The impact of EU price rules:

Interchange fee regulation in retail payments

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ABSTRACT

Debit and credit cards have gradually increased in importance as instruments for retail payments. This has prompted anti-trust authorities at both national and European levels to investigate and limit the interchange fee-based revenue model of four-party schemes. These moves were followed in 2015 by the introduction of the Interchange Fee Regulation (IFR), which introduced price rules to nurture a competitive, innovative and secure payments environment for all stakeholders. The IFR caps the interchange fees on consumer debit and credit cards and prohibits restrictions on co-badging and certain requirements to honour all cards for merchants.

This paper assesses the impact of the IFR. Based on a literature review and data analysis, it concludes that the IFR has led to a drop in interchange fees – in some cases below the maximum defined in the legislation in all EU member states.
The decrease in the interchange fee is largely reflected in lower charges for merchants, although the reduction is – at least partially – offset by higher scheme fees charged by international four-party card schemes and by higher fees for cardholders.
The policy recommendations aim to increase transparency for a fuller understanding of the functioning of the market and to enhance competitiveness in both the market for card payments and other payment instruments.

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1. Introduction

Cashless payments are gradually becoming the most common means of payment. But there are wide variations in the relative importance of cashless payments, e.g. card, direct debit, and other forms of retail payments such as e-money, vouchers, etc., across countries. In short, a bigger share of payments are cashless in those countries where the costs of such payments are lower and e-commerce is more developed. The so-called four-party debit and credit card transactions account for the largest share among cashless payments.

In the context of card payments, there are two existing models: four-party and three-party schemes, with the first being the most commonly used. Four-party schemes involve the participation of four parties: the consumer (the 'cardholder') and his/her bank (the 'issuer') as well as the merchant and his/her respective bank (the 'acquirer'). The four-party schemes are organised by card schemes, which could be considered as a fifth involved party. With Mastercard (Maestro, Mastercard, etc.) and Visa (V Pay) there are two international four-party card schemes and 17 national four-party card schemes (Bancontact, Girocard, etc.) active in the EU.[1] Three-party schemes consist of only three parties where the card scheme combines the role of issuer and acquirer. Examples of these schemes are American Express, Diners Club and Discovery Card.

The regulatory scrutiny for the four-party card schemes has increased as card payments have become more widespread. Initially, most of the regulatory scrutiny was in the form of competition cases brought against the four-party card schemes at both the national and international level targeting their interchange fees.[2] This was followed by formal legislation to reduce the interchange fees. The EU Interchange Fee Regulation (IFR)[3] adopted in 2015 led to the largest ever reduction in interchange fees.[4] The IFR capped the multilateral interchange fees for international four-party card schemes at 0.20% for debit card payments and 0.30% for credit card payments, with the possibility for member states to set lower caps for domestic card transactions. The cap is only applicable to consumer cards inside the European Economic Area (EEA). This means that payments using commercial cards and interregional card transactions are exempted. The cap was complemented with measures to enhance competition such as no restrictions on co-badging and no requirement to honour all cards for

[1] ECB (2019), "Card payments in Europe: Current landscape and future prospects: a Eurosystem perspective".

[2] European Competition Network (2012) "Information Paper on Competition Enforcement in the Payments Sector",:https://ec.europa.eu/competition/sectors/financial_services/information_paper_payments_en.pdf.

[3] 123/13 of 19.5.2015 (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32015R0751).

[4] Veljan, A. (2018), "A critical review of the European Commission's Multilateral Interchange Fee Regulation", Journal of Payments Strategy & Systems Vol. 12, No. 3, pp. 232–244.

merchants, except for IFR price-regulated cards. Australia,[5] Spain[6] and the USA[7] had introduced similar laws before the IFR was introduced.

This paper provides a brief assessment of the impact of the EU interchange fee cap based on a literature review and analysis of publicly available data. The analysis covers both the intended and unintended consequences of the EU's price rules in the area of retail payments.

As regards the intended consequences of the IFR,[8] the main objective was to improve the functioning of the internal market by creating an integrated market for electronic payments, with no distinction between national and cross-border payments. In order to enjoy the full benefits of an internal market, it should facilitate secure, efficient, competitive and innovative payments.

The European legislator had four main ideas in mind when proposing the IFR:

First, the variety and level of interchange fees were effectively an entry barrier for new card schemes, limiting the potential benefits of scale and scope benefits and innovation. Indeed, for a cross-border card scheme to be accepted by the issuers, the new card scheme needed to offer the highest interchange fee on the market.

Second, the payments sector is traditionally defined along national borders; even today 17 EU member states have their own national card scheme. It is very difficult for these national solutions to operate cross-border, while the existence of national card schemes prevented new international card schemes from entering the market. In the run-up to the IFR several EU member states adopted various measures regarding card payments. National measures aggravated the existing barriers to cross-border card payments.

Third, the choice of payment instrument should be left to consumers and merchants, to allow for effective competition between brands and payment instruments. The scheme rules (blending, transparency, restrictions on refusal of low-amount payments, the number of terminals in shops, etc.) and lack of information, prevented consumers and especially merchants from choosing or steering consumers towards the most cost-efficient means of payment.

[5] Stillman, R., Bishop, W., Malcolm, K. and Hildebrandt, N. (2008), "Regulatory intervention in the payment card industry by the Reserve Bank of Australia — Analysis of the evidence",: https://www.rba.gov.au/paymentsand-infrastructure/payments-system-regulation/past-regulatory-reviews/review-of-card-paymentsystems-reforms/pdf/review-0708-pre-conclusions/ cra-28042008-2.pdf.

[6] Iranzo, J., Fernández, P., Gustavo, M. and Delgado, M. (2012), "The effects of the mandatory decrease of interchange fees in Spain", MPRA Paper 43097, University Library of Munich: https://mpra.ub.uni-muenchen.de/43097/1/MPRA_paper_43097.pdf.

[7] Wang, Z. (2012), "Debit card interchange fee regulation: some assessments and considerations", *Economic Quarterly*, Vol. 98, No. 3, pp. 159–183.

