pre-set and may not have the knowhow or ability to change it currently. There is in their view no technical reason why they could not be provided with the instructions by the terminal provider as terminal manufacturers include reconfigurability into the design to be compliant with EMVCo interoperability standards. Further, this stakeholder argued that according to research done by organisations they represent, the acquirer of the merchant, in some instances, introduces priority selection through their own negotiations with the terminal provider, or priority selection is introduced by the merchant's payment gateway. The extent to which this is common practice is unclear however, as according to this stakeholder the research showed varying results by merchant and by country.

Stakeholders representing merchant associations noted that they lack information on how merchants feel about having their priority selection pre-set, however it was noted that merchants will tend to want priority selection set to the brand or application that is cheaper for them to accept.

3.4.2.2. Consumer's ability to override merchants' preselection

As mentioned above, the IFR stipulates that consumers have the right to override the priority selection put in place by the merchant – if any. The exercise of this right appears to be affected by a number of factors related to the technology used to accept and make the payment, as well as the level of consumer interest in the selection and/or awareness regarding the choice of application process. Overall, according to our survey **69% of merchant respondents indicated that consumers do not actively override merchant preselection**. [333]

Two stakeholders representing merchants noted that **from the perspective of the consumer, there are often no direct financial benefits to choosing one payment brand or application over another**, which combined with a lack of awareness regarding how to override priority selection, means that consumer choice in practice is rarely utilised (this is explored in more detail below). However, according to a stakeholder representing digital payment providers, cardholders are motivated by whatever payment brand (or application) works best, which in practice means having the most widespread acceptance. Which brand or application this is, depends on the context of the transactions. The brand of the international card schemes will be used in the context of cross border transactions, however for domestic transactions, this may be either brand.

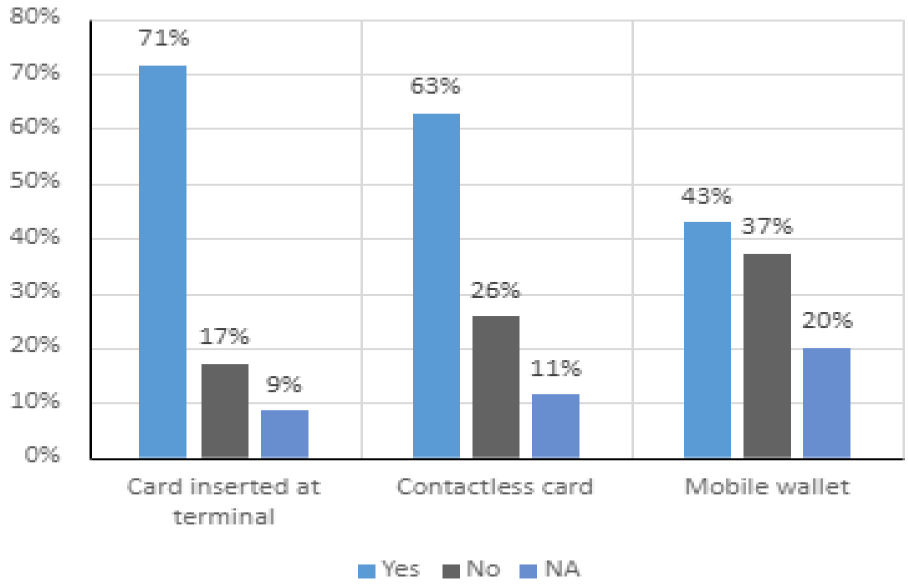
The consumer's ability to override merchants' priority selection is explored below using four use cases: physical co-badged cards at a terminal (contact based), physical co-badged cards (contactless), mobile wallets (contactless at terminal) and ecommerce. For each case the study reviews how often choice is facilitated, using the study's merchant survey data as well as other studies and interviews with expert stakeholders.

The first three use cases explore in-store payments using a payment terminal. Merchants who participated in our survey were asked if their payment terminals offer

[333] According to 35 Merchant respondents

customers the possibility to override merchant preselection and choose a (different) payment application in case of co-badged payment instruments, or if consumers can avail of choice by asking the merchant directly.

Figure 36: Choice of application at payment terminal



Source: Based on survey data from 35 merchants based in DK, FR, DE, IT, PT

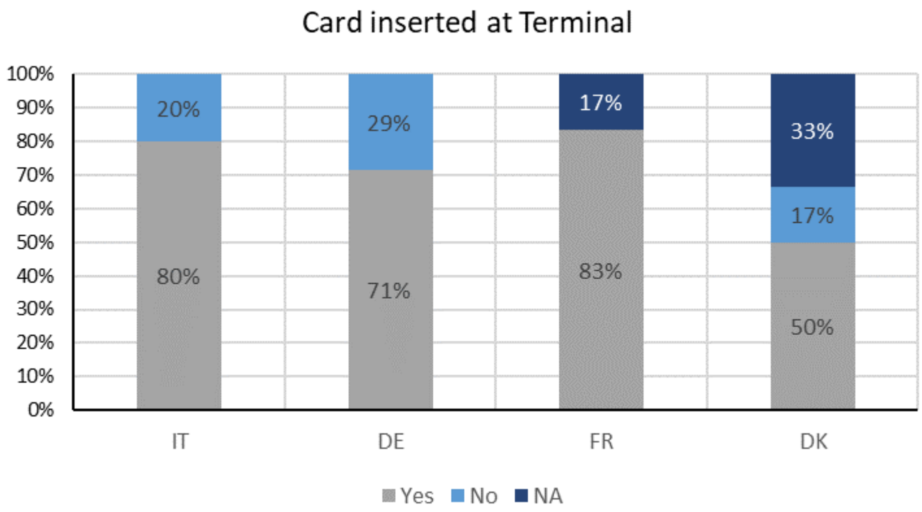
Physical co-badged cards at a terminal (contact based)

