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The Future of Charge Card Networks

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Executive Summary

The general-purpose charge card is now ubiquitous and largely taken for granted. Annual charge card volume exceeds $5 trillion worldwide. Within the United States, nearly one billion cards are in use (about eight per household), and more than two billion worldwide.

But charge cards, or more specifically, the cooperative networks that serve the largest card systems, Visa and MasterCard, are under legal attack through multiple lawsuits and under regulatory challenge in other countries.

We trace in this essay multiple possible future "scenarios." This focus on possible futures distinguishes our work from many earlier studies of this subject.

Background

The charge card "industry" consists of three distinct functions: *issuers* of charge cards; *acquiring institutions* that handle payment to merchants; and the *charge card networks* that process the charges and route payments. It is also useful to distinguish between the two types of networks that have evolved: proprietary and cooperatives (or joint ventures). In the proprietary network, the same company is issuer, acquirer and the network. In the cooperatives, the network links thousands of independent issuing and/or acquiring financial institutions. Considering the total of the four major networks, Visa and MasterCard together account for about 80 percent of U.S. charge card volume, American Express 16 percent, and Discover 4 percent.

Both of the cooperative networks have initiated or proposed significant changes in their corporate structures. In 2005, MasterCard proposed a public offering (to be completed in 2006). Later in the year, Visa announced a less far-reaching, but significant, reorganization, adding a majority of independent directors.

These steps the cooperative networks have taken to move away from the cooperative organizational form are similar to the steps that the members of various major capital market and derivatives exchanges have taken to convert to public companies. The reorganizations of the exchanges and the charge card networks are similar in that the members will become less involved in decision-making and will be treated in the future as *customers* of the reorganized entities rather than as members.

Credit Card Network Fees

Network externalities affect all of the charge card networks. The value to users of each network increases as the network itself increases in size, and the network effects in the card market are reinforced by the high fixed costs of establishing and operating a successful charge card network.

The "interchange fee" charged by the cooperative networks, as well as the "merchant discount" charged by the proprietary networks, are designed to cover both processing *and marketing functions*. In exchange, merchants derive benefits from card acceptance, including participation in scale economies.

In 2004, card issuers collected $25 billion in interchange fees from acquiring banks, and thus from merchants. With so much money at stake, it is not surprising that interchange fees have become the source of much tension between the card networks and merchants. The merchants argue that the bank members of the cooperative networks, which also issue the cards, have been unlawfully colluding.

Future Scenarios

We begin with a scenario in which merchant plaintiffs prevail in the U.S. interchange litigation, and then consider several other scenarios. We conclude that some version of the last scenario – one in which the current cooperative associations eventually become more like proprietary networks – is the most likely outcome.

1. Merchant Plaintiffs Prevail: No More Uniformity in Interchange Fees

Imagine a world in which thousands of card issuers have to negotiate or set different interchange fees with different acquiring institutions, acting on behalf of merchants, or even with merchants directly. The most likely outcome is that a system of multiple interchange fees would arise, and would vary for each bilateral relationship. With thousands of issuers and acquiring banks, and millions of merchants, this could mean a very large number of different price combinations.

It is entirely conceivable that because of differences in size and bargaining power between large and small banks, smaller issuers would be put at a significant competitive disadvantage relative to larger issuers. One would expect the issuing side of the market to become more concentrated.

Merchants are as heterogeneous, in terms of size and bargaining power, as card issuers. This means that larger merchants may be able, even with larger issuers, to negotiate lower interchange fees than they now pay. But smaller merchants could end up paying greater interchange fees. Large merchants would gain a competitive advantage versus smaller merchants through the card payment system.

There is no consensus among economists who have studied this issue about the net impact of the interchange fee system in a free-for-all world. Interchange fees certainly would be less uniform than they are now, and would reflect the relative bargaining power of the parties on both sides of the market.

2. Regulation of Interchange Fees

A second scenario is one in which the cooperative card associations continue to set interchange fees, but subject to government-imposed caps. Australia has gone the furthest in this direction.

In the regulated system, issuer revenue declines, which should lead to reduced benefits or higher fees to cardholders. Acquiring institutions pass their savings on to merchants. Whether lower merchant discounts pass on to consumers depends on whether merchants lower their prices.

Study of the experience in Australia preliminarily confirms cooperative network issuers in Australia indeed did cut their cardholder benefit packages and raised fees. Merchants have benefited from lower discounts, but merchants have not lowered their prices. If cardholders have lost benefits, pay higher fees, and have not gained from lower merchants' prices, then they have not benefited.

A further possibility is that multiple prices for retail items, varying by the method of payment, could emerge, although discounts for cash payment or surcharges for cards, where available, have never been generally accepted.

If both card networks become more proprietary – that is, they are owned by public stockholders and the members no longer control the setting of interchange fees – then the argument for regulation is more readily dismissed.

3. Nationalization of Credit Card Networks

Although the credit card industry grew up in the private sector, it is not inconceivable that some or all credit card network functions could be nationalized – much like what the Federal Reserve did for check clearing. There is ample precedent for government involvement in payment functions. The Federal Reserve System has a monopoly on cash production and dominance in check clearing.

A possible incentive for the Federal Reserve to assume some of these functions is to regain the loss in market share it has suffered to private sector charge card products, as shown in the trend in the composition of all in-store payments over the past six years:

	1999	2005
Charge cards	43%	52%
Cash	39%	33%
Checks	18%	11%
Other	-	4%

We believe direct government involvement in the charge card business is unlikely and undesirable, but nationalization of some or all parts of the charge card industry is valuable to ponder as a theoretical exercise. It should never be anything more than that.

4. Breakup of MasterCard/Visa

This scenario can be viewed as the extreme opposite of nationalization: breakup of both the cooperative networks, perhaps into four separate organizations. One way this scenario might come about is through a plaintiffs' victory in the interchange fee cases, but one which extends beyond damages and an injunction against the networks setting a uniform interchange fee or fee schedule. We believe such an outcome is highly unlikely, and we are skeptical that breakup would bring substantive benefits for consumers, given the network externalities and economies of scale characteristic of this market. It is interesting in this context that the pieces from the breakup of AT&T have subsequently consolidated.

5. Reorganization of MasterCard/Visa

Our final scenario is reorganization of the membership nature of both cooperative networks into proprietary companies more like American Express and Discover. Both organizations already have moved in the proprietary direction, although MasterCard's structural changes have been more ambitious than those of Visa. Interchange fees in a world with the reorganization of the cooperative networks should be set by each proprietary network firm, reflecting market conditions, and treating all participating financial institutions as customers, not members.

We do not believe that such reorganizations will cause major change for consumers, merchants, or the networks' strategy. As the cooperatives become more proprietary, they have new incentives to maximize their profitability, which other things being equal, means that they will strive to maximize their network size. In the context of the two-sided market, the cooperative networks both have decided in the past that it is most efficient to provide the cost of funding the promotion of the network through the interchange fee.

There is no reason this calculus should change as MasterCard and Visa become more proprietary and less member-operated. Those who are running the network will continue to have incentives for network success, just as do the existing proprietary card networks. As for market structure, if we are correct, the "new" more proprietary networks' profit-maximizing incentives drive network expansion much as they did in the "old" cooperative structures. It is unlikely that their competitive behavior or market structure will change as a result.

Conclusion

Consumer choice has given the charge card networks a remarkable record of long-term growth and capture of market share from cash and checks. We expect the fundamental economics to continue as institutional forms evolve.

The Future of Charge Card Networks

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1. Introduction

The general-purpose charge card – one that is accepted by many merchants rather than a single one or a combination -- is one of those American inventions that is now ubiquitous in the United States, used increasingly around the world, and largely taken for granted. It is commonly used as a means of payment, form of identification, ready source of borrowed money, and as a vehicle to obtain various kinds of "rewards", or discounts on multiple services (travel, automobile rental, airline flights) and other purchases. Today, charge card volume exceeds $5 trillion worldwide. Within the United States, nearly one billion cards are in use (about eight per household), more than two billion worldwide.[1]

But charge cards, or more specifically, the cooperative networks that serve the largest card systems, Visa and Mastercard, are under legal attack through multiple lawsuits – not just in the United States, their place of birth, and under regulatory challenge in other countries. It is not just the way the business is conducted that is being challenged, which could change. But the networks responsible for them face potentially crippling damages that could render them financially unviable.