[8] 123/13 of 19.5.2015 (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32015R0751).

Fourth, in order to conform to the principle of technological neutrality as defined in the Digital Agenda for Europe, there should no distinction in the rules regarding location (offline, online, or mobile).

Overall, the EU legislator made clear that the IFR is aimed at contributing to a secure, competitive and innovative payments environment for stakeholders and consumers.

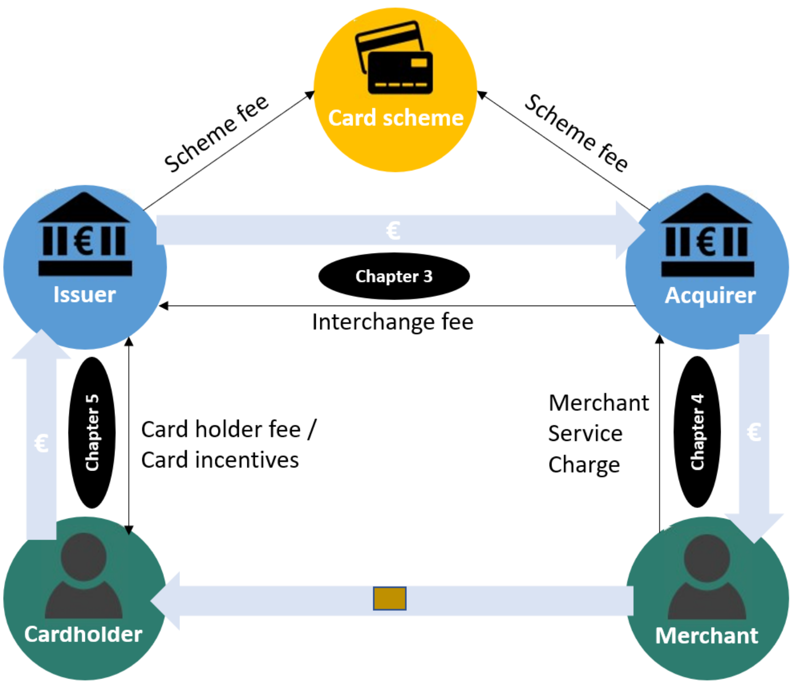
The remainder of this paper provides an overview of the four-party card schemes and related fees, in part 2. The assessment of the impact of the interchange fee cap is divided into three parts. Part 3 analyses of the impact of the cap on the interchange fee. Part 4 gives an analysis of the impact of the cap on the merchant service charges. Part 5 presents preliminary findings on the impact of the cap on cardholder fees. Part 6 draws the main policy conclusions and offers policy remarks.

2. Four-party card schemes

Most card payments in Europe are conducted through so-called four-party schemes. These schemes involve five important actors:

- **Cardholder** is a natural person that holds a debit or credit card with an issuer's card scheme.
- **Merchant** offers the cardholder the possibility to pay by card either through a point-of-sale terminal or an online/mobile interface. The merchant has a payment account with the acquirer.
- **Issuer** issues the card to the cardholder and issues and processes the transfer of money from the cardholder's payment account to the acquirer.
- **Acquirer** is responsible for accepting and processing the transfer of money to the merchant.
- **Card scheme** organises the four-party card scheme, including setting the scheme rules, practices, and standards, etc. The rules and practices are enforced by the issuer and acquirer, which are members or subscribers of the card scheme.

Figure 1. The four-party card scheme



Source: Authors' formulation based on European Commission (2016).[9]

[9] European Commission (2016), "Antitrust: Regulation on Interchange Fees", MEMO/16/2162: https://ec.europa.eu/commission/presscorner/detail/en/MEMO_16_2162.

For each payment of a cardholder for a good or service to a merchant, the issuer transfers money to the acquirer, who in turn transfers it to the merchant.

The card payment market is a two-sided market, which means that the card scheme must bring the consumer and merchant together for the payment transaction. In general, the consumer is likely to be more sensitive to changes in the price of payment transactions than the merchant. The consumer can choose from among various payment instruments when purchasing the good or service. Even when the consumer considers the card payment to be safer and more convenient, s/he is still unlikely to want to pay a surcharge for using the card because most alternatives, such as cash, carry no charge. The merchant, however, is more likely to accept a higher cost for card payments from large schemes, as without accepting such card payments and their related costs the merchant risks losing the sales transaction. This difference in price-sensitivity is also reflected in the allocation of the 'costs' of the transaction, which are skewed towards the merchant.[10] In practice, therefore, fees for card payments follow the opposite direction to the money flow.

The merchant pays the lion's share of the transaction costs in the form of a **merchant service charge (MSC)** to the acquirer. There are various models for the MSC; some charge a fixed fee per transaction, a percentage fee per transaction or fixed monthly fees for access to payment gateways.[11] Additionally, the merchant can be charged terminal fees (e.g. fees for rental, maintenance)[12] as well as activation and installation fees.[13]

The acquirer pays an **interchange fee** to the issuer. This interchange fee is usually a substantial part of the MSC. The interchange fee is set by the card scheme or can be agreed bilaterally between the issuer and acquirer. Most schemes have defined the interchange fee as a share of the transaction value. However, there are also national card schemes such as the Belgian Bancontact scheme that apply a fixed fee.[14]

In some cases, the cardholder receives a low financial compensation or loyalty rewards such as Air Miles from the issuer when spending on the card. However, in practice, most **cardholders do pay their share to the issuer via their annual fees** for the debit or credit card. This cost for card transactions can be included in the costs of a payment account package. In general, the cardholder does not need to pay a fee per transaction, with the exception of transactions in foreign currencies outside the EU for which cardholders may be charged transaction and

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[10] Rochet, J.-C. and Tirole, J. (2003), "An economic analysis of the determination of interchange fees in payment card systems", *Review of Network Economics* 2(2): 69–79.

[11] These fees are related to the use of an interface that connects a card processing service to a merchant's terminal or POS system.

[12] The rental charge of merchants for the chip and PIN machine.

