



Europe Economics

# The Economic Impact of Interchange Fee Regulation

*United Kingdom*

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# Executive Summary

The Commission has proposed to regulate the interchange fee rate, by which issuing banks are compensated for the costs and risks that are entailed in enabling transactions using payment cards. The Parliament has supported these proposals and extended them by voting to include commercial cards and separate cards schemes and transaction processing, changes that could prove particularly disruptive.

The proposal is based on a flawed understanding of the market, in which “reverse competition” constitutes a barrier to effective competition. It fails to consider other sources of competitive pressure in the market, which place downward pressure on prices and costs.

Similar regulations have been implemented elsewhere – in Spain, Australia and the United States – and have been associated with reduced revenue for banks; reduced costs for large retailers; and an overall increase in costs for consumers as banks pass on increased costs at a higher rate than retailers pass on savings (there is no evidence of savings being passed on so far).

If the results are similar in the UK, then we might expect the following consequences:

- Banks will see a total reduction in IF revenue of around €1bn, which they will recover from consumers through other charges.
- Retailers will see a reduction in MSCs of around €950m, accruing mostly or even entirely to large retailers.
- Consumers will see an increase in bank fees of around €1bn, or around €14 for each credit and debit card carrying customer, and they will not see a reduction in prices.

As a result of the increase in costs for consumers and the fall in profitability for issuing banks, the penetration of electronic payments might then decline – particularly among marginal consumers – and that would create a range of wider impacts:

- an increase in financial instability due to lower revenues for issuing banks;
- problems for the financing of the self-employed and micro-enterprises;
- uncertainty in monetary policy;
- problems for the implementation of the Universal Credit; and
- a deterioration in competitive conditions within the card sector and reduced incentives for issuers to innovate for bank cards.

In light of those problems, the UK and other EU Member States should further scrutinise the case for interchange fee regulation, or at least insist on proper justification for the more radical measures such as including commercial cards – which could increase costs for SMEs alone by over €150m – and separating card schemes and transaction processing.

# 1 Introduction

This research has been commissioned by Mastercard, who have asked Europe Economics to consider the lessons that can be drawn, for the regulation of Interchange Fee (IF) rates in the European Union, from similar regulation introduced in the past in particular countries within and outside Europe.

The European Union has proposed to regulate IF rates. They believe that competition between card schemes to attract issuing banks leads to ever higher IFs, and therefore, higher Merchant Service Charges (MSCs), which are passed on to customers by retailers. They claim that intervention will mean that consumers and small shops receive a fairer and more favourable deal.

In this research we will assess the extent to which that problem exists; the extent to which regulation is justified and the likely consequences if proposals to regulate IF rates go ahead.

We identify a number of broad errors in the Commission's conception of the market. There are a range of competitive downward pressures on prices and costs. Even to the extent that its diagnosis is correct, however, the Commission's prescription is inappropriate and might exacerbate the perceived problem. Lower interchange fees might impede entry by new schemes and create the problem which the Commission purports to address.

Several countries – Spain, Australia and the United States – have practical experience of the results of the regulation of IF rates. There is little evidence that the savings merchants made have been passed on to consumers. Consumers are paying more for banking services and the beneficiaries are larger retailers. If that experience is replicated when similar regulation is introduced across the EU, then it could mean higher prices for a range of services which many have up to now expected to receive for free.

In this report we will first explain in more detail the role of interchange fees in the context of a four party card scheme and the role of electronic payments. It is important to understand the function of IF in order to assess the likely effects of limiting the rate.

We will then consider the rationale for intervention outlined by the Commission and its limitations. We will examine a number of specific points and assess the likely impacts of a range of different options considered by the Commission.

Next we will consider past experience in those countries that have enacted IF regulation. There does not appear to be evidence reductions in IF rates have been passed on to consumers, but they have been passed on to merchants (especially larger shops) in the form of a lower MSC. In order to recover that lost revenue, banks appear to have put in place a wide range of higher charges or new charges upon consumers. We quantify the implications for banks, retailers and consumers if the regulation of those charges were to create similar results in the UK.

After that we consider other potential impacts. There are a range of other priorities which might be affected by IF regulation, tampering with the operation of a four party payment system. We consider some of those potential impacts.

Finally we consider the potential impact of separating card schemes and processing. This proposal has been added relatively late and was not subject to normal impact assessment. It therefore warrants further scrutiny. We particularly consider the rationale for action and the precedent for respecting the benefits, as well as the costs, associated with vertical integration.

Our view is that there could be considerable costs for consumers associated with interchange fee regulations, significant savings for retailers which – based on past experience – may not be passed on, and

that late additions to the regulations which have not been fully considered, particularly the separation of schemes and card processing, may create considerable further disruption.

## 2 Interchange fees and the Four Party System

In this section, we describe the structure of payment card networks and analyse the role of interchange fees in this structure.

### 2.1 The Role of Digital Money

The increased use of digital money in the place of cash has been of significant benefit to society. The advantages of digital money include:

- greater efficiency since they are generally a cheaper and faster payment method than cash;
- greater convenience, speed and security than cash; and
- increased transparency, through recorded transactions which help to prevent fraud and tax evasion, and thus counteract the effect of the underground economy.

While consumers enjoy the convenience of widely accepted debit cards that provide easy access to their deposit accounts and obviate the use of cash, credit cards also have a number of advantages to cardholders and retailers (sometimes referred to hereafter as “merchants”). Credit cards, once authorised, offer revolving credit to card holders, enhancing the retail experience for consumers by combining ease of payments with increased consumer purchasing power. Further, credit card users often enjoy insurance against faulty goods and non-fulfilment of services by merchants (as in travel and hotel bookings). There is also limited liability to the credit card account holders which is protection against fraudulent access to card holder funds.

Likewise, there are considerable advantages to merchants for accepting credit card payments and to credit card issuers. The latter include increased revenues from sale of goods on credit without incurring the full credit risk from card users who may default on repayments, see Zywicki (2010). Credit card issuers are known to expend large sums of money to attract and retain consumers, as this opens the door to other revenue streams. Interest rate revenues accrue to issuing banks on outstanding credit card balances that debit card users do not provide.

### 2.2 Card Payments in the UK

The UK has the highest penetration of electronic payments in Europe. It ranks the highest in the total number of cards held by its citizens. UK card holders are responsible for around 75 per cent of credit card spending in Western Europe and around 30 per cent of card spending.<sup>1</sup> There are around 96 million debit cards in circulation in the UK and around 75 million credit cards. Between 2001 and 2011, the number of consumer debit cards in circulation increased by 60 per cent. At the same time, during the same period, the volume of purchases paid for with a debit card has increased by around 300 per cent.<sup>2</sup> 77 per cent of all UK purchases are accounted by debit cards.

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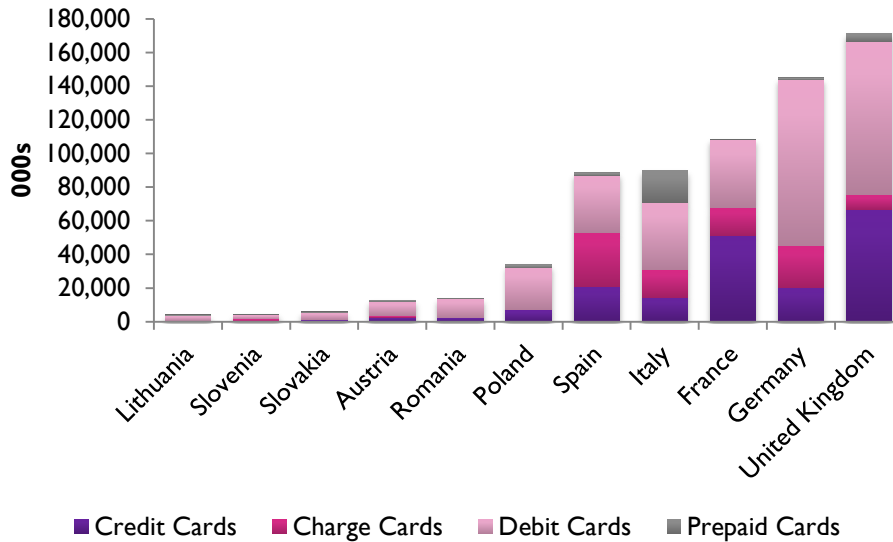
<sup>1</sup> Datamonitor (2004) “Western European Cards and Payments Databook 2004”; Datamonitor (2008) “European Consumer Credit 2007: Market Data and Forecasts”

<sup>2</sup> OECD (2012) “Policy Roundtables: Competition and Payment Systems”



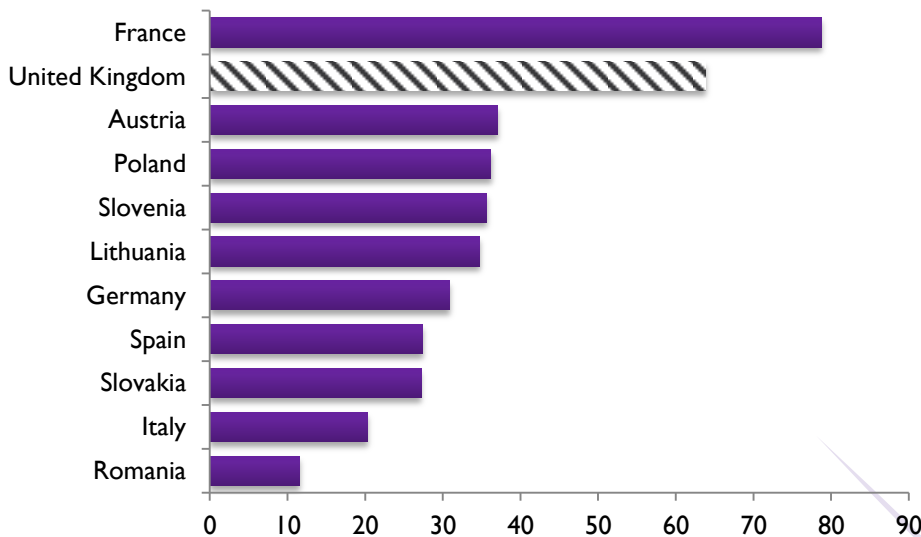
Figure 2.1 provides an indication of the significance of cards in the UK. In total, the UK has issued almost 30m more cards Germany.

**Figure 2.1: Number of cards, by country**



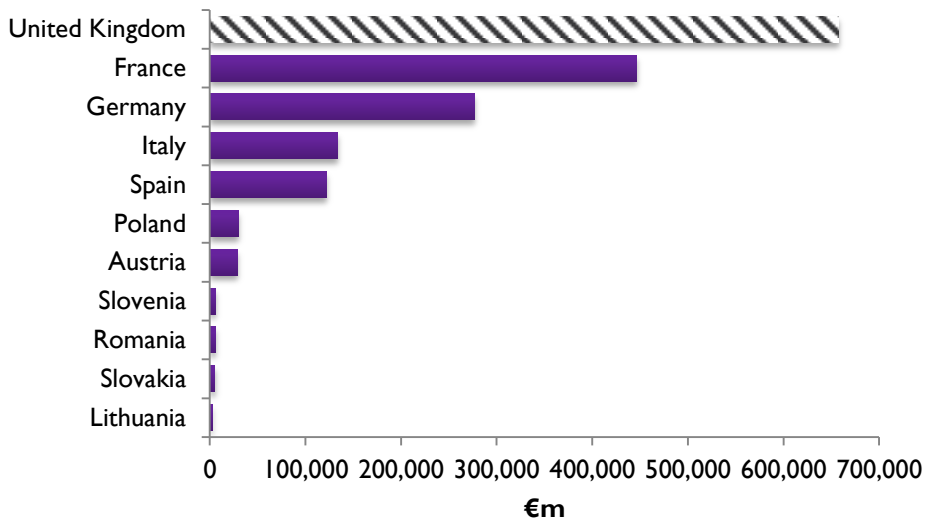
The majority of issued cards in Europe are debit cards. In the relatively mature economics – such as the UK, France and Germany – the ratio of debit to credit cards is closer to one whereas in smaller countries such as Lithuania, Austria and Slovenia the vast majority of issued cards are debit cards.

**Figure 2.2: Transactions per card**



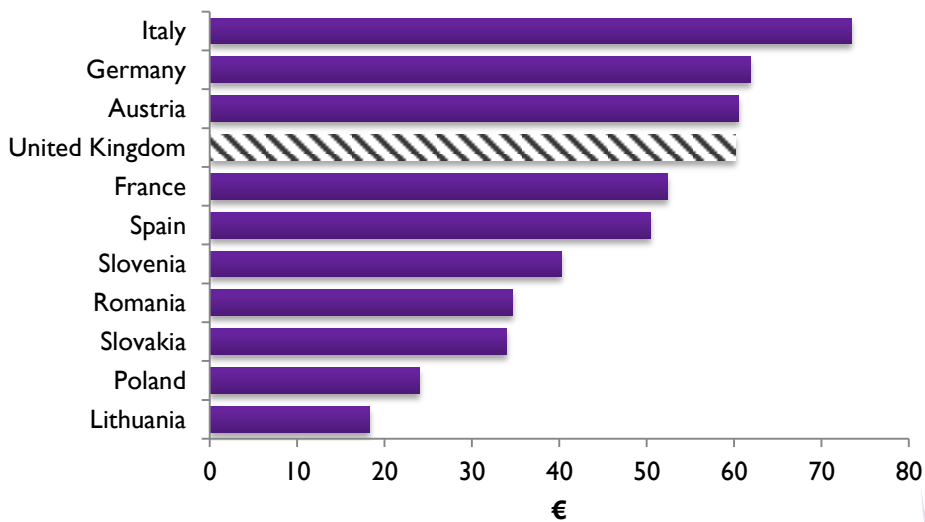
While the number of cards is higher in the UK than in France, Figure 2.2 shows that transactions per card are somewhat higher in France than in the UK. However the UK and France make many more transactions per card than the other countries in our sample. Figure 2.3 shows that, despite the greater number of transactions per card, the total volume of transactions is considerably higher in the UK.

**Figure 2.3: Total value of transactions**



Average value per transaction is shown in Figure 2.4. Cardholders in Italy use their cards for higher value transactions. However the UK ranks fourth in terms of value per transaction, despite a high volume of transactions per card, indicating that they are more likely to be used for minor purchases.

**Figure 2.4: Value per transaction**



Two payment schemes — Mastercard and Visa — together account for the overwhelming majority (around 96 per cent) of transactions volumes. The other competitors, American Express and Diners Club have a much smaller share.

Since 2004, Visa has managed to significantly increase its share of debit cards and around 97 per cent of debit card purchases by value were conducted using a Visa card in 2011. On the other hand, MasterCard has managed to increase its share in the credit card and charge sector. The proportion of transactions conducted using a MasterCard credit card has increased from about 30 per cent to 59 per cent of total

transactions between 2002 and 2011, while Visa's share has halved to about 30 per cent over the same period.

Since 2009, the volume and value of transactions in the UK using premium cards has increased considerably. Those cards typically charge higher multilateral interchange fees than standard credit cards, but premium cards are able to attract customers because they offer benefits and inducements, such as cash rewards and air miles.

## 2.3 Network structure

Payment networks are the textbook case of what economists refer to as “two-sided markets”.<sup>3</sup> So-called “two-sided markets” are characterised by: (i) the presence of one or more intermediaries through which two sets of agents interact; and (ii) circumstances in which the decisions of one agent affect the other agent, typically through an externality.

Both of these characteristics apply to payment networks because consumers must use the payment network and merchants must accept payment through the network if it is to be successful. In this context, consumers clearly value the participation of merchants because the payment network is more valuable to the consumer where it is widely accepted. Similarly, merchants value the participation of consumers because the return on their investment in the payment network is greater where more transactions are processed through the network.

The discussion above points towards one possible structure for a payment card network: a three-party system. In this type of ‘closed’ system, the payment card network operator liaises with merchants and consumers directly and is responsible for in addition to processing transactions, issuing cards and enlisting merchants to accept those cards.

Three-party systems are, however, less widespread than are four-party systems. A four-party system consists of the following actors: an issuing bank; a cardholder; a merchant; and an acquiring bank. In this type of ‘open’ system, there is a greater division of labour than is the case in three-party systems. The payment network is an intermediary that liaises with issuers and acquirers but does not have direct contact with consumers or merchants.

## 2.4 Interchange fees

The process through which a credit card transaction initiated by a cardholder is settled in a four-party system consists of the following eight stages:

1. The consumer's bank (the issuer) issues a card to the cardholder.
2. The cardholder initiates a transaction by purchasing a good or service from the merchant.
3. The merchant submits a request for authorisation to its acquiring bank (the acquirer).
4. The acquirer submits the transaction to the issuer for verification and authorisation.
5. The issuing bank authenticates the transaction and the acquirer provides confirmation to the merchant.
6. The consumer completes the purchase with the merchant.
7. The issuing and acquiring banks settle the transaction.
8. The cardholder's account is debited by the issuer for the good or service that was purchased from the merchant.

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<sup>3</sup> We note that this use of the term “market” is separate from the definition of “relevant markets” for competition law purposes.

Interchange fees are included at stage 7 of this process where the issuer subtracts a per transaction fee before it pays the acquirer.<sup>4</sup> Interchange fees exist because, in a four-party payment system, issuers assume greater risks and costs than do acquiring banks. The interchange fee serves partly to compensate the issuers for these higher risks and costs they entail for the commensurate benefits that merchants receive from accepting electronic payment (in the case of credit cards, the payment guarantee against fraud and cardholder default, the free-funding period, and the processing of incoming transactions). At the same time, IFs serve to balance the demands of consumers and merchants, so as to maximise the output of the number of transactions, but also to allow issuers to invest in innovation, security, efficient payments administration etc. The level of this fee can be the outcome of bilateral negotiations between an issuer and an acquirer, or can be set by the network at a 'default' or by banks at a 'multilateral' level in the absence of bilateral negotiations.

As shown in Figure 2.5, interchange fees are not the only fees paid in a four-party system. Merchants pay a fee known as the merchant service charge (MSC) to acquirers, of which interchange is one component. The MSC covers the provision of services such as connectivity to the card network, terminal hardware and software, customer support and so on. The economic function is to allow acquirers to benefit from the acceptance of cards by their customers. The level of this charge is the outcome of a negotiation between merchants and acquirers. Figure 2.5 also illustrates exchanges between the issuing bank and the cardholder. Besides providing the payment service, issuing banks give cardholders additional benefits, such as loyalty rewards, cash-back or travel insurance. In return, cardholders pay a combination of fees (e.g. annual card fees), interest rates and charges. Interchange maximises market participation and utilisation of the payment system by both consumers and merchants. Without interchange, merchants would receive the benefits from issuers' services without paying for them, resulting in a shortfall for issuers that would have to be picked up elsewhere.

**Figure 2.5: Fees and charges in a four-party system**

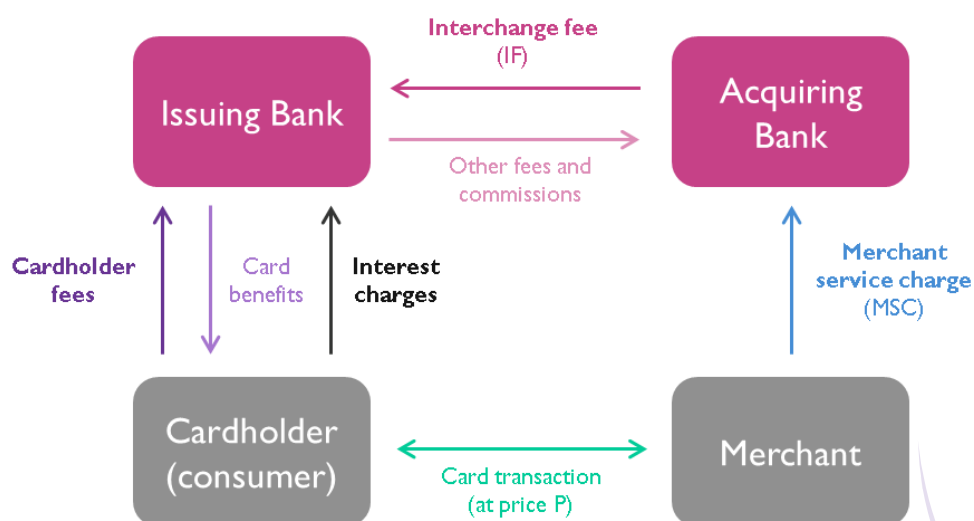


Table 2.1 below shows average IF rates for debit and credit cards in the UK in 2012.