What lies ahead for the industry, and its hundreds of millions of cardholders, millions of merchants, and thousands of participating financial institutions around the world? Unfortunately, there can be no definitive answer to this question, since much will depend on decisions by courts, regulatory bodies, and the credit card networks themselves. For that reason, we trace in this essay multiple possible "scenarios," suggest what events could give rise to them, and what impacts might be felt by consumers, merchants, card issuers, and the card networks themselves. This focus on possible futures

[1] Nilson Report 829, March 2005. Unless otherwise specified, when we refer to "charge cards" we mean to include the variety of cards the industry has developed over time, including the original "charge card" (which required the holder to pay the entire balance of all charges each month), "credit cards" (which require holders to pay only a portion of the monthly outstanding balance), and "debit cards"(which deduct amounts "charged" at point of sale from the holders' bank account). The different types of cards are discussed in the "Background" section, which follows this Introduction.

distinguishes our work from many earlier studies of this subject, which range from the highly theoretical to technical legal discussions about particular credit card practices.

To preview our principal conclusions: from a public policy and antitrust law perspective, we do not believe that the merchant plaintiffs should prevail in their current antitrust lawsuits charging MasterCard and Visa – the two cooperative or "joint venture" or bank charge card networks – with fixing the prices of their "interchange fees," which are the fees the networks require banks collecting on behalf of merchants ("acquiring banks") to pay to banks that issue the cards ("issuers").

Nonetheless, what if MasterCard and Visa lose this litigation? We do not speculate on the potential damages that the networks (and their owners) would have to pay if this occurs. However, we do discuss possible ways in which both networks might be required to change their mode of business, either by court order, as a result of settlement, or should they implement changes unilaterally to address the various challenges.

In fact, at this writing, both cooperative networks have recently announced steps to reduce the involvement of their members in such fundamental decisions as the setting of interchange fees. Both networks appear to have done so largely to reduce their future antitrust exposure.

However the precise organizational arrangements turn out, we believe the charge card market should continue to evolve toward a "mixed proprietary" model, which has elements of both network membership and ownership, in which the four major networks (American Express, Discover, MasterCard and Visa) will continue to compete with one another, both in the United States and elsewhere around the world, on this basis. We do not believe that the change in organizational form of the two card cooperatives will have a material impact on consumers, merchants, or even how the networks function – unless, of course, governments decide to regulate them anyhow, or in an extreme case, take over some or all of the card functions themselves. There is international precedent for the former, and precedent for the latter in the history of banking.

At the end of the day, therefore, if none of the major scenarios or alternatives to the status quo is likely to produce significant benefits to consumers, as a class, one wonders what all of the controversy is about. It is a legitimate question.

2. Background

To project where the charge card industry is likely to head, it is useful to understand its rapid evolution over the last half century.[2] We focus here primarily on the United States, but eventually the business models developed in this country were exported and copied abroad. As the discussion proceeds, it is also useful to keep in mind that the charge card "industry" in fact consists of at least three different and distinct segments or "industries" in their own right: *issuers* of charge cards; *acquiring institutions* that handle payment to merchants; and the *charge card networks* that process the charges and route payments between the issuers and the acquiring institutions.

It is also useful to distinguish between the two types of networks that have evolved: proprietary and cooperatives (or joint ventures). In the proprietary network, the same company is issuer, acquirer and the network. In the cooperatives, the network links thousands of independent issuing and/or acquiring financial institutions.

Although it was long common for individual merchants to extend credit to their customers, the first *general purpose* "charge card" – one that could be used at multiple merchants -- was not introduced in the United States until 1949, when Diner's Club extended it to upper income consumers to use for paying entertainment (primarily restaurant) and travel expenses. Unlike the holders of credit cards that were developed later, charge card holders were required by contract to pay their charges monthly. American Express followed with its own charge card, marketed to a similar customer base, in 1958. Both Diners and American Express, and later Discover (which was established by Sears, Roebuck in 1986 and is currently a subsidiary of Morgan Stanley), are examples of "proprietary" networks, since each organization issues the cards (exclusively, until a recent lawsuit allowing members of rival networks to issue them as

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[2] We draw heavily in this section on an excellent recent summary by Akers, et al, as well as on Evans and Schmalensee.

well), recruits the merchants to accept them, and routes payments from cardholders to those merchants.

In 1958, Bank of America became the first bank to introduce its own charge *and credit* card. The credit card feature allowed holders to defer payment of their monthly balances, as long as they paid interest on the outstanding balance and made some minimum payment of that balance each month. Because Bank of America was not then allowed to branch into other states (authority it and other banks would not gain until the late 1990s, when the terms of the Riegle-Neal Interstate Act became fully effective), it restricted its own card offerings to its California customers, but then licensed the card program to banks in other states. Licensing allowed Bank of America to build a national brand and a network of merchants who would accept its card, which made it a viable competitor against the other two proprietary networks, Diners and American Express. The Bank of America network was the first example of the joint venture or cooperative structure in the charge card industry.

Bank of America found, however, that as it added more licensees to its network, the more costly it became to settle accounts between the various issuers and their customers and merchants who had agreed to accept the card. In addition, other banks that had licensed the card gradually wanted more input into how fees and other operational details were set. Eventually, Bank of America decided these challenges would be better handled if its card operation were spun off into a separate company, which evolved into the Visa network. Meanwhile, other banks apparently felt that they could enter the card business without having to license the Bank of America card program. This alternative cooperative formed in 1966, and developed into the MasterCard network. Unlike Visa, MasterCard accepted non-banks as issuers as well as banks.

During the 1970s, both of the cooperative networks introduced *debit* as well as credit cards. Although the use of debit cards initially grew slowly (most likely because checks have been subsidized), in recent years, debit charge volume has increased very rapidly. Debit cards function like electronic checks that debit users' bank accounts, either immediately or after some authorization delay.[3] Initially, both Visa and MasterCard

[3] Debit cards are of two types: PIN (personal identification number) cards, where the customer's identity is authorized at point-of-sale and the amount charged is immediately deducted from the cardholder's bank

required merchants who accepted their credit cards also to accept the networks' debit cards. This practice was abandoned in 2003, as a result of a settlement of an antitrust action brought against the networks by Walmart and other merchants (discussed further below).

All of the initial entrants into the charge card business struggled financially in their early years, since it took time to build up a base of merchants and cardholders to pay for processing costs and marketing. But once critical size is reached, the card networks have grown very rapidly. For example, over the 30 years between 1974 and 2004, the number of charge cards issued by the four major general-purpose networks grew at an average annual rate of 8.5 percent, while transaction volume advanced at a very impressive 16 percent annual rate.[4] This illustrates an important feature of all charge and credit card systems: they are characterized by "network externalities", or the fact that the cards of a particular brand become more valuable to cardholders as more merchants accept them and more valuable to the merchants as more customers have cards. Indeed, because card systems cannot function without both cardholders and merchants, some analysts have referred to them as examples of "two-sided" markets (other examples being markets for residential real estate, network television, and computer software).

Actually, the market structures are more complicated than this shorthand term implies. Though the networks in both cases stand between the two sides, processing and routing all charges and payments (or contracting with third parties to do so) and building the networks by promoting the cards to cardholders and merchants, there is a key distinction between the cards issued by the proprietary networks (American Express and Discover) and their main cooperative rivals (MasterCard and Visa). In the case of the proprietary networks, the network operator does all the work, and sets its fees and discounts unilaterally. In contrast, the members of the cooperative networks (through a subset of them) set the fees to operate the network and promote its use -- the so-called "interchange fee" – collectively, as one would expect in a joint venture. Because the members of the cooperative also compete with one another in the issuing of the cards and collecting payments for merchants, this cooperation at the "network" level unsurprisingly

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account, and signature cards, where the user signs a receipt, which is then processed just like a credit card transaction.

[4] Date are from Visa International.

has been the subject of considerable legal controversy, litigation, and (outside the United States) regulation.