[13] ECB (2014), "Card payments in Europe, a renewed focus on SEPA for cards":
https://www.ecb.europa.eu/pub/pdf/other/cardpaymineu_renfoconsepaforcards201404en.pdf.

[14] Jonker, Nicole (2016), "Regulating Interchange Fees for Card Payments", in *Transforming Payment Systems in Europe*, pp. 149-181.

currency exchange fees. In some countries, cardholders are charged for all transactions, account statements and billing information.[15]

The card schemes charge **scheme fees** to both the issuer and the acquirer for participation in the scheme. Additionally, the processing entities (traditionally part of the card scheme) will also charge for clearing and settling the transactions between issuer and acquirer.

In the past, some merchants charged consumers extra for the use of cards, especially for transactions of low value. However, following the introduction of the Payments Services Directive (PSD2) in 2018, merchants are no longer allowed to apply these so-called **surcharges** on card payments for which the interchange fee is regulated.

For three-party schemes, the rules are slightly different given that in this case the schemes combine the role of card scheme, issuer and acquirer. These three-party card schemes therefore do not have an interchange fee and are exempted from the IFR in some respects. However, they are subject to the IFR for those elements of the scheme that are similar to four-party schemes e.g. when they work with licensees for the issuing and/or acquiring of card-based payment instruments. This concerned about 9% of the American Express cards issued in the EU and all Diners Club cards before the introduction of the IFR.[16]

In the following, we assess the various impacts of the IFR on the main relations within the four-party schemes. First, the impact on the relation between the issuer and acquirer. Second, the relation between the acquirer and the merchant. Third, the relation between the issuer and the cardholder.

[15] ECB (2014), "Card Payments in Europe – A Renewed Focus on SEPA for Cards": https://www.ecb.europa.eu/pub/pdf/other/cardpaymineu_renfoconsepaforcards201404en.pdf.

[16] European Commission (2013), "Payment Services Directive and Interchange fees Regulation: frequently asked questions", MEMO/13/719: http://europa.eu/rapid/press-release_MEMO-13-719_en.htm?locale=en.

Box 1. Overview of main antitrust cases on European interchange fees

The revenue model of four-party card schemes has been under the scrutiny of the competition authorities at both national and EU level. There are several landmarked cases in the EU that have informed the IFR.

MasterCard I (2007-09)

The European Commission decision of 19 December 2007[17] prohibited Multilateral Interchange Fees (MIFs) for cross-border payments made with MasterCard and Maestro cards within the EEA. The Commission argued that the MIFs limit competition for merchants. The collectively agreed MIFs function as a minimum tariff for merchants. The Commission did not agree with MasterCard that the MIFs were efficient in encouraging both issuing banks to promote card payments with consumers and to motivate merchants to accept them. Instead, the Commission and later the EU General Court ruled in the first appeal in May 2012 that the MIFs are not strictly necessary in four-party schemes as they could also operate the card scheme profitably through non-MIFs fees (card issuance, annual fees, interests, etc.). To comply with the European Commission decision, in 2009 MasterCard reduced the cross-border consumer MIFs to 0.2% (for debit cards) and 0.3% (for credit cards). They did, however, increase the scheme fees.[18]

Mastercard II (2015-19)

In early 2019, the European Commission fined Mastercard €571 million for obstructing merchants' access to cross-border card payment services. More specifically, the scheme rules obliged acquiring banks to apply the MIF of the country where the retailer was located. This was important as prior to the IFR there were large domestic differences in MIFs, from which merchants could not benefit due to the scheme rules. The fine followed a formal antitrust investigation initiated in April 2013,[19] with a Statement of Objections issued in July 2015. In the latter the Commission also raised objections about the higher interchange fees on payments inside the EEA with cards issued outside the EEA, in combination with the obligation for merchants to accept all cards in the card scheme.[20]

Antitrust investigation against Visa Europe, Visa Inc. and Visa International Services Association (2000-19)

After initial objections to certain Visa MIFs in 2000, the European Commission decided in July 2002 that the Visa cross-border consumer MIFs within the EEA fulfilled the conditions for exemption.

[17] European Commission (2007), Commission decision related to a proceeding under Article 81 of the EC Treaty and Article 53 of the EEA Agreement: http://ec.europa.eu/competition/antitrust/cases/dec_docs/34579/34579_1889_2.pdf.

[18] ECB (2014), Card payments in Europe, a renewed focus on SEPA for cards, https://www.ecb.europa.eu/pub/pdf/other/cardpaymineu_renfoconsepaforcards201404en.pdf.

[19] European Commission (2019), "Antitrust: Commission fines Mastercard €570 million for obstructing merchants' access to cross-border card payment services": https://ec.europa.eu/commission/presscorner/detail/en/IP_19_582

[20] ECB (2014), "Card payments in Europe, a renewed focus on SEPA for cards", https://www.ecb.europa.eu/pub/pdf/other/cardpaymineu_renfoconsepaforcards201404en.pdf.

Following expiry of this exemption, and in line with the MasterCard decision of 2007, the Commission opened an antitrust investigation into the various Visa companies.

The Statement of Objections issued in April 2009 covered all the consumer MIFs directly set by Visa Europe, including both domestic and cross-border transactions in the EEA. It also raised concerns about the MIFs on cross-border transactions involving non-EEA issued cards.

In response, Visa Europe committed to reducing the maximum weighted average MIF for consumer debit cards for cross-border transactions and national transactions to 0.20%. Moreover, Visa gradually reduced their MIFs for deferred debit and credit card transactions from 1.1% to 0.7% in 2007, with a 0.28% flat-rate MIF applied to debit card transactions. The commitments were made binding on Visa Europe in December 2010 for a period of four years. Moreover, the MIF was capped at 0.2% for certain debit card payments within the EEA, and Visa members were allowed to reveal certain information about the MIF to merchants.[21] In 2019, both Visa and Mastercard committed to reducing their MIFs for payments with cards issued outside the EEA in the EEA.[22]

[21] ECB (2014), ibid.