In terms of in store payments using a co-badged card which is inserted into the terminal, the survey (**figure 36**) finds that **71% of respondents indicated that consumers have the ability to override merchant preselection at point of sale**. It is apparent that this ability also varies by Member State (**figure 37**). Though the sample size is too small to make an inference regarding any country specific trend, the survey does indicate a trend towards consumers being provided with the technical ability at point-of-sale terminals to override merchant preselection, in the four sample countries where domestic schemes are present. Furthermore, two domestic schemes[334] confirmed that in card present scenarios at point-of-sale consumers have the ability to choose even if they may only rarely exercise this choice.

This is further supported by research conducted on behalf of the European Commission which found that the majority of POS terminals have been upgraded to meet the technical specifications of the IFR, which includes facilitating final choice of application at point of sale by the consumer.[335]

335 European Commission, Directorate-General for Competition, Pavel, F., Kornowski, A., Knuth, L., et al., (2020). Study on the application of the Interchange Fee Regulation : final report, Publications Office.

Figure 37: Consumer ability to override card inserted at terminal by Member State



Source: Based on survey data from 34 merchants based in member states which have a domestic card scheme (country samples with over five survey participants only)

While consumers may have the ability to override merchant pre-selection at point of sale in the majority of cases where a card is inserted into the terminal stakeholders from merchant associations, and associations representing PSPs also stated that **consumers rarely exercise this ability**.

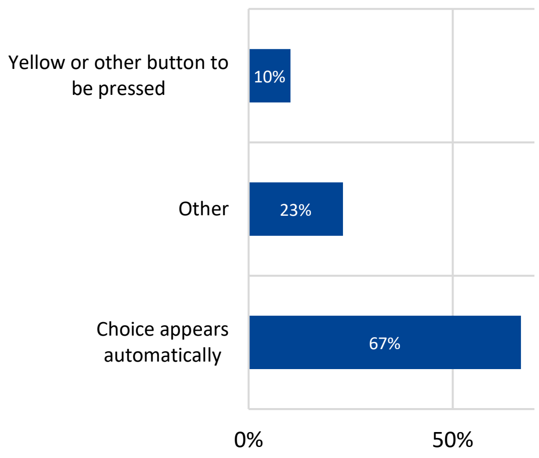
A stakeholder representing PSPs, e-money institutions and acquirers, argued that the consumer's ability to exercise their choice can be affected by **obstacles presented by the POS terminal**. Findings from interviews indicated that these obstacles might be either functionality based (i.e., the technical ability of the terminal or how it is programmed) or due to the consumers' lack of interest and/or awareness of the process involved.

If consumers had an economic interest in making a choice, they would want to **become aware of the process required to override merchant preselection and, in that case, the user experience if not seamless or user friendly may play a role** in consumers deciding to override merchants' preselection or not. In particular, several stakeholders representing both merchants and payment service providers argued that in their opinion if the process requires additional steps, such as pressing a button, consumers are less likely to perform this action of overriding merchant preselection. Whether consumers would potentially see additional steps as an obstacle though would depend on the comparative economic benefit they would gain from using another payment application. A stakeholder representing card schemes argued that in its view when choice is available, in many instances, consumers must press a button to prompt the terminal to offer choice such as the yellow/'clear' button or 'F', depending on the market. In the opinion of this stakeholder, this process is not well known to consumers, clear or user friendly, and this stakeholder further argued that this would lead to it being rarely used by the consumer.

In contrast, in the survey for this study, 10% of merchants indicated that on their terminal a button is required to be pressed before a consumer can override merchant preselection (**figure 38a**), with the majority indicating that choice appears automatically. Those that indicated that a button is required were based in France[336] and Germany [337]. According to further qualitative data collection, a large merchant based in two countries which operate domestic card schemes indicated that in their locations in Italy, France, and Germany, it is required for a consumer to press a button to access the ability to override priority selection.

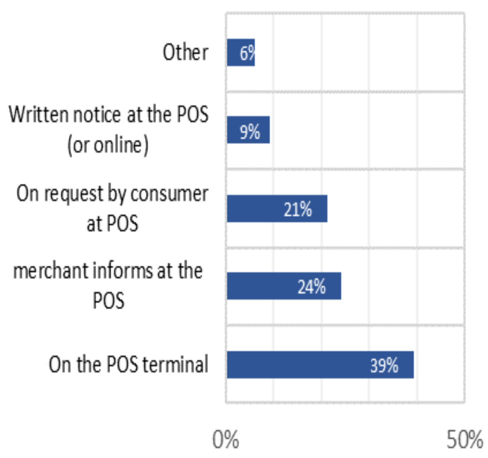
Figure 38: Consumer Selection

Figure 38a



Source: Based on survey data from 27 merchants based in DK, FR, DE, IT, PT.

Figure 38b



Source: Based on survey data from 33 merchants based in DK, FR, DE, IT, PT.

When questioned about **how merchants inform consumers about the possibility to override priority selection**, responses were varied (**figure 38b**). The most common response among merchants was that the information is available on the POS terminal.