Recently, both of the cooperative networks have initiated or proposed significant changes in their corporate structures. Visa operates through four nonstock for-profit membership corporations that are owned by approximately 21,000 financial institutions throughout the world. Previously, MasterCard operated as a nonstock not-for-profit membership association.[5] In 2003, MasterCard converted to a private for-profit corporation, owned by 1,400 of the approximately 25,000 financial institutions participating in MasterCard programs. Two years later, in 2005, MasterCard proposed a public offering (to be completed in 2006) in which public investors will own 49 percent of the equity, but 83 percent of the Class A votes, while financial institution members collectively would own 41 percent of the total equity, but receive non-voting Class B shares and Class M shares with limited voting rights. Under the proposed arrangement, a majority of the board directors would be independent, and only a minority would be chosen from among financial institution issuers.[6] Late in the same year, Visa announced a somewhat less far-reaching, but nonetheless significant, reorganization retaining its membership status, but adding a majority of independent directors among the 15 voting members of its board. The boards of both newly reorganized entities are to have final approval for all pricing decisions.

We discuss later the potential implications of these measures for the antitrust exposure of both organizations. At this point, we note only that the steps the cooperative networks have taken to move away from the cooperative organizational form are similar to the steps that the members of various major capital market and derivatives exchanges – the New York Stock Exchange (NYSE), the Chicago Mercantile Exchange (CME), and the Chicago Board of Trade (CBOT) – also have taken or are taking to convert to public companies. In the case of the exchanges, the major motivation appears to be the quest for access to capital to finance future expansions and/or technological enhancements, with

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[5] These figures are provided by the *Visa International Annual Report, 2004* (at 7) and *MasterCard Canada Press Release,* February 2, 2005, and the *Wall Street Journal,* "MasterCard Says IPO May Raise $2.45 Billion," September 16, 2005.

[6] The IPO also contemplates that a charitable foundation to be established by MasterCard will own 10 percent of the Class A shares. The financial institution members holding class M shares would have the right to elect three of the 15 directors.

antitrust seemingly not relevant (except in the case of NASDAQ's efforts to go public, which may stem in part from the need for more capital to compete against electronic communications networks, or ECNs, which owe their existence largely to the government's antitrust action against NADAQ in the 1990s). However, the reorganizations of the exchanges and the charge card networks are similar in that the new owners, and former members, will become less involved in decision-making and will be treated in the future as *customers* of the reorganized entities rather than as members.

The network externalities that affect all of the charge card networks also have important implications for market structure among these networks. In particular, because the value to users of each network increases as the network itself increases in size, there is a natural tendency toward monopoly, or at least oligopoly, in network markets. Furthermore, network effects in the card market are reinforced by the high fixed costs of establishing and operating a charge card network that is both convenient for all users and that minimizes fraud (since networks typically reimburse merchants for the cost of fraud as long as network procedures are followed). Economies of scale thus also contribute to market concentration, at least at the network level [Hunt, at 17].

Indeed, given both network effects and economies of scale, it is somewhat surprising that the charge card network market (measured by both credit and charge card volume) is not more concentrated than it is. Considering the total of the four major networks, Visa and MasterCard account for about 80 percent of U.S. charge card volume; American Express (16 percent) and Discover (4 percent) make up the balance [Nilson Report, September, 2005]. By comparison, the personal computer operating systems market has long been dominated by Microsoft, with a market share in excess of 90 percent; similarly, the regional Bell Operating Companies have dominated local landline telecommunications markets with even higher market shares (although continuing innovation in wireless communications is blurring the lines between "landline" and "wireless" markets, and eventually should eliminate the distinction between the two).

The network market must be distinguished from the markets in card issuing and acquiring.[7] The card issuing market consists of over 20,000 issuing institutions. Though

[7] The U.S. Court of Appeals for the Second Circuit accepted this distinction made by the trial court in the course of upholding the latter's decision that Visa and MasterCard unlawfully prevented their bank

the card issuing market continues to experience consolidation – largely because of economies of scale, it remains very unconcentrated. In 2002, the Herfindahl-Hirschman Index (HHI), the concentration measure most favored by the Antitrust Division at the Department of Justice, was just 816 for the credit card issuing part of the market [Evans and Schmalensee, at 230].[8] Industries with HHIs below 1000 are considered by the Division (and experts in industrial organization) to be unconcentrated. The acquiring side of the market also has been consolidating, but is much more concentrated – also due to economies of scale. A considerable portion of this side of the market outsources its processing to First Data Corporation. If all of the institutions that do this are considered as one entity, the HHI among acquirers is 1,702, near the top of the range of industries considered by the Antitrust Division to be "moderately concentrated"; if these entities are considered separately where the marketing and customer pricing occurs, the HHI on this side of the market, however, falls to 709 [Evans and Schmalensee, at 261].

3. <u>Credit Card Network Fees</u>

Although we discuss the interchange fee issue more extensively below, it is important to understand at the outset how the networks charge and for what, since this subject has been surrounded by controversy. That controversy, in turn, stems in our view from a fundamental misunderstanding about the role of interchange fees in charge card networks. Critics believe they represent or should represent only recovery of the costs of processing transactions. In contrast, the cooperative charge card networks argue (rightly in our view) that the fees are necessary to the costs of *marketing* the cards and thus building the network as well.

Whether they are proprietary or cooperative in structure, in nature, all card networks – indeed, all payment networks -- have operational and capital expenses they must cover. Charges must be recorded and properly routed through the network to ensure payment is made to the proper payees and that the proper amounts are deducted from the

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members from issuing cards by other proprietary networks. *U.S.A. v. Visa, Inc, et al.,* 334 F. 3d 229, 238-39 (2 Cir. 2003).

[8] The HHI is calculated by squaring the market share of each of the market participants and then adding up the resulting figures for all competitors in a market.

cardholder's bank account. In the case of checks, these processing costs – which are substantial (especially since many of the checks themselves must be flown around the country to be returned to the banks on which they are written) – are centered in the Federal Reserve System. Since 1980, Congress has required the Fed to charge banks enough to cover the costs for this "interchange" service (although as we note shortly, the Fed still provides a subsidy). In addition, since 1916, *the Federal Reserve System has required banks belonging to the System to clear checks "at par" – in other words, not to assess any fees on other banks for "check interchange."* Non-member banks have been allowed to charge a discount on checks presented to them, but by 1980, this practice had disappeared [Evans and Schmalensee, at 42].

Charge card networks differ from the banking system, and the checks it processes, in a key respect – which affects the "interchange fees" that these bank networks charge. Unlike the bank members of the Federal Reserve System's clearinghouse networks, who benefited from the Fed's historical subsidies of the check clearing system, each of the charge card systems needed to build the network from scratch, *without subsidy*. This meant that the charge card networks needed to price their services in a way that attracted both sides of the networks – merchants and cardholders – and that continues to attract them, since all of the networks continue to compete actively with each other.

In short, the "interchange fee" charged by the cooperative networks, as well as the "merchant discount" charged by the proprietary networks, are designed to cover both processing *and marketing functions*. This "double duty" distinguishes the card fees from any fees for checking clearing, which in principle are designed to cover only the Fed's processing and capital costs, but in practice fail to do that.[9] Put another way, the charge card network fees cover not only network processing costs, but are also structured to enhance the value of the network. Of course, merchants derive other benefits from card acceptance, including payment guarantees, reduced risks of theft of cash, elimination of the risk of uncollectible checks, access to network marketing programs, improvements in cash flow, and participation in scale economies. Guerin-Calvert and Ordover argue that

[9] Thus, even though the Fed has continued to raise its fees for check processing, and indeed is even required by law to cover its processing and capital costs, the System has not met this objective. In 2003, it recovered 86 percent of costs, and in 2004 aimed for 95 percent cost recovery – still an economic subsidy [Pamlette, 2005].

"credit card networks deliver to merchants true 'network' services that are subject to substantial economies of scale and scope, and, as such, can be provided at lower cost by networks than by the merchants themselves" [Guerin-Calvert and Ordover, at 10].

Interchanging pricing is complicated. Prices depend on "the card association, the type and size of the merchant, the type of card, and the type of transaction. Merchants that sell low-margin items – for example, convenience stores, supermarkets, and warehouse clubs – have lower rates. Hotels and car rental establishments have higher rates. Newer premium credit cards that offer more rewards have high rates. Credit card transactions have higher rates than PIN debit card transaction…" [Akers, et al., at 28].

In 2004, card issuers collected $25 billion in interchange fees from acquiring banks, and thus in turn from merchants [Aite Group]. In addition, merchants paid several billion more dollars to the proprietary networks, bringing the likely total amounts paid by merchants for card fees to over $30 billion. With so much money at stake, it is not surprising that interchange fees and merchant discounts have become the source of much tension between the card networks and merchants. In 2005, merchants have formed new trade associations and used existing ones to challenge interchange fees assessed by the cooperative networks. In earlier years, some merchants strongly resisted merchant discounts assessed by other proprietary networks.

