Interchange Fees in Credit and Debit Card Markets: What Role for Public Authorities?

A Summary

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I. Introduction

Credit and especially debit card transactions are on the rise worldwide. Interchange fees are an integral part of the pricing structure of credit and debit card transactions. Indirectly paid by merchants to card issuers, interchange fees in most countries are set by credit and debit card networks. But in one country, Australia, the central bank is regulating interchange fees, and in several other countries and areas, including the European Union, Mexico, the Netherlands, Spain, and the United Kingdom, public officials are taking or are considering taking a more hands-on regulatory stance. And in the United States, it is largely the court system that is debating interchange issues.

The payments industry has a strong vested interest in interchange fees. They are a major portion of costs that merchants pay for processing debit and credit card payments and are a major source of revenue for banks that issue the cards. One reason for recent interest in interchange fees in the United States is a shift in retail payments away from checks. Research sponsored by the Federal Reserve documents a rise in electronic payments and a decline in the use of paper checks, with a milestone recently passed where the majority of non-cash payments are now made using electronic instruments.[1] This shift is also occurring in other countries, as shown by the Weiner and Wright research summarized below. Since paper checks typically do not have an interchange fee while credit and debit payments do, the shift is a major reason why merchants face a rapidly rising cost of processing payments. Card issuers, on the other hand, rely on associated revenues to provide a return to their substantial investment in card payment networks.

This conference explored issues surrounding interchange fees. What are the trends in interchange fees, including credit cards and debit cards? What is the economic rationale for interchange fees? What opinions do participants in the payment system have about interchange? What role, if any, should central banks and other public institutions play in establishing or overseeing interchange fees?

The unique conference design brought together many parties that have an interest in interchange fees. Industry participants, antitrust authorities, central bankers, and academics each had opportunities to formally express their experiences and viewpoints. In addition, considerable time was devoted to discussion periods, which allowed audience members to be actively involved in conveying diverse and, at times, impassioned counterarguments.

The purpose of this paper is to introduce the many issues and participant perspectives concerning interchange fees by providing summaries of the formal presentations made in various sessions and highlights of contributions made by participants in each session's discussion period. After first providing an introduction to the mechanics of interchange fees, this paper will generally follow the flow of conference presentations. The second section is on the economics of interchange, summarizing two academic papers concerned with global trends and the economic rationale of interchange. The third and fourth sections focus on industry perspectives presented during a panel discussion and two keynote speeches. The fifth and sixth sections summarize panel sessions devoted to public policy issues involving antitrust authorities and central bankers. The paper closes with a short conclusion.

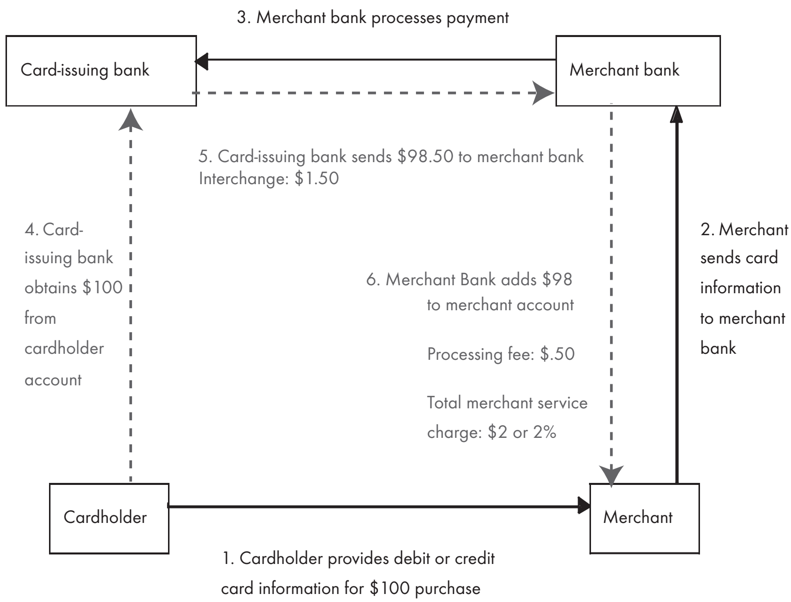
A. A brief introduction to the mechanics of interchange fees

The mechanics of interchange fees are complex, involve many parties, and use arcane terminology. This section briefly reviews interchange mechanics to provide background to readers unfamiliar with details of payments processing so that they can more easily follow arguments presented elsewhere in this volume.