**Table 2.1: IF Rates for Consumer Cards**

Card type	Weighted average IF rate
Debit cards (pre-paid and debit)	0.21%

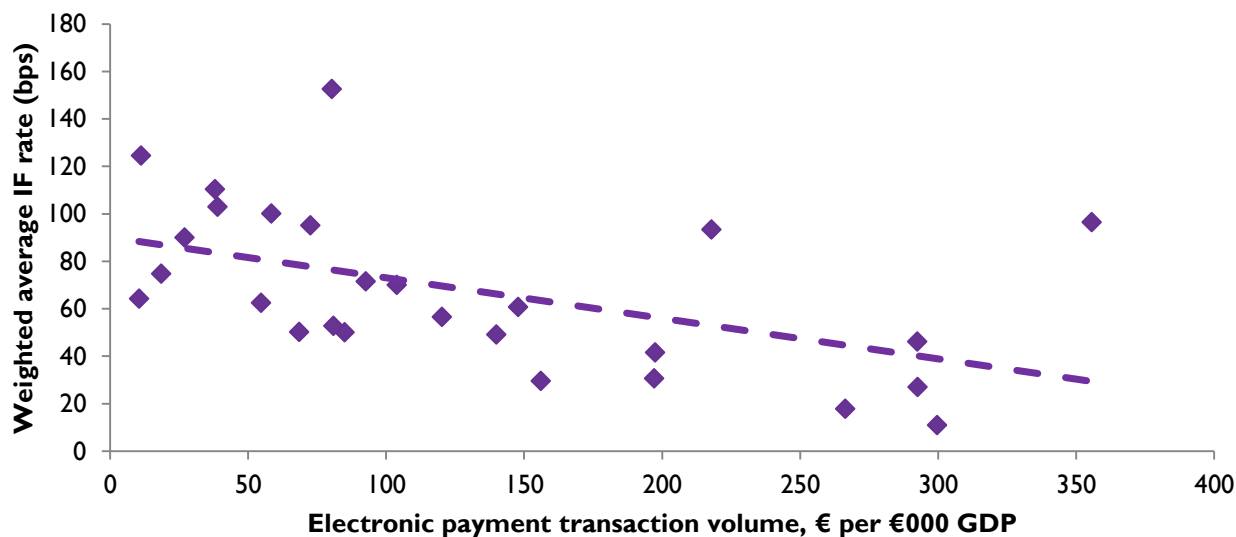
<sup>4</sup> As three-party systems do not involve issuers and acquirers, interchange fees are not present in these systems.

**Credit cards (charge and credit)**

0.95%

Source: Europe Economics calculations from data supplied by MasterCard

IF rates in the UK are relatively low by comparison with other EU Member States, which fits with the relatively well-developed UK cards sector since the fixed costs associated with issuing cards and processing transactions can be spread over more transactions. Figure 2.6 plots weighted average IF rates by EU country and illustrates that relationship.

**Figure 2.6: IF rates versus market penetration**

## 2.5 Merchant Services and Merchant Service Charges

In order to accept payment cards, merchants bear a number of costs, including:

- transaction processing fees;
- fees for charge-backs which are the funds returned to a consumer when a transaction is reversed when, for example, the delivered goods do not meet the consumer's satisfaction;
- overheads on terminals or chip and pin devices;
- fraud monitoring and maintaining compliance with Payment Card Industry Data Security Standards (PCI DSS) to help prevent fraud, required by all the major card networks;
- installation and running infrastructure to handle card payments, such as payment websites or call centres; and
- staff training.

Merchant service charges, MSCs, reflect the costs relating to electronic payment and settlement guarantees at the point of sale (POS). The sector and size (volume and value) of the retailers' POS transactions, the cost of anti-fraud measures and the period needed for settlement are the main drivers for merchant service charges. As the acquiring firms have to pay the IF to the card issuing banks, MSCs for different types of card generally follow the same pattern as the IF fee.

Information on the level of MSCs and their relation to interchange fees is often incomplete or contradictory. Some acquirers include almost all of the costs described above under MSCs and hence for some retailers they are the only costs for accepting payment cards. This is particularly likely to be the case

when the acquirers also provide EFTPOS<sup>5</sup> terminals, as they will then typically include all of those costs, with perhaps the exception of staff training, in the MSC.

In other cases, only the transaction processing fees are included in the MSC and other costs are treated as add-ons with other providers or done in-house by the retailer. Thus, MSC as a percentage of costs of card payments for retailers can vary considerably. The important point is what proportion of MSC is paid to the card issuer in IF. Again reports differ, even within countries. For the UK, an Office of Fair Trading report in July 2012 stated that around 70 per cent of the MSC is made up of the interchange fee that the acquirer pays to the card issuer. In contrast, the 2012 British Retail Consortium Cost of Payment Collection Survey stated that it was closer to 90 per cent.

There is also evidence, at least in some markets, of considerable price differentiation between large and small retailers due to their relative power in the negotiations with acquirers. Small retailers pay up to 70 per cent higher MSCs per transaction on average than larger merchants across Europe, according to a Commission study.<sup>6</sup>

MSCs are relatively low in the UK compared to other EU Member States. Generally speaking, we would expect larger and more developed markets to tend to exhibit lower MSCs, in line with lower IF rates but also reflecting that many of the other costs described above will also have a fixed component which can be spread over a greater volume of transactions, although there is considerable variation.

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<sup>5</sup> EFTPOS stands for “electronic funds transfer at point of sale”. It is the system used to receive electronic payments used in Australian and New Zealand.

<sup>6</sup> Reported in a study by Which? (2011), which gives the following classification: Small retailers typically have annual retail sales of less than £1 billion, for medium size ones this is in the range of £1 billion - £4 billion and large retailers have retail sales of over £4 billion.

## 3 Regulating interchange fees

In this section we provide a critique of the EC's impact assessment (IA), focussing on those policy options directly related to IFs. In particular, we first consider the EC's assessment of the underlying problems in relation to IFs, before going on to critique the EC's assessment of the various policy options it considers to address these problems.

### 3.1 Problem Definition

The IA alludes to market failure in the retail payments market. Specifically, the IA notes that *“(w)hile such schemes create societal value by enabling payment transactions, in certain cases schemes and/or scheme participants can use their market position to impose restrictive rules and business practices on other market actors. This is for example the case for so-called multi-lateral interchange fees (MIFs) which are fees set multilaterally and paid by the PSP [Payment Service Provider] of the merchant (acquirer) to the PSP of the card holder (issuer).”*<sup>7</sup>

The IA then goes on to discuss specific problems stemming from the stated problem drivers. In relation to IFs, the focus is on ineffective competition in certain areas of card and internet payments.

Below, we provide a general critique of the EC's problem definition as well as a critique of some of the specific points made by the EC with regard to ineffective competition in relation to IFs. This is valuable because the EC's problem definition frames its objectives and policy proposals, and therefore, the analysis of impacts.

#### 3.1.1 General critique

The EC's IA states that *“(i)n the area of cards there are several restrictive business rules and practices that lead to a situation of ineffective competition. This results in sub-optimal market outcomes and relatively high prices for card payments that are at the end of the day reflected in the prices of goods and services.”*<sup>8</sup>

With regard to IFs, the EC believes that competition between card schemes to attract issuing banks leads to ever higher IFs, and therefore, higher MSCs, which are passed on to customers by merchants. The EC considers this to be a major obstacle to effective competition in the market for card payments, one which warrants regulatory intervention.

We consider this assessment to be plainly wrong. We do not consider that the process of “reverse competition” (as it is referred to by the EC) constitutes a barrier to effective competition. We accept that there may well be an incentive for issuing banks to increase revenues from IFs, but it is true in any market that some parties have such an incentive. The desire of a firm to maximise its revenues given its cost is merely a statement of the economic objective of firms to maximise profits. It does not *ipso facto* represent ineffective competition.

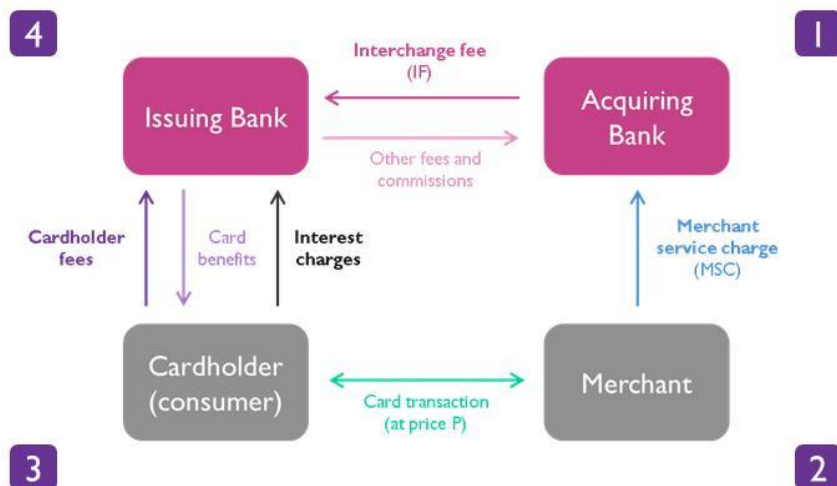
The EC has identified this “reverse competition” as a barrier to effective competition; however, the EC fails to consider the ways other sources of competitive pressure in the market provide downwards pressures on prices and costs. The EC's focus on competition between card schemes on the basis of IFs seriously undermines the basis of the EC's proposals for IF regulation. To illustrate this point, the diagram below

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<sup>7</sup> EC Impact Assessment, 3.2.1.1 Market Failures, p16

<sup>8</sup> EC Impact Assessment, 3.2.2.2 Ineffective competition in certain areas of card and internet payments, p19

identifies various points in the market at which different market participants have an incentive to control costs, thus creating the potential for competitive pressures.



1. For a given level of MSC, the acquiring bank has an incentive to seek lower IFs, not higher IFs. Further, merchants clearly have the ability to switch banks should they deem MSCs to be too high, as discussed below. While this may be of limited consequence to the acquiring bank in the case of SMEs choosing to switch,<sup>9</sup> the prospect of a large, nationwide retailer switching should serve as a significant constraint on pricing. This further constrains the extent to which IFs can be endlessly increased by card schemes to attract issuers, as it reinforces the incentive for acquiring banks to reduce IFs.
2. Merchants will clearly want to reduce MSCs. If MSCs became too high, it is not infeasible that merchants would stop accepting a certain type of card, or steer customers to a particular type of card or cash payments. For example, as noted in a recent Forbes article, “data from Intuit shows that 55 per cent of the [USA’s] 27 million small businesses do not accept credit cards.”<sup>10</sup>

Further, in the UK, for example, 96.4 per cent of debit cards are Visa cards, while MasterCard has a 58.6 per cent share of the credit card market. This suggests that there will be a substantial proportion of people who have both MasterCard and Visa cards. Therefore, it may also be possible for a merchant to stop accepting one type of card (or steer customers to a particular type of card or cash payments) if MSCs became too high as a result of IFs being too high.

If it were true that retailers lacked the option of accepting other cards because of a lack of market players, this would imply the correct regulatory response would be one that facilitated additional market entry by new card schemes or other competing means of payment. As noted below, caps on interchange fees have precisely the opposite effect — they impede entry by new schemes. The key point at which there may be a genuine net incentive upon card schemes to set high fees is that of market entry. In theory, a new card scheme may set higher interchange fees than existing schemes, so as to encourage issuance of cards with the new card scheme’s brand. Once the new network is in place, the tendency will then be for interchange fees to fall, under the sorts of cost and pricing pressure we detail here, as seen in the trend for falling interchange fees in more developed card markets such as the UK.

<sup>9</sup> This is not necessarily the case, however, as SMEs will generally be less able to achieve economies of scale, and may therefore have more elastic demand, resulting in a greater propensity to switch. Therefore, if a significant proportion of SME merchants switched, this could still amount to a sizeable impact on the acquiring bank’s business.

<sup>10</sup> McCue (2013) “Why Don’t More Small Businesses Accept Credit Cards”, Forbes



Forbidding card schemes from charging higher fees at the stage of developing a network does not reduce the costs of building a card network, thereby reducing barriers to entry. Rather, it may raise barriers to entry by making one of the more straightforward routes to building a card network unavailable. This is not to suggest that high IFs are likely or necessary for new card schemes (or indeed existing card schemes) to flourish. This is because it is not enough for a card scheme to have issuing banks on board. As described above, for a given level of MSC, acquiring banks would seek to face lower IFs.

Similar principles apply in relation to separation between card schemes and the entities that are processing (i.e., authorising, clearing and settling) the transactions. As above, the separation of card schemes and processing does not reduce the costs of building a card network. Of course, any activity by integrated companies should be carried out within the confines of competition law; however, separation itself may serve as a barrier to entry rather than a remedy for limited entry. This point does not appear to have been considered in any detail in the impact assessment.

3. Consumers must ultimately choose which card they use. In theory, the consumer would implicitly take into account IFs in making a choice, e.g. because IFs may affect the extent to which a certain type of card is accepted by retailers, and the extent to which a type of card is accepted is a key influence upon a consumer's decision to take out a certain type of card. On the other hand, cardholder fees, interest rates and potential rewards are likely to be a bigger driver of competition in markets where card schemes are more developed, given widespread acceptance of both Visa and MasterCard in, for example, the UK (notwithstanding the points made above with respect to acceptance).

We note that the proposal to permit issuers to co-badge cards with two or more different brands could in theory provide consumers with greater choice. However, it is also possible that this proposal could create confusion amongst consumers, negating this benefit. Further, different security standards may apply for different schemes and there could be complexities in coordinating between schemes, resulting in potentially high security and technical costs to issuers and processors.

4. As such, issuing banks are likely to compete on many fronts in the payment cards market to encourage take up, so the notion that IFs alone are driving adoption of certain cards by issuing banks is flawed.

Therefore, even if it were the case that competition which leads to higher IFs poses competition problems (which we do not accept is the case), as can be seen above, there are significant competitive pressures at other points in the market.

### 3.1.2 Critique of specific points

- **EC:** IFs are subject to reverse competition meaning that competition between card schemes to attract card issuers (banks) leads to ever higher interchange fees (and consequently, MSCs).

**Critique:** The incentive for some players to seek to raise prices is obvious and intuitive from a theoretical standpoint, provided that it is assumed that IFs are passed on by acquiring banks in the MSC, but proves little in itself. The EC's assessment does not consider other reasons which might encourage switching between card schemes, e.g. quality of service, developments in the service offered (e.g. due to some innovation), or the level of advertising undertaken. Some of these reasons may explain why the example of the UK debit cards market (given by the EC to support its point),<sup>11</sup> does not show an immediate decrease in the number of cards for MasterCard following Visa's increase in IFs in 2007.

- **EC:** Another aspect of the same "problem" is that banks issuing cards, getting ever higher MIF revenues can encourage consumers to use these cards through additional incentives (such as air miles, insurances, etc.), as the cost for these benefits is not directly apparent to the cardholder as they are borne in the first place by the merchant accepting the card.

<sup>11</sup> Table I, p.20, UK debit cards market

**Critique:** This assumes that the provision of additional incentives provided by issuers is necessarily detrimental to cardholders. If a cardholder’s willingness to pay for the ‘bonus’ exceeds the expected incremental cost of purchases made using the card (assuming that higher IFs lead to higher MSCs which are passed on to consumers through the retail price of the product), the cardholder will be better off.

- **EC:** Merchants are normally reluctant to turn down payment instruments which are costly to them (and ultimately to their subsequent purchasers) for fear of losing business. As a result, merchants pass on to all their customers the increasing costs of accepting card payments through the general prices of their goods and services.

**Critique:** Cost pass-through is complex, particularly because price changes are constrained by the need to accept cash profitably, and cash may be materially more expensive to process than cards for some retailers. Furthermore, in competitive oligopolistic markets, we would not expect to see 100 per cent of costs passed on. Indeed, as shown in our previous report, empirical studies of IF regulation in Spain and Australia have shown that a reduction in IFs had no impact on final price.

- **EC:** “Reverse competition” on MIFs means that market entry for new pan-European players remains difficult. Such new schemes would have to offer issuing banks interchange fees that are at least comparable to those prevailing in the market they want to enter.

**Critique:** For the sake of argument, let us assume that banks (which, in some instances, though typically not in the UK, will act as issuers and acquirers) are only concerned with the level of IFs because they are able to pass this cost on to merchants when acting as an acquirer. Even in this case, we do not consider that it can be assumed, *a priori*, that the presence of unregulated IFs serves as a barrier to entry. For example, it may still be possible for a new entrant to match existing IFs or offer lower IFs, but compete on other fronts. It could also be argued that the presence of IFs reduces barriers to entry in the card scheme market because it provides an added dimension on which these firms can compete.

The EC’s analysis of barriers to entry also appears to miss the point that entry by new card schemes may imply setting interchange fees higher than those currently prevailing in the market. Setting a (binding) interchange fee cap means that new players will not be able to offer higher interchange fees than those offered by existing players, thereby impeding new entry not facilitating it.<sup>12</sup> Of course, in practice the optimal level of IF from the card scheme’s point of view would have to take into account the level of IF required to encourage take up from both issuers and acquirers/merchants.

There is also a “one size fits all” problem here — a pan-EU interchange fee or pan-EU criteria by which an interchange fee must be set would each fail to recognise that the stages of development of card schemes are very different in different EU Member States. In some Member States it is not simply a matter of facilitating new entry into markets where there are existing players but, instead, of building acceptance of any card schemes at all.

- **EC:** Scheme rules which force acquiring banks to apply the MIFs applicable in the country where the payment transaction takes place, even if the acquirer is based in a different country with a potentially lower domestic MIF level, effectively eliminates the benefits of cross-border and centralised acquiring for merchants and limits their ability to avoid paying high MSCs resulting from high MIFs through using acquirers in other Member States.

**Critique:** IFs serve partly to compensate issuers for the higher risks and costs they entail for the commensurate benefits that merchants receive from accepting electronic payment. It may be necessary to charge a different IF in a particular Member State if the costs faced by an issuer in that Member State are higher than in other Member States.

Further (as acknowledged by the EC), it is likely that only larger merchants will be able to take advantage of cross-border acquiring. For a given level of revenue from MSCs, acquiring banks may seek

<sup>12</sup> Similar principles apply when considering the proposed separation of card scheme and processing activities.

to increase MSCs to SMEs who are unable to take advantage of cross-border acquiring in order to make up the shortfall from larger merchants.

- **EC:** IFs lead to much higher costs to merchants and ultimately their customers. Any efficiencies they generate do not appear to justify these costs, at least at the current IF levels.

**Critique:** Assuming that IFs are passed on in full by acquiring banks in the MSC and that MSCs are passed on in full by merchants to their customers, we do not consider that there is evidence to support the assertion that the efficiencies generated by IFs do not justify the costs. When considering efficiency gains, it is important to consider dynamic efficiencies that are likely to arise from increased card use, .e.g due to innovation. This is difficult to quantify in practice, but empirical studies have generally shown that dynamic efficiencies are typically significantly larger than static efficiency gains.

- **EC:** The caps considered (0.2%; 0,3%) are set on the basis of existing proceedings, cases at European level and recently negotiated agreements with the French competition authority. The EC notes that the Merchant Indifference Test ("MIT") formed the basis for the MasterCard Undertakings of 2009 and the Visa Commitment Decision of 2010. Under the MIT, the cost incurred by the merchant when a customer uses its card should not exceed the cost for receiving a cash payment.

**Critique:** The MIT appears to draw its rationale from a competitive market thought experiment — in a competitive market, the thought goes, merchants that accepted both cash and cards would be indifferent which they accepted. This reasoning is flawed in at least three ways. First, it is unclear why the relevant agent that is indifferent should be the merchant, rather than, say, the consumer. Why is it not the consumer's indifference that would count in a competitive environment? Second, why is indifference between debit cards and cash the correct dimension of indifference rather than indifference between debit and credit cards? Third, is indifference really relevant? In a Cournot-type residual demand framework, we could imagine the supply of means of payment being made up of, say, debit cards and cash, with (say) debit cards being cheaper (or in an alternative case, more expensive) to process but the supply of means of payment via debit cards (or in the alternative case, cash) being less than total demand for means of payment, with the residual demand being satisfied through cash (or in an alternative case, debit cards). In such a Cournot-type model we can have both "goods" supplied even though their prices differ, even with competition.

Such cases may be of particular relevance when a market for some payment method is evolving — market entry of a payment option may occur via a period of differentiated prices with incomplete supply of that payment option.

Further, another idea appears to be that the level of MSC that implies merchant indifference for payment cards would eliminate externalities that arise due to the customer failing to take into account the costs imposed on the merchant as a result of the customer's choice of payment method. But here, we are concerned with the *net* costs, i.e. the difference between the MSC charged to the merchant and the transactional benefits obtained by the merchant. Clearly, the size of this net cost may vary from merchant to merchant, and even from transaction to transaction. This suggests that a single cap on IFs based on merchant indifference is not appropriate. A single cap is likely to result in gains with respect to certain transactions for certain merchants and losses for others. We might expect the size of the externality to be larger for SMEs. An IF cap based on an underestimate of the level of merchant indifference for these merchants could lead to a level of card usage that is greater than the socially optimal level which would in turn be detrimental to these merchants.