[22] European Commission (2019), "Antitrust: Commission accepts commitments by Mastercard and Visa to cut inter-regional interchange fees": https://ec.europa.eu/commission/presscorner/detail/en/IP_19_2311

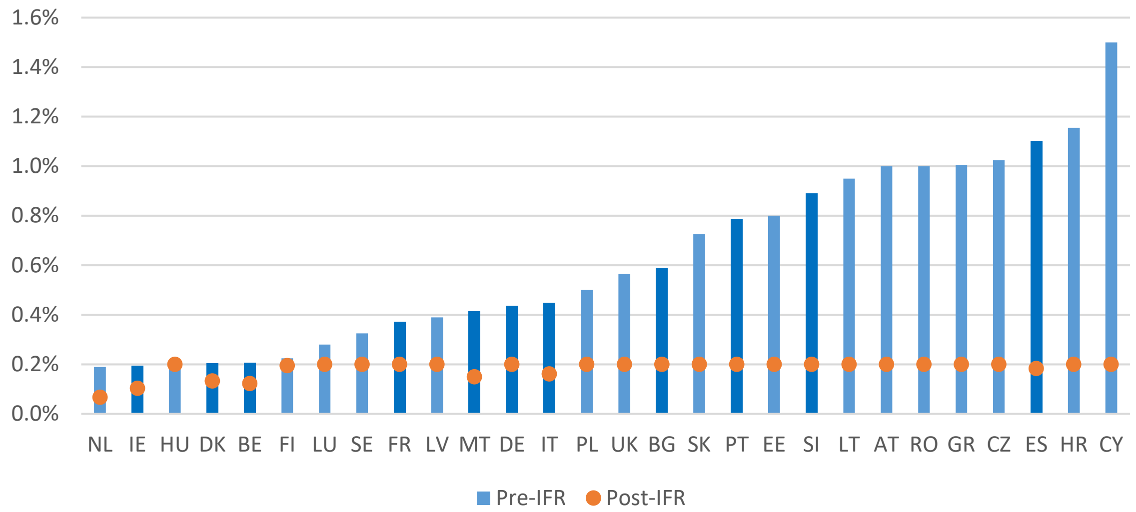
3. Impact of IFR on interchange fees

The main feature of IFR was the introduction of a cap on interchange fees as of December 2015. In particular, the interchange fee caps on debit card transitions were set at 0.20% of the transaction value and at 0.30% on credit card transactions.[23] The cap applies to both the national and international four-party card schemes. The direct expected impact of the IFR would be a reduction of the interchange fee below the maximum level.

The expectation of the European Commission before the introduction of the IFR was that it would lead to a reduction in the revenues of issuers, for which they might be partially compensated by an increase in transactions. This assumes that the reduction of interchange fees is passed on to the merchants in the form of lower MSCs, encouraging merchants to steer customers towards card payments.[24]

Looking at the evolution of interchange fees, we observe that the average fee in the year preceding the introduction of the cap ranged from between 0.19% in the Netherlands and 1.50% in Cyprus. Similarly, the interchange fees for payments with credit cards ranged from between 0.30% in Hungary and 1.64% in Germany. The differences are largely due to national circumstances (national card schemes, regulations, historical agreements, etc.).

Figure 2. Debit card interchange fees pre- and post-introduction of the IFR



Notes: The figure above shows the debit card interchange fees across EU member states before the introduction of the IFR (2014 or closest publicly available) in 2015 and after the introduction (2016 or closest publicly available). When the interchange fees are defined in absolute terms, they have been translated into percentages based on the average transaction values. The average amounts are based on the simple average of the Mastercard, Visa and national card schemes (if applicable and available). The countries with national card schemes are shown in dark blue.
Source: Author's computations based on data published by the ECB, European Commission, NBP, Visa, Mastercard and national card schemes.

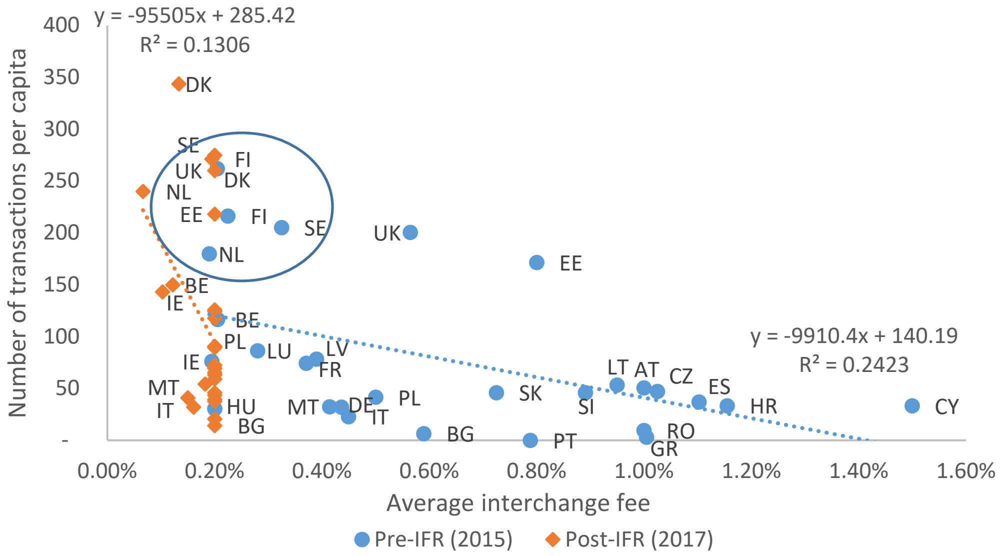
[23] European Commission (2015), "Regulation (EU) 2015/751 of the European Parliament and of the Council of 29 April 2015 on interchange fees for card-based payment transactions", https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32015R0751.

[24] European Commission (2015), "Survey on merchants' costs of processing cash and card payments", http://ec.europa.eu/competition/sectors/financial_services/dgcomp_final_report_en.pdf

Following the introduction of the IFR, the interchange fees in all EU member states decreased, except for Hungary where the interchange fees remained at the same level. The drop ranged from between 0% in Hungary to 87% in Cyprus. This means in practice that most member states have interchange fees at the maximum level allowed under the IFR. However, there are at least seven EU countries with lower than average interchange fees (i.e. Belgium, Denmark, Ireland, Italy, Malta, the Netherlands and Spain). Interchange fees are mostly set below the maximum, especially in member states with national card schemes. Not all national card schemes' interchange fees are publicly available, which might mean that there are more member states that charge lower or higher interchange fees.