Chart 1 provides a stylized diagram of information and payment flows in a four-party card payment system. It is called a four-party system because it involves a cardholder, a card-issuing bank, a merchant, and a merchant bank. Flows of transaction information begin with the purchase, when the cardholder provides debit or credit card information to the merchant. The merchant sends the card information to its bank, which passes it along to the card-issuing bank. Card networks, such as Visa or MasterCard (for credit cards) or the NYCE or Star networks (for PIN debit cards) typically provide the link between merchant banks and card-issuing banks over which this information flows. The network routes information

Chart 1:

A Four-Party Card Payment System



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first to authorize and then to settle the payment. To settle, the card-issuing bank obtains funds from the cardholder—$100 in this example—with which it can pay the merchant bank.

However, the card-issuing bank retains a portion of the funds as an interchange fee. In this example, the fee is $1.50 and the card-issuing bank sends $98.50 to the merchant bank. The merchant bank charges the merchant a processing fee of $.50 and deposits $98 in the merchant's account. The merchant service charge is the total cost of processing the payment and in this example is $2 or 2 percent of the transaction.[2] The interchange fee thus represents revenue to the card-issuing bank paid by the merchant through the merchant bank.

This example is highly simplified and leaves out many details of real world provision of payment services.[3] Three additional details should be mentioned. First, companies called "merchant acquirers" often act as intermediaries between merchants and the merchant bank by processing transaction information for the merchant. Second, American Express and Discover use a different model called a "three-party card system," in which the card network issues cards and performs the services of the merchant acquirer. Because the network plays both roles, there is no need for an explicit interchange fee. Some observers argue that merchant service charges in three-party systems contain an implicit interchange fee because the merchant service charges have a similar magnitude compared to that in four-party systems. Third, there are two types of debit cards, signature and PIN, distinguished by whether at the time of the transaction a signature or entry of a personal identification number is required. In general, credit cards carry the highest interchange fee, PIN debit the lowest, with signature debit in between.

II. Economic analysis of interchange fees

The conference started with presentations of two papers that analyze the role of interchange in payments markets. Economists have recently turned their attention to the subject of interchange fees because these types of markets are increasingly important but not well understood.

The topic of the first paper, coauthored by Stuart Weiner and Julian Wright, is international developments in interchange. The paper begins with a discussion of the economic role of interchange fees. In a four-party card payment system, interchange fees link card-issuing and merchant banks, which take the fee into consideration when deciding the level and type of payment services they offer to each other as well as to their cardholding and merchant customers. It is an example of a two-sided market, a principle feature of which is the interrelation between end users of a product. The market would not work if merchants accepted cards but there were no cardholders, and vice versa. The interchange fee is a key instrument that networks can use to balance the two sides of the payments market and achieve an appropriate ratio of cardholders and accepting merchants.

Interchange fees are common to payment systems throughout the world, and in the second part of their paper, Weiner and Wright review issues and developments in 10 countries. The striking outcome of this section is the diversity of how card payment systems work across these countries. For example, interchange fees are sometimes set by members of a network, by regulatory limits, by network management, by members of bankers associations, or bilaterally between card-issuing and merchant banks.

Weiner and Wright find that interchange fees are generally stable or declining in most countries. In many of these countries, declines have been because of recent regulatory action or regulatory threat. The most common public authority to take these actions has been the competition authority in each country, although the central banks of Australia, Mexico, and Spain have been very active as well. Experience in the United States is different from other countries because in recent years its interchange fees generally have been rising.

The final section of Weiner and Wright's paper reviews possible economic determinants of interchange fees, such as the costs of card-issuing and merchant banks, demand for card services by cardholders and merchants, market power of card-issuing and merchant banks, and competition between alternative types of payments. The authors then attempt to confirm one prediction of economic theory with a simple statistical analysis between measures of market power of card issuers and the level of interchange fees. They only find a weak, positive relationship but argue that it does not necessarily suggest that market power is an unimportant determinant of interchange fees. Rather, to properly sort out the economic determinants of interchange fees, research would need to account simultaneously for several factors that might influence interchange fees.

Weiner and Wright conclude by noting two implications of the finding that interchange fees are determined by many different factors. First, industry participants, academics, and public authorities face a significant challenge in understanding changes in interchange fees. Second, researchers and policy authorities need richer sources of data to achieve that understanding.

In his comments on Weiner and Wright, Alan Frankel focuses on what interchange fees actually do in the marketplace and what that implies for interchange fee differences across countries. Card issuers, for example, may provide some benefits to merchants, and interchange fees provide a vehicle for reimbursement to card issuers. This underlies the call for a cost-based determination of interchange fees but is problematic because some issuer costs are endogenous, especially promotions and reward programs, so that card issuers have little incentive to control those costs. Interchange fees can also balance end user demands in a two-sided market and solve an externality whereby one end user in a two-sided market has insufficient incentive to use a product. This role attracts the most attention of economists but has conceptual issues. For example, existence of an externality that requires subsidy of cardholders implies a substantial benefit to merchants, and so merchants should welcome rather than resist the subsidy.