### 3.2 Assessment of Impacts

The EC considers that in the absence of policy change, the issues raised in its problem definition section with regard to ineffective competition and lack of transparency would be left to be treated by enforcement under competition policy, which will not deliver legal certainty and a level playing field in the market.

Below, we critique the detailed assessment of the impacts of each of the policy options provided at Annex 9 of the IA (and summarised at section 6.2.1). It is important to note that the policy options presented are not necessarily mutually exclusive and should not therefore automatically be viewed as alternatives. It is also important to note that, for the most part, the EC's assessment of impacts is qualitative in nature.<sup>13</sup>

Before going on to make specific observations on the EC's assessment of each option, it is worth noting some general critiques that apply to the whole impact assessment.

- The EC generally assumes that a reduction in IFs necessarily leads to gains for consumers in the form of lower retail prices, because merchants will face lower MSCs which they will pass through. As shown in our previous report, empirical studies of IF regulation in Spain and Australia have shown that a reduction in IFs had no impact on final price because the reduction in the price per transaction would have been insufficient to justify a move in price points (though we note that the EC makes this point in its assessment of option 15).
- The EC does not appear to consider the possible negative effect of reducing or banning IFs on incentives for innovation for issuers.
- The EC's assessment appears to assume that the lack of regulation of IFs leads to high IFs, which in turn creates barriers to entry for cheaper and more efficient payment solutions. As described above, this assessment seems to assume that card schemes only compete on the basis of the level of IFs. When other factors are considered, the presence of IFs may in fact serve to promote competition.
- The EC appears to take it as a given that the efficiency gains created by card use for merchants are immaterial.
- The EC's guidance on Impact Assessments recommends that, when assessing the impact of specific economic, social and environmental aspects of a proposal, the impacts on SMEs must be properly considered. While the EC's impact assessment does give consideration to the impact of its proposals on SMEs in some parts, there is not a comprehensive consideration of the possible negative impacts on SMEs of IF regulation.
- The IA does not consider any of the additional risks detailed in Section 6.

Bearing these general critiques in mind, we now provide some more specific comments on the EC's assessment of the impacts of implementing the different policy options.

### 3.2.1 Regulate cross-border acquiring and the level of interchange fees for cross-border transactions only (Option 13)

According to the EC, *"this option would make it easier for merchants to accept card payments through acquirers located in other Member States, i.e. instead of the fee applicable in the country of the point of sale, a cap set for IFs for cross-border acquired transactions would apply in the event merchants choose to make use of the services of an acquirer in another than their own Member State."*<sup>14</sup>

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<sup>13</sup> The IA notes the following: *"It is important to note that robust data for the payment methods analysed in this paper is not always available. For core payment instruments such as credit transfers, direct debits and, to some extent, payment cards, transaction data is regularly published by the European Central Bank (ECB). While business related data for card schemes has been gathered by the Commission it cannot be used and published in the present report due to on-going proceedings in competition cases. Reliable data for internet and mobile payments is even more difficult to collect and identify as the environment is fragmented and transaction data cannot easily be separated from the overall data for core payment instruments."*

<sup>14</sup> EC Impact Assessment, 2.3 Option 13 (Allow cross-border acquiring and regulate the level of cross-border interchange fees), p176

The principal critique of the ECs assessment of this option is that it fails to recognise that different IFs in different Member States may be a result of cost reflective pricing. Banning or lowering IFs on cross-border acquired transactions could lead to a loss in efficiency by forcing issuers to collect IFs that do not reflect the higher risks and costs they face in providing the service. For example, in the case of credit cards, this includes the payment guarantee against fraud and cardholder default, the free-funding period, the payment guarantee and the processing of incoming transactions.

Further, there is a possible negative impact on SMEs which is not considered by the EC. In its assessment of this option, the EC acknowledges that only larger retailers will be able to take advantage of cross-border acquiring and therefore benefit from lower IFs (assuming that these translate to lower MSCs). However, as described earlier in this report, for a given level of revenue from MSCs, acquiring banks may seek to increase MSCs to SMEs who are unable to take advantage of cross-border acquiring in order to make up the shortfall from larger retailers. This could have a significant, detrimental effect on SMEs as MSCs are likely to make up a larger proportion of a SMEs total cost base.

### 3.2.2 Mandate Member States to set domestic IFs on the basis of a common methodology (Option 14)

This option would mean adopting legislation on the methodology for setting interchange fees, and it would be up to each Member State to implement it. According to the EC, this option would address the issue of different maturity of card and payment markets in the Member States where different levels of card usage and acceptance and different levels of cash usage prevail. It would allow national solutions to be developed, giving more leeway for purely ‘domestic’ card schemes or other payment solutions.

The EC acknowledges that consumers’ and retailers’ welfare gains are likely to be modest, and the heavy administrative resources to be invested in defining a concrete methodology for national regulators are likely to raise issues, in terms of the efficiency of this policy option.

We agree with this assessment in general, but we would note that this approach does not guarantee that IFs would be lower than they would be under the no policy change option. Therefore, any assumed welfare gains (resulting from pass-through of lower IFs by acquiring banks) may well be lower.

### 3.2.3 Regulate a common, EU-wide maximum level for interchange fees (Option 15)

Under this option, acquirers would be charged for payments on the basis of one single IF cap across the EU.

The EC argues that this will result in a level playing field in terms of payments costs. However, as stated in the critique of option 13 (“regulate cross-border acquiring and the level of interchange fees for cross-border transactions only”), issuing banks are likely to face different costs and risks in different Member States. In addition the average number of transactions by cardholders and the average transaction value is likely to be different between Member States. Therefore, equalisation of IFs across the whole EU may result in gains by issuing banks in some Member States, but losses in others. As a result, this could lead to cherry-picking (by both incumbents and any potential entrants) of low cost Member States, resulting in a loss of service in higher cost Member States.

Further, markets in different Member States may be at differing levels of maturity. It is possible to imagine a notional market cycle in which higher IFs are needed earlier on in the development of the market to encourage issuance until some critical mass is reached in order to overcome inertia (e.g. acceptance of cards by merchants) before IFs then fall once acceptance is widespread. If this were the case, the imposition of a common, EU-wide maximum level for IFs could mean that it is not possible to reach this critical mass if the cap is set too low for countries where the market is still developing. This would impact

not only existing players, but also potential entrants. The EC acknowledges that the differing maturities in different markets will make it difficult to identify a single level of IF that is appropriate; however, the EC does not appear to consider the potentially costly implications of this point in any great detail.

The EC also argues that this option would create a level playing field for competition in issuing and acquiring cards. It states that “*all other elements being equal, the competition would be based on pricing, not other non-price factors*”. However, this seems to subsume the possibility that issuing and acquiring banks may value the competition between card schemes on non-price factors.

Four sub-options are considered in the impact assessment. The critique of the four sub-options considers similar issues, so we group these observations below.

**Table 3.1: Option 15, sub-options<sup>15</sup>**

Option	Domestic debit cards	Domestic credit cards	Cross border debit cards	Cross border credit cards
15.1	0.2 per cent	Not covered	0.2 per cent	Not covered
15.2	IFs forbidden	Not covered	IFs forbidden	Not covered
15.3	0.2 per cent	0.3 per cent	0.2 per cent	0.3 per cent
15.4	IFs forbidden	0.3 per cent	IFs forbidden	0.3 per cent

The IA acknowledges that a single cap on IFs could lead to increases in IFs in Member States where IFs are currently below this level. However, the EC’s assessment does not consider that cross-country differences in IFs may arise due to differences in costs and risk exposure. As described above (when considering the overarching policy option), this approach could lead to cherry-picking which could lead to a reduction in the number of cards issued in countries with IFs which were previously above the cap. However, the extent to which this materialises is likely to depend on the magnitude of other savings offered to banks by the use of cards (compared to cash).

Where a cap on IFs is considered (rather than a ban), the IA rightly acknowledges that the differing levels of maturity of national card markets and national payment habits may lead to difficulties in finding one IF level acceptable and appropriate for most Member States. However, it does not consider the possible costs of compliance with a scheme that may be subject to change as markets in different Member States develop.

In relation to banning IFs for debit cards, the IA states that “(t)here might not be a need any longer to incentivise the issuing of debit cards by banks through an IF, as debit cards are already widespread.”<sup>16</sup> This statement could be construed so as to imply that the effects of banning IFs for debit cards would be minimal. However, this assessment fails to recognise that the presence of IFs is not solely to encourage issuance. IFs exist because issuers assume greater risks and costs than acquirers. Therefore, banning IFs may lead to unrecovered costs (*ceteris paribus*) for issuing banks.

The EC considers that banning IFs for debit cards would also lead to increased card acceptance by (small) retailers to the detriment of cash, resulting in overall welfare gains for society. This assessment assumes that the increased use of debit cards as a result of a greater number of merchants accepting debit cards outweighs the possible decrease in debit card usage as a result of lower issuance of debit cards (e.g. because of increased cardholder fees). However, the widespread use of debit cards may mean that there are limited gains from a greater number of merchants accepting debit cards.

<sup>15</sup> We note that there is a discrepancy between the summary of sub-options 15.1-15.4 provided at p.53 in the main body of the text and at p.183 in Annex 9, with respect to the regulation of cross border credit cards under options 15.1 and 15.2. Specifically, the table at p.53 states that cross border credit cards are not covered under options 15.1 and 15.2, whereas the table at p.183 states that the IF under these options would be “0.3 per cent or acquirer’s country”. We focus on the table at p.53 because the assessment of the impacts provided does not appear to cover cross border credit cards.

<sup>16</sup> EC Impact Assessment, Sub option 15.2: ban on Ifs for debit cards, credit cards not covered, p185

### 3.2.4 Exemption of commercial cards and cards issued by three party schemes (Option 16)

Under this option, commercial cards and three party schemes would be exempt from any fee regulation on the basis that they have very limited market shares.

According to the EC: *“three party schemes and commercial cards cannot be regarded as substitutes for credit cards or debit cards. In fact, they mostly issue credit cards both for corporate clients and for well off consumers. They therefore cater for a specific clientele and their needs, not the average customer.”* On this basis, the EC considers that commercial cards and three party schemes would not be in a position to take over the market of consumer debit and credit cards by offering more advantages to average customers.

The claim that three party schemes cannot be regarded as substitutes for four party scheme credit or debit cards is not set out in any robust form. Though three party types of schemes tend to cater to a particular segment of the market, this is not to say that they are unable to constrain the pricing of firms in a four party scheme, such as MasterCard.

Second, even if we do assume that this assertion holds, failing to subject cards issued by three party schemes to regulated fees could create competition issues at the ‘high end’ of the market, thus creating level playing field issues. For example, issuing banks face higher costs when processing payments for these ‘high end’ customers, thus collecting higher IFs. Under this option, issuing banks would receive lower IFs for cards issued by card schemes subject to the regulated fees, while cards issued by three party schemes would be able to receive higher IFs.

On the other hand proposals which include commercial cards could create significant disruption, even though commercial cards are a small part of most markets (around 4 per cent).<sup>17</sup> The Commission did not include commercial cards in its regulatory proposal, but the European Parliament voted to subject commercial cards to the interchange fee cap and the measure will be considered by the Commission, Parliament and Council as part of the negotiation of any final legislation.

Commercial cards generally have considerably higher IF rates than consumer cards. For examples, Visa reports that for transactions between different EEA countries the typical interchange fee rate for commercial cards is around five times the rate for consumer cards.<sup>18</sup>

Those higher interchange fees reflect differences in the kinds of services which commercial cards are displacing. Whereas consumer cards generally compete with and displace cash, commercial cards – often used to purchase goods and services like travel and business supplies – displace cheques, manual invoices and bank transfers. Those other substitutes are particularly expensive and it is therefore often very worthwhile for businesses, particularly SMEs, to replace them with card transactions.

However the demands are also higher: with principal-agent problems and large transactions there is an even greater need for proper security and detailed, often ad hoc, management information is needed in order to ensure proper control over expenditure.

It is therefore possible that it would become simply uneconomic for banks to issue commercial cards, particularly if the cap is the same as for consumer credit cards at 0.3 per cent. Earlier research for MasterCard by Deloitte has estimated that the result would be substantial increases in annual card fees (€80 per card on average) to make up for €1.1bn of lost revenue across the EU. If SMEs were no longer able to afford or access commercial cards, then that might diminish their access to credit, increasing costs by around €330m.

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<sup>17</sup> RBR (2013) “Banking Automation Bulletin”

<sup>18</sup> Visa (2014) “Intra Visa Europe – EEA”

As the cost of those cards rose – and potentially the availability fell – a reduction in their use would then increase costs to merchants, because commercial cards have a number of advantages for the merchants accepting them, including:

- protection from non-payment;
- reduced effort in payment and bill processing; and
- a reduction in delays in receiving payment.

The Deloitte study estimated that the benefits to merchants associated with commercial cards would fall by around €780m. There are further estimates of the increase in costs that might be associated with commercial cards in Section 5.3.

If commercial cards are included in the final proposals, and we assume for the sake of a rough approximation that the share of the increased costs and reduced benefits described above which takes place in the UK matches the UK share of commercial card transaction volume (around 50 per cent), then we can expect:

- around €560m in lost revenue for banks;
- around €168m in increased costs for SMEs; and
- around €397m in reduced benefits to merchants.

### 3.2.5 Regulate Merchant Service Charges (Option 17)

Under this option, MSCs would be directly regulated, rather than regulating IFs. As was the case for the options above which cap IFs, the assessment of the impacts of this option does not consider the likely variance in costs faced by issuers in different Member States. As such, the assessment does not consider the potential inefficiency created by setting a cap on MSCs that may be higher than the current level of MSCs in some Member States, while being lower than the current level in others.

The IA notes that setting the cap on MSCs at an appropriate level would entail high implementation costs in terms of public administration, but it does not make reference to implementation and compliance costs for business.



## 4 Past experiences regulating interchange fees

### 4.1 Impacts of introducing a progressive cap on interchange fees in Spain<sup>19</sup>

#### 4.1.1 Background

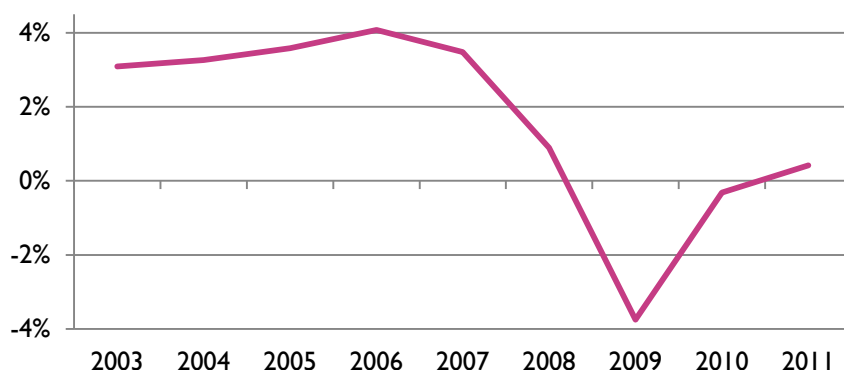
Spain has historically had a lower level of use of credit and debit cards for transactions than many other EU Member States. In 2010, the average number of card transactions per capita in Spain was around 47, considerably lower than the EU-15 average of around 90 transactions. In 2005, Spain also had the largest ratio of ATMs per inhabitant in Europe, with nearly double the number than in more advanced European economies.

Online commerce, or e-commerce, grew significantly in Spain over the period in which fee caps were introduced, which may be a cause for an increase in the use of non-cash payment methods. Further, Spain, already characterised by a large underground economy, saw this expand as a consequence of the economic crisis.

The timing of the intervention, which capped IFs between 2006 and 2010, overlaps with the period in which the Spanish economy entered the global economic crisis. Figure 4.1 shows Spanish GDP growth, which peaked in 2006 at 4.08 per cent and continued at 3.48 per cent in 2007. Following the financial crisis, GDP growth plunged to -3.74 per cent in 2009, returning to positive figures two years later. For this reason, any conclusions in respect of the impacts of the cap need to bear this in mind.

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<sup>19</sup> This sub-section draws from the findings presented in Irazo et al. (2012) “The effects of the mandatory decrease of interchange fees in Spain”.

**Figure 4.1: Annual GDP growth of Spanish economy**

Source: World Bank

### 4.1.2 Intervention

The Spanish payment networks and merchant associations historically set their IFs collectively following a special authorisation granted by the *Tribunal de Defensa de la Competencia* (TDC).<sup>20</sup> Accordingly, IFs were set through negotiations led by the Ministry of the Economy and Competitiveness and the Ministry of Industry, Tourism and Trade along with the antitrust authority.

In May 2003, payment networks were requested to set such IFs according to the European Commission's basic principles for EU-wide cross-border interchange fees set in the Visa July 2002 exemption decision, i.e. using a cost-base which reflected operating and fraud costs. In December 2003, the TDC cancelled the special authorisation which enabled the collective setting of IFs.

In December 2005, Spanish card networks and merchants reached an agreement coordinated by the Ministries of Economy and of Industry, Tourism, and Trade to progressively reduce IFs for the period 2006-2008. The agreement consisted of a mechanism which set yearly caps on IFs with the objective of progressively lowering the fees. Table 4.1 below shows the yearly caps for credit and debit cards.

**Table 4.1: Progressive caps on IFs (aggregated average) in Spain, 2006-2010**

Issuing Bank Revenue	2006		2007		2008		2009		2010	
	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit
€										
0-100m	1.40%	€0.53	1.30%	€0.47	1.10%	€0.40	0.79%	€0.35	0.79%	€0.35
100-500m	1.05%	€0.36	0.84%	€0.29	0.63%	€0.25	0.53%	€0.21	0.53%	€0.21
> 500m	0.66%	€0.27	0.66%	€0.25	0.54%	€0.21	0.45%	€0.18	0.45%	€0.18
<b>Average</b>	<b>1.01%</b>	<b>€0.32</b>	<b>0.96%</b>	<b>€0.29</b>	<b>0.81%</b>	<b>€0.26</b>	<b>0.71%</b>	<b>€0.24</b>	<b>0.61%</b>	<b>€0.22</b>

Source: Iranzo et al. (2012) and Bank of Spain

The regulatory intervention ended in December 2010, giving Spanish card schemes the freedom to choose the default level of interchange fees, which are then exposed to competition. Although the

<sup>20</sup> The *Tribunal de Defensa de la Competencia* (TDC) was the decision-making body of the Spanish competition authority. After the latter's restructuring in July 2007, it was replaced by the Council of the *Comisión Nacional de la Competencia* (CNC), the current competition authority.

intervention ended in 2010, average interchange fees have continued to fall, currently standing at average levels of 0.59 per cent for credit cards and €0.22 per debit card transaction.

### 4.1.3 Impacts on card payments and the banking sector

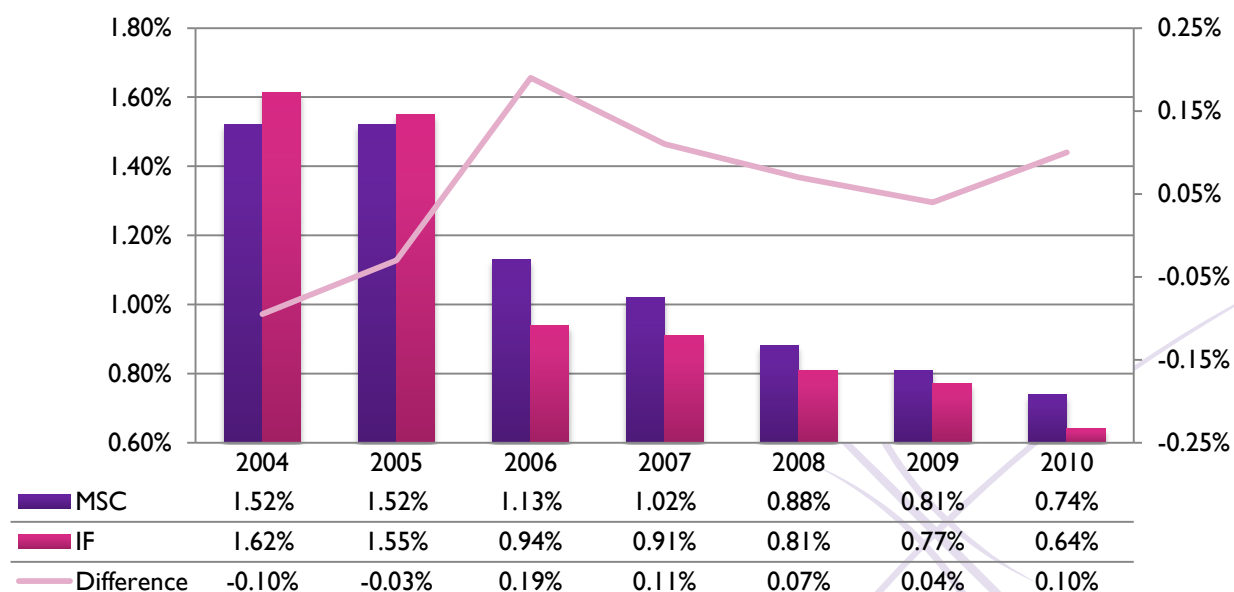
The most direct result of the cap was a fall in revenues from IFs for issuing banks. In 2005 these were around to €1.1bn while in 2010 they were around €600m.<sup>21</sup> Also, issuing banks' share of revenue from cards (excluding interest income) fell from nearly 21 per cent in 2005 to 18 per cent after the intervention.