In terms of how transparent this process is, several stakeholders representing merchants argued that **in general consumers are not aware of the process involved in overriding priority selection**. A card scheme argued that in its view Portugal is a good example for the implementation of consumer choice in the case of chip and pin transactions at terminals. In its view, in the majority of terminals in Portugal a co-badged card is recognised when inserted and choice is automatically presented on the terminal screen before a transaction is triggered (rather than having the consumer press a button to allow for the option of making a choice which in the view of this stakeholder was 'not transparent').

Physical co-badged cards at a terminal (contactless)

Consumer choice may be more difficult when using a co-badged card for contactless payments because of the need for seamlessness which contactless payments are promoting.

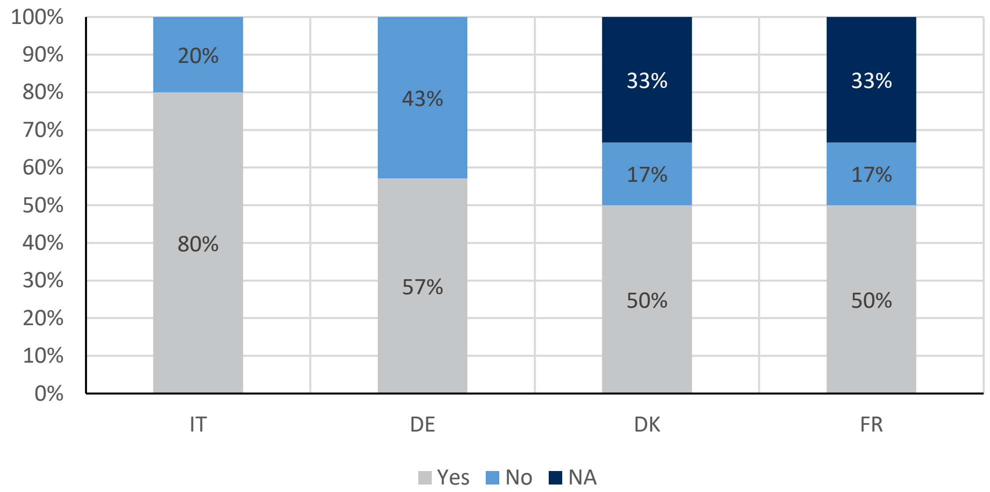
According to the study survey, **63% of merchant respondents indicated that choice is technically possible for consumers when paying with a contactless**

[336] *Two out of Five merchant respondents indicated a button is required.*

[337] *Two out of Five merchant respondents indicated a button is required.*

card (**figure 36**). This was most prevalent in Italy where 80% of merchants indicated choice is possible when using a contactless card (**figure 39**). As this survey only considers a small sample of merchants in the market, it is considered in conjunction with critical analysis of the qualitative feedback collected from stakeholders in the industry. For instance, according to a stakeholder representing the banking sector in France, in the majority of cases consumers making contactless payments can only override merchant selection by inserting their card, which results in the transaction not being contactless.

Figure 39: Consumer Choice: Contactless



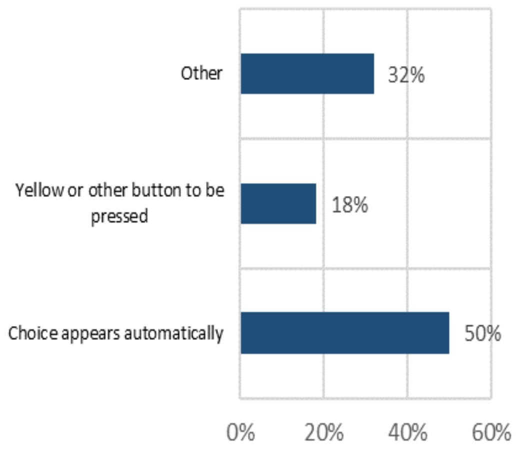
Two interviewees, one representing merchants and the other representing the card-based payments sector, argued that **consumers' lack of awareness in terms of the choice process is an obstacle – even if evidence is lacking as to consumers' interest in exerting a choice – in which case they would presumably ask for how to choose**. As indicated above, on some terminals, when using a physical card, consumers must press a button to activate choice or, 'double tap'[338] to choose. A stakeholder representing card-based payment service providers opined, that consumers are unaware of this option when it comes to contactless card payments, and in their view, it is not 'intuitive' or 'user-friendly' as it creates an additional step in completing the transaction. **On the other hand, if choice is prompted automatically every time a consumer taps a contactless terminal, this would seem to defeat the purpose of seamlessness and speed for contactless transactions.**

According to the study survey, 50% of respondents indicated that choice appears automatically at POS (**figure 40a**). This does not support the opinion of stakeholders representing both merchants and payment service providers interviewed who were of the view that in some Member States (e.g. France according to a French merchant association) that choice is only available to consumers when the card is inserted.

[338] Double tap function involves tapping twice on the payment terminal to choose when making a contactless payment.