In practice, the drop-in revenues due to lower interchange fees were at least partially compensated by an increase in transactions. Part of the increase might have been due to the IFR, although the evidence is not convincing. The growth in the number and value of debit and credit cards at EU level following the entry into force of the IFR is not noticeably higher than in the years preceding the introduction and there is only a low correlation between the drop in average interchange fees and the increase in card transactions.

Figure 3. Debit card transactions per capita pre- and post IFR entry into force



Source: Author's formulation based on data published by the ECB, European Commission, NBP, Visa, Mastercard and national card schemes.

Looking at the absolute number of card transactions, there seems to be a negative relation between debit card payments and the interchange fee (see Figure 3). Indeed, the higher the average interchange fees the lower the number of debit card transactions per capita. However, the link between the number of card payments and the level of interchange fee only seems evident for a small group of countries (Denmark, Finland, the Netherlands, and Sweden). This means that there are other important factors that play a role in the development of card payments (availability of cash, availability and convenience of cards, the growth of contactless, the importance of other cashless payment methods, and the time period for which the lower interchange fees have been in place, etc.).

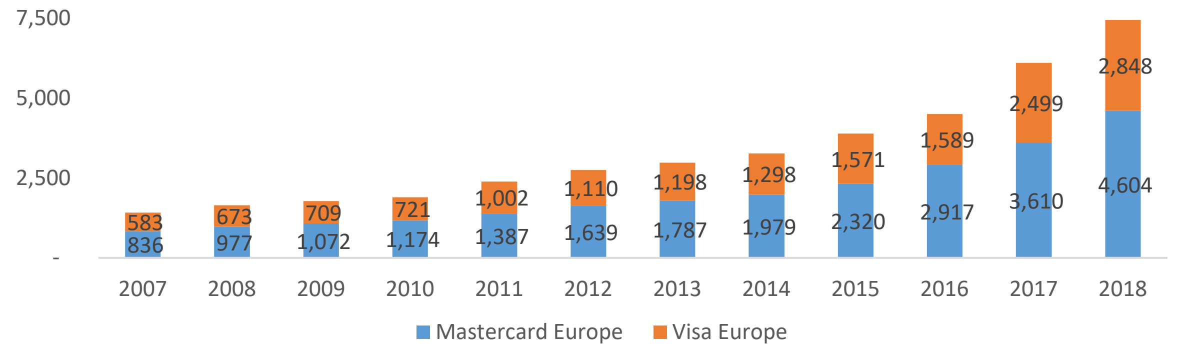
In the flowing sections two potential explanations for the lack of a clear link between the number of card payments and the level of interchange fees are explored. More specifically, whether the reduction of the interchange fees is effectively passed on to merchants; whether they are steering consumers more towards cards; and whether costs for holding cards have changed.

Box 2. Growing importance of international card schemes

Since the introduction of the IFR, international four-party card schemes (Visa and Mastercard) have increased their market share at the expense of national card schemes. In the past, international four-party card schemes were primarily active in cross-border payments, which usually only forms a small part of the cards sector. Since the introduction of the IFR, international four-party card schemes have gained importance with a larger share of the national card transactions. Their share of total card transactions in the EU surged to 67.5% at the end of 2016.[25] [26]

Four reasons explain the growing importance of international four-party card schemes. First, the international four-party card schemes are generally frontrunners in the implementation of new payment solutions such as online and contactless payments. Second, some new banks (e.g. Monzo, N26) offer internationally accepted cards cross-border. Third, customer preference and legal capacity for a single payment card for domestic and international payments contributes to the increase in co-badging and cards with internationally active card schemes. Fourth, the reduction of interchange fees under the IFR reduced the price gap between the international and domestic schemes, which makes it more attractive for merchants to accept those and caused some national four-party card schemes to decide to cease their activities.[27]

Figure 4. Revenues of international card schemes (EUR million)



Source: Author's computations based on data published by the ECB, European Commission, NBP, Visa, Mastercard and national card schemes.

[25] ECB (2019), "Card payments in Europe – current landscape and future prospects: a Eurosystem perspective": https://www.ecb.europa.eu/pub/pubbydate/2019/html/ecb.cardpaymentsineu_currentlandscapeandfutureprospects201904~30d4de2fc4.en.html.

[26] According to figures from RBR London, the combined market share of Visa and Mastercard in Europe (EU28 excl. LU, MT and CY and including NO, CH, RU, TR, UA and KZ) increased from 85.5% in 2014 to 89% in 2016. http://www.paymentscardsandmobile.com/MasterCard-and-visa-continue-to-grow-share-of-the-europeancards-market

[27] ECB (2019), ibid.

The increasing importance of the international four-party card schemes is also reflected in the growth of their revenues. The card scheme revenues of Mastercard Europe and Visa Europe increased nearly five-fold between 2008 and 2018, from €1.7 billion to €7.5 billion. A large part of this increase coincided with the introduction of the IFR. However, for the most part, it seems that the IFR impacted the revenues of the international four-party card schemes indirectly. The operational margin of the international four-party card schemes has increased from around 12% in 2007 to 33% in 2013, since then the margin has been quite stable, ranging between 23% and 35%.