There was a reduction in MSCs, but it was not equal to the full value of the reduction in IF fees. Iranzo et al. (2012) explain that one could expect acquiring banks to not pass through the full reduction in IFs to merchants in order to increase their own revenues and protect their margins by transaction. This, the authors argue, was especially true for small and medium sized enterprises (SMEs). Due to their lower sales volumes, SMEs only have limited bargaining, or buyer, power, which puts them at a disadvantage when negotiating MSCs and other charges with acquiring banks. In contrast, large merchants are better able to benefit during such negotiations as a result of their large sales volume.

The evidence shows that before the introduction of the cap, the average MSC remained at 1.52 per cent from 2002 to 2005, with falls in maximum MSCs being matched with increases in the minimum rate. In 2005, IFs averaged 1.55 per cent. The MSC fell alongside the IF rate throughout the regulatory period ending at 0.74 per cent in 2010, when IFs averaged at 0.64 per cent. (Shown in Figure 4.2)

Although maximum and minimum MSC rates also converged during the regulatory period, their average level fell. Also, the degree to which the reduction in IFs led to a reduction in MSCs varied per sector. Consequently, the authors note that cross-transfers from issuing banks to acquiring banks only occurred in those sectors in which decreases in the maximum rate were not paired by increases in the minimum rate of MSCs.

**Figure 4.2: Average Interchange Fees and Average Merchant Service Charges**



Source: Own elaboration based on data from Iranzo et al. (2012)

<sup>21</sup> Iranzo et al. (2012)

The difference between the two rates was the largest during the first year, at 0.19 per cent, in which the cap was implemented. The same difference was lowest in 2009 at 0.04 per cent. Over the period of the intervention, IFs fell by 0.91 per cent and MSCs dropped by 0.78 per cent. In relative terms, IFs were reduced by around 59 per cent when comparing the 2010 level to that in 2005. MSCs were reduced by around 51 per cent. The authors found that minimum and maximum MSCs converged during the intervention period. This is evidenced by a difference of 2.24 per cent in 2005 and 0.94 per cent in 2010.

**Table 4.2: Bank revenues in Spain in relation to credit cards**

	Revenues from MSCs Acquiring Bank (€m)	Revenues from IFs Issuing bank (€m)	Surplus for Acquiring bank (€m)
<b>2006</b>	894.00	743.68	150.32
<b>2007</b>	911.84	813.50	98.34
<b>2008</b>	830.84	764.75	66.09
<b>2009</b>	737.71	701.28	36.43
<b>2010</b>	704.36	609.18	95.18
<b>Total 2006-2010</b>	<b>4,078.75</b>	<b>3,632.40</b>	<b>446.36</b>

Source: Own elaboration based on Bank of Spain data

The regulation meant that acquiring banks began to make savings, as outlined in Table 4.2, as they did not pass on the full interchange reduction, in euro terms, to merchants. Over the five years, acquirers' total savings were around €450m.

The authors also found that some acquirers increased fees charged to merchants for the installation of POS terminals. This increases the costs for merchants of accepting cards, which naturally impacts SMEs more severely than larger merchants as the higher costs are spread over a lower sales volume and value. As argued by Evans and Mateus (2011), the higher costs borne by merchants are expected to have been fully transferred to consumers, especially in highly competitive sectors that experience constant returns to scale.

#### 4.1.4 Impact on consumers

##### *No impact on final prices*

The intended effect of imposing a cap on interchange fees was that they would translate into lower prices of goods and services purchased by consumers, summarised below:

Lower IFs → lower MSCs → lower retail goods price and higher quality of product/service → increase in card transactions → transfer of benefits from monopoly card issuers to consumers and society

Consumers were intended to be the main beneficiaries of the policy, with lower IFs translated into lower costs to merchants, through lower MSCs. The latter reduction would be passed on to consumers as lower retail prices and higher quality of products and services available. In this way, the cap on IFs was intended to transfer surplus away from monopoly card issuers to consumers and society as a whole.

As reported in Iranzo et al. (2012), this chain of effects did not take place in Spain: although the reduction in IFs did translate into lower MSCs<sup>22</sup>, no evidence of it having been passed through to decreased prices was found by the study. The explanation given was that the reduction in the price

<sup>22</sup> The degree of pass through between IFs and MSCs is studied in detail in the following subsection.

per transaction would have been insufficient to justify a move in price points.<sup>23</sup> The authors also found no evidence of an improvement in the quality of products offered.

#### *Higher cardholder fees*

As issuing banks saw their revenues fall due to lower income from IFs, they raised cardholder fees and reduced benefits in order to compensate for the lost income. Annual fees for credit cards increased by 50 per cent by the end of the regulatory period, and those for debit cards rose by 56 per cent.<sup>24</sup>

Issuing banks experienced an increase in revenues from cardholder fees (annual issuance and renewal fees) of €855 million, from around €1.1bn in 2005 to around €2bn in 2010. The authors conclude that the cost to consumers in terms of annual fees increased by 50 per cent as a result of the Spanish regulation, amounting to nearly €2.5bn paid in increased fees over the course of the intervention.<sup>25</sup>

#### *Higher Credit Card Interest Rates*

Spanish consumers were unintentionally impacted by the lower IFs through higher credit card interest rates according to the following mechanism:

Lower IFs → lower income for issuing banks → increase in credit card interest rates  
→ higher outstanding card debts despite reduction in volume of debt → decrease in consumer welfare

The authors found that average interest rates increased during the time the cap was in place, from 6.27 per cent in 2005 to 6.35 per cent in 2010. Revenue from interest rates is estimated by Iranzo et al. (2012) to have increased from under €700m to nearly €1bn from 2005 to 2010.

#### *Slowdown in the displacement of cash*

Although the substitution of cash payments with card payments continued in the period during which IFs were capped, growth in the take-up of cards slowed and the number of debit cards fell as a consequence of higher cardholder fees and lower cardholder benefits. This is detrimental to consumers as it prevents the full benefit of card payments being realised. The rationale behind this is as follows:

Lower IFs → reduced IF revenue for issuing bank → issuing bank compensates by increasing cardholder fees → consumers substitute from card use to cash → decrease in economic efficiency due to higher cost of cash use

Growth in the take-up of cards slowed: the annual growth rate in the use of cards fell from approximately 14 per cent in 2005 to 10 per cent in 2006, while cash use went up from 1.60 per cent in 2005 to 3.01 per cent in 2006. Further, in the aftermath of the recession use of cards declined by 2.5 per cent in 2009, while cash use only declined by 2.9 per cent.

Moreover, the analysis also suggests that the cap on IFs affected the average value of POS transactions.<sup>26</sup> The average value of payments made by card peaked in 2005 at €52 and has decreased steadily since then, falling to €44 in the last year of the agreement. In contrast, the average value of ATM withdrawals grew consistently throughout the period, increasing from €91 to €117 during the period.

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<sup>23</sup> A price point is a retail price chosen at a strategic level with the aim of becoming more attractive to consumers, e.g. £4.99 or €0.99.

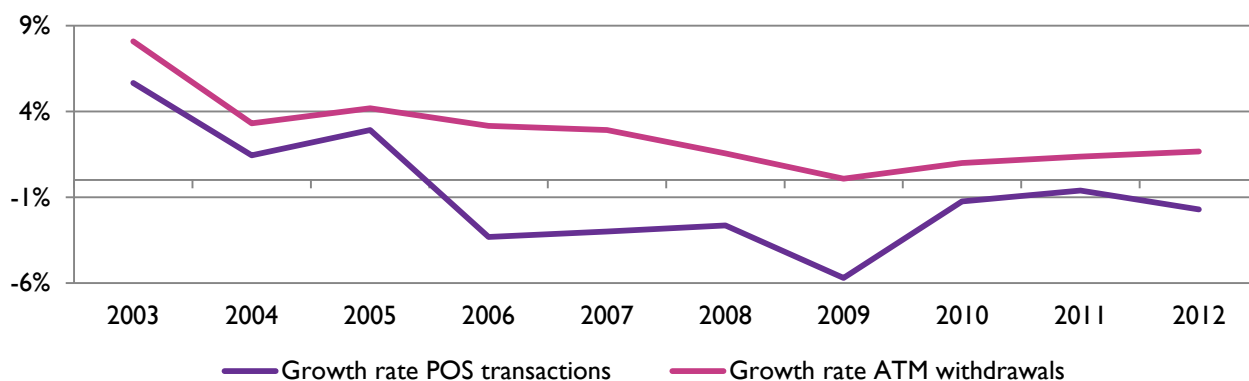
<sup>24</sup> Iranzo et al. (2012) report that the average annual cardholder fee increased from €22.94 for credit cards and €11.12 for debit cards in 2005 to €34.39 and 17.3 respectively, once the cap was removed in 2010.

<sup>25</sup> This calculation is taken directly from Iranzo et al. (2012). The authors calculate the additional amount in revenue collected by issuers from average annual fees resulting from the regulatory intervention in comparison to the revenues they would have enjoyed if annual fees remained at their 2005 levels.

<sup>26</sup> The average value of a card transaction is the ratio of the total value of POS transactions over the total number of POS transactions.

What is more, the average value of a POS transaction, i.e. the average amount card holders paid by card, increased between 2002 and 2005. This implies that the growth rate of the average value was positive during the period. However, once IFs were capped in 2006, the growth rate declined sharply into negative values to -3.32 per cent (see Figure 4.3). Because Spain was already one of the European countries with the lowest usage of card payment systems, the regulation of IFs only seemed to delay the country's convergence to its neighbours' rates.

**Figure 4.3: Growth rate of the average transaction value**



Source: Own elaboration using *Bank of Spain* data

#### *Effect on the underground economy<sup>27</sup>*

As illustrated above, the cap on IFs delayed the growth in the uptake of cards as a means of payment. Combined with the consequent decrease in the number of officially recorded transactions, this reduced government tax revenues. Moreover, this could also have boosted the underground economy, which is estimated to represent approximately 20 per cent of Spain's GDP.<sup>28</sup> By holding back the uptake of electronic payments, the IF cap may have prevented these benefits from being fully realised.

#### 4.1.5 Summary

In conclusion, the Spanish study suggests that consumers in Spain were made worse off as a result of the regulation of interchange fees:

- Merchants made significant gains
- There is no evidence that those gains were passed on to consumers in the form of retail price reductions.
- Cardholder fees increased by 50 per cent.
- Credit card interest rates increased, raising issuers' annual income from interest rates by 45 per cent.
- Substitution from cash to cards was slowed, preventing the full benefits of card payments from being realised.

<sup>27</sup> The underground, or shadow, economy is defined by Schneider (2013) as consisting of undeclared work (two-thirds) and underreporting (one-third).

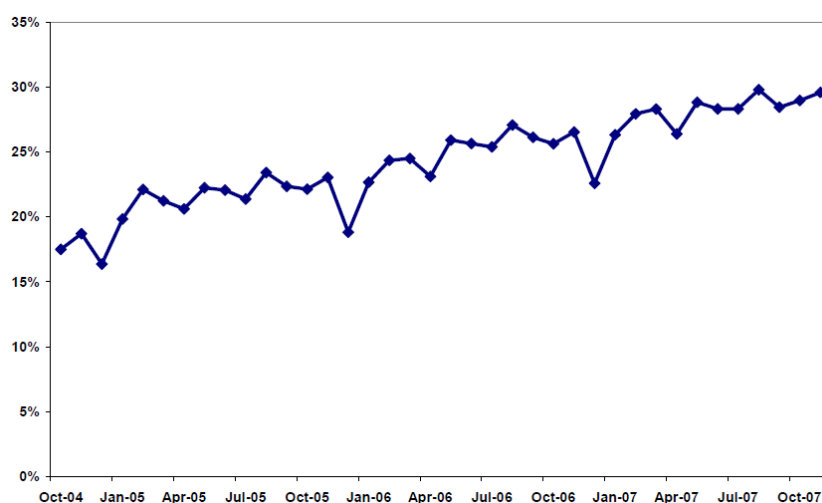
<sup>28</sup> NERA (2011) "Paying with Card or Paper: Costs and Benefits for the Economy and for Users in the United Kingdom, Italy, Germany, and Poland", 29 December 2011.

## 4.2 Impacts of regulating interchange fees in Australia<sup>29</sup>

Unlike the Spanish experience, the introduction of fee caps in Australia did not coincide with the financial crisis. However, there are other factors and characteristics of the Australian economy which need to be taken into account. For instance, CRA International (2008) point out that low-rate credit cards and the growth of e-commerce may “confound” conclusions relating to card usage. The former were introduced in 2003 and are thought of by the authors as a consequence of international development, not of RBA’s intervention itself.

The increased use of e-commerce after the intervention is shown in Figure 4.4. The trend continued after the cap on IFs was introduced and it is therefore also not considered a consequence of the intervention.

**Figure 4.4: Share of MasterCard transactions during which the debit/credit card was not present**



Source: CRA International (2008) using MasterCard data

### 4.2.1 Intervention

In 2003, the Reserve Bank of Australia’s (RBA) regulated card payments through two mechanisms: RBA capped interchange fees on four-party credit cards by reducing them from 0.95 per cent to 0.55 per cent, and it prohibited no-surcharge rules in four-party and three-party systems.

The rationale given by RBA for setting IFs was that it believed these charges and other aspects of credit card payments were leading to inefficient outcomes. RBA argued that IFs created a distortion in the price signals perceived by consumers because the revenue from IFs partly financed cardholder benefits, e.g. reward points and interest-free loan periods. The intuition behind the elimination of no-surcharge rules was that merchants should have the freedom to impose them.

In 2006, RBA changed the allowed IF for debit cards from 0.53 per cent to 12 cents per transaction. IFs for EFTPOS<sup>30</sup> debit card transactions were reduced from 20 cents to between 4 and 5 cents.<sup>31</sup>

<sup>29</sup> The summary presented next is drawn from CRA International (2008) “Regulatory intervention in the payment card industry by the Reserve Bank of Australia, Analysis of the evidence”.

<sup>30</sup> In Australia, 85 per cent of debit card transactions are processed using an EFTPOS terminal. IFs for such transactions are imposed in inverse direction to that of credit cards as they are paid by the issuing bank to the acquiring bank.

<sup>31</sup> The EFTPOS system is used domestically to process debit card transactions. EFTPOS debit cards are the most widely used in Australia, therefore making the most common IF for debit transactions be the 4-5 per

There has been regulation since 2003 and the IFs of MasterCard, Visa, Visa Debit<sup>32</sup> and EFTPOS are still capped today. The cap is set on the weighted average IF for each card listed above, and is reviewed every three years.<sup>33</sup>

#### 4.2.2 Impacts on card payments and the banking sector

The RBA's intervention to reduce IFs was intended to benefit merchants through two mechanisms:

Lower IFs → lower MSCs → lower cost to merchants

Lower IFs → lower MSCs → greater transparency → better bargaining position for merchants

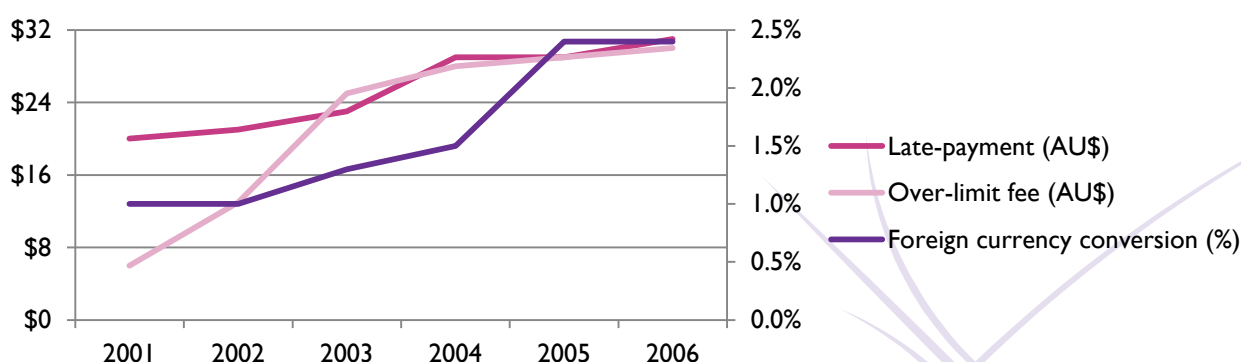
By means of a lower service charge imposed on merchants and more transparency which would put them in a better, more informed, position when negotiating with acquiring banks, merchants were intended to be the main beneficiaries of the regulatory intervention. According to CRA International (2008), Australian retailers experienced cost reductions of the order of AU\$676m during the first year after the introduction of the regulation.

There were concerns that the search and adjustment costs of merchants would prevent acquiring banks from fully passing the reduction in costs on to merchants, especially in the case of smaller firms. This, however, was not the case. MSCs fell by 0.43 per cent, from 1.40 to 0.97 per cent the year the cap was introduced, and was further reduced to 0.79 per cent in 2007. This implies a full pass-through of the reduction in IFs in relation to the reduction in MSCs during the first year of the intervention, as both fell by approximately 0.40 per cent on average.<sup>34</sup>

CRA International (2008) reported that merchant acceptance of credit cards grew after 2004. The number of locations accepting MasterCard as a form of payment slightly decreased immediately after the introduction of the cap on IFs to approximately 500,000 locations. However, the number increased continuously after that to about 700,000 in 2007.

Issuing banks suffered from a reduction in revenues from IFs worth AU\$647m for 2006. However, as in the Spanish case, banks responded to the reduction in their revenue from IFs by increasing the level of other fees. Annual fees increased by AU\$40 on average, which for 2006 represent an estimated AU\$480m in issuer revenues. Issuing banks recovered 74 per cent of the lost revenue from IFs in annual fees alone. Other important fee increases reported by the authors are illustrated below.

**Figure 4.5: Changes in other fees**



cent rate. However, when other debit card transactions are processed these now incur an IF charge of 12 cents per transaction.

<sup>32</sup> MasterCard debit has voluntarily decided to comply by this rate.

<sup>33</sup> RBA (2012) "Developments in Retail Payments Systems"

<sup>34</sup> We point out that these figures are average rates experienced by an average merchant in Australia. Therefore, the reduction in fee levels experienced by any single merchant may be different to another.

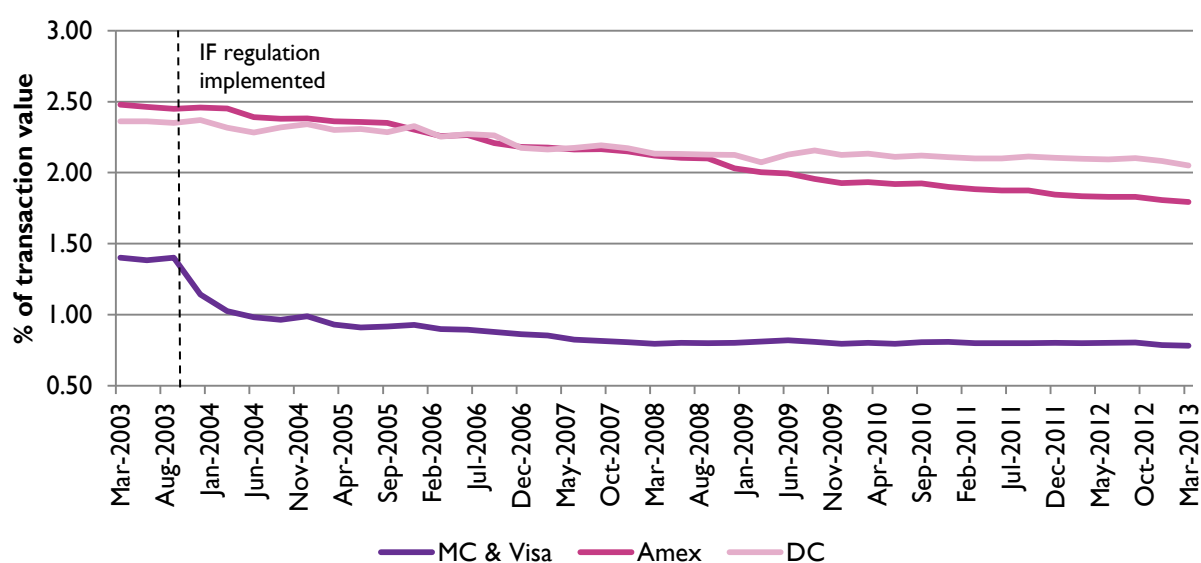


Source: Own elaboration based on CRA International (2008)

The authors argue that the decrease in profitability for issuing banks and the effect of regulatory uncertainty brought about by the new regulation, had a negative effect on the incentives to innovate for the issuers.