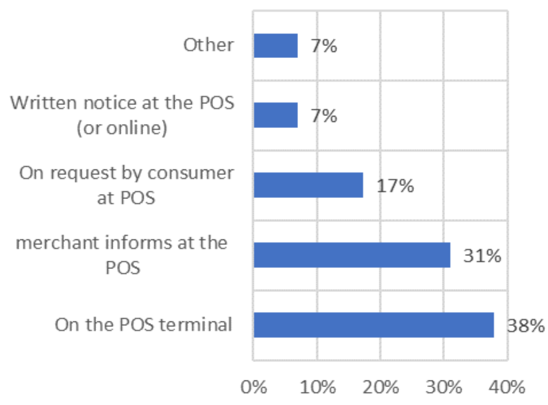
Figure 40: Choice of application: Contactless

Figure 40a



Source: Based on survey data from 22 merchants based in DK, FR, DE, IT, PT,

Figure 40b



Source: Based on survey data from 29 merchants based in DK, FR, DE, IT, PT,

Furthermore, as described above, consumers have a lack of interest in choosing one brand or another as it is of little benefit to them and therefore seen as irrelevant. According to one stakeholder representing merchants, this may be even more important in the context of contactless payments, as consumers value the speed and efficiency provided by this type of payment. Stakeholders representing merchants indicated that merchants want to provide a fast and seamless payment experience which can – at times - clash with obliging consumers to choose. For instance, where a consumer wishes to make a contactless payment, exercising choice at POS could require them to press a button on the POS terminal (to indicate that they want to choose the payment brand) and to select the desired card scheme from a list on the POS. This opinion was also reflected by a representative of the European banking sector who noted that providing choice to the customer will add friction to the payment, which in their view, is not desirable at POS-payments.

An interviewee representing a merchant association indicated that in their view, asking consumers to **choose a preferred payment application every time contradicts the main purpose for consumers of using contactless payment**, which is to make swift and convenient payments. Requiring consumers to make a choice of card payment method slows down the payment journey and reduces the conversion rate if the consumer abandons the transaction. This stakeholder and another interviewee representing retailers also noted that there is an issue with the need for cashier staff to be trained on how application selection works. As it is rarely used and due to high staff turnover, there is a risk cashiers do not know what to do when it occurs.

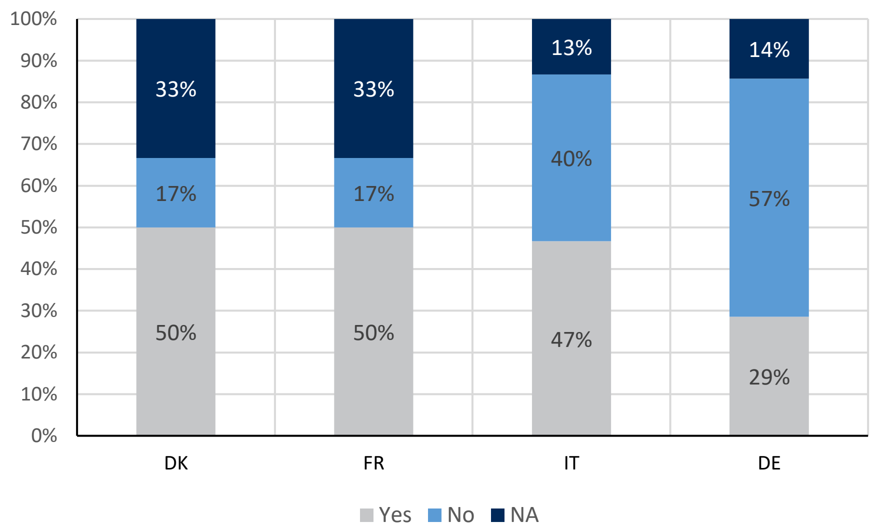
Mobile wallets (contactless)

When a transaction occurs in store using a mobile wallet, both priority selection and consumer choice should be facilitated. Interviewees agreed that **whether one or several applications are sent to the terminal – provided they can be uploaded on the wallet – might depend in part on the mobile wallet provider, as well as whether or not both brands (or payment applications) have the required tokenisation technology in place**. Furthermore, depending on these factors, in some instances only one Application Identifier (AID) may be sent to the POS terminal meaning choice of application will not be possible for the merchant through priority selection, or for the consumer.

If both brands (or applications) can only be uploaded separately to the wallet, the consumer can preselect the brand (or application) they wish to use, within the wallet, according to an interviewee from a card scheme, this is displayed as '*two card art solution*'[339]. In effect, as mentioned earlier in this section, this means that de facto merchants priority selection becomes impossible, while it is enshrined under the IFR. If the co-badged card is uploaded as one card (for example in an Apple wallet), referred to by one card scheme as a '*one card art solution*' and on the condition that both AIDs are sent to the terminal, then in this instance similarly to contactless card transactions, merchant's priority selection is possible, and choice can be offered to the consumer at POS.

According to a limited sample of 34 merchant respondents who participated in the study survey, 37% of survey respondents indicated that consumers were not provided the ability to override merchant selection at POI when using a mobile wallet (figure 36). A breakdown of this in four member states below indicates **approximately half of merchants in this sample provide the ability for the consumer to override priority selection at the terminal in the context of mobile wallets**, with the exception of Germany in which only 29% reported choice was facilitated in this context (**figure 41**).

Figure 41: Choice of application: Mobile Wallets by Member State



Source: Based on survey data from 34 merchants based in member states which have a domestic card scheme (country samples with over five survey participants only)

According to a stakeholder representing PSPs and e-money institutions, this is dependent on the capabilities of the merchant's payment terminal. This stakeholder noted that **payment terminals may only recognize one of the payment options on the card, or as described earlier, may only receive one Application Identifier (AID) of the two available brands, which limits merchant's priority selection and therefore the ability of the consumer to override this choice.**

According to a stakeholder representing card issuers, card acquirer and card schemes, when a terminal only facilitates the consumers ability to override merchant priority selection when a card is inserted, in the context of mobile wallets consumer choice is

[339] *The consumer can see the display of both card brands or applications separately within their wallet.*

no longer facilitated, as consumers do not necessarily have the physical card with them at point of sale. Additionally, the obstacles described in the contactless card use case regarding efficiency of payments also apply in the context of mobile contactless payments.