A less benign view is that interchange fees shift revenue toward the side of the market with more market power. Frankel argues that certain elements of the credit card market are consistent with market power on the part of card issuers which, in turn, explains rising interchange fees observed in the United States and Canada. By contrast, in countries with stable or declining interchange fees, either merchants have some power to resist increases in interchange fees (such as adding a surcharge to credit card payments) or there has been some measure of regulatory intervention.

Two topics dominated the open discussion period. First, why are there few alternative suppliers for credit card services? Are there barriers to entry that limit competition? Panelists responded that there are other networks, such as PIN debit, but their mere existence does not necessarily address concerns over efficiency because consumers have incentives to use credit cards or signature debit, which are more expensive to process. Moreover, even with a monopoly network, market performance may be adequate as long as there is competition on both sides of the market. One reform proposed in Australia would open up card networks to nonbank acquirers. Panelists agreed that more nonbank participation in various areas of payments or relaxing restrictive rules should enhance competition.

Second, how does the existence of three-party systems, such as American Express or Discover, affect interchange fee policies of Visa or MasterCard? Panelists responded that these systems do compete with and influence one another. The regulation of Visa and MasterCard interchange fees in Australia forced American Express to lower its fees to remain competitive. However, American Express may make a poor example to emulate because to some extent its market power has allowed it to charge relatively high fees.

The second paper, coauthored by David Evans and Richard Schmalensee, explores the economic rationale of interchange fees. The paper notes that soon after they began, three-party systems adopted a pricing structure that was highly asymmetric, with merchant fees providing the bulk of revenue. Economic theory has shown that under plausible conditions, one side of the market will not pay for the service. This helps explain highly asymmetric pricing in markets such as for real estate services in the United States where sellers pay for services or for customer parking at shopping malls where the mall's merchants pay the parking fee. In these situations, members of one side of the market typically receive a strong benefit from participation of members of the second side.

Because at the time none of the new card payment companies had market power, Evans and Schmalensee argue that this price structure would be the natural outcome of a competitive two-sided market. The fact that four-party systems came after the three-party systems yet still adopted a similar price structure suggests they are using an efficient pricing mechanism.

Early economic analysis of interchange fees in multiparty systems assumed competition among card issuers and merchant acquirers. It identified features of these markets such as usage externalities and the balancing role of interchange fees. Subsequent analysis has introduced market imperfections into the analysis of two-sided payment markets that has generated some interesting contrasts with imperfections in typical one-sided markets. In one-sided markets, a monopoly harms consumers by restricting output and raising price. A monopoly intermediary in two-sided markets has similar potential to harm consumers, but also has the potential to enhance the value of the system by setting an interchange fee that balances the two sides of the market.

More important, the interchange fee set by the intermediary may be equal, above, or below the interchange fee that would produce the largest amount of social welfare. As a result, a socially optimal interchange fee is not easy to identify, and regulation of interchange fees may or may not improve performance and enhance economic welfare. Regulated interchange fees, such as a cost-based fee or zero interchange, are unlikely be socially optimal.

Because theory provides little guidance, Evans and Schmalensee emphasize that empirical evidence must play a leading role in assessing potential market failure. Society would be better off if it relied most heavily on the most efficient payment system, and one empirical strategy is to examine whether various types payments are over- or underutilized relative to some social optimum. In practice, measurement of the costs of various forms of payment is very difficult, but the intuition is compelling: Electronic payments are likely more efficient than paper checks because ease of transport and economies of scale in processing favor electronic payments. However, establishing that a particular product is less costly to produce does not demonstrate superiority because it ignores benefits of the product. It is not unusual for a high-cost product to drive out a lower-cost product if the high-cost product has superior qualities.

Even if research establishes that it would be socially optimal to reduce the use of a particular form of payment, would interchange fee regulation accomplish the goal? For example, simply reducing interchange fees may not lead to expected benefits. Card issuers may not raise transaction fees on cardholders, and without some incentive to change their behavior, cardholders may not change the amount of their card transactions. Nor is it guaranteed that merchant acquirers would pass savings along to retailers or, if they did, that retailers would pass savings along to consumers in the form of lower prices.

In the first of two comments on the paper by Evans and Schmalensee, Michael Katz acknowledges that economic theory does not unambiguously show benefits of regulation. Katz argues, however, that the facts of the payments marketplace do provide information that can help guide policy. For example, prices that maximize network and social welfare may differ in a variety of ways but the nature of merchant incentives suggests that relative network prices will be biased toward high merchant service charges. Moreover, in the United States, most agree that networks place greater emphasis on issuer profits than acquirer profits and that acquirers pass along more of any changes in fees to their customers compared to issuers—both of which suggest that interchange fees will be above the efficient level.