According to CRA International (2008), the regulation of IFs affected competition in the sector. It had a positive effect on three-party schemes and Australian issuers started offering three-party credit cards, i.e. American Express and Diners Club, as a companion product to four-party credit cards. As expected by the RBA, the MSCs of American Express and Diners Club also declined as a result of the intervention: MSCs fell from 2.45 per cent in 2003 to 2.38 per cent in 2004 (see Figure 4.6). After the introduction of the regulation, all MSCs declined, however, those of four-party cards fell more abruptly.

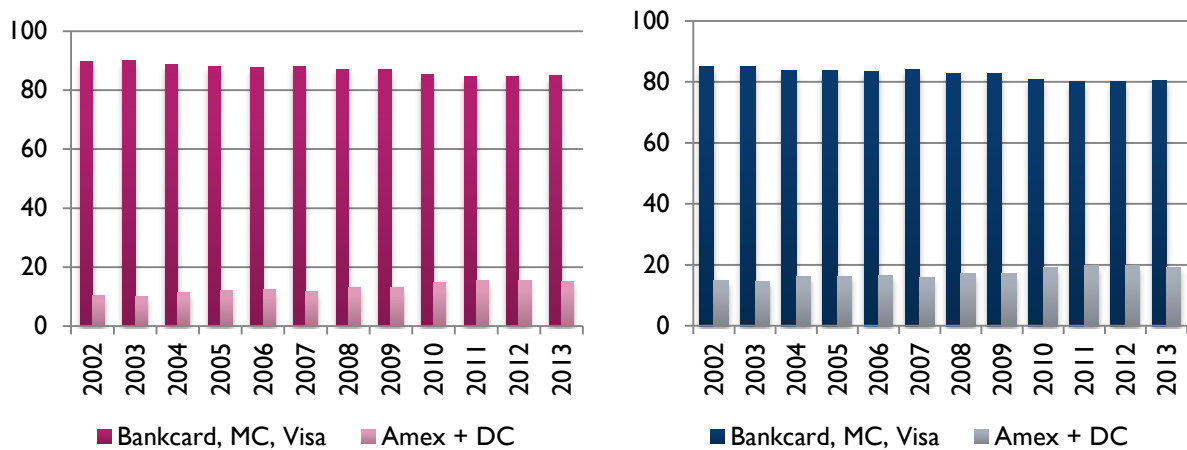
**Figure 4.6: Credit card merchant service charges in Australia, 2003-2013**



Source: CRA International (2008)

The relative share of the three-party system in terms of the number of cards issued (Figure 4.7, left) only increased slightly during the first years after the reduction in IFs: American Express and Diners Club covered around 10 per cent of the credit card industry in 2003, while their share was around 12 per cent in 2005. Therefore, the immediate response to the cap on IFs for three-party cards was limited. However, in 2009, their share increased to around 15 per cent. This may indicate that the two three-party schemes gained a comparative advantage over four-party schemes when issuers started offering “companion cards”. A similar trend is observed when analysing shares in terms of the value of transactions (see Figure 4.7).

**Figure 4.7: Industry shares (average, in %), by number of cards (left) and by value of transactions (right)**



Source: Europe Economics elaboration based on RBA data

### 4.2.3 Impact on consumers

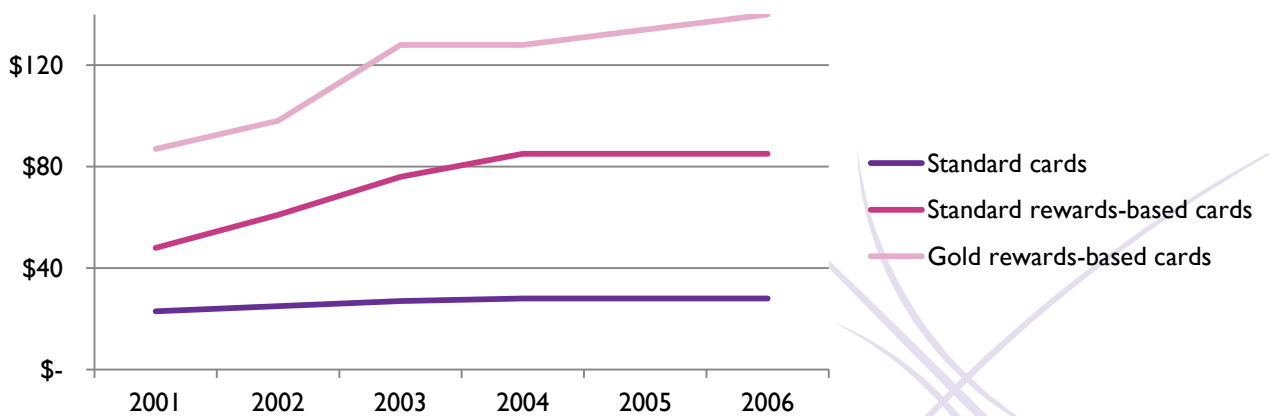
According to CRA International (2008), RBA intended two types of impacts on consumers to take place due to its intervention.

First, unlike in Spain, RBA expected cardholder fees to increase and benefits to fall in relation with the following causal mechanism:

Lower IFs → lower revenues for issuing banks → increased cardholder fees and reduced cardholder benefits → increased cost of credit cards → consumers switch to debit card payments

Accordingly, with the intervention RBA intended to induce consumers to use debit cards instead of credit cards as the cost of the latter payment method increased. Debit cards were thought to be less costly in terms of resources utilised. CRA International (2008) found that cardholder fees did indeed increase as a result of the reduction in IFs (see Figure 4.8).

**Figure 4.8: Annual cardholder fees, by card type**



Source: Own elaboration based on CRA International (2008)

From the shape of the curves for each type of card above, it becomes clear that regulation in Australia had the strongest impact on the annual fees of Gold rewards-based cards, whose fees increased by 30 per cent as a result of the regulation of IFs from AU\$98 to AU\$128 in 2003. The annual fees for

Standard rewards-based cards increased by 24 per cent, while those for Standard cards increased by 8 per cent.

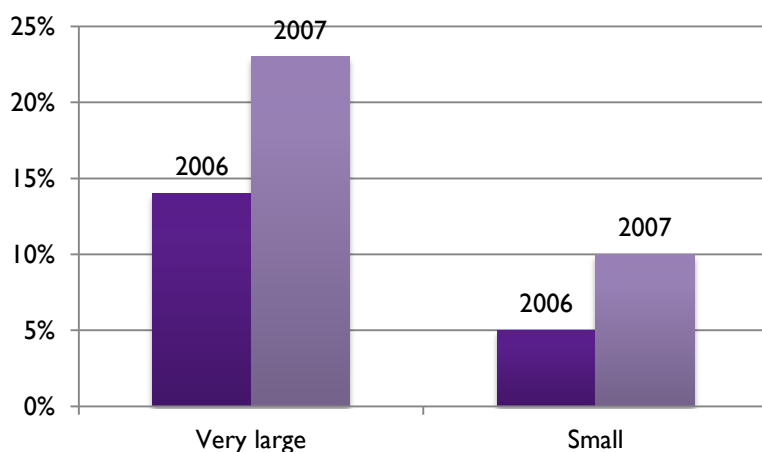
The authors explain that cardholder benefits were also reduced as reflected in the lower amount of reward points earned per dollar spent and the increase in the amount of points needed to claim a prize. In 2003, the average number of reward points required to redeem a voucher worth AU\$100 was 12,400, which increased to 16,200 in 2007.

Moreover, the removal of no-surcharge rules was also expected to induce consumers to switch to debit card payments as the cost of using credit cards would rise further:

No-surcharge rules prohibited → merchants start imposing surcharge → increased cost of credit cards → consumers switch to debit card payments

Although RBA did not expect a widespread use of surcharges, CRA International (2008) report that the number of merchants imposing a surcharge increased significantly, as shown in the figure below.

**Figure 4.9: Number of merchants imposing a surcharge, by firm size**



Source: Own elaboration based on CRA International (2008)

What is more, the surcharges introduced were not based on costs, according to the authors, and were greater than MSCs. The difference between the two varied per payment system and was subject to significant change.

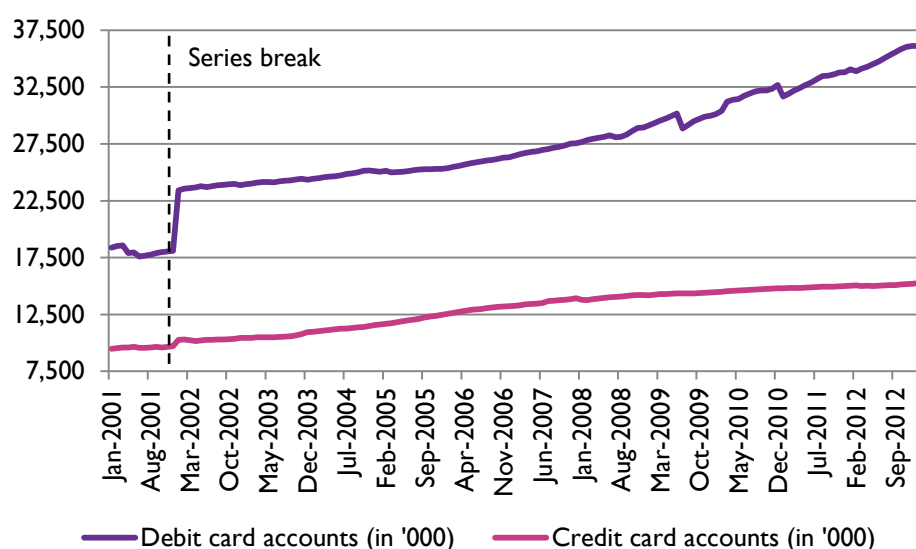
**Table 4.3: Difference between MSCs and surcharges, by credit card**

	2004			2006	
	Visa & MC	Amex	DC	Visa & MC	Amex & DC
Average surcharge	1.80%	2.60%	2.50%	1.00%	2.00%
Average MSC	0.99%	2.38%	2.34%	0.85%	2.18%
<b>Difference</b>	<b>0.81%</b>	<b>0.22%</b>	<b>0.16%</b>	<b>0.15%</b>	<b>-0.18%</b>

Source: CRA International (2008)

CRA International (2008) found that the adoption of credit cards remained similar to its level before the intervention. The growth rate in the use of debit cards, however, was lower after the introduction of the cap on IFs. The share of debit card transactions went from around 50 per cent in 2002 to around 54 per cent in 2007.

**Figure 4.10: Number of accounts, in thousands**



The intervention was then expected to benefit consumers as retail prices would fall:

Lower IFs → lower MSCs → lower cost for merchants → lower prices

RBA expected the decrease in IFs to be passed through to consumers in the form of lower prices, thanks to “vigorous competition” at the retail level. What is more, the RBA eliminated no-surcharge rules because it expected prices to follow the decrease in IFs and therefore no longer reflect merchants’ cost of offering card payment services. Therefore only those consumers opting to pay by card would be affected by the cost of using the card system. The RBA expected a reduction of 0.1-0.2 percentage points in the Consumer Price Index (CPI).

As in the Spanish case, no evidence was found neither of a reduction in retail prices nor of an improvement in the quality of products. CRA International (2008) also explain this as a consequence of the very small reduction in the price per transaction if pass through from MSCs to prices would have taken place. The authors estimate that the average cost reduction for the merchant was approximately 0.16 per cent.

In 2008, the RBA observed that merchants had saved around AU\$1.1bn, yet they have been unable to provide any evidence related to consumers’ benefit, stating that:

No concrete evidence has been presented to the Board regarding the pass-through of these savings.

In 2009, the RBA dropped any reference to merchants passing along savings:

The aggregate net savings to merchants over 2007/08 from declines in merchant fees...since the reforms were introduced is estimated at \$1.1 billion. Equivalently, this represents a reduction in costs for merchants of around 72 cents per credit or charge card transaction over the period.

There were also wider impacts resulting from the measure. The regulatory intervention by the RBA was intended to reduce the profitability of four-party payment systems. As profitability fell, so did issuers’ incentives to invest and innovate in, for example, new types of four-party cards, which might have improved the security of the system and prevented fraud.

## 4.3 Impact of the Durbin Amendment regulation of IF fees in the United States

### 4.3.1 Background

The United States is a very large economy with a highly developed and diverse financial services industry. There were a number of changes in the regulation of the financial sector following the crisis under the 2009 Dodd-Frank Wall Street Reform and Consumer Protection Act.

Shortly before the vote on that law, an amendment was introduced by Senator Durbin – the Durbin Amendment – which required the Federal Reserve to regulate the level of interchange fees. In negotiations over the act, regulation was restricted only to banks with \$10bn or more in assets. The regulation was therefore a surprise for analysts.

There are two features which mean that the Durbin Amendment is particularly amenable to study:

- It only covers larger banks, which means trends at smaller banks provide some indication of what might have happened without the regulations in place. This wrinkle in the regulation was exploited by Manne, Morris & Zywicki (2014) to study its impacts.<sup>35</sup>
- The passage of the amendment was a surprise to analysts and the media. That means Evans, Chang & Joyce (2013) at the Coase-Sandor Institute were able to conduct an event study at the point where it was introduced to ascertain the expected impacts on banks and retailers, the extent to which they were expected to be able to pass on the costs and benefits respectively to consumers.<sup>36</sup>

Our analysis in this section is largely based on those two studies.

It should be borne in mind that the limitations of the Amendment, namely that it applies only to larger banks and that it does not apply to credit card transactions, may mean that the results of those studies, while internally reliable, cannot be applied directly (in a quantitative sense) to the Commission's proposals, which cover all banks and – in the case of the version most likely to be adopted – debit and credit cards. However the results are similar to those seen in Australia and Spain which suggests that problem is not critical and the results can be seen as a reasonable proxy for what might happen in Europe.

### 4.3.2 Intervention

The Durbin Amendment was implemented by a Federal Reserve rule-making that effectively halved the debit card interchange fee that could be charged by banks with over \$10bn in assets. The average interchange fee fell from around \$0.44 per transaction to around \$0.24 per transaction.

### 4.3.3 Impact on card revenues and the merchant service charges

IF revenues are estimated to have fallen by around \$7.3bn a year after the introduction of the Durbin Amendment. That figure is expected to rise over time as the volume of debit card transactions continues its long-term upward trajectory. The event study conducted at the Coase-Sandor Institute found that capital markets anticipated banks would lose significant profits, in other words that not all

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<sup>35</sup> Manne, G. A., Morris, J. & Zywicki, T. J. (2014) "Price Controls on Payment Card Interchange Fees: The US Experience", International Centre for Law & Economics

<sup>36</sup> Evans, D. S., Chang, H. H. & Joyce, S. (2013) "The Impact of the U.S. Debit Card Interchange Fee Caps on Consumer Welfare: An Event Study Analysis", University of Chicago Coase-Sandor Institute for Law & Economics Research Paper No. 658

of those costs could be passed on to consumers. Based on different modelling approaches, they found a reduction in expected future bank profits of between \$15.9bn and \$16.4bn.

On the other hand, the study found that “capital markets anticipated that publicly traded retailers would retain billions of dollars in profits” as a result of IF regulation, between \$38.1bn and \$41.1bn in expected future additional profits depending on the modelling approach. MSCs have fallen for larger retailers, increasing their profitability. Manne, Morris & Zywicki (2014) report that research for Mastercard has found that the top twenty US merchants have saved around \$120m, around 0.7 per cent of around \$16bn in sales.

However, Manne, Morris & Zywicki (2014) found that the weighted average MSC only fell from 1.99 per cent to 1.97 per cent for smaller retailers, despite the average interchange fee falling from 1.07 per cent to 0.74 per cent. 93 per cent of the reduction in interchange fees captured by acquiring banks and only 7 per cent passed through to retailers. They argued that this resulted from the different ways in which MSCs are calculated for larger and smaller retailers, with the rates charged to smaller retailers less responsive to increases or decreases in IF rates. They expect that over time more of the IF rate reduction will be passed on, but argue that “it is not clear how long that will take or how completely their MSCs will decline in the end”.

Other retailers have suffered as previously discounted interchange fees charged for very small transactions have increased, as the cap acts as a floor in cases where the market interchange fee rate was below the cap set. This might be a concern for those EU Member States where rates are either below the cap now or might reasonably be expected to fall below the cap in future.

Reductions in MSCs have therefore been concentrated upon large retailers where most trade is in the form of relatively large transactions.

#### 4.3.4 Impact on consumers

The overall impact on consumers appears to have been higher costs. The difference between the reduction in bank profits (\$15.9bn to \$16.4bn) and the increase in publicly traded retailer profits (\$38.1bn to \$41.1bn) found by Evans, Chang & Joyce (2013) equates to a net loss for consumers of between \$21.8bn and \$23.6bn.

Manne, Morris & Zywicki (2014) report that, while larger retailers have seen a substantial reduction in MSCs, “there is little evidence of any of those savings being passed on to consumers”. They point to the diesel and petrol retail sector as an example:

In the year following Durbin’s implementation, gasoline retailers realized more than \$1 billion in savings from reduced interchange fees. But “while this should mean savings of roughly 3 cents per gallon, no savings have been passed on to consumers.” This is particularly remarkable and instructive given that the retail gasoline industry is highly competitive, and at least one other study has demonstrated that gasoline excise taxes are almost instantly and fully passed-through to consumers.

Costs may be passed-through over time, and the cost savings are small enough on an individual transaction that they might not be discernible against the backdrop of changes in prices for other reasons. However the Coase-Sandor Institute study notes that their estimate that banks are likely to pass-through a greater proportion of the increase in their costs than retailers will pass through the reduction in their costs fits with findings of earlier research, which finds pass-through rates of other sorts of costs for merchants of around 50 per cent and banks of around 70 per cent.

Similar to Spain and Australia, issuing banks have made up for the reduction in their revenue by increasing the cost and reducing the quality of bank accounts for customers. The initial response was a monthly debit card fee of \$3-\$5. However in the face of criticism from customers, banks shifted to less transparent measures.

Manne, Morris & Zywicki (2014) find that the “primary way in which banks have sought to recoup the lost revenue seems to have been through higher bank fees and reduced access to free current accounts.” Free accounts, which had increased from 10 per cent of all accounts in 2001 to 76 per cent by 2009 (as customers shifted from cheques to debit cards), but access fell dramatically. They cite a Bankrate.com study which found that 39 per cent of banks offered free current accounts free current accounts in 2012, whereas 76 per cent offered those accounts in 2009. Average monthly fees also roughly doubled (increasing by around \$6 a month) and the minimum balance required to avoid them increased from around \$500 to around \$700. Other fees also increased. Overall, they estimated that:

All told, a typical lower income bank customer who previously qualified for a free current account but, after Durbin, no longer meets the minimum monthly balance requirement, is likely paying around \$12 in monthly fees, as well as an additional \$1 or more in ATM fees. That’s an annual cost of around \$160.

#### 4.3.5 Impacts on financial inclusion

Manne, Morris & Zywicki (2014) also look at the potential impacts of the combination of a decline in free bank accounts and the rise in number of bank customers who are not profitable (they cite one industry analyst as finding that a combination of the Durbin Amendment and reductions in overdraft fees would mean 40 per cent of customers would become unprofitable.

Higher fees can be expected to discourage low-income consumers, who are the least likely to meet the minimum balance needed to avoid paying, and lower profits will discourage banks from seeking their business. They note that the number of unbanked households increased by almost 1 million between 2009 and 2011, an around 10 per cent rise, and that rise was particularly concentrated among low income households.

The main effect in terms of the volume of transactions, on the other hand, has been a shift from debit cards to credit cards (reversing the prior trend), similar to the shift from regulated four-party schemes to unregulated three-party schemes in Australia. There has also been a shift to pre-paid cards, which are also not subject to the regulation.

## 5 Expected Initial Impacts

### 5.1 Scenario

In this section we model the short- to medium-term impact of regulating IFs in the UK. To do this, we estimate the difference between issuing banks' current interchange income and their interchange income if fees were capped at the rates in the central proposal from the Commission (0.2 per cent for debit cards, 0.3 per cent for credit cards). We then estimate the extent to which issuing banks would be able to recoup lost interchange revenue through higher cardholder fees and the extent to which acquiring banks would pass through the saving in interchange fees in the form of lower MSCs, based on the experience in Spain.