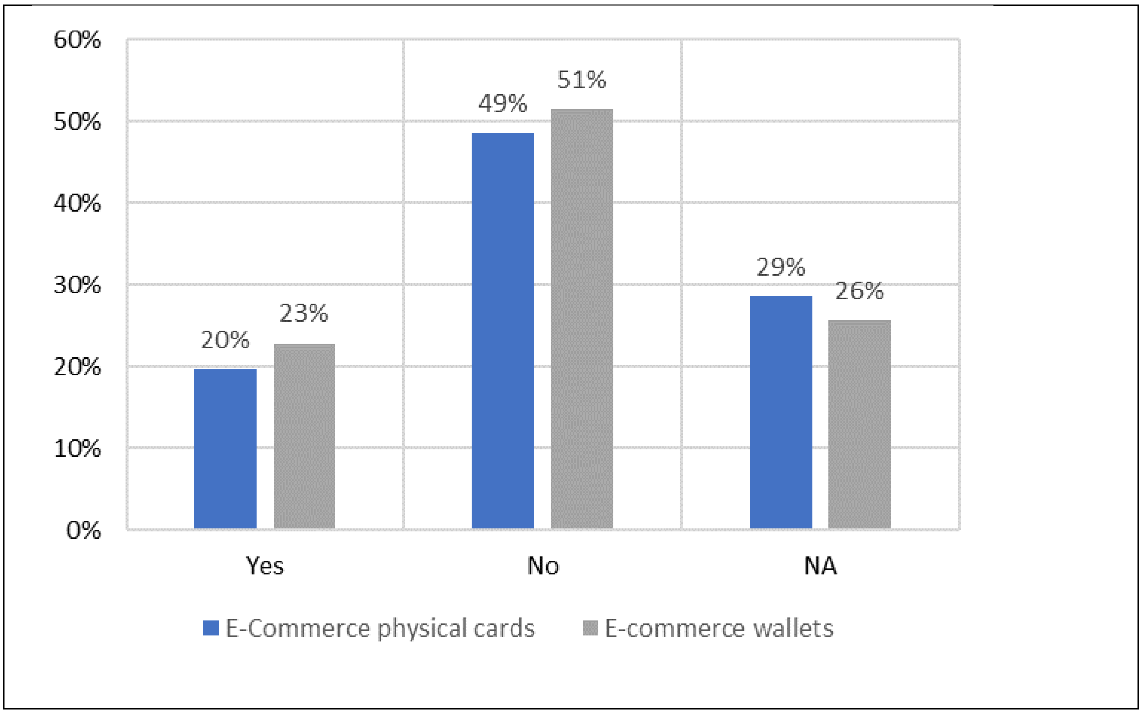
Further to this, a representative from an organisation on the digital payments side, highlighted the technical capability obstacles. **Not all digital wallets and applications facilitate the use of technologies such as NFC, QR, or BLE** (Bluetooth Low Energy). This limits their use with certain merchants or payment terminals and reduces consumer choice. Furthermore, according to this stakeholder some payment options are not available in certain locations. Indeed, there are cases where a merchant uses a mobile point of sale (mPOS) terminal to accept additional means of payment, where the merchant's regular POS terminal accepts domestic card schemes, but the merchants mPOS does not.

Finally, if both brands (or applications) of a co badged card-based payment instrument are successfully sent to the payment terminal, consumers are likely to face the same obstacles as described for contactless card transactions, in particular a lack of understanding regarding the process and a lack of interest in making this selection.

E-commerce

As regards e-commerce, the study's survey elicited very few replies. It found that for 49% of merchants, consumers do not have the ability to override priority selection at POS in the context of using co-badged physical cards and for 51% of merchants, consumers do not have the ability to override priority selection at POS with payments made using wallets (**figure 42**).

Figure 42: Choice of Application: E-commerce



Source: Based on survey data from 35 merchants based in member states which have a domestic card scheme

For a card-based payment transaction to take place in an e-commerce setting, merchants put forward which payment methods they accept without expressing a preference – or with priority selection in place, and consumers choose from these options or override the merchant's selection within the limits of the brands/applications accepted by the merchant. If no priority selection is in place, consumers choose from the payment methods put forward, which is in line with the IFR.

If merchants do have priority selection in place, then as with all other payment scenarios described, consumers should have the ability to override this selection. One stakeholder representing a card-based payments association argued that it is the experience of their member organisations, that online checkouts often do not allow consumers to select one scheme over another when using a co-badged card, although this was not substantiated with figures/evidence.

Further, one stakeholder representing issuers, acquirers, and card schemes, expressed concerns that consumer choice may be limited as a single combined option representing the co-badged card which is accepted and consumers allegedly cannot choose from the underlying brands/applications. Further, if the consumer does have the technical ability to do this, the process is often unclear of how to do so.

For e-commerce payments when a digital wallet is being used the study survey found similar results to the case of physical cards.

Interviewees representing a card scheme indicated that in their view effective consumer choice in the context of e-commerce can be simply and effectively implemented by providing a list of supported card schemes, including a co-badged option which allows for the selection of either brand or application, however this is not always the case and in their view 'many' websites – although this was not substantiated- do not allow for selection when it comes to co-badged cards[340].