Katz concludes by noting that payment market characteristics may allow policymakers to reduce their needs for information. Due to the maturity of the card payment market, merchants find accepting cards a competitive necessity and would therefore be insensitive to small changes in merchant fees. If so, the effect of changes in interchange fees would be felt primarily on the consumer side of the market, allowing policymakers to treat the market as one-sided. To achieve a socially optimum mix of payments, policymakers could strive to ensure that consumers face prices for payments that reflect their underlying social costs. Even with this simplification, however, the most helpful role of public authorities at present may be to continue to collect and analyze information about the payments market.

In the second comment on Evans and Schmalensee's paper, Jean-Charles Rochet begins by investigating "the interchange fees mysteries," in which he tries to uncover evidence for the "crime" of charging excessive interchange fees. Is there evidence of excessive use of credit cards? There is some slight inefficiency from holding too many cards, but that is outweighed by evidence that shows electronic payments to be more efficient than cash or checks. Is there evidence of excessive bank profits? While banks have been doing well recently, the best solution may be to improve competition rather than regulate interchange fees.

Even if evidence supports excessive interchange fees, regulating interchange fees may make things worse because some regulatory proposals are based on incomplete understanding of interchange fees. A zero or cost-based interchange fee may not allow incentives for consumers to use cards that may be needed in the presence of free options like cash or checks. Finally, a mandatory reduction in interchange fees may cause issuers to impose consumer fees and could cause consumers to hold fewer cards. If so, merchants would be under more pressure to accept all cards and, thus, would reduce their ability to steer customers toward preferred types of payments.

During the open discussion, a large number of questions centered on the apparent disparity between the resource cost of various payment instruments and the prices that consumers face for using those instruments. Panelists generally agreed that consumers do not face appropriate price signals for payment alternatives but did not agree on the extent of the resulting distortions.

Establishing that transactions are significantly misallocated requires calculation of the net social cost (resource cost net of benefits for all users) for each payment type. Because no such definitive calculation exists, said some panelists, there may be no significant distortion in the use of various payment instruments. Other panelists suggested that it may not be so easy to dismiss potential payment market distortions. For example, even if existing analysis is incomplete, other evidence on benefits, such as fraud rates or speed of transactions, only reinforces the overall superiority of PIN debit over signature debit. Yet the market, at least in the U.S. case, has provided consumers with incentives to use signature debit and discourages PIN debit.

Panelists also noted that surcharges by merchants could improve consumer incentives and add competitiveness to the payments market. Skeptics argue that there is no widespread surcharging where it is allowed and so it may be ineffective. But absence of surcharging does not mean it does not affect competition in payments; the simple threat of surcharging could influence the behavior of card issuers. Nor does permitting surcharges imply that it necessarily would be good to eliminate interchange. In Australia, for example, surcharging is allowed, but only certain merchants choose to do so. It may be useful to have both an interchange fee and an ability to surcharge in order to accommodate heterogeneous merchants.

III. NETWORK, ISSUER, ACQUIRER, AND MERCHANT PERSPECTIVES

A panel of industry executives highlighted the depth of the divide in views on interchange between merchants on one side and networks and banks on the other. Networks and banks argued that interchange fees are necessary for the four-party networks to maximize volume and compete with other networks. Panelists representing the merchant view saw interchange fees and network rules distorting consumer incentives and providing merchants little if any power to negotiate price. The disagreement extended to the expected impact of regulatory action on these markets—on consumers and the networks themselves.

In his remarks, Xavier Durieu noted the evolutionary progress made in Europe toward more transparent, more competitive payments markets, but that intervention by the European Commission and several national competition authorities was necessary. Durieu explained that the acquiring market is domestic, which limits competition for the 20 percent of the merchant discount that is not represented by interchange fees. He argued that even if the acquiring market was more competitive, competition on the issuing side of the market will drive up interchange fees. Durieu advocated regulatory intervention to ensure transparency, more competition, and a fairer distribution of the costs among stakeholders.

José Gabeiras discussed recent developments in Spain, including the Spanish competition authority's decision to reject an application from Spanish banks to allow them to set a common interchange fee. By July 2005, the Spanish Competition Tribunal will require that interchange fees be limited by the amount of costs associated with debit and credit transactions, separately. Gabeiras noted that an appeal may be filed.

John Gove summarized the Australian experience following the Reserve Bank of Australia's implementation of cost-based interchange fees, the elimination of the "no surcharge" rule, and the relaxation of network membership rules to include nonbanks. Despite credit card interchange rates declining from .95 percent to around .50 percent in Australia, credit card spending continues to increase, four-party networks continue to thrive, and banks continue to earn profits in their card services divisions—albeit more from cardholders and less from the merchants. This latter result is consistent with the Reserve Bank of Australia's policy objective—to align cardholder costs with benefits such as loyalty programs that incent cardholders to use a less efficient payments system.