Merchants' complaints about the interchange fees charged by the cooperative networks boil down to this: that they are "too high" and rising, seemingly unrelated to processing costs. For example, according to Visa, the credit card interchange fee rate rose at an annual rate of 2.2 percent between 1990 and 2004 (the debit card fee rate at a much lower 0.5 percent rate) [Sheedy, at 3]. By comparison, interchange rates have been falling in other markets around the world (except for Canada) [Posner, at 3]. The merchants argue that the only plausible reason for these trends is that the bank members of the cooperative networks, which also issue the cards, have been unlawfully colluding to raise their fees, in an effort to increase their profits.

The cooperative networks have a number of responses. As for the numbers, they can argue that the rate of increase in interchange fees is not extraordinary, but rather not all that much different from overall inflation, which drives the costs of all inputs for all service producers (and manufacturers) upward. For example, between 1990 and 2004, the

Producer Price Index for finished goods increased at annual rate of 1.6 percent; the deflator for the Gross Domestic Product (GDP) rose at a rate of 2.0 percent. These figures are not all that different from the 2.2 percent rate of increase in average interchange fees reported by Visa over this period. Fees could be falling outside the United States, while rising here, because charge card markets are relatively immature in other countries, and thus are at the stage where the price-reducing impact of economies of scale can more than offset general inflationary factors. Indeed, this is what happened in the United States in the 1980s and early 1990s, when interchange fees (as a percentage of charge volume) here fell [Evans and Schmalensee, at 154-55].

Second, the networks can argue that their interchange fees are not necessarily tied to processing costs alone because the fees have been used for different purposes over time, also to cover the cost of funds by issuers in providing a grace period (between the time a charge is made and the date the card payment is due), and evolving in recent years, to support the promotion of cards by card issuers [Evans and Schmalensee, at 154-56]. Increasingly, card issuers have competed on the basis of these promotions – frequent flyer programs and additional benefits (such as travel insurance) – rather than on the basis of differences in annual fees and interest. Indeed, the average annual card fee has fallen in half since 1990, from $16.51 to $8.52 in 2004 [Sheedy, at 7]. At the same time, issuer competition has led to steadily lower margins on the credit extended to "revolvers" (or those who do not pay off their entire balances each month). In 1990, for example, the spread between the average percentage rate (APR) on revolving accounts and the 10-year Treasury rate was 10.2 percent; by 2004, the spread had dropped to 4.5 percent [Ibid].

The cooperative networks also have specific and legal arguments that their setting of interchange fees jointly is both legally permissible and economically rational. The legal reference is the federal appellate court decision in *National Bancard Corp. (Nabanco) v. Visa*,[10] which held that the setting of credit card interchange rates by Visa members was permissible under the "rule of reason," and analogous to the setting of royalty rates by composers and musicians, approved by the Supreme Court in 1979 in

[10] 596 F. Supp. 1231 (S.D. Fla. 1984), *aff'd.,* 779 F.2d 592 (11th Cir. 1986), *cert. Denied*, 479 U.S. 923 (1986).

Broadcast Music Inc (BMI) v. CBS.[11] The economic justification for joint fee setting in both cases is that the transactions costs of negotiating thousands of separate bilateral fee arrangements between different parties would be so prohibitive as to potentially destroy the network, and thus the benefits it provided to consumers. The 11th Circuit Court agreed, finding from an "abundance of evidence" that the interchange fee "on balance is procompetitive because it was necessary to achieve stability [of the network] and thus the one element vital to the survival of the VISA system – universality of acceptance."

The modern interchange fee cases seek to overturn the central holding in *Nabanco*. To be successful, plaintiffs must either persuade the courts today that the earlier decision was wrongly decided, or that changes in technology or the marketplace in the intervening years justify a new principle. We are skeptical that either showing can be made, though we speculate later in the article how the credit card networks might adapt if *Nabanco* were effectively overruled.

Much of the battle over which parties pay which and how much in credit card network fees turns on who bears the ultimate costs of those fees. This is clear in the case of issuer fees, which fall directly on cardholders, and thus most consumers (those who use cards for payment). As for merchant fees, we assume that merchants do not ultimately bear these costs. In a competitive setting, where card usage is widespread, merchants can be expected to pass these costs on to their consumers. In principle, merchants could choose to pass them on only to consumers who use their charge cards, thus effectively giving consumers who pay with cash, check or the merchant's own charge card a small discount. Indeed, merchants specifically have had this authority under federal law since 1975.

However, merchants have rarely used differential pricing. Initially, some gas stations used the strategy, but have since generally phased it out as general purpose cards have become more popular. Outside the United States, only about 10 percent of merchants in Sweden and the Netherlands – two countries that banned no-surcharge rules (which would have prohibited discounts for cash) – charge consumers who use their credit cards more than if they use cash [Hunt, at 20]. Australia has banned credit card networks from using "no surcharge" rules there, but at least initially found strong

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[11] 441 U.S. 1 (1979).

consumer resistance to attempts by merchants to charge more for purchases made with charge cards [Lowe and Macfarlane].

In short, whether fees are assessed on cardholders or on merchants, eventually consumers pay for them in exchange for the undoubted convenience of using cards. Evans and Schmalensee [at 156] illustrate the point with this example:

"In 1983, before the explosive growth of credit cards, the Visa interchange fee was 1.6 percent, the average merchant discount rate was 2.3 percent, the average annual cardholder fee was $16.86, and charge volume per account was $1,720. If the interchange fee fell to zero [a seeming objective of at least some of the more recent cases], the merchant discount rate would have fallen to 0.7 percent (assuming interchange fees were fully passed on to merchants) … *and the cardholder fee would have had to almost triple to $44.38 to keep the average issuer's revenues constant.*" [emphasis added].

Who then benefits from interchange fees? From the allegations in the interchange fee cases discussed shortly, one would think that because fee revenue is received by the banks that issue the cards, these institutions reap all of the benefits. Indeed, the merchant plaintiffs in these cases can be expected to argue that precisely because issuers have so vigorously competed against one another by lowering annual fees on cards and interest rates on revolving accounts, they have used the cooperative associations, which they allegedly dominate, to raise interchange fees to compensate for the loss in revenue from these other sources.

But this line of argument is likely to be rebutted by the networks, who will point to the high degree of competition in the issuer market as guaranteeing that most, if not all, of any increased interchange revenue *is* passed forward to cardholders through various promotional efforts by the issuers. As just one example, one recent report documents that up to 24 percent of all credit cards held by consumers have rewards associated with them, "and in 2003 an estimated 60 percent of credit card spending was attributed to cards with rewards." [Akers, et al., at 28-29].

We surely will not resolve the issues in the interchange litigation here. Rather, we have summarized what we anticipate to be likely arguments on both sides largely to review what is at stake. At the same time, we believe that laying out the arguments will help readers better understand the rationales for what we believe are likely outcomes in each of the future scenarios we outline later, which is the main object of this essay.

Finally, we note that the fascinating economics of interchange fees has spawned a robust and growing literature among professional economists, who continue to debate whether the current fee-setting system is optimal from a "social point of view" – that is, whether it ultimately is the best arrangement for society, as opposed to the networks, who can be presumed to be acting in their own best self-interest in maximizing charge and credit card usage. There remains no consensus on this issue, although one fact is clear: consumers are paying more often with credit and debit cards relative to cash or checks.[12] Two main arguments have been advanced as to why what is good for the charge cards networks nonetheless may not be optimal for society as a whole.[13]

First, some claim that when proper account is taken of the costs incurred by other parties (banks and merchants), the charge card networks are more expensive to use than alternative forms of payment, including cash and checks.[14] Indeed, representatives from the Reserve Bank of Australia have made clear that one of the main reasons why the Bank imposed caps on interchange fees charged by MasterCard and Visa was to offset the existing incentives provided by those fees for card issuers to promote wider use of their cards [Lowe and Macfarlane]. Other analysts have reached a similar conclusion.[15]

Later, we question whether Australia's regulatory regime has accomplished its intended result. More fundamentally, however, one of the premises underlying that country's regulation of interchange fees – that charge cards are socially more expensive than cash or checks – may not be true, once one takes account of *all* of the costs and *benefits* of the different types of payment instruments, including the safety and convenience of charge cards (which, by federal law, limit the liability of cardholders to

[12] For example, according to one source, the share of in-store purchases made by debit or credit cards rose from 43 percent in 1999 to 52 percent in 2005. The shares for cash and checks fell, from 39 percent to 33 percent for the former, and from 18 percent to 11 percent for the latter. [Dove Consulting, 2005]

[13] For a sample of the literature, see Baxter, Carlton and Frankel, and Rochet and Tirole.