### 5.2 Expected Impact on Cardholder Fees and MSCs: Lessons from Spain

First, we show what IF and cardholder fees revenues per card would have been without any regulatory intervention (see Table 5.1), as calculated in Iranzo et al. (2012). We include an additional year before the introduction of the cap than in the original study, i.e. as we see that IFs fell significantly from that year to the next, from 1.62 to 1.55 per cent. In 2004, issuers generated approximately €1bn in IF revenues, for the value of POS transactions reported by the Bank of Spain.

Given the expected change in issuing banks' revenues, we then model the additional impact on cardholder fees and MSCs.

**Table 5.1: Banking revenues in Spain without intervention, 2004-2010<sup>37</sup>**

	IF	MSC	Value (€m)	Revenues from IFs (€m)	Revenues from MSCs (€m)	Total Number of Cards (m)	IF Revenue per card (€)	IF Revenue Mark-up per card (€)	
<b>2004</b>	1.62%	1.52%	62,515.42	1,009.62	950.23	61.7	16.4	0.96	
<b>2005</b>	1.55%	1.52%	71,466.43	1,107.73	1,086.29	65.1	17.0	0.33	
<b>2006</b>	1.55%	1.52%	79,115.03	1,226.28	1,202.55	70.1	17.5	0.34	
<b>2007</b>	1.55%	1.52%	89,395.89	1,385.64	1,358.82	75	18.5	0.36	
<b>2008</b>	1.55%	1.52%	94,413.92	1,463.42	1,435.09	76.4	19.2	0.37	
<b>2009</b>	1.55%	1.52%	91,075.50	1,411.67	1,384.35	74.5	18.9	0.37	
<b>2010</b>	1.55%	1.52%	95,184.09	1,475.35	1,446.80	71.6	20.6	0.40	
<b>Change in IFs per card, 2004-2010</b>							<b>26%</b>		
<b>Change in revenue mark-up per card, 2004-2010</b>								<b>-59%</b>	

Source: Iranzo et al. (2012), Bank of Spain and Europe Economics calculations

From the table above it becomes clear that in the absence of a cap on IFs, the revenue mark-up enjoyed by issuers in Spain would have been reduced by nearly 60 per cent over the course of seven years.

<sup>37</sup> Data on revenues from IFs is taken from Iranzo et al. (2012) who calculate it using the average IF rate for credit card transactions and apply it to the value of sales POS terminals for each year. We added the figure for 2004 to the authors' analysis using the same methodology.



We then model the extent to which issuing banks recouped lower IF revenues from cardholders in the form of higher cardholder fees and increased interest income. Specifically, we compared the change in additional revenues (from cardholder fees and interest) per card with the change in IFs per card. This is shown in Table 5.2 below.

**Table 5.2: Comparison of changes in revenues from annual fees and interest income in Spain, 2005-2010**

	Revenues from IFs (€m)	Revenue from Fees + Interest (€m) <sup>38</sup>	Annual income	Total Number of Cards (m)	IF Revenue per card (€)	Additional revenues per card (€)
<b>2005</b>	1,107.8		1,777.8	65.1	17.0	27.3
<b>2006</b>	743.7		2,473.0	70.1	10.6	35.3
<b>2007</b>	813.5		3,052.1	75.0	10.9	40.7
<b>2008</b>	764.8		3,308.2	76.4	10.0	43.3
<b>2009</b>	701.3		3,080.8	74.5	9.4	41.3
<b>2010</b>	609.2		2,931.9	71.6	8.5	41.0
						Change in IFs per card, 2005-2010
						-50.0%
						Change in fees per card, 2005-2010
						49.9%
						<b>Change in Revenues per card as % of Change IFs</b>
						<b>-99.9%</b>

Source: Europe Economics calculations based on Iranzo et al. (2012)

This suggests that the burden of the IF revenues lost for issuers in the Spanish case was passed on to consumers up to nearly 100 per cent, on a per card basis.

To model the impact of lower IFs to MSCs, we compared the change in MSCs per transaction with the change in IF revenue per transaction. This is shown in the table below.

**Table 5.3: Comparison of changes in MSCs in Spain, 2004-2010**

	Revenues from IFs (€m)	Revenues from MSCs (€m)	Total Volume of Transactions (m)	IF per transaction (€)	MSC Revenue per transaction (€)
<b>2004</b>	1,009.6	950.2	1,171	0.86	0.81
<b>2005</b>	1,107.8	1,086.3	1,418	0.78	0.77
<b>2006</b>	743.7	894.0	1,627	0.46	0.55
<b>2007</b>	813.5	911.8	1,900	0.43	0.48
<b>2008</b>	764.8	830.8	2,065	0.37	0.40
<b>2009</b>	701.3	737.7	2,121	0.33	0.35
<b>2010</b>	609.2	704.4	2,258	0.27	0.31
					Change in IF revenues 2004-2010
					-40%
					Change in MSC revenues 2004-2010
					-26%
					<b>Change in MSC revenues as % Change in IF revenues</b>
					<b>65 %</b>
					Change in IFs per transaction, 2004-2010
					-69%
					Change in MSCs per transaction, 2004-2010
					-62%
					<b>Change in MSCs as % Change in IFs</b>
					<b>90%</b>

Source: Europe Economics calculations based on Iranzo et al. (2012)

<sup>38</sup> We note that data on the level of annual fees is only available since 2005, making an earlier comparison (as done in the rest of the analysis) impossible.

The table above demonstrates that in the Spanish case the cap on IFs led to a 40 per cent fall in IF revenues for issuers in 2010 in comparison to the pre-regulation revenues in 2004. Acquirers' revenues from MSCs fell by 26 per cent, which leads to the conclusion that the fall in the latter revenues for acquirers as a proportion of the reduction in issuers' revenues from IFs was 65 per cent over the period.

Nevertheless, when looking at the change in revenues with respect to the volume of transactions, the degree of pass-through is greater: IFs per transaction fell by nearly 70 per cent as a result of the cap, while MSCs per transaction were reduced by 62 per cent. This implies a pass-through rate from IFs to MSCs of 90 per cent, on a per transaction basis, over the period 2004 to 2010.

A possible explanation for the lower pass-on rate when assessing the total revenue changes in comparison to the rate passed through on a per transaction basis is that acquiring banks in Spain may not have reduced the MSC for smaller merchants as much as they lowered the charge for larger merchants. As noted earlier, this may occur because SMEs do not enjoy the same bargaining power as larger merchants, which puts them at a disadvantage when negotiating MSCs with acquirers. There may also be differences in how MSCs are calculated for retailers of differing sizes.

### 5.3 Implications for the UK

In order to estimate the implications of those proposals for the UK, we apply the method developed in earlier Europe Economics reports on this subject, where IF rates are given in basis points for debit and credit cards and this is applied to their respective total value of transactions in order to calculate projected IF revenues.

$$IF\ Revenues = IF\ Revenues^{Debit} + IF\ Revenues^{Credit}$$

where

$$IF\ Revenues^{Debit} = IF_{Visa}^{Debit}(\%) * Value_{Visa}^{Debit} + IF_{MasterCard}^{Debit}(\%) * Value_{MasterCard}^{Debit}$$

$$IF\ Revenues^{Credit} = IF_{Visa}^{Credit}(\%) * Value_{Visa}^{Credit} + IF_{MasterCard}^{Credit}(\%) * Value_{MasterCard}^{Credit}$$

Estimated IF revenues after the introduction of a cap of 0.2 per cent on debit card transactions and 0.3 per cent on credit card transactions are then compared to actual IF revenues in order to estimate the total impact on bank IF revenues; retailer MSCs; and costs to consumers.

**Table 5.4: Initial IF regulation impacts, UK**

	Debit	Credit
<b>Estimated IF revenue, €m</b>	708	478
<b>Loss in IF revenue, €m</b>	19	1,041
<b>Increase in consumer fees, €m</b>	19	1,041
<b>Increase in consumer fees per card, €</b>	0.20	13.82
<b>Reduction in MSCs, €m</b>	17	937

We therefore estimate the following initial impacts for banks, retailers and consumers:

- Banks will see a total reduction in IF revenue of around €1bn, which they will recover from consumers through other charges.
- Retailers will see a reduction in MSCs of around €950m, accruing mostly or even entirely to large retailers.
- Consumers will see an increase in bank fees of around €1bn, or around €14 for each credit and debit card carrying customer, and they will not see a reduction in prices.

As noted in the previous section, in the Spanish case there was zero pass-through by merchants to consumers from lower MSCs in the form of lower retail prices.<sup>39</sup> It is worth pausing to grasp why this might be less surprising than it at first might seem. Cash is the most expensive medium in which to accept payments. But since it is culturally (and often legally) mandatory to accept cash payment in most retail contexts, that means that if accepting payment in cash is to leave transactions profitable, it will be the cost of cash acceptance that determines the price point rather than the cost of credit or debit card transactions (i.e. those transactions to which interchange fees are relevant). It is possible that, over the very long term, competition might force retailers to accept unprofitable transactions on cash payments as part of an overall “normal profit” business model, but it should not be surprising if that process is drawn out and that it has not happened so far in Spain, Australia and the United States.

Even if, eventually, there is some pass-through to consumer prices, there are reasons to expect that such pass-through will always be incomplete and the net impact will be an overall increase in costs for consumers. In other words, while the exact magnitude of the increase in costs to consumers may reflect an initial impact that erodes to some extent over time, the sign of the results – an expected reduction in bank IF revenues, reduction in retailer MSCs and an overall increase in consumer costs – can be expected to hold. At the same time, even if the pass-through for merchants matched the pass-through for banks in the future, consumers would still have lost out overall (as they are currently seeing increased overall costs). Consumers would only be better off if, in future, banks passed through a smaller share of their costs than merchants on a scale sufficient to outweigh the imbalance thus far.

Thus, in practical terms, MSC / IF caps tend to function ultimately as transfers from consumers to retailers, via banks.

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<sup>39</sup> Such a case has also been reported in relation to the regulation of debit IFs introduced in the US in 2011. (Electronic Payments Coalition, 2012) Research by Bloomberg Government stated that the expected benefit to the retail industry was expected to be US\$8 billion. In relation, the Electronic Payments Coalition reported that merchants expected the highly competitive market to translate the IFs savings into lower prices. However, the same study conducted a review of prices at 18 stores before and after the introduction of the Amendment. It found that “customers paid 1.5 per cent more for the same products after the Fed rule was implemented” as only 33 per cent of the stores evaluated increased prices of kept them at the same level.

# 6 Expected Wider Impacts

## 6.1 Introduction

The last section of this report quantified the potentially adverse direct short- to medium-term impacts of the introduction of interchange regulation in the UK. However, interchange regulation could potentially also lead to a number of additional, more complex adverse consequences, namely:

- an increase in financial instability due to lower revenues for issuing banks;
- problems for the financing of the self-employed and micro-enterprises;
- uncertainty in monetary policy;
- problems for the implementation of the Universal Credit
- increased use of non-mainstream finance; and
- a deterioration in competitive conditions within the card sector and reduced incentives for issuers to innovate for bank cards.

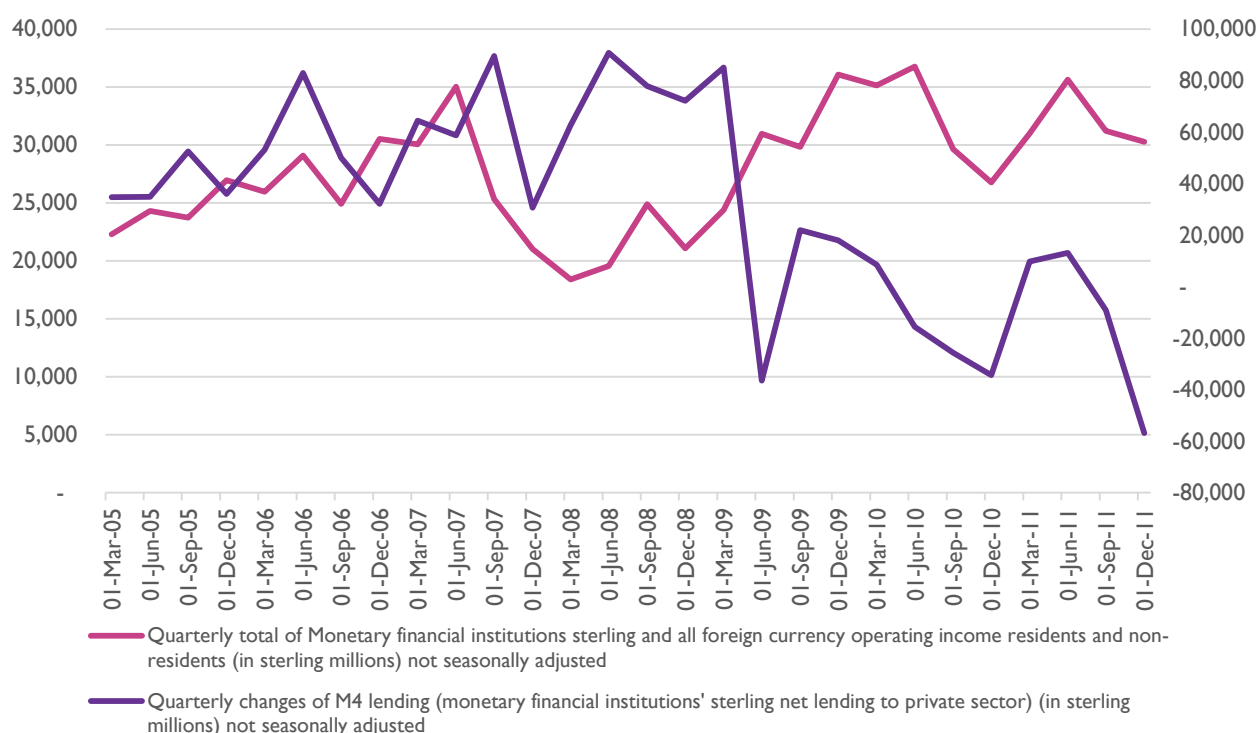
## 6.2 Retarding the Recovery in Bank Lending

Banks appear in the four-party system at two key points: some are acquirers and some are issuers. In respect of issuers, there is a revenue effect that in direct terms is transitional but material. Transitional in that over the medium-term, charges to cardholders and interest rates may eventually balance out revenue lost through IFs, but in the interim period revenues and profits for issuers are diminished.

Such an effect on issuer revenues is likely to have wider impacts. Any decrease in their revenue streams is likely to decrease lending, as banks that are less profitable will take longer to rebuild their currently distressed balance sheets, and in the meantime will have less available to lend, while increases in the uncertainty of their revenue streams could also potentially slow the recovery in lending growth.

The chart below shows financial institutions operating income (left axis) and changes in their lending to the private sector (right axis). As financial institutions' operating income grew relatively steadily from 2005 to early 2007, their lending to the private sector was growing. However, after a large shock to their operating income in 2008 as a result of the financial crisis, lending fell from the end of 2008. Moreover, despite a general recovery, their income has remained subject to significant fluctuations and lending generally continued to fall.

**Figure 6.1: Quarterly total of Monetary financial institutions sterling and all foreign currency operating income residents and non-residents (in sterling millions) not seasonally adjusted (left axis) and quarterly changes in M4 lending (monetary financial institutions' sterling net lending to private sector) (in sterling millions) not seasonally adjusted (right axis)**



Source: Bank of England

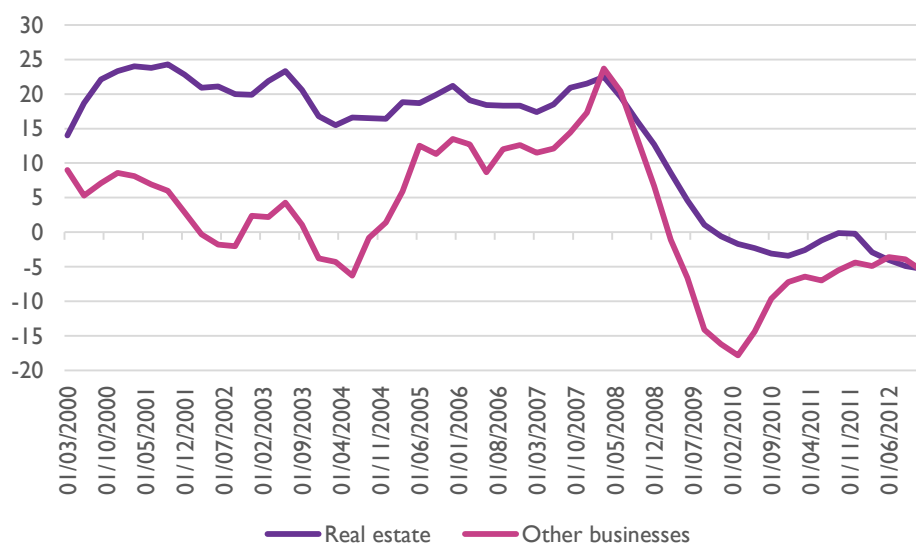
As interchange regulation would reduce issuers' revenues, a consequence might therefore be a slower recovery in bank profitability and hence a slower recovery in the robustness of bank balance sheets, due to lower revenues, and increased uncertainty, for issuing banks. This in turn could retard the recovery in bank lending.

### 6.3 Financial Problems for Small Businesses and the Self-Employed

As noted above, one important feature of the current crisis has been a fall in lending to businesses across the economy. Credit cards are an important alternative source of financing or credit availability for small businesses and the self-employed. As traditional bank lending channels have dried up, the importance of credit card lending to these groups has increased, if anything.

The chart below shows year-on-year changes in business lending since 2000, and illustrates the sharp decline that has occurred since 2008.

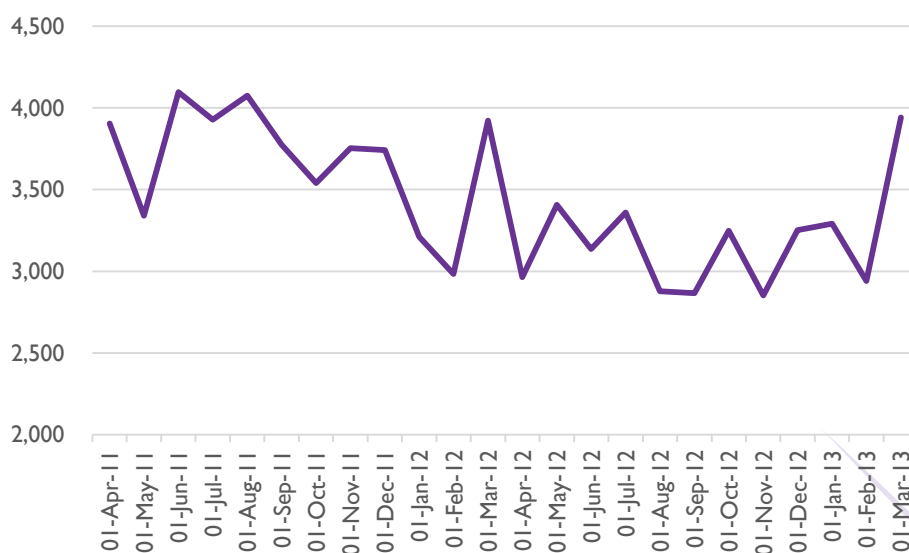
**Figure 6.2: Growth in the stock of lending to the UK real estate sector and other businesses, year on year percentage change**



Source: Bank of England

Moreover, lending to small businesses in particular has been problematic. This can be seen in the chart below, which shows lending to small and medium enterprises since April 2011, which shows that lending to SMEs in 2012 was generally below its levels in 2011. Although there has been some improvement in 2013, lending conditions for small businesses remain poor.

**Figure 6.3: Monthly sterling and all foreign currency gross lending (excluding overdrafts) to small and medium-sized enterprises (in sterling millions) by monetary financial institutions - not seasonally adjusted**



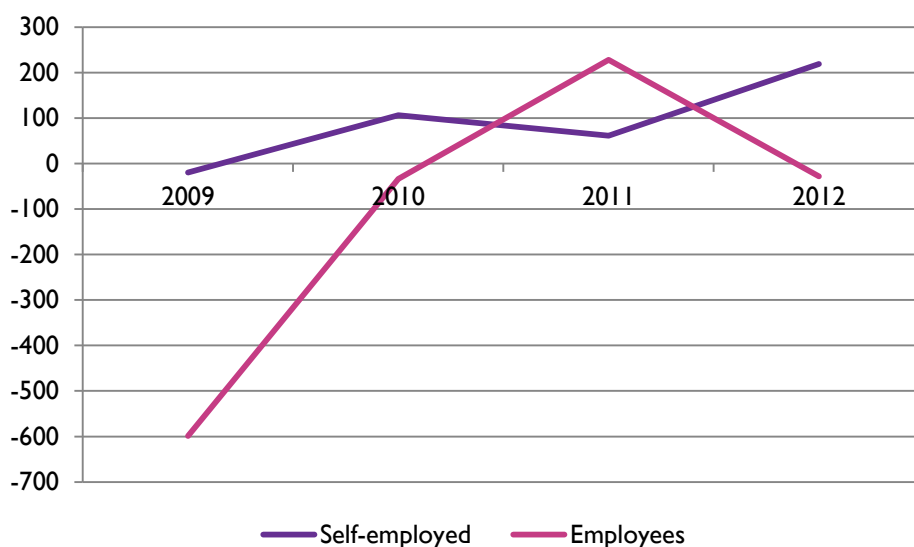
Source: Bank of England

Coupled with poor lending conditions, a further feature of the post-financial crisis economy has been an increase in the number of workers that are self-employed. In fact, the number of self-employed workers increased by 367,000 in the four years from 2008 to 2012, while the number of employees fell by 434,000 in the same period.<sup>40</sup> This trend can be seen in the chart below, which shows year-on-year changes in the

<sup>40</sup> <http://www.ons.gov.uk/ons/rel/lmac/self-employed-workers-in-the-uk/february-2013/sty-self-employed-workers.html>.

number of self-employed workers and employees in the UK. In every year but one the number of self-employed has increased, whereas in every year but one the number of employees has fallen.