Despite economic arguments that suggest little justification for cost-based interchange fees, Gove noted that regulatory authorities in Australia, the EU, and the United Kingdom are mandating cost-based interchange as a way, in the merchants' view, to more equitably distribute benefits of the network. Gove suggested that the case for cost-based interchange may be even clearer in the United States, as it maintains the highest interchange fees in the world, yet its costs should be among the lowest, given economies of scale and declining cost trends for processing, fraud, and credit. Finally, Gove attributed the increase in regulatory action in these markets to the fact that payments are moving from non-interchange-based systems (cash and checks) to systems that have interchange and where the networks exert market power over rates, rules, and membership.

B.J. Haasdijk pointed out that cooperation among the eight banks that own Interpay, the only Dutch debit card network, was essential to the development of what some consultants cite as one of the lowest-cost card payments networks in the world. Interpay handled merchant acquiring as well as processing when first established. Haasdijk explained that while interchange fees for Interpay's debit card transactions were set at zero, the shareholder banks were paid dividends representing their share of transaction volume as issuers and were thereby reimbursed for their authorization costs as if interchange fees were paid.

In response to a commission established by the Dutch central bank to increase competition and transparency, Interpay sold its acquiring business to network banks and spun off a separate company with authority to set network rules. Last year, despite having one of the lowest fee structures in Europe, the Dutch competition authority fined Interpay and its owner banks for charging excessive fees relative to costs. Haasdijk believes policymakers need to better balance the desire for competition with the benefits of cooperation in a concentrated payments market.

Turning to the United States, William Sheedy and Susan Webb made the case for unregulated interchange fees. Sheedy presented data showing that Visa's interchange fees have increased only modestly in the United States over the past 15 years. He argued that competition among thousands of merchant acquirers constrains merchant discount fees and that merchants do have negotiating power. Sheedy cited merchant benefits from card payments, including higher sales per customer, new sales channels (for example, the Internet), faster checkout, and a payment guarantee. Moving to consumer benefits, Sheedy noted that competition on the issuing side of the market has caused a decline in both cardholder fees and net borrowing costs. Finally, Sheedy suggested that if interchange were regulated, borrowing costs would increase, merchants would pay more as American Express gained a larger market share, and investments in product innovation and fraud prevention would not occur.

Webb echoed many of the points made by Sheedy: that merchants derive significant value from card networks; that pricing is competitive, especially compared to handling cash; that merchants do have choice in cash discounting, co-branding deals, and which networks to work with; and that regulation will stagnate a "frothy market."

The discussion period highlighted the disagreement between networks and issuers on the one hand and merchants on the other with respect to market power. Networks and issuers claimed that the general but moderate rise in interchange fees in the United States results from normal market forces that reflect the value of the services to all parties while merchants say the rise is more dramatic and reflects the major networks' market power.

Networks maintained that they are willing to negotiate deals with merchants if they would steer consumers to use their cards. Merchants responded that the competitiveness of their markets and consumer attitudes about payments options forced them to offer all forms of payment on an equal basis. On the question of whether lower interchange fees would be reflected in lower prices to consumers or higher profits for merchants, the extent of price competition in merchant businesses was viewed as important. Economists also conceded that the impact of reductions in interchange fees on consumer prices in the aggregate is difficult to measure.

IV. Keynote addresses

The two keynote speakers, attorneys Lloyd Constantine of Constantine Cannon and Noah Hanft of MasterCard, presented their cases for and against the need for regulatory intervention in the credit and debit card markets. Constantine asserted that both the debit and credit card markets have failed and called for the Federal Reserve to regulate debit and the Department of Justice to intervene in the United States credit cards market. Hanft pointed to what he viewed as the success of the card payment markets, measured by the number of cardholders, merchants, transactions, and value growing each year as evidence that the markets are efficient and working well.

Constantine, who represented merchants in the so-called Wal-Mart litigation, argued that Federal Reserve intervention in the debit card market would not create a new regulated world but would "recreate a world which existed for 15 years in the United States in a free market environment." He described the rise to dominance in the early 1990s of the regional PIN debit networks as more efficient and less risky than the signature debit alternative offered by Visa and MasterCard, employing an "at par" pricing model. He attributed the decline of PIN debit networks later that decade to a "predatory assault" by Visa and MasterCard seeking to preserve interchange as a pricing model and to prevent the PIN debit networks from entering the credit card market. Contrary to statements made by Federal Reserve officials, Constantine argued that the Federal Reserve has authority to regulate the debit card market, reasoning that it regulated the check clearing system in the early 1900s to establish at-par clearance and that debit card transactions are merely electronic checks.

Turning to the state of the credit card market, Constantine offered evidence for its failure, including barriers to entry (with Discover as the most recent entrant in 1985), continuous and significant price increases without losing merchants, and rules preventing Discover and American Express from doing business (until recently) with bank issuers. Constantine also discussed reasons that the 1986 *NaBanco* decision, which condoned Visa's interchange fee pricing model, is no longer valid.