Finally, a stakeholder representing card schemes and acquirers noted that in their view giving consumers the ability to override priority selection is a technically straightforward process at online checkouts. In their view, web designers can detect that a co-badged card number is being entered by using existing look up tables provided by card schemes. Once detected, choice can be offered through on-screen selection before the consumer proceeds to transaction completion. While according to this stakeholder stored card details can make this selection seamless for the consumer by storing both brands and associated card details, allowing consumers to set a default option for the next time they visit will bypass the merchant's right to set a priority selection under the IFR, including if the consumer can change option for each transaction.

[340] *Visa (2023) Effective Consumer Choice is essential for competitive payments in Europe. Pg. 20*

4. Main findings and conclusions

This section summarises the key findings of the study.

Payment sector evolution

The study confirms that, across the EU, **card payments are the most frequently used form of electronic payment method accounting for just over half of payments**, and in the majority of Member States, this share has grown between 2018 and 2021, though to a varying degree. Further, in Member States where there is a domestic card scheme present, it is the domestic scheme that is most frequently used for domestic transactions, whereas the position of international card schemes remains relatively unchallenged for cross-border transactions.

Cash remains the most popular means of payment for in-store transactions, though the downtrend in cash usage appears to have accelerated during the Covid-19 pandemic. (59% of in store transactions were made by cash in 2022, down from 72% in 2019). [341]

Furthermore, a key trend in recent years concerning card payments is the **increasing popularity and acceptance of contactless payment cards.** Though the extent to which contactless cards are used varies between Member States, a general upward trend in the use of this type of payment has been observed between 2019 and 2022[342].

Mobile payments via digital and mobile wallets have also become an increasingly popular means of payment in recent years. The study finds that the value of digital and mobile payments increased by 30% between 2018 and 2022[343]. In fact, the transaction value generated from mobile wallet POS payments in-store in the EU-27 increased in the last 5 years from EUR 4.2 billion in 2017 to EUR 195.2 billion in 2022, and is expected to increase at an annual rate of 21% from 2023 to 2027.[344] The increase in the popularity of mobile payments may be the result of a combination of factors, including wallet solutions being introduced by big-techs and PSPs, the increase in smartphone penetration and the rise in e-commerce. In addition, technologies available today allow users to easily store and manage payment applications on their mobile devices.

With regard to the technologies which have facilitated this development in mobile payments, near-field communication (NFC) and QR-codes (Quick Response - codes) are the key technologies used in mobile wallets at physical POS terminals, with **NFC-based mobile wallets being the most commonly used in Europe.**

In addition to the aforementioned trends, a number of alternative payments are currently offered in EU Member States. **Instant payments are a new form of payment becoming increasingly available across the EU**. These are SEPA Credit Transfer (SCT) transactions that are processed instantly and allow for the transfer of funds from the payer to the payee's account within 10 seconds. Several alternative payment services can be linked with **account-to-account (A2A) digital payments** (i.e. the transfer of funds from one party's account to another party's account) such as Bluecode, Bizum, and Blik.

Finally, the study finds that **the market structure for issuing and acquiring services is changing due to new payment players entering the market**, in particular Fintechs and TPPs. In addition, some traditional issuing and acquiring service

[341] *ECB, (2022). Study on the payment attitudes of consumers in the euro area (SPACE) – 2022*

[342] *ECB. (2022). Study on the payment attitudes of consumers in the euro area (SPACE) – 2022*

[343] *Mark Stiltner. (2021). How digital wallets in Europe are reshaping payments. Rapyd. Online: https://www.rapyd.net/blog/how-digital-wallets-in-europe-are-reshaping-payments/*

[344] *Statista.(2022). Mobile POS Payments. Online: https://www.statista.com/outlook/dmo/fintech/digital-payments/mobile-pos-payments/eu-27#transaction-value*

providers (i.e. banks) have experienced **a market consolidation in order to become more competitive.**

Interchange and scheme fee evolution

The survey and interviews conducted for this study provide some evidence on the evolution of interchange and scheme fees, as well insights on the impact of fee changes on costs for acquirers and subsequently merchants.

The study finds that, between 2018 and 2022, **the weighted average interchange fee for debit and credit card transactions in the sample of 12 EU countries (the "EU-12") covered by the survey remained below the 0.2% and 0.3% caps respectively.** Specifically, in 2018, the weighted average interchange fee on debit cards for the EU-12 was 0.143%, and this rose to 0.153% in 2022. Further, in a number of countries (e.g. Netherlands, Ireland and Italy) the national caps for debit card transactions are below the maximum rate of 0.2% stipulated in the EU Interchange Fee Regulation, at least for specific transactions.

Overall, the **findings indicate that issuers have experienced an increase in interchange fee revenues over the past 5 years.** For instance, interchange fee revenues from German debit card transactions of ICS-cards (excluding the domestic debit card scheme) rose in terms of average annual growth rate by 5164% between 2018 (€30m) and 2022 (€108m). Similarly, in Lithuania, the average annual growth rate of interchange revenue for domestic debit card transactions rose by 7796% between 2018 (€5m) and 2022 (€25m). A possible reason for this increase in interchange fee revenue, lies in the increasing volume and value of transactions. Additionally, interchange fee revenues card schemes from debit card transactions in the EU-12 were significantly greater than those from credit card transactions, probably pointing to more consumer debit than credit card transactions.