[14] To illustrate the point: between 2000 and 2003, the number of checks used for payment fell from approximately 42 billion to 37 billion [Dove Consulting]. The decline in shares of spending is also noteworthy. In 1970, cash and check payments accounted for more than 90 percent of personal consumption expenditures; by 2004, this share had dropped to 61 percent [Evans and Schmalensee, at 85].

[15] For example, Hunt [at 19-20] notes that as long as merchants charge consumers who use credit cards the same price as those who pay with cash, then cash-paying customers end up implicitly subsidizing the use of credit cards. This can lead to over-use of credit cards, which is socially sub-optimal if credit cards indeed are more costly than cash or checks.

$50), and the cost of time in traveling to and waiting in line at the ATM machine or at the bank for cash, not to mention the risks of theft and loss [Hahn and Layne-Farrar].

Second, the argument is pressed against credit cards in particular that because they enable consumers to more freely borrow money than in the past, personal saving has declined, which may push up real interest rates and contribute to a rising current account deficit (which reflects the imbalance between national saving and investment). Resolving this debate, too, would take us far from our main subject here, so we refrain from doing so, but with several comments. One is that there is probably some truth to this objection, though the magnitude of the credit card effect on social saving is still subject to debate. But even so, credit cards have afforded access by millions of individuals to credit that in the past they would have no means of obtaining (or, if so, at exorbitantly high interest rates through pawn shops and other informal credit lenders). If, for paternalistic reasons, the government deems it appropriate nonetheless to curtail credit card borrowing, it does not follow that the best or even an appropriate means for doing so is to regulate credit card network fees.

4. Legal Challenges

The credit card industry has seen considerable litigation – and recently, regulation (outside the United States) – over the years. We will concentrate on what we believe to be several of the more significant of these developments, especially at the network level.

But first we offer a few observations on past challenges that have confronted card issuers. The most important of these occurred in the early 1990s, when there was flurry of interest within Congress – led by then Sen. D'Amato of New York and encouraged (apparently inadvertently) by President George Bush – aimed at curbing the interest rates that bank credit card issuers could charge. At the time, the typical revolving rate was 18 percent, although many cards charged lower rates. Congress took no action, however, and as we discuss further below, average credit card interest rates have since fallen, more or less in line with the drop in interest rates generally. In a similar vein, at least one state attempted to limit late fees charged by national cooperative issuers, but this effort was overturned in federal court (on the ground that state authority to regulate in this and other areas was preempted by the National Bank Act). More recently, certain issuing banks, both bank credit card networks, and even American Express, have been charged with colluding in the setting of charges for foreign currency conversion and including mandatory arbitration clauses in their cardholder agreements. This litigation continues at this writing.

The more interesting and we believe more important, legal developments have been at the network level, have concentrated primarily on the cooperative networks, MasterCard and Visa. These have focused broadly on three aspects: whether these networks can restrict their members from joining or issuing the cards of the other proprietary networks (exclusivity); to what extent the cooperative networks can impose on restrictions on third parties, merchants in particular; and the scope of permissible activities of the cooperative networks. We consider each of these topics in turn.

Membership Exclusivity: Even though they have been cooperative joint ventures, the interests of the Visa/MasterCard networks have not always been coincident with those of their members. In particular, at various times, bank members have wanted the freedom to join both networks, or to distribute cards issued by rival proprietary networks.

The divergent interests of bank members and their networks first became apparent in 1971, when Visa member, the Worthen National Bank of Arkansas, joined MasterCard. Visa reacted by adopting a bylaw prohibiting dual membership. Worthen sued in federal court, arguing that the restriction was a naked restraint of trade prohibited under Section 1 of the Sherman Act. Visa responded that membership exclusivity was necessary to preserve competition between the two cooperative networks. At the trial court level, Worthen won.[16] What happened next was the most interesting part of the litigation.

Visa appealed to the U.S. appeals court for the Eighth Circuit and also sought to have the Antitrust Division of the Department of Justice submit an amicus brief asserting the paramount importance of network competition. The Division refused, but offered Visa some consolation in urging the appellate court to order a new trial so that Visa's claims about the need for exclusivity could be weighed against Worthen's argument that

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[16] *Worthen Bank and Trust Co. v. National BankAmericard Inc.*, 345 F. Supp. 1309 (E.D. Ark. 1972), *rev'd*, 485 F. 2d 119 (8th Cir. Ark. 1973), *cert. Denied*, 415 U.S. 918 (1974).

"duality" (membership in both card networks) was more consistent with the antitrust laws. In the end, Visa settled the case, allowing Worthen to join MasterCard, but depriving the marketplace of an appellate decision on this critical issue.

Even after the *Worthen* case, Visa's board continued to believe in the competitive virtue of exclusivity, but was sufficiently worried about its antitrust exposure that it asked the Antitrust Division in 1974 to provide a ruling on the issue. After studying the question for a year, the Division ducked, expressing no support either for exclusivity or duality, while leaving open the possibility that it might oppose exclusivity in the future. By 1976, Visa's board dropped its exclusivity rule altogether, and quickly most banks became members of both bank networks.

Roughly a decade later, a different set of events was set in motion, which eventually resulted in a judicial decision that was more favorable to exclusivity, and thus at least to preserving network competition. This story began in 1988, Sears sought Visa membership, even though Sears created and owned one of Visa's competitors, Discover. Visa refused the request, and then quickly implemented a new membership rule, bylaw 2.06, which denied Visa membership to any applicant that issued (directly or indirectly) the cards of its two main proprietary rivals, Discover and American Express. Even though cooperative duality by then was an accepted fact, Bylaw 2.06 clearly was an effort to keep what network competition existed at the time.

But Sears was not easily thwarted. In 1990, it purchased an insolvent thrift in Utah, Mountain West, which already belonged to Visa, and through this institution planned to launch a new Visa card with national reach. Visa sought to prevent the implementation of this program, and Sears sued, claiming that ByLaw 2.06 was anti-competitive. Sears' case rested on its claim that it would enhance competition in the card *issuer* market. Visa's response was that this market already was competitive (with thousands of issuers), while permitting rival networks to issue Visa cards would diminish network competition. The jury found for Sears, but the 10th circuit court of appeals overruled in what has since come to be known as the *Mountain West* decision, finding that Sears could issue its new card through its existing Discover network and that competition in the issuer market would not be thwarted it did so.[17] For the time being, Visa's argument about the paramount importance of network competition was revived.

That is, until the Department of Justice reopened the issue in the late 1990s, investigating the cooperative card association rules preventing members from issuing cards of proprietary rivals. The focus of this investigation differed from the facts in *Mountain West I,* where a rival network *wanted in* to the Visa network. The Department of Justice was concerned instead now with the ability of those already inside the network to go *outside*, and issue competing cards. This part of the investigation seemed to give short shrift to network competition, but Justice counterbalanced it by questioning the overlapping membership of the governing committees of the cooperative card associations on the grounds that this diminished network competition.

Both (seemingly contradictory) parts of the investigation came to a head when the Department sued both MasterCard and Visa in federal court in New York in 1998. After a trial, the judge rejected the Department's objections to duality (through overlapping governance committee memberships), finding no evidence that competition was diminished. In so holding, the judge noted that both networks recently had taken steps to encourage their members to become loyal to only one of the networks, thus weakening duality in practice. At the same time, however, the judge sided with the Department by striking down the cooperative card association rules that prevented members from issuing cards from rival proprietary networks. The trial court ruling, *United States v. Visa U.S.A. et al.,* was upheld on appeal.[18]

So what is the current status of exclusive membership rules by Visa and MasterCard? In the wake of the recent *Visa* decision, it is clear that neither cooperative network can prohibit its members from *issuing* a card from any other network. At the same time, the *Mountain West* ruling would seem to carve out a small exception to the exclusivity ban where the issue is *membership.* In that case, the two networks do not appear to have to accept as members organizations that may be owned by or which are

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[17] *SCFC ILC, Inc. v. Visa (U.S.A.), Inc.,* 819 F. Supp. 956 (D. Utah 1003), *rev'd in part and aff'd in part*, 36 F. 3d 958 (10th Cir. 1994), *cert. Denied*, 515 U.S. 1152 (1995).