Constantine indicated that he expected additional legal challenges to the collective setting of interchange as well as the rules that inhibit information flow to consumers on payment alternatives. The aim would be to realign economic incentives so that consumers bear most of the cost of their choices. At the same time, he emphasized that the Federal Reserve's education role is crucial to help the public understand the differences among payment forms and the consequences of their choices.

In his remarks, Hanft painted a very different picture of these markets. He stated that the card payment markets are competitive and benefit both merchants and cardholders as the number of transactions and the numbers of merchants accepting MasterCard have increased dramatically. In response to accusations of market power and the lack of choice on the part of merchants, Hanft noted that several large merchants, including Costco and Neiman Marcus, and thousands of small merchants choose not to accept MasterCard.

Hanft characterized demands to regulate interchange without regulating merchant fees charged by the three-party systems as unfair, representing a preference for corporate form. More generally, Hanft warned that government setting of interchange fees will lead to increased use of less efficient three-party card networks, stifling competition and raising costs for merchants and consumers. Hanft referred to the current experience in Australia, noting that Diners Club and American Express cards are eclipsing the growth of the less expensive four-party cards, not by adding new customers but through issuers converting their existing card portfolios. Further, Australian issuers are raising cardholder fees and reducing service levels to compensate for lost revenue. This has caused the Reserve Bank of Australia to take further actions to lower signature debit interchange fees and reduce the interchange revenue that flows to merchants on the national PIN debit network.

V. ANTITRUST AND REGULATORY PERSPECTIVES

As noted by Weiner and Wright, most of the regulatory intervention in credit and debit card markets has been undertaken by antitrust and competition authorities. Because the fee structure and network rules are documented in agreements between competitors, payments networks that employ interchange have faced ongoing scrutiny under competition laws. In certain circumstances, however, collective price setting is permissible—where it produces efficiencies or is necessary to the success of a joint venture.

In a number of countries, antitrust and competition authorities are actively reviewing these agreements as the market for card services has matured. Four policy leaders from competition authorities in Canada, the United Kingdom, the United States, and the European Union took part in a panel discussion to offer their perspectives.

While Canada has not had any cases come before its Competition Bureau directly addressing interchange, David Teal noted that the unique nature of the card association's membership structure in Canada may be instructive. Canadian banks do not maintain dual membership in the card associations. He suggested that this drives MasterCard, as the second largest network, to use interchange to compete more aggressively for issuers than might occur in dual markets. Teal pointed out that behavioral remedies, as opposed to structural ones, may be more appropriate to preserve the efficiencies that a single network makes possible, while addressing the potential for abuse. As an example, he referenced the 1996 agreement between the Competition Bureau and Interac, Canada's debit card network, that covered membership, governance, and price structure issues.

Bernhard Friess discussed the European Commission's (EC) 2002 review of Visa's cross-border interchange fees. At issue in this case was that interchange fees represented a collective agreement among competitors that distorted the market for issuing and acquiring services. The fee set a floor on the price merchants paid for card payment services, and merchants lacked information on how fees were set and, thus, the power to negotiate. While the EC did not see interchange as essential to the successful operation of a card payment network, it accepted two possible efficiency benefits of collectively setting interchange fees. First, a multilateral agreement can reduce the costs of negotiating many bilateral agreements. Second, interchange fees can help optimize the utility of the payments network to its two sets of users, merchants and cardholders. Friess noted the difficulty in measuring the marginal utility to these categories of users and that a proxy was needed. Given the controversy over cost-based interchange, it was interesting that Visa proposed a set of remedies which included setting interchange fees based on a benchmark comprised of three cost components of services benefiting merchants: transaction processing, the payment guarantee, and the cost of the free funding period.

Friess suggested that the EC's decision had broader implications in that the remedies have set a "de facto standard" for other European competition authorities in reviewing domestic interchange fees. Echoing Weiner and Wright's conclusion regarding country differences, Friess encouraged policymakers to look for ways to make the merchant acquiring market more competitive and to examine network rules that might constrain competition.

In a paper prepared for the conference, "Public Policy and the Invisible Price," Sir John Vickers questions whether Adam Smith's invisible hand will guide the credit card markets to an economically efficient outcome. He discusses the economic factors that influence the incentives of merchants, bank issuers, and consumers. He notes the relevance of two principles emerging from the theoretical literature that are important to the issue: the difference in "competitive intensity" between the issuing and acquiring sides of the market and Rochet and Tirole's "merchant resistance" concept, which is the competitive interaction between merchants in different sectors and the impact on merchants' willingness to accept cards. Vickers concludes that the level of interchange that is best for the major card associations and their members could be significantly in excess of the level that is economically efficient and best serves consumer welfare and, therefore, raises a serious public policy question.