In terms of the development of scheme fees, only limited data could be collected directly from card schemes. However, collection of input through other methods including interviews would seem to indicate that **overall, scheme fees have risen over this period – even if this cannot be verified empirically**. Based on a limited sample of three domestic card schemes, **the weighted average of domestic gross scheme fees paid by issuers increased for debit card transactions**. An analysis of the available data suggests scheme fees for consumer debit card transactions paid by issuers increased from 0.003% in 2018 to 0.007% in 2021. In contrast, domestic scheme fees for credit card transactions declined from 0.0026% to 0.0020%. In terms of scheme fees imposed by international card schemes, industry stakeholders argued in interviews with that an increase in scheme fees per card transaction occurred during the past 5 years in the EU. Further, **payment institutions, acquirers, and merchants argued that fee structures of ICS have become more complex and lack transparency**. More specifically, it was argued that four-party schemes do not offer a clear reason to acquirers for the rise in scheme fees nor for the introduction of new fees. Further, it was argued **that competition dynamics (or the lack thereof) have meant increases in scheme fees set by the ICS.**

At the same time, card schemes have argued that any rise in scheme fees is due to a combination of new regulatory requirements and new players joining the market, both of which require additional measures to enhance security and prevent fraud risks.

The report analyses the evolution of MSCs based on data from a survey of merchants within the representative sample of 12 EU countries and complemented by interviews. Broadly, conclusions on the evolution of MSCs show a mixed picture. **Based on the limited data gathered from the merchant survey, the average EU-12 net MSC for debit card transactions increased from 0.27% in 2018 to 0.44% in 2022.** In addition, the limited survey data also shows that **merchants experienced lower MSCs for credit card transactions.** At the same time, some merchant associations argue that, while interchange fee caps have had a positive effect on lowering components of MSCs, the rise in card scheme fees and the introduction of new fees have meant overall increases in the costs that merchants face.

Blended and unblended fee schedules among merchants

The total merchant service charge (MSC) paid by a merchant to their acquirer is, in reality, not one fee but is made up of a number of different fees including an interchange fee, a scheme fee and an acquirer fee. Unblended fee schedules provide merchants with a detailed, broken-down overview of these fees, whereas blended schedules combine all fees into one charge. According to Article 9 of the IFR, acquirers are required to provide details of the components of their MSCs, "*specified for different categories and different brands of payment cards with different interchange fee levels*", unless merchants opt out and request (in writing) a blended MSC.

The analysis in this chapter investigates the prevalence of unblended vs blended schedules among merchants. This analysis is based on a survey of merchants and is supported by insights drawn from a series of interviews. The majority of merchants surveyed (61%) receive an unblended fee schedule, while 30% have opted for a blended schedule. Several stakeholders representing merchants and payment service providers interviewed for this report argue that larger merchants tend to maintain the option of receiving unblended fee schedules, whilst smaller merchants tend to request blended fee schedules; even though blended fees can lead to higher costs per transaction because the acquirer may add a risk premium to compensate for variations in the payment mix.

A card-based payment provider and an association representing merchants argued that **larger firms have more capacity to analyse, compare and manage the individual costs behind card schemes**. Smaller merchants do not have resources to process and analyse broken-down fee information and they may prefer blended schedules that are **easier to monitor and that allow them to anticipate costs easily and accurately.**

The report shows a mixed picture as to the perceived quality and usefulness of information according to merchants. The survey of merchants finds that 48% of respondents are satisfied with the quality of the information provided, 38% judge it to be of moderate quality and 11% indicated low or very low quality.

The analysis also explores obstacles that merchants may face when they wish to switch acquirers. The survey finds that just over half of respondents believe that switching services to a new acquirer is difficult due to **merchant size/bargaining power, and access to 'clear' information on pricing**. Merchants may also face difficulties switching due to the costs that may be involved, for instance, regarding termination fees associated with exiting a contract, or due to technical obstacles. According to a survey of 61 merchants, **just over half (51%) of respondents believe that switching services to a new acquirer is difficult, or very difficult,** while, on the other hand, 31% believe it to be an easy, or very easy process.

Restrictions to co-badging (digital wallets and the equivalent) and choice of application at the Point-Of-Sale

Co-badging refers to the inclusion of two or more payment brands or payment applications of the same brand on one card-based payment instrument.[345]

[345] *REGULATION (EU) 2015/751 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2015 on interchange fees for card-based payment transactions. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX%3A32015R0751*

The study finds that **co-badging in the context of a digital wallet can be complex and is dependent on a number of technical factors as well as collaborative agreements between the actors involved**. Indeed, to be able to digitalise a co-badged card in a wallet, two digital cards (i.e., two digital tokens) must be created. This must be facilitated by both the card issuer and the digital wallet provider, which according to stakeholders consulted for this report, requires investment on both sides. Further, domestic card schemes must have invested in the required tokenisation technology and must adhere to the required tokenisation operating methods as set by their token service provider (which is often an international card scheme). Findings further indicate that there may be a reluctance from these parties (card issuers, digital wallet providers and card schemes) to facilitate these requirements due to the complexity of the process and the investment it entails However, it is also apparent that the extent to which this is facilitated varies between member states and is evolving over time.

With regard to ‘priority selection’, there is consensus among stakeholders, both those representing merchants and those representing PSPs, that in markets where card-based payment instruments carry multiple payment applications (i.e., co-badged), **merchants do have the technical ability to install automatic mechanisms in equipment to prioritise their preferred payment brand or application at payment terminals and online, though this may vary between Member States.**

Overall findings indicate that **large merchants are more likely to have the ability and capacity to implement a process for setting priority selection** whereas smaller merchants most likely have their priority selection pre-set by acquirers. Where merchants have priority selection in place, they are likely to set this for the cheaper option. In markets in which domestic card schemes are active and co-badged with international schemes, domestic schemes are in general cheaper.