[18] *United States v. Visa U.S.A., et al.,* 163 F. Supp. 2d 322 (S.D. N.Y. 2001), *aff'd*. The appellate decision was appealed to the Supreme Court, which decided not to hear the case.

themselves rival networks—though admittedly, the status of *Mountain West* is not entirely clear in light of the *Visa* ruling.

Does the analysis change at all in light of the planned corporate reorganization of one of the cooperative networks, MasterCard, into something closer to a publicly owned proprietary network? The reorganization should not affect the *Visa* ruling: banks that will own shares in MasterCard should continue to have the right to issue American Express (or Discover) cards. However, since MasterCard will become publicly owned, "membership" no longer will be a meaningful concept.

Meanwhile, however, American Express and Discover have filed separate antitrust actions against MasterCard and Visa arising out of the Justice Department's litigation, seeking treble damages over the exclusivity provisions in the both associations' rules or bylaws. Both cooperative networks remain subject to the possibility of major damage awards in these cases.

Restrictions on Third Parties: In the past, both cooperative card networks maintained an "Honor All Cards" rule, which required merchants to accept all cards issued by a particular network (or brand). Originally, this rule covered only different types of *credit* cards (those with standard rates and benefits and premium cards), but when *debit* cards came into use, both networks extended the rule to cover them as well. In 1996, Walmart filed a class action lawsuit on behalf of roughly 4 million merchants nationwide, who claimed that the credit and debit card markets were distinct, that Visa and MasterCard together had "market power," and thus that application of the Honor-All-Cards rule to debit cards constituted an unlawful tying of debit to credit cards. The merchants specifically argued that the tying arrangement allowed the networks to charge the higher interchange fees associated with debit cards requiring signatures (and thus routed over the credit card networks) than the lower fees associated with PIN debt cards (whose transactions were routed directly to customers' banks). The cooperative associations responded that the Honor-All-Cards rule was necessary to build the debit card network, since it was a new product and subject to the same network externalities associated with credit cards. The argument was never resolved in court (although in a similar case, the European Commission found in 2001 that the Visa Honor-All-Card rule was not anti-competitive), but instead was settled, with the card association defendants agreeing to drop the rule, as it applied to debit cards, and to pay $3 billion to the merchant class over a period of years.[19]

Member Activities: The interchange fees that were part of the Walmart case were more directly challenged two decades before. Earlier, we discussed the merchant objections and the associations' responses regarding the setting of interchange fees by representative members of the cooperative networks. These arguments first surfaced in a judicial setting in 1979, when National Bankcard Corporation (Nabanco), a company that processed card transactions, sued Visa, objecting that the interchange fee it had to pay (on behalf of a merchant) to card-issuing banks representing unlawful price fixing under Section 1 of the Sherman Act. Nabanco felt especially aggrieved because while it had to pay such a fee, banks that were both issuers and "acquirers" (collecting on behalf of merchants) could offer lower discounts to merchants because they did not have to pay interchange fees on transactions associated with their own cardholders. As we discussed above, Visa won this litigation, persuading the court that the alternative to a fixed interchange fee for all members of its system (also true for MasterCard) would be a chaotic free-for-all system of bilateral negotiations between thousands of bank issuers and acquirers – one that could lead to the demise of the network (although, as we discuss below, other detrimental outcomes are possible as well).

The *Nabanco* decision remains the law of the land, but apparently the losses or settlements by the cooperative card associations in the 2001 *Visa* and the *Walmart* cases have emboldened merchants to revisit the interchange fee issue. In 2005, several merchant class action lawsuits were filed against MasterCard and Visa for setting their interchange fees, allegedly in violation of Section 1 of the Sherman Act. The cases have since been consolidated in a federal court in Brooklyn, New York. The lawsuits seek treble damages on potentially hundreds of billions, if not trillions of dollars, of transactions charged on the defendants' card networks. [20] In a worst case (from the

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[19] Various class actions have been filed in a number states against MasterCard and Visa by representatives of consumers, who claim that they were victims of any damages suffered by merchants arising out of the Honor-All-Cards litigation, on the grounds that the merchants allegedly passed on their costs to consumers. At this writing, motions to dismiss these cases on various grounds are still pending in most of these states.

[20] One of the many hurdles that plaintiffs must surmount, even if they prevail in the "liability" phase of the interchange fee litigation is that the settlement in the *Walmart* litigation obligated the millions of class members in that case to waive their rights to damages on other possible antitrust claims against the cooperative associations, through the time of that settlement (January 2005). Accordingly, if they have

association's perspective), the damage calculations would presume that the *entire interchange fee* is unlawful, analogizing from the absence of such fees in check clearing. Clearly, worst-case damages could expose the networks, and their members, to enormous levels of liability.[21]

In addition, any cutting back or reversal of the holding in *Nabanco* would open the cooperative associations, in their current form and even possibly as reorganized as public companies (discussed below), to potential antitrust liability for other joint activities. Much of the motivation for sketching various scenarios for the future of the charge card industry and its customers arises out of the possibility that plaintiffs will succeed in some fashion in this litigation and/or that the cooperative associations will take measures on their own to address the complaints (unilaterally or through settlement with the plaintiffs).

In fact, certain of these scenarios draw on rulings or developments in other countries relating to interchange fees. Several are worth mention:

--In July 2002, the European Union's Competition Directorate announced a settlement with Visa under which Visa agreed to reduce gradually its interchange fee on all cross-border transactions (between EU merchants and non-EU consumers) over the subsequent five years, and thereafter to subject its interchange fee to a cap, based on the prior year's cost for processing card transactions, financing the interest-free grace period benefiting cardholders, and payments guarantees provided to merchants. The cost formula, however, does not allow Visa to recover costs for providing incentives to issuers to expand the distribution and use of Visa cards.[22] The EU has mounted a similar effort against MasterCard.

--The Office of Fair Trading in the United Kingdom (that country's antitrust authority) issued a formal finding in September, 2005 that MasterCard's system of setting

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rights to any damages at all in the interchange fee case, the damage period may cover only card transactions posted after the Walmart settlement.

[21] A possible fall-back damage calculation for the plaintiffs would be to calculate any fees above some cost level, perhaps using the cost base in the EU and Australia as an example. The card associations, of course, would counter that it would be appropriate, and indeed necessary, to include in any such cost calculation the incentives it provides to issuers to increase distribution and use of the associations' cards (since such activities enhance the value of the network, for issuers, the networks, and consumers).

[22] As noted above, in a separate ruling issued in November 2001, the EU found that Visa's Honor-All-Cards rule was not anticompetitive.

interchange fees was anti-competitive, infringing Article 81 of the EC Treaty. The OFT is conducting a similar investigation of Visa.

--In August 2002, the Reserve Bank of Australia (that country's central bank) announced new rules relating to interchange fees set by MasterCard and Visa (but not American Express). As in the EU, the Australian rule caps interchange fees by the associations according to prior years' costs (averaged over three years, rather than just the previous year). The scope of allowable costs is similar to that in the EU.

Given the current litigation over interchange fees, the ongoing debate in the United States and elsewhere over possibly regulating them, and possible future antitrust litigation against the cooperative associations if *Nabanco* is overturned or limited in some fashion, there is much uncertainty about what the future holds for the charge card industry. In the section that follows, we outline several possible scenarios or paths the industry might take, what could trigger them, and what impact(s) they would have on the industry, merchants and on consumers.

5. Future Scenarios

We begin with a scenario in which merchant plaintiffs prevail in the U.S. interchange litigation, and then proceed to consider several other scenarios. We conclude that some version of the last scenario – one in which the current cooperative associations eventually become more like proprietary networks – is the most likely outcome. At the same time, we do not believe this most likely outcome would have a material impact, either way, on charge card holders or merchants, relative to the status quo.