Vickers then discusses the pros and cons of three public policy approaches: *laissez faire*, where the cost of intervention exceeds the benefits; remedies under competition law; and specifically tailored regulatory measures. In his discussion of competition law, Vickers notes that a key question is whether the level of interchange fees indicates distortions in the market for card services and what implications that has for who bears the burden of proof. Vickers suggested that a natural benchmark to determine market distortion might be if the level of interchange is such that merchants pay more than all of the costs of the services provided jointly to retailers and cardholders. While pricing asymmetries in two-sided markets are expected, Vickers suggested this benchmark as a trigger for competitive review and to shift the burden of proof to the card associations to demonstrate that the agreements provide benefits to consumers and do not restrain competition.

In the United States, where interchange fee levels are the highest, Renata Hesse defended the Department of Justice (DOJ) approach to competition issues generally and in payments specifically. The DOJ's preference is to address competition problems as they are brought forward, by a merger or a complaint, and with relatively narrow remedies that attempt to preserve competition in markets and minimize government involvement. In a case decided against Visa and MasterCard, DOJ argued successfully that Visa and MasterCard's "exclusionary rules," which barred members from issuing American Express and Discover cards, adversely affected competition in the market for credit card network services. In 2003, the DOJ sued to enjoin a merger between First Data and Concord, which would have resulted in the combination of two of the three largest PIN debit networks in the United States. Hesse noted that, in general, the DOJ views three-to-two mergers as negatively impacting consumers by limiting competition and to expect continued scrutiny of these types of mergers.

During the discussion period, audience members probed the panelists for justification of remedies and action or inaction in their jurisdictions. Of particular interest were the difficult consequences of cost-based pricing remedies and whether three-party or unitary systems like American Express would receive similar scrutiny if that model had become dominant. One of the most interesting exchanges occurred when merchants questioned Hesse about how the DOJ might view an agreement by merchants to establish their own network with interchange set at zero. Hesse responded that it could probably be done in way to avoid antitrust issues but cautioned that the key question to be answered is whether provision of card services can only be accomplished through collective action on the network side.

VI. Panel of central bankers

Central banks need to understand interchange fees because they are responsible for general oversight of the payments system and have either direct or advisory roles in payment competition policy. This panel brought together representatives of central banks from countries in which there is much discussion of interchange fees. The central banks of Australia and Mexico have taken regulatory steps toward interchange fees and two panelists from these banks provided an opportunity for the audience to hear about their experiences. Representatives from the Federal Reserve Bank of Kansas City and the European Central Bank each brought unique perspectives to the panel.

Thomas M. Hoenig reviewed information that could be usefully taken from the conference. Presentations on the economic theory of two-sided markets provided insight into their function and the role of interchange fees. For example, theorists argue that a market-determined interchange fee may be above, below, or equal to a socially optimal interchange fee. Whether this outcome is accurate, however, needs to be explored further because these new theories are complicated and currently underdeveloped. Besides economic theory, the actual behavior of the market can provide information upon which to evaluate performance. The recent success of card payments may reflect strong competition in the market, yet courts in the United States have found that card associations have market power and face limited competition. The ambiguity of market behavior might reflect different points of view, but it may be wise not to completely abandon interchange fees as indicators of market performance despite their theoretical ambiguity.

Hoenig concluded by observing that all participants agree that greater transparency would be beneficial. If market participants would provide more information to each other and to research analysts, more definitive answers to important questions could be found. Added transparency could also be a first step toward a better understanding of common interests in efficient, safe, and accessible payments systems.

Because the Reserve Bank of Australia (RBA) has arguably been the most active public authority in regulating interchange fees, Philip Lowe's presentation was highly anticipated. He first cited a mid-1990s RBA study of the retail payments system which concluded that the PIN-based debit card system had lower operating costs than other card payment systems but that cardholders faced a much higher price for using PIN debit. These price signals resulted in other card payments growing faster than PIN debit. The study argued that interchange fees were the primary cause of these prices and that competition among card issuers had the perverse effect of raising interchange fees. After unsuccessfully seeking a voluntary reduction in interchange fees, the RBA instituted a regulation that required card networks to set interchange fees at or below a cost-based standard. As a result, the interchange fees and merchant service fees each fell by a similar amount.

Lowe offered some general observations about the RBA experience. The RBA implemented gradual reforms because of the complexities of the card payment market. Underdeveloped economic theory and a lack of empirical information has hampered the reform process and caused the RBA to proceed carefully. Rather than identify optimal interchange fees, they chose to move interchange fees in an appropriate direction. Good policy requires designating one institution with ongoing responsibility for efficiency in the payments system, but whatever institution is responsible, it must be able to act proactively in response to anticompetitive behavior.