Card scheme revenues mainly depend on the number of international transactions, which have increased significantly in recent years. Moreover, the revenues of Visa Europe, especially, increased considerably. With the acquisition of Visa Europe by Visa Inc, it has become a profit-maximising organisation, which is reflected in fees that have been aligned with the higher fees of Visa Inc.[28] However, it is difficult to assess the development of the scheme's fees as these are not made public.[29]

[28] Godwin, C. (2017), "Your Merchant Service Charge (MSC) is changing – here's why:" https://cmspi.com/eur/blogs/mscbreakdown/

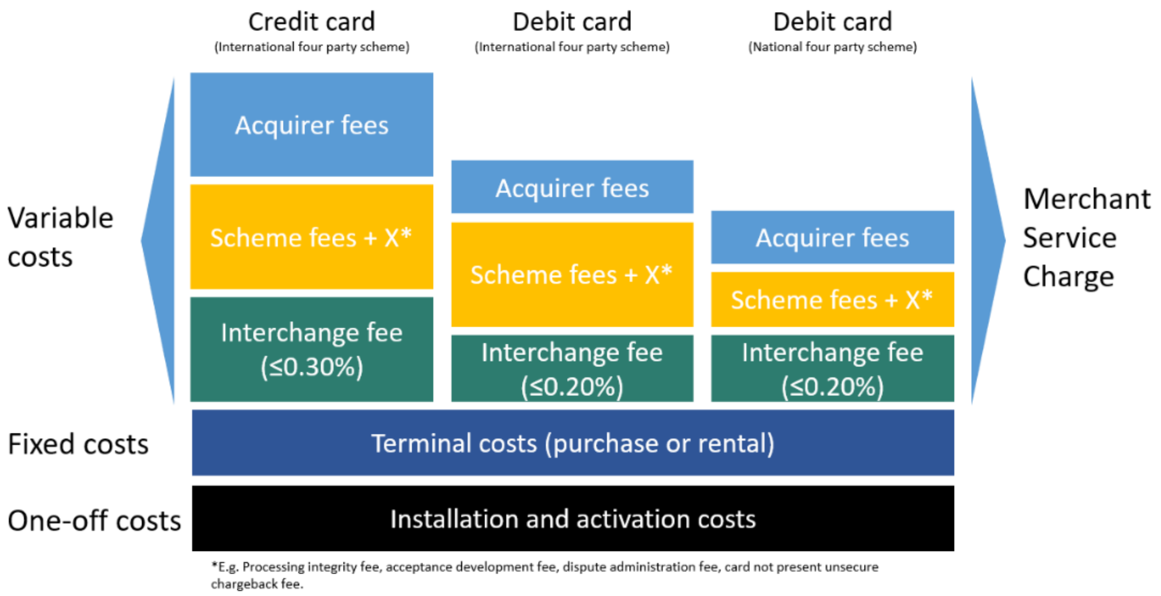
[29] FOD Economie (2019), "De werking van de markt van de elektronische betalingen in België – mei 2019": https://economie.fgov.be/nl/publicaties/de-werking-van-de-markt-van-de

4. Impact of IFR on Merchant Service Charge

In theory, the introduction of a cap on interchange fees leads to a potential rebalancing of the fees from merchants to cardholders and/or a potential overall reduction of the fees. Indeed, as a two-sided market the interchange fee for schemes with a high market share is likely to be inflated and the transaction costs are likely to be skewed towards the least price-elastic party – the merchant in the case of four-party card schemes.

In such four-party schemes, the interchange fees are typically passed on to the merchant as part of the Merchant Service Charges (MSCs), which is the payment by the merchant to the acquirer for the execution of card payments. The MSC typically consists of three components: i) interchange fee for the issuer from the acquirer; ii) fees for the card scheme that manages the four-party card scheme on which the acquirer operates; and iii) fees for the acquirer. The latter covers the operational costs and margin of the acquirer.[30] According to the impact assessment of the European Commission, prior to the adoption of the IFR, interchange fees accounted for about 70% of the MSC.[31]

Figure 5. Key components of the merchant costs



Note: The Merchant Service Charge is subject to negotiation, depends on volume/value of transactions and type of merchant. Moreover, additional fees (account and transaction fees, return and risk assessments, foreign exchange fees, etc.) may apply depending on the private contract with the acquiring bank.
Source: Author's formulation based on ECB (2019).[32]

[30] FOD Economie (2019), ibid.

[31] The impact assessment conducted by the European Commission on the proposal for a regulation on interchange fees for card-based payment transactions states on page 122 that MIFs make up approximately 70% of MSC. See: European Commission (2013), "Commission Staff Working Document – Impact Assessment," SWD(2013) 288 final, http://ec.europa.eu/internal_market/payments/docs/framework/130724_impact-assessment-fulltext_en.pdf.

[32] ECB (2019), ibid.

The reduction of the interchange fees should in principle lead to a reduction of the MSCs. The MSCs can take various forms. Most merchants pay an agreed amount per transaction, but there are alternative fee structures for merchants. The merchant can be charged additional fees for the rental or purchase of payment terminals as well as for the installation and activation of the terminal.[33]

4.1 Past experiences with interchange fee caps

Evidence on the regulation of the interchange fees in some jurisdictions shows a differentiated impact on MSC.

In Australia the regulator measured a significant decrease in the MSCs once the regulation of interchange fees entered into force in January 2003. The decrease of the MSCs was largely in line with the drop in interchange fees. In parallel, they measured some increases in the terminal fees and fees related to transactions (paper, charge-backs).[34]

In the United States the impact on the MSCs was more mixed. Unlike the Australian reforms, the Durbin Amendment in the US only targets the interchange fees charged for debit card transactions by financial institutions with more than USD 10 billion (€9 billion) in assets. For those institutions, the interchange fee reduced by about half in October 2011. Based on a survey among merchants two years after the introduction by the Federal Reserve Bank of Richmond and Javelin Strategy & Research, the impact on the acceptance costs is limited and unequal. More specifically, about two-thirds of the surveyed merchants did not report any or know about any change to the debit card transactions. Additionally, about a quarter of the merchants even reported an increase in transaction costs, while only the remaining tenth of merchants witnessed a decrease in charges. The survey does not provide explanations for the mixed impact.[35]

In Spain there was a series of regulatory interventions to reduce interchange fees through regulatory incremental interventions. In 2002 and between 2005 and 2009, the interchange fees were reduced based on agreements between the Spanish government and the national card schemes. The imposed interchange fee reductions based on the agreements with the government were complemented with decreases initiated by the card schemes. Based on data from 45 Spanish issuing and acquiring banks for the period between 1997 and 2007, Valverde et al. (2016) find that the reduction of interchange fees had a positive impact on merchant acceptance, yet did not lead to a reduction in the number of cards in circulation, despite higher cardholder fees. Moreover, the increase in transactions more than offset the loss in revenues due to the reduction in interchange fees. In their assessment Valverde et al. did not distinguish

[33] FOD Economie (2019), ibid.