A world without Nabanco: no more uniformity in interchange fees

Assume that *Nabanco* is overturned and that the cooperative associations, at least as they formerly were operated, can no longer legally set a uniform interchange fee or fee schedule that all acquiring banks must pay to issuing banks.[23] Then imagine a world in

[23] More realistically, this scenario assumes no further uniformity in the interchange fee *schedule* rather than the fee itself. As already noted, there currently is no single fee, but rather a menu of fees, which depends on various factors, including the type and size of the merchant(s). For some thoughts on how plaintiffs might be able to overturn *Nabanco*, arguing changed circumstances since that ruling, see Constantine, 2005.

which thousands of card issuers have to negotiate or set different interchange fees with different acquiring institutions, acting on behalf of merchants, or even with merchants directly. What then are the most likely outcomes that follow under these assumptions?

Some plaintiffs (and their attorneys) in the interchange fee cases may believe that the likely result would be zero interchange fees, analogous to the “at par” treatment of banks in the check clearing system. Why, they may ask, should credit or charge card clearing be any different?

There are at least three reasons for a difference. First, “at par” clearance for bank checks between Federal Reserve member banks is *mandated* by federal law; no such law exists for charge cards. Second, the check clearing system benefits from a federal subsidy, which is not available for charge cards. And third, even in all networks, *someone* has to pay for the costs of processing, marketing and capital.

The credit card clearing system, which operates without government subsidy, requires substantial investment in computer and communications facilities, and ongoing costs for processing transactions, research and implementation costs for preventing fraud and so forth. There are only four candidates for bearing these costs: issuing banks, cardholders, acquiring banks, merchants, or some combination of these.

In the absence of a uniform interchange fee system running from acquiring to issuing institutions, the most likely outcome is that a system of multiple interchange fees would arise, and would vary for each bilateral relationship – that is, between each issuer and acquiring bank that still would belong to the system. With thousands of issuers and acquiring banks, and millions of merchants, this could mean a very large number of different price combinations.

At first blush, such an outcome may not be disturbing and indeed, even may look familiar. For example, there are thousands of city-pair combinations in the airline industry, each with their own prices – which vary not only by city pair, but from day to day, and even within each day. But the airline analogy is misleading because there are only several dozen airline carriers, each setting their own prices, which consumers clearly pay. The cooperative card networks, however, consist of thousands of issuing banks and acquiring institutions. In such a market, it is entirely conceivable that because of differences in size and bargaining power between large and small banks, and between large and small merchants, the largest issuers (like Bank of America, Capital One, Chase, and Citibank) would continue to receive fees, perhaps from some acquiring banks (and thus merchants) at rates even higher than they receive now under a common schedule. Perhaps many of the thousands of smaller issuers might actually *have to pay* acquiring institutions for the "privilege" of having their cards accepted at the merchants that do business with those institutions. Meanwhile, large merchants likely would pay lower interchange fees, while smaller merchants might end up paying more.

In the scenario just described, smaller issuers would be put at a significant competitive disadvantage relative to larger issuers, especially issuers that also have a thriving acquiring business (since for those institutions, the "interchange fee" is internalized within the institution). As a result, one would expect the issuing side of the market to become more concentrated. As it does, then the fewer number of larger issuers that remain would have stronger bargaining power relative to smaller acquiring institutions, which would have the effect of pushing up the interchange fees they might negotiate with acquirers. And large merchants would gain a competitive advantage versus smaller merchants through the card payment system.

Are consumers better or worse off in this world, compared to the current system of interchange fees? Clearly, cardholders of smaller issuers would be worse off to the extent that issuers receive less interchange revenue than they do under the current system. With less revenue to spend on promotions for cardholders, smaller issuers would be likely to cut back on the benefits and raise the fees they charge their cardholders – that is, if they can keep them at all with a less attractive card product than is offered by the larger issuers. Indeed, because of their better bargaining position, the few large card issuers might be in a position to collect even more interchange revenue, and thus, in principle, to offer even better benefits and lower fees than they do now.

That is, if they have to. If smaller competitors face greater hurdles to remain in the issuing business, then those issuers may not be able to compensate for their lower interchange revenue (or even net payments to merchants), and would be likely to drop out of the issuing market altogether. Meanwhile, facing less competition from smaller rivals, any larger issuers who were successful in collecting more interchange revenue likely would pocket that additional revenue in the form of higher profits, without having to pass it on to their cardholders in the form of more attractive card features. If all this should happen, then the net aggregate impact on cardholders from the "free-for-all" bilateral bargaining in a world without *Nabanco* would be negative, while the remaining issuers in a potentially far more concentrated market could see higher profits.

What about the merchants, who are the principal antagonists in the legal war against the card networks? If the net result, in the aggregate, is higher interchange revenue collected by fewer issuers, then acquiring institutions, and in turn, merchants will be *worse off*. To say the least, this would be an ironic impact from the lawsuits that the merchants have filed.

As stated above, merchants are just as heterogeneous, in terms of size and bargaining power, as card issuers. This means that larger merchants (like the superstores – Walmart, Target and Costco) may be able, even with larger issuers, to negotiate lower interchange fees than they now pay (and if smaller issuers remain in the market, they may end up paying these merchants in a free-for-all world). But smaller merchants could end up paying greater interchange fees to the larger issuers with much greater bargaining power. To forestall this result, it is possible – indeed likely – that groups of merchants may band together to negotiate better interchange terms with issuers.

Finally, what would card network competition and market structure look like in a world without *Nabanco*? For one thing, it is possible that some bilateral negotiations would fail, and thus there could be fewer issuers and merchants on the systems as a result. More important, without a common fee structure, no single issuer would seek to maximize the interest of the entire joint venture because of network externalities. That is, no issuer in a cooperative network would have an incentive, or an ability, to charge higher interchange fees to fund promotions to widen the cardholder base or to give cardholders greater incentives to use their cards, and thus to expand the scope of the network. This is so because the benefits of such a network are like a public good, in which no one party has an incentive to finance it unless all are forced to (as are taxpayers, to support public goods such as the legal system, a common defense, roads, and basic research, among other such goods).

To compensate for all this, the cooperative networks themselves would have to find some way to promote themselves, and then charge the members or participants, in some manner, for doing so. For reasons already outlined, it would be economically rational for them to charge acquiring institutions and merchants more than issuers. If they couldn't do this through the interchange fee system, they would try to turn to another assessment on acquiring institutions, who in turn would pass this on to merchants. But if the joint setting of interchange fees were held to be unlawful, then so would any supplemental "network promotion" fee. There are two possible end results, therefore. One is that if they could find a legal way to impose the additional promotional fee, there could no effective difference from the current interchange fee system. A second possibility, if they could not impose such a fee, is that the cooperative members would shrink relative to the proprietary networks or adopt an alternative proprietary organizational structure, which they appear well on the way to doing (as discussed above and elaborated further in our final scenario below).

If the cooperative networks could no longer set the interchange fee or any supplemental network promotion charge to compensate for it, it is possible that aggregate interchange fees collected by issuers could fall relative to the status quo, in which the network internalizes the benefits of expanding the network through the fee. But it is also possible that aggregate fees could *rise* because of the likely increased concentration of the issuer side of the market could enable the largest issuers to raise their fees (relative to the current average fee). A likely major reason why both cooperative associations are moving toward a proprietary model is so that they can continue to internalize the "public good externality" inherent in their networks should the courts eventually rule that against uniform interchange fees.

Whether or not the potential shrinkage of the cooperative associations under a free-for-all fee system would be a social gain or loss depends on the costs and benefits of card payments relative to other forms of payment. Earlier we discussed this issue and suggested the possibility, at the very least, that charge card payments are less expensive than checks and cash, once all relevant costs and benefits are accounted for. If this is so, then any shrinkage of the cooperative systems could result in a social loss, depending on whether other two proprietary networks (American Express and Discover) grow to make up for the loss in share formerly held by the cooperative networks.

In sum, anything could happen in a free-for-all world relative to the status quo – which is why there is no consensus among economists who have studied this issue about the net impact of the current interchange fee system relative to a free-for-all *Nabanco-less* world. About the only safe thing to say is that interchange fees certainly would be less uniform than they are now, and would reflect the relative bargaining power of the parties on both sides of the market. It is also reasonably certain that the issuer market would concentrate further, while it is possible, if not likely, that merchant organizations would form to negotiate better interchange terms. The costs of the complex nature and number of tens of thousands of negotiations certainly would be large. But whether, on net, issuers, their cardholder, merchants, and their customers would be net winners or losers is difficult to predict.