The IFR stipulates that consumers have the right to override the priority selection put in place by the merchant. The exercise of this right appears to be impacted by several factors related to the technology used to accept and make the payment, as well as the level of consumer interest in the selection and/or the linked awareness regarding the choice of the application process.

Findings indicate that though **consumers often have the technical ability at point-of-sale to override merchant preselection, they rarely exercise this ability.** Interviews with merchant stakeholders have indicated that in their view from the perspective of the consumer there are often no direct financial benefits to choosing one payment brand or application over another. In addition, if choice is prompted automatically every time for contactless transactions, this would seem to defeat the purpose of seamlessness and speed for those transactions.

Finally, the study finds that **how this choice is facilitated, varies depending on the context of the transaction.** For instance, whether the transaction is chip-and-pin, contactless, mobile wallet or e-commerce.

Annex 1 Interview guides

See separate document:

Catalogue number: KD-02-24-141-EN-N
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Annex 2 Survey questionnaire (4 party card schemes)

See separate document:

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Annex 3 Survey questionnaire (acquirers)

See separate document:

Catalogue number: KD-02-24-141-EN-N
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Annex 4 Survey questionnaire (issuers)

See separate document:

Catalogue number: KD-02-24-141-EN-N
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Annex 5 Survey questionnaire (merchants)

See separate document:

Catalogue number: KD-02-24-141-EN-N
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Annex 6 Sample frame of issuers and acquirers

See separate document:

Catalogue number: KD-02-24-141-EN-N
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Annex 7 References

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Annex 8 Definitions

Terms	Definitions
Acquirer or Acquirers	A payment service provider contracting with a payee to accept and process card-based payment transactions, which result in a transfer of funds to the payee.
Buy Now Pay Later (BNPL) schemes	The creditor grants credit to a consumer for the exclusive purpose of purchasing goods or services provided by a supplier, which are new digital financial tools that let consumers make purchases and pay them off over time, are often granted free of interest and without any other charges, and should therefore be included in the scope of this Directive.346
Card-based payment instrument	Any payment instrument, including a card, mobile phone, computer or any other technological device containing the appropriate payment application which enables the payer to initiate a card-based payment transaction which is not a Credit transfer, or a direct Debit as defined by Article 2 of Regulation (EU) No 260/2012
Card-based payment transaction	A service based on a payment Scheme's infrastructure and business rules to make a payment transaction by means of any card, telecommunication, digital or IT device or software if this results in a Debit or a Credit card transaction. Card-based payment transactions exclude transactions based on other kinds of payment services.
Co-badged cards	Cards that include two or more payment brands or payment applications of the same brand on the same card-based payment instrument.
Digital wallet	Digital wallets are software or equivalent enabling the initiation of card-based payment transactions when they contain an underlying payment application or applications. A digital wallet can contain one or several underlying payment applications and can itself be stored on one or several card-based payment instruments (e.g. a smartphone and/or a computer). A digital 'pass-through wallets', might involve the tokenisation of an existing payment instrument, e.g. a payment card, with the token being a payment application. Those wallets therefore qualify as 'payment applications'., Other categories of (non-card based) digital wallets, namely pre-paid electronic wallets such as 'staged-wallets' where users can store money for future online transactions, are in principle considered a payment instrument and their issuance a payment service.[347]
Four-party card scheme	Card-based payment transactions are made from the payment account of a payer to the payment account of a payee through the intermediation of the scheme, an issuer (on the payer's side) and an acquirer (on the payee's side)
Issuer	a payment service provider contracting to provide a payer with a payment instrument to initiate and process the payer's card-based payment transactions
Payee	A natural or legal person who is the intended recipient of funds which have been the subject of a payment transaction.
Payer	A natural or legal person who holds a payment account and allows a payment order from that payment account, or, where there is no

[346] Directive (EU) 2023/2225 of the European Parliament and of the Council of 18 October 2023 on credit agreements for consumers and repealing Directive 2008/48/EC. Online : EUR-Lex - 32023L2225 - EN - EUR-Lex (europa.eu)

[347] This definition is based upon the Commission's proposal for for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on payment services in the internal market and amending Regulation (EU) No 1093/2010 EUR-Lex - 52023PC0367 - EN - EUR-Lex (europa.eu)

	payment account, a natural or legal person who gives a payment order
Payment application	payment applications are characterised as a computer software (or equivalent) which is loaded on a device (e.g. a smartphone, computer or wearable) that enables a card based payment transaction to be executed.
Payment instrument	Any personalised device(s) and/or set of procedures agreed between the payment service user and the payment service provider and used in order to initiate a payment order
Payment Service Provider (”PSP”)	A natural or legal person authorised to provide the payment services listed in the Annex to Directive 2007/64/EC or recognised as an electronic money Issuer in accordance with Article 1(1) of Directive 2009/110/EC. A payment service provider can be an Issuer or an Acquirer or both.
Point-of-sale (POS)	The address of the physical premises of the Merchant at which the payment transaction is initiated. However: a) in the case of distance sales or distance contracts (i.e. E-Commerce) as defined in point 7 of Article 2 of Directive 2011/83/EU, the point of sale shall be the address of the fixed place of business at which the Merchant conducts its business regardless of website or server locations through which the payment transaction is initiated; b) in the event that the Merchant does not have a fixed place of business, the point of sale hall be the address for which the Merchant holds a valid business licence through which the payment transaction is initiated; c) in the event that the Merchant does not have a fixed place of business nor a valid business licence, the point of sale shall be the address for correspondence for the payment of its taxes relating to its sales activity through which the payment transaction is initiated.

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