**Figure 6.4: Year on Year Change in Number of Self-Employed workers and Employees (thousands)**



Source: Office for National Statistics

Small businesses, and the self-employed in particular, are more likely to be reliant on business credit cards as a source of finance than are larger businesses, which typically raise more of their capital through bank loans or corporates bonds. Likewise, sole traders may also use personal credit cards as a form of business finance. For example, only three per cent of small businesses use equity finance, compared to 55 per cent that use credit cards.<sup>41</sup> More evidence on tighter lending conditions for SMEs in the wake of the crisis can be found here.<sup>42</sup>

The UK Department for Business, Innovation and Skills (BIS)<sup>43</sup> reported in January 2012 that 19 per cent of the external finances of SMEs are from credit cards. Moreover, they identify that SMEs use mostly existing cards, while only a small proportion of these firms obtain a new card.

According to the SME Business Barometer for February 2013<sup>44</sup>, half of all SME employers in the UK had credit cards that they used for business purposes.<sup>45</sup> To the extent that interchange regulation increases the cost of holding cards and reduces credit card use, it would also therefore constrain finance to small businesses in particular.

## 6.4 Uncertainty in Monetary Policy

In any economy, and by definition, Nominal GDP (GDP in cash terms) is identical to the product of the broad money stock and the GDP-velocity of circulation of that money stock — the amount of money times the average circulation of each pound note in producing that GDP is identically equal to the cash value of GDP.

<sup>41</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/32230/12-668-boosting-finance-options-for-business.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/32230/12-668-boosting-finance-options-for-business.pdf).

<sup>42</sup> [http://www2.warwick.ac.uk/fac/soc/wbs/research/csme/research/latest/small\\_firms\\_in\\_the\\_credit\\_crisis\\_v3-oct09.pdf](http://www2.warwick.ac.uk/fac/soc/wbs/research/csme/research/latest/small_firms_in_the_credit_crisis_v3-oct09.pdf).

<sup>43</sup> BIS (2012) “SME Access to External Finance”, BIS Economics Paper No. 16, January 2012 [Available [here](#)].

<sup>44</sup> BIS (2013) “SME Business Barometer: February 2013”, by BMG Research, May 2013 [Available [here](#)].

<sup>45</sup> It is not known if the cards were used in the name of the business or as personal cards.

The broad money stock is not simply the notes and coin in circulation. Instead, the broad money stock can be thought of as consisting of “everything used as money” and can be defined in many ways, depending on how broadly one wants to draw the concept of being used as money. Some plausible definitions will, however, include available credit balances on credit cards as falling within the broad money stock. In general, however, it will certainly be the case that the relationship between narrower concepts of “money” (e.g. notes and coin plus reserve balances — known as the “monetary base”) and “broad money” — the relationship called the “money multiplier” — will be affected by practices such as the standard norms of credit card use. In principle, such practices could also affect the velocity of circulation.

Hence the relationship between changes in broad money and changes in nominal GDP depends (either via the money multiplier or via the velocity of circulation), *inter alia*, on how widespread is the holding of credit cards and how they are used. If fewer consumers have credit cards, then (other things being equal) for a given monetary base, nominal GDP will be expected to be lower.

Quantitative easing (QE) involves the central bank purchasing government bonds with newly-created money. This process expands the monetary base. If the relationship between the monetary base and nominal GDP were stable, then such an expansion in the monetary base would have a predictable effect upon nominal GDP. There are, however, many complexities.

One such complexity has been widely discussed in recent months. Responding to the failure of many financial institutions during the financial crisis of 2008/09, regulatory authorities raised capital and liquidity requirements (so-called “prudential requirements”) for banks. Many authors have contended that this had the perverse effect of offsetting the impact of QE on the broad money stock — with higher capital requirements, the argument goes, banks face incentives to shrink (growth in) their balance sheets, thereby shrinking (growth in) the volume of bank deposits and hence reducing (growth in) the broad money stock.

In a closely related way, regulation that had the effect of reducing credit card use (as the Spanish experience suggests an interchange fee cap might do) could affect the relationship between QE and nominal GDP. This could make it very difficult for central banks to calibrate the appropriate amount of QE to engage in (a difficult task even under ideal conditions), and mean that the medium-term impacts were unpredictable.

## 6.5 Problems for the Implementation of Universal Credit

As part of its welfare reform programme, the UK government is introducing Universal Credit to replace six existing benefits – income-based Jobseeker’s Allowance, income-related Employment and Support Allowance, Income Support, Child Tax Credits, Working Tax Credits and Housing Benefit. Introduction of Universal Credit began in some areas of North-West England in April 2013. Key changes from the current system are that Universal Credit will be available to people in work as well as to those out of work, most people will claim Universal Credit online, and Universal Credit will continue to be paid as people move in and out of work, start a new job or increase their hours.<sup>46</sup>

However, from the point of view of interchange regulation, the key differences are that:

- Claimants will receive one monthly payment, paid electronically into a bank account in the same manner as a monthly salary. In combination with a Basic Bank Account, this can now include prepaid cards that have sort codes and account numbers.
- Support with housing costs will go directly to the claimant in their monthly payment.

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<sup>46</sup> <https://www.gov.uk/government/policies/simplifying-the-welfare-system-and-making-sure-work-pays/supporting-pages/introducing-universal-credit>.



The intention of paying claimants monthly, and paying support for housing costs directly to them, is to mirror working practices to ready claimants for entering the workforce and having to budget, as many existing benefits are paid weekly or fortnightly.

However, interchange regulation may cause problems for the implementation of Universal Credit for a number of reasons. First, as Universal Credit will be paid into bank accounts, including those linked to prepaid cards, regulating interchange would increase charges to card users. Current proposals for delivering Universal Credit payments via prepaid cards have no/low cost associated with them. In practical terms, regulating interchange removes the ability to offer this option as it would increase costs to claimants who would be in no position to pay. This may further increase the difficulty that claimants have in adjusting to monthly payments to bank accounts.

Secondly, to the extent that interchange regulation causes card users to withdraw larger amounts of money in a smaller number of withdrawals (as occurred in Spain), this may affect the ease of claimants' adjustments to the new system. It is plausible that claimants adjusting to monthly payments would find managing their cash spending easier by withdrawing cash only as they needed it across the month, rather than having small numbers of large withdrawals. However, if increased card charges as a result of interchange regulation discouraged this practice and lead to large cash withdrawals, claimants may find it more difficult to adjust to monthly payments. The effectiveness of welfare reform would therefore be reduced.

## 6.6 Increased Use of non-Mainstream Finance

With less access to credit cards to address short-term lending needs, some consumers will obtain credit outside the mainstream finance sector. That may include pawn shops, cheque cashers, cash converters, payday lenders and various other high-cost short-term credit providers (including potentially illegal lenders).

## 6.7 Adverse Consequences for R&D and Innovation

### 6.7.1 Innovation in the payments system

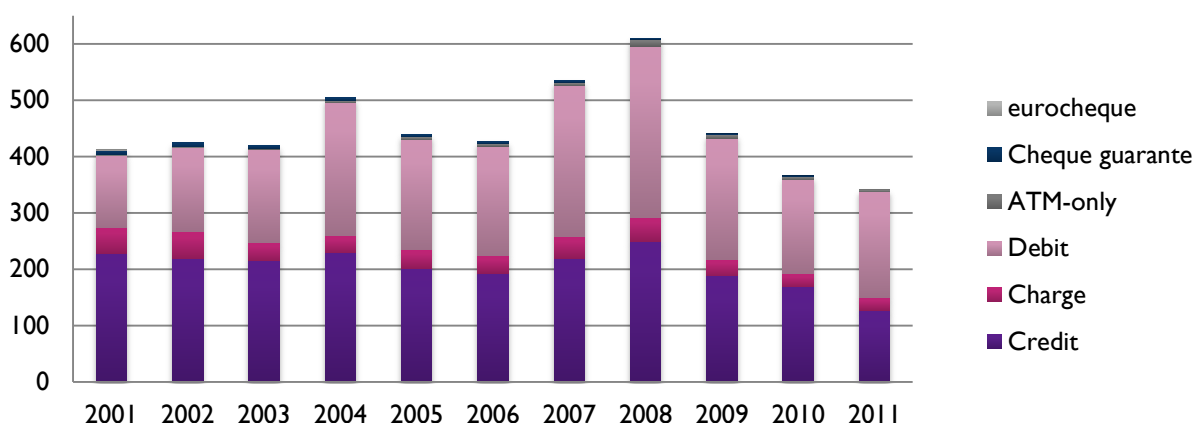
One of the areas for which issuing institutions use interchange revenue is investment in R&D and innovation. Such investment is often channelled towards improving security of the card payments system by developing fraud prevention technologies and other security enhancing measures.

According to the UK Cards Association, players in the credit card business have historically invested heavily in developing the security of the system.<sup>47</sup> Recently, investment has shown to have paid off: after a peak in fraudulent card use in 2008 at a total of nearly £600m, there has been a marked decline in losses from fraud from all card types to about £337.7 million (see Figure 6.5).

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<sup>47</sup> According to DotEcon (2011), fraud prevention and the losses related to fraud are one of the main cost categories for retail banks.

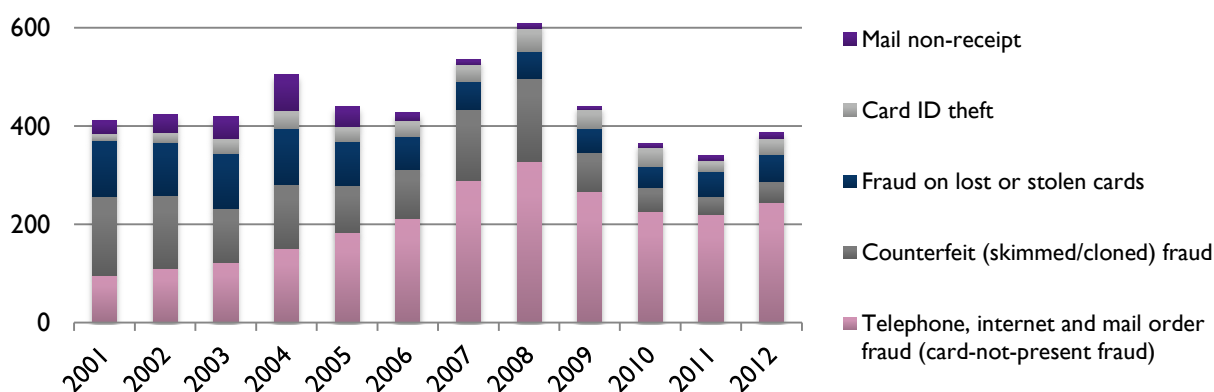
**Figure 6.5: Total Value of Fraudulent Card Transactions, in £ million**



Source: UK Plastic Cards 2012

As a result, the losses due to fraud in the industry have gone down significantly in the last five years (see Figure 6.6). One example of this is the implementation of a chip in both credit and debit cards which increased security of the system as approval for payment is now done by requiring a security code.<sup>48</sup>

**Figure 6.6: Fraud losses on UK-issued cards, in million £**



Source: The UK Cards Association

What is more, Schneider (2013) reports<sup>49</sup> that the UK has one of the smallest shadow economies in Europe relative to the size of its regular economy, currently at 10 per cent of GDP — which is widely regarded as at least partly a direct result of high usage of electronic payments. Nevertheless, together with Germany, Italy, France and Spain, the UK contributes two-thirds of the European underground economy.

Other innovations that have resulted from the large investment in R&D are the introduction of contactless payments and the roll out of Near Field Communication (NFC) technology, also called mobile payments. Through the creation of the NFC Steering Group (NFC-SG), which consists of players from the card payment and other industries, several collaborations have been established. For instance card issuers and mobile network operators<sup>50</sup> work together to design and develop new mobile payment methods.

The fall in IFs revenues for issuing banks is expected to have a negative impact on innovation through three mechanisms. First, as issuers see their revenues fall, provided they do not manage to recoup them through other means, they would have fewer resources available to invest in R&D and innovation. The lower

<sup>48</sup> In contrast, in Australia and the United States, some payments by credit cards are authorised by requiring a signature only.

<sup>49</sup> Schneider, F. (2013) *The Shadow Economy in Europe, 2013*, report for Visa

<sup>50</sup> Specific examples include collaborations between Barclaycard and O2 for the development of QuickTap, Vodafone and Visa for mobile wallet and Visa and Samsung for the creation of the Olympics m-payment app.

investment would mean that the development of new technologies for improved security and fraud prevention in the market would slowdown progress in the field. In summary:

Regulatory intervention → fall in IFs revenue for issuers → less funds available for investment in R&D and innovation → slowdown in the improvement of security and fraud prevention

Second, depending on the competitive position of four-party card issuers vis-à-vis three-party issuers, the incentives for banks to innovate in general terms may be reduced:

Regulatory intervention → alteration of balance in four-party credit card system → negative impact on ability to compete with three-party system → no level playing field in the market for card payments → reduced incentives to innovate

This latter point was experienced in the Australian case. Four-party credit card schemes saw their ability to compete with three-party systems altered by the capped IFs and related reduction in IF revenue for issuers. This led to a decrease in the issuers' incentives to innovate.

Third, as proven in the Spanish case, the regulatory intervention increased uncertainty for players in Spain, in particular with regards to future regulatory interventions. Such perceived uncertainty had a negative effect on the incentive and degree of innovation in the Spanish card payments industry.

Regulatory intervention → increased regulatory uncertainty for issuers → reduced incentives to innovate → decrease in innovation

As a result, the most direct consequence on consumers from a reduction in investment for innovation is that they may perceive that issuers are failing to improve security and protect consumers from fraud. This may lead consumers to associate card payments with higher risk, or non-decreasing risk, and thus choose not to switch to plastic cards. In this way, the displacement of cash with cards would be negatively impacted because increasing security of the system is seen as key to the adoption of cards as a payment method. In the UK cash has become steadily less important as a means of payment relative to debit cards.

As described in Section 4 when analysing the Spanish experience, a greater use of cash is associated with boosting the shadow economy because cash payments are anonymous and are not as easily traceable as card payments, therefore making it easier to participate in the underground economy. Regulating IFs would be expected to lead to the following causal mechanism:

Regulatory intervention → less investment in R&D and innovation → slowdown in the improvement of security and fraud prevention → lower perceived security associated with the card payments system → greater use of cash → boosting of underground economy

Consequently, cash as a form of payment is more conducive of tax evasion than plastic cards. Schneider (2013) explains that "Countries with high levels of electronic payment usage, such as the United Kingdom and the Nordic countries, have smaller shadow economies". For this reason, increasing the security of the card payments system is key to reducing the size of the underground economy. The author found that if the volume of electronic payments would increase by 10 per cent annually for at least four consecutive years, the shadow economy could be expected to shrink by five per cent.

In addition, one would expect a lower degree of security of card payments as perceived by consumers to adversely affect the UK's e-commerce industry. E-commerce has grown in importance recently as credit cards accounted for 51 per cent of online spending in 2011. If this means of payment is perceived as lacking the expected level of security, consumers may shift back to using cash. Such consumers would naturally no longer be able to engage in e-commerce, thus affecting its use and development. Also, as discussed in Section 4, the analysis in Spain suggested that that small business acceptance costs might rise as a result of interchange regulation. As the vast majority of e-commerce businesses fall into the UK Government classification of small and medium-sized enterprises, interchange regulation might therefore have a disproportionately adverse effect on this sector.

### 6.7.2 Innovation by small firms

The sections above described the problems faced by UK businesses, especially small and medium-sized enterprises in accessing finance after the start of the financial crisis. In that context, we explained how the regulation of interchange fees could have a destabilising effect on the economy and thus delay the recovery in lending.

In relation to that argument, in a recent report by the Big Innovation Centre,<sup>51</sup> it is argued that the UK firms most likely to apply for finance are those which are most innovative. The authors found that in the period from 2010 to 2012, 34.7 per cent of innovative firms applied while only 24.9 per cent of other firms did. The former figure increased from 2007-2008, when only 28.2 per cent of innovative firms and 22.8 per cent of other companies sought finance. What is more, innovative firms found it more difficult to access finance as they are less likely to obtain finance now than before the recession. For this reason, delaying the recovery in bank lending may have a further negative impact on innovation.

## 6.8 Conclusion

In addition to its direct effects on the cards market, interchange regulation could potentially have a number of further adverse impacts in the UK. The reduction in issuer bank revenues may delay the recovery in bank lending, whilst reductions (relative to trend) in the use of credit cards may increase uncertainty in monetary policymaking. In view of recent trends in the labour market, regulation may also have adverse effects on finance for the self-employed, while increased card charges may have adverse impacts on welfare reform. Finally, regulating interchange may also lead to a particular impact on the e-commerce industry and reduce investment in R&D and innovation.

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<sup>51</sup> Lee et al. (2013) “Credit and the crisis, Access to finance for innovative small firms since the recession”, the Big Innovation Centre [Available [here](#)].

# 7 Separation of Scheme and Processing

Alongside proposals to regulate interchange fees, the European Commission (EC) has also proposed separation between scheme and processing activities carried out by card schemes. In this section we provide a critique of this proposal.

We first highlight the EC's proposals in this regard; second, we set out what we assume is the EC's rationale for intervention of this sort; third, we provide a critique of this proposal in the light of the assessment of the possible rationale for intervention.<sup>52</sup>

## 7.1 European Commission proposal

The EC's proposal for a regulation of the European Parliament and of the Council on interchange fees for card-based payment transactions sets out the following proposal in relation to separation of scheme and processing activities:<sup>53</sup>

“Payment card schemes and processing entities shall be independent in terms of legal form, organisation and decision making. They shall not discriminate in any way between their subsidiaries or shareholders on the one hand and users of these schemes and other contractual partners on the other hand and shall not in particular make the provision of any service they offer conditional in any way on the acceptance by their contractual party of any other service they offer.

“Payment card schemes shall allow for the possibility that authorisation and clearing messages of single card transactions be separated and processed by different processing entities.

“Any territorial discrimination in processing rules operated by payment card schemes shall be prohibited.

“Processing entities within the Union shall ensure that their system is technically interoperable with other systems of processing entities within the Union through the use of standards developed by international or European standardisation bodies. In addition, processing entities shall not adopt or apply business rules that restrict interoperability with other processing entities within the Union.”

Here, “payment card scheme” is defined as “*a single set of rules, practices, standards and/or implementation guidelines for the execution of payment transactions across the Union and within Member States, and which is separated from any infrastructure or payment system that supports its operation*”.

Based on the wording above, it appears that the EC seeks to impose legal unbundling of card scheme activities and processing infrastructure, but ownership unbundling would not be required.

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<sup>52</sup> We note that the EC has not included this policy proposal in its impact assessment of the “Proposal for a Regulation of the European Parliament and of the Council on interchange fees for card-based payment transactions”. As such, it has been necessary to assume the likely rationale for this proposed intervention, and the possible impacts of the proposal (notably the benefits the European Commission might expect to accrue).

<sup>53</sup> European Commission (2013) “Proposal for a regulation of the European Parliament and of the Council on interchange fees for card-based payment transactions”

## 7.2 Rationale for Intervention

The EC's proposal document suggests that consumers are generally unaware of the merchant service charge paid by businesses for the payment instrument that is used. In the EC's view incentive schemes applied by issuing payment service providers (such as travel vouchers, bonuses, rebates, etc.) may steer consumers towards the use of payment instruments generating high fees for issuing payment service providers. To counter this, the EC suggests that measures imposing restrictions on IFs should only apply to payment cards that have become "mass products" such as consumer debit and credit cards, whereby (in the EC's view) merchants generally have difficulty refusing the card due to their widespread issuance and use. In order to enhance effective market functioning in the non-regulated parts of the sector and to limit the transfer of business from the regulated to the non-regulated parts of the sector, the EC considers that it is necessary to, *inter alia*, separate card scheme and processing infrastructure.