[34] Reserve Bank of Australia (2005), Payments System Board Annual Report, 2004.

[35] Wang, Z., Schwartz, S., and Mitchell, N. (2014),"'The Impact of the Durbin Amendment on Merchants: A Survey Study", *Economic Quarterly*, Federal Reserve Bank of Richmond.

between interchange fee reductions related to government intervention and industry initiatives, which might have affected the findings.[36]

4.2 Experiences with IFR: Belgium and Italy

Turning to the IFR, according to a market consultation conducted by the ECB, the impact on the MSCs is mixed.[37] The impact of the IFR is also difficult to assess as the banking systems and circumstances differ greatly across countries (market concentration, card penetration, presence of a national card scheme, alternative e-payments, scale advantages, etc.).

This section discusses the main findings from studies on the impact of the IFR on MSCs in Belgium and Italy. These studies give some information about the impact of the IFR, but more information on other EU member states would be required for a fuller understanding of the impact of the IFR on MSCs.

4.2.1 Belgium

Besides having the international four-party card schemes Visa and Mastercard, Belgium also has a domestic card scheme entitled 'Bancontact'. Belgian banks have already indicated that they would prefer to cease Bancontact and replace it with an international four-party card scheme, but merchants have rejected this idea for fear it might increase their costs. Hence, the interchange fee of Bancontact is set at 0.20% with a maximum of €0.05 per transaction (0.10% on average), which corresponds to about half the amount international four-party card schemes charge in most other EU member states. Moreover, until 2012 the transactions of Bancontact were exclusively processed by Worldline, however as of 2018 there are 16 more parties with a licence to process Bancontact payment transactions.

The Belgian Ministry of Economic Affairs has assessed the impact of the IFR based on information from three acquirers for 2015 (pre-IFR) and 2019 (post-IFR) .[38] The three acquirers had different fee structures; blended, interchange++ and payment package. When the acquirer charges a blended fee, the merchant pays a fixed transaction cost for a particular card scheme, notwithstanding the brand, country of issuance (EEA vs non-EEA), type of card (consumer vs commercial) and card acceptance. The interchange++ sets a fixed acquirer fee per transaction plus variable interchange and scheme fees that are determined by the card schemes. The payment packages require either a periodic subscription fee from the merchant for which it can accept a fixed number of card transactions or a fixed subscription plus an additional fee per transaction.

Looking at the price of the acceptance of card payments before and after the introduction of the IFR, the MSCs have decreased for most of the merchants and the interchange fees for

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[36] Carbó Valverde, S., Chakravorti, S., and Rodríguez Fernández, F. (2016),"'The Role of interchange Fees in Two-Sided Markets: An Empirical Investigation on Payment Cards", *The Review of Economics and Statistics.*

[37] ECB (2019), ibid.

[38] FOD Economie (2019), ibid.

Bancontact transactions reduced slightly (from €0.056 to maximum €0.05). The international four-party card schemes reduced their interchange fees by about half to maximum €0.056. The MSCs decreased for all merchant profiles and nearly all price structures. The granularity of the data did not allow us to assess the extent to which the reduction in the interchange fee was translated into lower MSCs. The change in MSCs for the different profiles and price structures ranged between -48% and +10%. On average, the MSCs decreased by 11% between 2015 and 2019.

The assessment was complicated by a lack of detail in the pricing, which did not allow a differentiation between the interchange fee, scheme fees and acquirer fees, no standard transaction or a change in fee structures. For example, the acquirer offering packages increased the price of its packages substantially in 2016, but with the higher charge they also changed the packages by including a number of free transactions and a reduction in the charges per transaction. Moreover, the acquirer offering interchange++ could not provide the costs for the period before the introduction of the IFR, as the costs were only available on request. Regarding the latter, the Ministry received a complaint from a merchant that they carry the risk of transaction costs as the interchange fees for unregulated international transactions are hard to predict. This is one of the reasons that an increasing share of merchants are switching to a blended structure, which requires the acquirer to incorporate the risk of the interchange as well as scheme fees.

4.2.2 Italy

The Bank of Italy also assessed the impact of the IFR on the MSCs charged by about 400 acquirers (banks and non-banks).[39] The interchange fee prior to the introduction of the IFR in 2015 was estimated to be 0.5% and accounted for the largest share of the MSC fees of around 0.8%. After the introduction of the IFR the interchange fee dropped about 0.2% to 0.3% on average, while the MSC dropped about 0.17% in 2016 and 2017 to 0.63%. This means that the reduction of the MSC is broadly in line with the decrease of the interchange fee. Moreover, the acceptance of card payments measured in terms of number of transactions per POS terminal increased substantially after the introduction of the IFR, from about a 5% increase per year between 2013 and 2015 before the introduction of the IFR, to 10% and more in the years just after its introduction in 2016 and 2017.

Looking at the EU-level, the number of transactions per terminal increased slightly after the introduction of the IFR, but not more than in the year preceding the introduction (i.e. 6.9% increase in 2015 compared to 5.5% in 2016). The number of terminals also increased significantly after the introduction of the IFR (i.e. a 6.8% increase in 2015 and 9.4%, 9.5% and 12.3% in 2016, 2017 and 2018, respectively).

[39] Ardizzi, G. and M. Savini Zangrandi (2018), "The impact of the interchange fee regulation on merchants: evidence from Italy", Bank of Italy Occasional Papers: https://www.bancaditalia.it/pubblicazioni/qef/2018-0434/QEF_434_18.pdf

Importantly, both Belgium and Italy have national card schemes that generally have lower scheme fees. It is known that some of the fees charged by international four-party card schemes have increased significantly in recent years, which might partially or completely have offset the decrease of the interchange fees due to the IFR (see Box 2).