The final two presentations by representatives of the Mexican and European central banks offered a comparison of formulating payment system policies in very different payment markets. In Mexico, few cash registers accept debit, and most retail payments are made with cash and checks. Moreover, the banking industry is highly concentrated, with significant barriers to entry in card issuing and acquiring. The payments market in the euro area is highly fragmented, with 12 countries that host more than 20 card payment systems. The majority are national debit card systems, which account for two-thirds of all card payments in the euro area. Cross-border payments mostly use the Visa or MasterCard systems. There is a wide variety of fee arrangements and a wide variety of consumer payment habits.

Guillermo Ortíz noted particular concerns in Mexico that include the high interchange fees for debit transactions at small merchants and a structure of interchange fees across different payment systems that discourage the use of electronic forms of payment. Banco de México has used a mix of voluntary actions and regulatory threat to implement reforms. This has been aided by working with the banks that have shared cost information to help the central bank understand the process of setting interchange fees. One outcome is a unilateral agreement by banks to reduce interchange fees and introduce interchange fee categories for different retail sectors. But Banco de México also has issued regulations, such as requiring banks to disclose fees, and made it compulsory for banks to allow payment of credit balances through interbank electronic transfers.

Ortíz observed that the Mexican central bank does not necessarily need definitive economic theory to act if it observes barriers to entry and other impediments to appropriate market processes. Reform is difficult because it is not obvious what the socially optimal interchange fee should be. Empirical research would help, but to do such research, central banks need appropriate resources. Cooperation with industry participants produces the best reforms, but a credible regulatory threat is helpful. Finally, policymakers need to be aware that improving efficiency in retail payments is a long and continuous process.

According to Gertrude Tumpel-Gugerell, the European Central Bank (ECB) is currently concerned with integration of European payments systems with equal treatment of national and cross-border payments. The role of the ECB is to facilitate bank efforts toward transparency and integration, but it will monitor developments closely and intervene if progress is insufficient. The ECB expects that competition and transparency should lead to appropriate interchange fees.

Scrutiny of competition in payments in the European Union has generally been at the national level, reflecting the fragmented nature of the payments market. To aid payment integration, the ECB hopes that national competition authorities develop policies that not only promote payments competition in their countries but also facilitate the establishment of pan-European card services.

The session's discussion period featured a variety of questions on interchange fee regulation and on the mechanics of the payments market.

If interchange fees are regulated based on processing costs, are the costs of extending credit or risk included? Panelists responded that Australian regulations allow for the cost of the interest-free period, but not because merchants benefited from the interest-free period. Instead the RBA saw a need to formulate an interchange fee standard that was pragmatic and transparent. In Mexico, regulation will require debit interchange to be a fixed fee rather than a percentage of the sale because debit transactions settle immediately and therefore do not carry the same risk as credit card transactions.

By what means can competition be enhanced, and how well can this achieve regulatory goals? According to panelists, the Banco de México thinks more competitors need to be brought in to the payments market, perhaps by allowing nonbanks to be part of card networks. Elsewhere, the European Commission in 2000 mandated a change in card association rules to allow acquiring of transactions across national borders of the European Community. In general, market outcomes are favorable with enhanced entry to get the benefits of competition and economies of scale.

Do central banks have a mechanism in place to track whether an interchange fee reduced through regulation has been passed to merchants in the form of lower merchant service charges? In response, panelists argued that it would be impossible to measure precisely because the effect would be relatively small for individual retail prices. Logically, however, merchants should see a significant reduction in their costs, and competitive pressure implies that consumers will see lower prices.

Is it safe to ignore three-party payments systems, such as American Express, and concentrate on the regulation of the Visa and MasterCard four-party systems? Panelists answered that the interchange fee in four-party systems deserves special scrutiny because it sets a floor to merchant services. In addition, it is not true to say that reform in Australia has ignored three-party systems. The RBA has asked American Express to remove restrictions or improve transparency in order to ensure merchants can fairly negotiate with American Express.

VII. Conclusion

During the two days of presentations, discussion, and debate among leading economists, industry leaders, and policymakers, the need for intervention in the credit and debit card markets was hotly contested. Sharply differing views between merchants and card issuers and networks left a perception that common ground may be difficult to find. However, there are several reasons to be optimistic about the future. First, the conference facilitated a unique dialogue among the four key stakeholders that enhanced knowledge about how these markets work. Second, there was agreement among participants that more transparency in these markets will increase the likelihood that they will work effectively and in the public interest. Finally, industry participants offered to work with policymakers and researchers to provide data that will better inform public policy actions to ensure a safe and efficient payments system.

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Endnotes

[1]Gerdes and Walton (2005).

[2]The merchant service charge is sometimes called the "merchant discount."

[3]Additional details on topics such as payment authorization, third-party processors, cardholder fees, reward programs, card issuer processors, payments guarantees, and risk can be found in Bradford, Davies, and Weiner (2003) and Hayashi, Sullivan, and Weiner (2003).

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