We note two issues with the EC's position here. First, the logic of the view that IF restrictions should apply only where payment cards have become "mass products" would appear to be in tension with the application of a pan-EU cap, since in a number of Member States penetration is very low. But more fundamentally, it is surely incorrect to claim that there is anything fundamental about credit or debit cards that means that merchants would be unable to refuse to accept a specific card for which the scheme had very high IFs. For example, suppose that there were 20 schemes each with a 5 per cent market share. It is surely implausible to claim that a merchant would be unable to refuse to accept cards from one of these schemes. Even as matters stand in markets where card penetration is already high, many shops refuse to accept American Express whilst accepting other cards, and many consumers carry multiple cards including both Visa and Mastercard and the experience of having one card not work in a card machine for some reason is common, with the common (usually unproblematic if sometimes inconvenient) reaction being for consumers to use a different card. At best, this rationale appears to be the mis-application of a remedy to a competition concern in the form of a fundamental regulatory change.

Returning to the EC's view of the rationale for separation, the cost of processing is a significant part of the total cost of card acceptance and it is important for this part of the value chain to be "opened to effective competition". The EC believes that a separation of card scheme and infrastructure should allow all processors to compete for customers of the schemes. According to the EC, the current structure contributes to "*market fragmentation, negatively impact market entry by new players and prevent pan-Union players from emerging, hence hindering the completion of the internal market in cards, internet and mobile payments, to the detriment of retailers, companies and consumers.*" However, the EC fails to provide any evidence to suggest that there is in fact any specific market failure that warrants policy intervention. In particular, the EC does not provide any assessment to support the notion that a vertically integrated structure (in which the scheme and processing is integrated) automatically creates a form of market power which allows discriminatory treatment of competitors.

Even were it identified robustly, the existence of a market failure would not on its own justify a particular policy intervention. This is because (a) the intervention proposed may fail to address the identified market failure effectively; (b) even an effective intervention may itself give rise to costs or undesirable side-effects which in some cases could far outweigh the benefits gained from attempting to correct the market failure. Hence the need for impact assessments to determine whether the benefits of a policy proposal outweigh its costs.

The EC did not include an assessment of this proposal in its impact assessment. When assessing the impacts of any policy proposal, it is important to assess the impacts relative to the "counterfactual" scenario, i.e. a scenario in which the proposal is not implemented. With this in mind, it is important to note that the SEPA Cards Framework (SCF) requires that participants do not bundle their licensing activities with those of transaction processing. MasterCard is fully compliant with the SCF: MasterCard customers are, for example, free to issue MasterCard-branded products without being obliged to also process transactions with MasterCard. MasterCard processes approximately 35 per cent of transactions

on cards with a MasterCard logo; the remainder are processed by competing infrastructure, provided by other companies.

As such, any expected benefits from enforcing legal separation of card schemes and processing infrastructure may be limited, as these benefits are already likely to materialise under the SCF. Rather, any further legislation in this regard would likely impose costs on card schemes without generating incremental benefits. This is discussed further in the next section.

### 7.3 Impacts of separating card schemes and processing

Aside from the purest providers of commodities, supply labour or finance, virtually every firm can be characterised as integrating, to some extent, business activities that could be conducted separately and competitively. For example, a car manufacturer sells a bundled product including a chassis, engine, wheels, carpets etc.. It would be possible in principle for consumers to purchase each of these components separately along with a service of assembling them. Yet in virtually every industry it is more efficient to bundle activities to some extent than to keep them at the highest level of separation that would in principle be possible.

Despite this, there are some settings in which unbundling can promote economic efficiency. Unbundling of monopoly activities is a structural tool that has been employed in the process of liberalising many utility markets, with a view to facilitating competition. It is the process of disaggregating components of a previously vertically integrated company. With separate charges for each component, stages of production that are potentially competitive can attract entry, potentially leading to improved efficiency and performance. Separation is therefore a tempting option for a policymaker looking for something to be done.

Proceeding (for the sake of argument) from the EC's view that the processing part of the value chain is not subject to effective competition, as well as the disadvantages we shall come to in due course there would be certain advantages to separating card schemes and processing infrastructure. Such advantages might arise, for example, in cases where incomplete separation of these activities were associated with incentives for the processing infrastructure operator to favour its own card scheme over other card schemes, or for the card scheme to favour its own processing infrastructure over competing processing infrastructure. The main purpose of unbundling is to prevent these incentives from arising and thus increase competition, which (if such competition were initially inadequate) would ultimately lead to consumer benefits.

A further possible advantage of unbundling is that it removes the possibility for inefficient cross-subsidisation of card scheme and processing infrastructure activities, which (where it was indeed inefficient — which it would not always be<sup>54</sup>) could distort the market by creating unfair cost advantages over other market participants.

However, as described above, card schemes and processing infrastructure are already required not to be bundled under the SCF. Therefore, it is not clear whether any incremental benefits from moving to legal unbundling would materialise.<sup>55</sup>

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<sup>54</sup> As an example of this, it is not uncommon in the telecommunications sector for there to be a form of “cross-subsidisation” of products in the sense that pricing does not reflect an even or proportionate allocation of common costs. Sometimes, instead, common costs are more efficiently allocated on what is called a “Ramsey” basis related to the willingness to pay.

<sup>55</sup> This is not to say that the incremental benefits would by definition be zero. It is possible that the benefits of unbundling described above may only be partially realised under the SCF, which may leave scope for incremental benefits from the EC's proposal to separate card scheme and processing activities. A full impact assessment of the policy option, with a well-defined counterfactual, would need to be carried out to determine the magnitude of any incremental benefits. In any case the presence of incremental benefits is not sufficient to justify policy; these benefits would have to outweigh any incremental costs.

Despite the potential advantages of the unbundling of activities (notwithstanding the likelihood that these benefits are already being achieved absent any further regulation), there are drawbacks of this approach to promoting competition. A principal disadvantage of unbundling is that it can remove operational synergies, particularly if the form unbundling that is introduced is severe. Similarly, it can reduce financial synergies by reducing scale which may affect ability to attract financing. In economic jargon, unbundling has the potential to reduce economies of scale and scope.

Below, we consider relevant examples from other sectors that offer insights into the likelihood of the EC's proposal being inefficient or ineffective.

### 7.3.1 Energy

Tooraj Jamasb and Michael Pollitt, two leading academics in the field of energy policy and markets, carried out a review of progress toward liberalisation and integration in EU energy markets.<sup>56</sup> The article notes that vertical integration between retailing and generation appears to have a strong commercial rationale because the supply risks inherent in the generation segment can be insured against by integrating into retailing.

The authors also find that privatised utilities have exhibited strong tendencies toward vertical (re)integration through domestic and cross-border mergers and acquisitions (M&As). According to the review, there is also a possible indirect link between M&As and investment. Allowing for some degree of vertical integration (e.g. between generation and retail supply) may lead to higher investment due to the risk-reducing properties described above. On the other hand, the authors note that this could result in possible negative effects on competition. For example, in Great Britain the retail supply margin appears to have increased with higher concentration resulting from M&As as the number of national competitors in retail supply falls and the degree of integration between generators and suppliers has increased.

On 26 June 2014, Ofgem (the UK's energy regulator) referred the UK's energy market to the Competition and Markets Authority (the UK's competition authority) for further investigation to "*make sure competition in the energy market effectively bears down on costs and drives improvements in customer service and innovation.*"<sup>57</sup> Ofgem's decision document noted vertical integration as a key feature of the energy market.<sup>58</sup> In the context of the UK energy market, vertical integration refers to the integration of energy generation and energy supply to end consumers.

Ofgem's referral decision notes the following:

"Vertical integration offers a natural hedge against volatile or changing wholesale prices and balancing risks; reducing risk and therefore potentially lowering consumers' prices. Suppliers' behaviour also suggests real benefits to vertical integration. All the large electricity suppliers are vertically integrated and some small suppliers have entered long-term supply contracts to achieve the same effect. Aggregate profits across generation and supply appear more stable than in either generation or supply alone, reflecting the natural hedge that vertical integration provides. All the largest six (vertically integrated) retail suppliers argued that the benefits of vertical integration outweigh the downsides.

"Stakeholders have said that vertical integration also helps suppliers to lower their credit ratings, reducing requirements to post collateral to trade in wholesale markets. It may provide significant benefits by lowering companies' cost of capital, a significant saving for capital-

<sup>56</sup> Jamasb, T. and Pollitt, M. (2005) "Electricity Market Reform in the European Union: Review of Progress toward Liberalization & Integration", The Energy Journal, Vol. 26, Special Edition

<sup>57</sup> <https://www.ofgem.gov.uk/publications-and-updates/consultation-proposal-make-market-investigation-reference-respect-supply-and-acquisition-energy-great-britain>

<sup>58</sup> Ofgem (2014) "Decision to make a market investigation reference in respect of the supply and acquisition of energy in Great Britain"



intensive generation businesses. Lower investment costs could also improve investment prospects and so improve security of supply.”

The document also refers to the possible anticompetitive effects of vertical integration; however, as described above, the SCF already provides a means to negate some of these effects by ensuring that card scheme and processing activities are not bundled.

The European Commission's DG Health and Consumers published a study in 2010 on the functioning of retail electricity markets in the EU which found that “it is common for distribution companies to also supply electricity to household consumers and in some countries there are also strong ties between generation companies and suppliers”.<sup>59</sup> This suggests that the market structure found in the UK is common to other Member States too.

This example of the UK energy sector is particularly relevant to the payment cards market because companies can enter as generators, as suppliers, or as both, with energy being purchased from different generating companies. In a similar fashion, companies offering processing services can compete for card schemes and card schemes can also compete for processing services.

This example suggests that explicit removal of a vertically integrated structure could increase risk exposure for the resulting unbundled firms, which could ultimately increase costs, which would have the effect of increasing fees (with 100 per cent pass through of costs to customers in a perfectly competitive environment), rather than reducing them.

### 7.3.2 Airports

The airports sector is typically characterised by competing airports. However, some of these airports may be deemed to have significant market power. These airports are typically price regulated. The price caps can either be set on a single till basis (i.e. allowed revenues that cover both aeronautical activities and commercial, non-aeronautical activities) or a dual till basis (i.e. a price cap that only covers aeronautical activities).

It is often argued that a dual till approach is more efficient than a single till approach with regard to pricing, as it avoids cross-subsidy between monopolistic aeronautical activities and commercial activities (if costs are correctly allocated between the two activities), since prices for both activities are covered in the same price control. This therefore reduces the scope for the airport to use revenues from its monopoly activity to price competitors out of the market in contestable activities.

However, many regulators adopt a single till approach to setting a price cap for these integrated activities, as can be seen in the table below which shows the regulatory framework of large European airports in 2007:<sup>60</sup>

**Figure 7.1: Airport regulation**

Rank	City	Code	PAX (Mio)	Regulation form		Regulator	Private share (%)
1	London	LHR	68.1	Incentive	Single till	Independent	100
2	Paris	CDG	60.0	Incentive	Single till	Dependent	32.5
3	Frankfurt	FRA	54.2	Cost-based	Dual till	Dependent	47.2
4	Madrid	MAD	52.1	Cost-based	Single till	Dependent	0
5	Amsterdam	AMS	47.8	Cost-based	Dual till	Independent	0
6	London	LGW	35.2	Incentive	Single till	Independent	100
7	Munich	MUC	34.0	Cost-based	Single till	Dependent	0

<sup>59</sup> DG Health and Consumers (2010) “The functioning of retail electricity markets for consumers in the European Union”

<sup>60</sup> International Transport Forum (2010) “Airport Regulation Investment & Development of Aviation”

Rank	City	Code	PAX (Mio)	Regulation form		Regulator	Private share (%)
8	Rome	FCO	32.9	Cost-based	Dual till	Dependent	97
9	Barcelona	BCN	32.8	Cost-based	Single till	Dependent	0
10	Paris	ORY	26.4	Incentive	Single till	Dependent	32.5
11	Istanbul	IST	25.6	Cost-based	n.a	Dependent	14
12	Milan	MXP	23.9	Cost-based	Dual till	Dependent	0.88
13	London	STN	23.8	Incentive	Single till	Independent	100
14	Dublin	DUB	23.3	Incentive	Single till	Independent	0
15	Palma De Mallorca	PMI	23.2	Cost-based	Single till	Dependent	0
16	Manchester	MAN	22.7	Incentive	Single till	Independent	0
17	Copenhagen	CPH	21.4	Incentive	Dual till	Dependent	77.3
18	Zurich	ZRH	20.7	no regulation			42
19	Oslo	OSL	19.0	Incentive	Single till	Dependent	0
20	Vienna	VIE	18.8	Incentive	Dual till	Independent	50

Source: 2007 ACI-EUROPE, GAP data base (as reported in "Airport Regulation Investment & Development of Aviation")

For example, the UK's Civil Aviation Authority (CAA) recently published final determinations for the next price control period for Heathrow and Gatwick in the UK. In its Notice granting Gatwick's licence, the CAA notes that "(p)art of the rationale for single till regulation was that an airport operator in a competitive environment took into account non aeronautical revenue when setting the level of airport charges."<sup>61</sup>

When setting the previous price control for Stansted, another UK airport, the reasons for adopting a single till approach were further elaborated. The main reasons included, *inter alia*, the following:<sup>62</sup>

- There was no evidence that the single till had led to any general under-investment in aeronautical assets at the three BAA London airports in the past, nor any expectation that it would do so over the next five years.
- The dual till could improve the efficient use of capacity, but the benefits were unlikely to be more than marginal.
- It was difficult to separate commercial and aeronautical facilities. As commercial revenues at the three BAA London airports could not be generated without aeronautical facilities, it made sense that they should be regarded as one business.
- Since the successful development of commercial revenues required airlines to deliver passengers to or from the airport, the benefits of commercial activities should be shared with airlines and airline users.
- It is difficult, in practice, to allocate both investments and operating costs between aeronautical and commercial activities.

This example has direct implications for the payment cards market because card scheme revenues could not be generated without processing infrastructure, and *vice versa*. As such, legal separation of currently vertically integrated companies into separate card scheme and processing entities could lead to inefficient outcomes.

### 7.3.3 Water

A new Water Act was recently enacted in the UK. When the new legislation was being considered, a number of different policy options in relation to separation of the retail stage of the vertically integrated value chain were considered. In particular, the impact assessment considered further opening of the retail market to competition along with:

- legal separation of water company wholesale/retail businesses;

<sup>61</sup> CAA (2014) "Economic regulation at Gatwick from April 2014: Notice granting the licence"

<sup>62</sup> Competition Commission (2008) "Stansted Price Control Review"

- functional separation of water company wholesale/retail businesses;
- allowing companies to choose whether to separate along wholesale/retail lines; and
- no separation.<sup>63</sup>

The analysis found that legal separation entailed by far the highest costs, while functional separation yielded the highest net present value. The functional separation suggested would have involved separating the existing licence into retail and wholesale elements, creating separate wholesale and retail divisions and introducing a range of additional controls to protect against the various price and non-price discrimination risks that could arise from an integrated structure. This could be considered to be similar to the effective separation that is required under the SCF in the card payments market. This indicates that a move to legal separation, beyond what is already in place under the SCF, could impose significant additional costs on the card payments sector.

#### 7.3.4 Competition assessments

There is no presumption in EU competition rules that vertically integrated structures are always inefficient or damaging to competition. The EC's own guidelines on non-horizontal mergers provide valuable insights into the potential benefits of a vertically integrated structure. The guidance notes the following:<sup>64</sup>

“(V)ertical and conglomerate mergers provide substantial scope for efficiencies. A characteristic of vertical mergers and certain conglomerate mergers is that the activities and/or the products of the companies involved are complementary to each other. The integration of complementary activities or products within a single firm may produce significant efficiencies and be pro-competitive. In vertical relationships for instance, as a result of the complementarity, a decrease in mark-ups downstream will lead to higher demand also upstream. A part of the benefit of this increase in demand will accrue to the upstream suppliers. An integrated firm will take this benefit into account. Vertical integration may thus provide an increased incentive to seek to decrease prices and increase output because the integrated firm can capture a larger fraction of the benefits. This is often referred to as the ‘internalisation of double mark-ups’. Similarly, other efforts to increase sales at one level (e.g. improve service or stepping up innovation) may provide a greater reward for an integrated firm that will take into account the benefits accruing at other levels.

“Integration may also decrease transaction costs and allow for a better co-ordination in terms of product design, the organisation of the production process, and the way in which the products are sold. Similarly, mergers which involve products belonging to a range or portfolio of products that are generally sold to the same set of customers (be they complementary products or not) may give rise to customer benefits such as one-stop-shopping.”

Of course, the guidance notes that there may be anticompetitive effects where the merger creates or strengthens a dominant position. However, as noted in the previous section on the rationale for intervention, the EC has not provided any robust assessment to suggest that there is market power in relation to card schemes or processing. Indeed, the fact that MasterCard processes approximately 35 per cent of transactions on cards with a MasterCard logo, with the remainder processed by competitors suggests that there is some scope for competition in these markets.

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<sup>63</sup> Defra (2011) “Introducing Retail Competition in the Water Sector: Impact Assessment”

<sup>64</sup> European Commission (2008) “Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings”

### 7.3.5 Empirical evidence of the benefits of vertical integration

Lafontaine and Slade (2007) provide a review of the empirical literature on the effects of vertical integration.<sup>65</sup> Overall, the authors find that the empirical evidence supports the proposition that vertical integration is more likely to promote efficiency (and therefore benefit consumers) than to facilitate market foreclosure or other anticompetitive outcomes, even in highly concentrated industries. Based on a review of ten empirical studies that evaluate whether vertical integration resulted in foreclosure or raising rivals' costs, the authors conclude that the evidence in favour of anticompetitive foreclosure is weak (notably because the industries studied were chosen because their vertical practices have been the subject of antitrust investigations). A review of sixteen studies that assess the ultimate effect of vertical integration on consumer welfare finds that the majority of studies show that consumer welfare is increased under a vertically integrated structure. On the basis of their review, Lafontaine and Slade draw the following conclusion:

“(U)nder most circumstances, profit-maximizing vertical-integration decisions are efficient, not just from the firms’ but also from the consumers’ points of view. Although there are isolated studies that contradict this claim, the vast majority support it. Moreover, even in industries that are highly concentrated so that horizontal considerations assume substantial importance, the net effect of vertical integration appears to be positive in many instances. We therefore conclude that, faced with a vertical arrangement, the burden of evidence should be placed on competition authorities to demonstrate that the arrangement is harmful before the practice is attacked. Furthermore, we have found clear evidence that restrictions on vertical integration that are imposed, often by local authorities, on owners of retail networks are usually detrimental to consumers.”

Therefore, the empirical literature appears to suggest that mandatory vertical separation is likely to reduce efficiency and, on net, harm consumer welfare. The conclusions drawn by Lafontaine and Slade also reinforce the point that the EC needs to provide a robust rationale for intervention for the proposal to separate card schemes and processing infrastructure.

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<sup>65</sup> Lafontaine, F. & Slade, M. (2007) “Vertical Integration and Firm Boundaries: The Evidence” 45 J. ECON. LIT. 629, 653

## 8 Conclusions

Interchange fee regulations are proposed for the EU despite having produced considerable unintended consequences in other jurisdictions in which they have been implemented. In Spain, Australia and the United States, the result so far appear to have been reductions in bank revenues, reductions in costs for large retailers not passed on to consumers in lower prices, and consumers paying more for banking services on one hand, and not seeing a commensurate reduction in costs for retail goods.

If that experience is matched in the UK, then we can expect significant net costs for consumers:

- Banks will see a total reduction in IF revenue of around €1bn, which they will recover from consumers through other charges.
- Retailers will see a reduction in MSCs of around €950m, accruing mostly or even entirely to large retailers.
- Consumers will see an increase in bank fees of around €1bn, or around €14 for each credit and debit card carrying customer, and they will not see a reduction in prices.

While those annual costs may erode over time, the overall result is still likely to be higher costs for consumers as a result of the regulation being introduced. As a result of those higher costs for banks and consumers, there might be a range of wider impacts:

- an increase in financial instability due to lower revenues for issuing banks;
- problems for the financing of the self-employed and micro-enterprises;
- uncertainty in monetary policy;
- problems for the implementation of the Universal Credit; and
- a deterioration in competitive conditions within the card sector and reduced incentives for issuers to innovate for bank cards.

All of those potential harms make the shortcomings in the Commission's problem definition – its rationale for intervention in this market – particularly crucial. If such intervention is misplaced, based on an incomplete understanding of the market in question, then it is not likely to produce the benefits that EU institutions must hope make up such risks worthwhile.

Additional measures, added to the proposals relatively late and not subject to full assessment, to regulate commercial cards and separate card schemes and transaction processing could be particularly disruptive. Member States will need to decide both whether to support interchange fee regulation despite the costs outlined in this report and whether or not to bear the additional risks associated with those particularly radical proposals.