5. Impact of IFR on cardholder fees

Issuers might want to compensate for the lower interchange fees by increasing other fees or reducing costs. For example, they might increase the cardholder fees or reduce the rewards and other benefits for cardholders.

The evidence of the regulation of interchange fees in various other jurisdictions before the IFR was introduced in the EU showed a clear impact on cardholder fees and benefit schemes.

In Australia, most of the credit card issuing banks changed their offerings in response to the implementation of the regulation of interchange fees in January 2003. The issuers both increased the annual and other fees and reduced or capped the rewards that can be earned. Moreover, many banks also issued new cards that offset the lower rewards and higher fees with lower interest rates.[40]

In the US, the impact of the interchange fee regulation implemented in October 2011 was broadly similar to that observed in Australia. In the US the larger banks covered by the regulations changed the terms of the accounts, increasing the prices for accountholders and reducing the number of accounts without monthly subscription fees. The increases in the fees for these accounts were large enough to offset the lost revenues from the reduction of the interchange fees for debit cards.[41]

In Spain, a series of interventions to reduce the interchange fees between 2002 and 2009 also led to an increase in fees for cardholders. Interestingly, Valverde et al. (2016) find that despite this increase in cardholder fees, the number of issued credit cards is not affected. They give two potential reasons for this effect. First, the credit cardholders might be fairly insensitive to the increase in annual fees. Second, the credit cardholders are more willing to accept higher card fees when the card is more widely accepted.[42]

There are currently no systematic statistics available on the evolution of the cardholder fees and benefits covering all EU member states around the time the IFR was introduced. Moreover, it is unclear to what extent the cardholder fee increases are related to the IFR or due to other developments. However, there are various analyses at national level indicating that the fees for cardholder payment packages have increased. These analyses often relate the increases to other coinciding events such as new digital applications and the low interest rate environment.

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[40] Reserve Bank of Australia (2004), Payments System Board Annual Report – 2004.

[41] Manuszak, M.D., and K. Wozniak (2017), "The Impact of Price Controls in Two-sided Markets: Evidence from US Debit Card Interchange Fee Regulation", Finance and Economics Discussion Series 2017-074. Washington: Board of Governors of the Federal Reserve System: https://www.federalreserve.gov/econres/feds/files/2017074pap.pdf

[42] Carbó Valverde, S., Chakravorti, S., and Rodríguez Fernández, F. (2016), "The Role of interchange Fees in Two-Sided Markets: An Empirical Investigation on Payment Cards", *The Review of Economics and Statistics*.

In Belgium the majority of current accounts also increased in price between January 2016 and January 2018, except for the electronic current accounts with a credit card in 2016.[43]

In Italy the price of current accounts increased substantially after years of decline. More specifically, between 2011 and 2015 the average costs of current accounts decreased from just over €90 per year to €76.5 per year. In the subsequent years the current account costs increased to €86.9 in 2019 (+13.6%).[44]

In the Netherlands, the price of a current account increased between 2015 and 2019 for all Dutch banks, except for one online bank that kept the fee at the same level.[45]

[43] FOD Economie (2019), ibid.

[44] Ardizzi, G. and M. Savini Zangrandi (2018), ibid.

[45] MoneyView (2019), Betalingsverkeer, SpecialItem: https://www.infinance.nl/wp-content/uploads/2019/07/SI-108_Betalen_07-2019-1.pdf

6. Conclusions and policy recommendations

Four-party card schemes continue to be important payment instruments and have further increased their dominance in recent years. On the one hand, merchants feel the need to accept card payments to avoid losing business, on the other hand it is becoming more attractive for consumers to use cards for retail payments. The increasing reliance on cards for payments enhanced the market power of the middleman, i.e. national and international four-party card schemes. This allowed the card schemes to set their interchange fees above the economically efficient level.

In 2015, IFR introduced a cap on the interchange fees for consumer debit and credit cards within the EEA. This was complemented by other measures avoiding circumvention and enhancing the competitiveness of the cards sector, i.e. rules on co-badging, honour all cards, transaction processing, etc.

Data shows that after the introduction of the IFR, interchange fees in nearly all member states have decreased. In most member states the new interchange fees have been set at the maximum level as defined in the IFR, which led to a reduction in the interchange fees of up to 87%. There are at least seven member states with average fees below the maximum defined in the regulation. These are primarily those with national card schemes, which in most cases have lower interchange fees than the international four-party card schemes.

The reduction in interchange fees, when applied to all acquirers, in principle leads to a reduction in fees for merchants. Based on the limited information available on the impact of the IFR on MSCs in two member states, merchant service charges have decreased since the introduction of the IFR.

However, the comparison of MSCs over time is not straightforward as there are several price structures that are not easy to compare for merchants. Some of the price structures (i.e. interchange++) do not allow the merchant to know the costs related to the transaction (i.e. interchange fees depend on several factors including the card schemes, country of issuance, type of card, etc.). Additionally, the reduction of interchange fees in other member states may have been offset by an increase in the scheme fees of the international four-party card schemes.

Evidence from three EU member states as well as other jurisdictions shows that customers are likely to face higher annual costs for their cards and lower benefits because of the interchange fee regulations. This might have somewhat offset issuers' losses from lower interchange fees.

The currently available public information does not allow us to provide a comprehensive assessment of the IFR. Nevertheless, there are some **preliminary policy recommendations** that can be drawn.

First, the continuing assessment of the impact of the IFR is recommended as the currently available public information is insufficient to draw firm conclusions about the effect of the various elements of the IFR.

Second, a potential revision of the IFR should promote more transparency regarding the interchange fees charged by national card schemes, scheme fees, and card acceptance fees, to allow smaller merchants, in particular, to make better comparisons and switch between acquirers.

Third, a close monitoring of developments in the retail payments sector is recommended. The growing importance for the economy and dynamic shifts in the payments sector are likely to change both the market structure (e.g. importance of different card schemes and alternatives) and practices (co-badging, cross-border acceptance of national schemes, mutual recognition of national schemes, surcharging, etc.), which might also change the policy problems.

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