Regulation of interchange fees

A second scenario is one in which the cooperative card associations continue to set interchange fees, but subject to government-imposed caps. As noted earlier, Australia has gone the furthest in this direction, imposing cost-based limits on cooperative interchange fees, but not the merchant discounts of proprietary networks. The EU also imposed cross-border cost-based caps on Visa and MasterCard. Regulators from other countries are contemplating similar systems. In 2005, two separate Federal Bank districts (Kansas City and New York) hosted conferences on interchange, indicating the U.S. central bank's interest in the subject, though we view it unlikely that the Federal Reserve would impose Australian or EU style caps.

In the regulated system, the fee schedule remains uniform (not subject to bilateral negotiation) and thus is unlikely to affect issuer or acquirer concentration one way or the other, except to the extent that smaller financial institution issuers should be disadvantaged by a cap that has the effect of cutting their revenues. Although small issuers are guaranteed some interchange revenue in a capped, but uniform, fee structure, as in the free-for-all world, regulation nonetheless adversely affects small financial institutions.

The aggregate impacts should be as follows: On average, issuer revenue should decline, which should lead to reduced benefits or higher fees to cardholders. Meanwhile, on average, acquiring institutions should pass their savings on to merchants. Whether merchants, in turn, pass on their lower merchant discounts to their consumers depends on whether merchants lower their prices. Finally, lower interchange revenue flowing to issuers within the cooperative networks should advantage the proprietary networks, which should see gains in market share.

These propositions can be tested, at least to some degree, by looking at the experience in Australia, where the central bank has used the cost-based formula to mandate reduction in interchange fees from around 0.95 percent of transaction value to 0.55 percent [Lowe and Macfarlane].[24] The most thorough study of that experience [Chang, Evans and Swartz] preliminarily confirms the foregoing speculations of the impact of this reduction: cooperative network issuers in Australia indeed did cut their cardholder benefit packages and raised fees, and so cardholders as a group are paying more.[25] Merchants have benefited from lower discounts – indeed, according to the central bank, credit card acquirers have passed the lower fees entirely back to merchants – but merchants have not lowered their prices and thus passed this benefit onto consumers. The authors suggest that this is because Australian merchants, as a group, exercise market power. It also appears that American Express has gained some market share. Thus, the authors find that the regulatory regime has not accomplished perhaps its major purpose – the reduction of credit card use. In fact, the numbers of credit card accounts, transactions and purchase volume has continued to increase even after the caps were imposed [Chang, et al].

Do these impacts, taken together, suggest that caps have benefited Australian consumers? If cardholders have lost benefits, pay higher fees, and consumers have not gained from lower merchants' prices, then the answer to this question seems "clearly no."

An interesting question is whether the answer would be different for an Australian-style regulatory system applied in the United States, where merchants, as a group, do not have the market power they appear to have in Australia. Would American merchants be forced by competition fully to pass on their lower costs to their consumers?

[24] The Bank of Mexico, in concert with the Mexican Bankers Association, also has forced the reduction of interchange fees in the cooperative networks.

[25] This study was in draft at the time this paper was prepared. For similar conclusions, see also the recent draft study by Epstein.

If that is case, then cardholder losses may be offset by consumer gains. The groups are not identical, however, since the consumer class consists of cash paying customers as well as those who use their charge cards. If the total losses to cardholders are equal to the total gains to merchants' customers, then a capped system would channel some savings to cash-paying customers who currently do not pay lower prices when they use cash; or put differently, the subsidy from cash-paying customers to charge card users would be reduced.

This result need not imply a gain in social welfare, however. If it is correct that charge cards are socially cheaper than cash or check payments, as we have suggested earlier, then any system that promotes more use of cash would be more socially expensive.

Furthermore, the merchant discounts of the largest proprietary network – American Express – are higher than those charged by the bank networks (and as it targets more affluent cardholders, American Express also charges annual fees on its charge cards). But no one argues that American Express has market power, with only 16 percent of total charge card volume. Thus, a regulated system would tend to move cardholders toward American Express rather than MasterCard/Visa (because the issuers of the latter would have less incentive to promote their cards).

An alternative possible outcome from the regulation of interchange fees[26] would be a situation where interchange fees were reduced to zero and the costs of various payment method choices were borne directly by consumers as merchants set different retail prices depending on the mode of payment. This would be a world in which discounts for cash, charges for checks, and surcharges for cards, varying by type of credit or debit card, generally prevail, so that consumers face a range of prices for each item. This suggestion raises significant issues of consumer and merchant acceptance or resistance. Where they have been available, different prices based on payment methods have not been widely used.

Finally, it is useful to revisit the rationale for regulation of interchange fees. In Australia and Europe, regulation has been targeted on the cooperative networks only. This is presumably done for two reasons. One rationale presumably is to offset any price-

[26] Suggested by Professor Steve Salop at the "Future of the Payments Industry" conference.

increasing impact allegedly arising from the fact that the members of these networks are issuers who allegedly use the networks to enhance their collective profits. The other rationale is that the cooperative systems are the dominant charge card competitors.

A natural question therefore arises: would the case for regulating the cooperative interchange fees be any more or less compelling if the two cooperative networks moved more in the direction of becoming proprietary organizations rather than joint ventures? This in fact is already occurring, and as we discuss shortly, should become even more apparent in the future. To the extent that regulation is justified because the networks have provided a forum for unwarranted collusive activity, then clearly any move toward the proprietary form of network undercuts the rationale for regulation.

At first blush, any reorganization should have no effect on the second rationale for interchange fee regulation: market dominance. But on closer inspection, the "collusion" rationale also is closely related to this second justification.

It is not an accident, in our view, that both Australia and the EU have singled out only the cooperative networks for regulation, but not the other smaller, proprietary networks: because, *taken together*, the two cooperative networks are the dominant players in the charge card market around the world. Regulators "take the two together" because historically their membership overlaps significantly, and thus regulators can feel justified in treating them as a single entity whose dominance warrants traditional monopoly price regulation.

But if both card networks become more proprietary – that is, they are both owned by public stockholders and the members no longer control the setting of interchange fees – then the argument for treating the two networks as overlapping entities is more readily dismissed, and along with it, so is the case for regulating any fees the two networks may set.

Of course, whether regulators in different countries eventually will see it this way if the two cooperative networks both turn into true proprietary networks is another question. Indeed, it is even conceivable that as more banks issue the cards of the other proprietary networks, regulators may come to view these two organizations as more membership-like. But, on balance, we believe that the more justifiable, and in the end more likely outcome, of further moves toward proprietary networks eventually should be deregulation of interchange fees rather than continued or even extended regulation.

Nationalization of credit card networks

Although the credit card industry grew up in the private sector, it is not inconceivable that, under the right circumstances, some or all credit card network functions could be nationalized – much like what the Federal Reserve has done for check clearing. Thus, it is noteworthy that the lead plaintiffs' attorney in the *Walmart* case stated during a presentation before the Federal Reserve Bank of Kansas City, "[Visa's counsel] told the Court that Visa now functions like the Federal Reserve. Congress gave that job to the Federal Reserve. The time has come for the Fed to reassert its stewardship over the U.S. payment system."[27]

How might this come about? One answer lies in the possible aftermath of a plaintiffs' victory in the current interchange fee litigation, one which results in such a high multi-billion dollar damage award that it forces the liquidation of the two cooperative networks. In that circumstance, policy makers may want to fill the gap left by the two networks that currently account for about 80 percent of U.S. charge card volume. One potential solution could be to leave the cooperative issuer and merchant systems in place, but have the government assume the processing – or the network – functions that are now performed by MasterCard and Visa.

There is ample precedent for government involvement in payment functions. The Federal Reserve System has a monopoly on cash production and dominance in check clearing. In other countries, "giro" systems operated by the government process payments through electronic transfers between payors and payees. Given the economies of scale and network externalities entailed in charge card systems, some could argue that government operation of some card functions – the network or back office functions in particular – in fact would be most efficient.

A possible incentive for the Federal Reserve to assume some of these functions is to regain the loss in market share it has suffered to charge card products, as shown in the

[27] [Constantine].

trend in the composition of all in-store payments over the past six years (according to a survey conducted by Dove Consulting for the American Bankers Association):

	2000	2005
Charge cards	43%	52%
Cash	39%	33%
Checks	18%	11%
Other	-	4%

Of course, in the absence of some kind of triggering event, direct government in the charge card business is unlikely. It is also, in our view, undesirable on at least two counts.

First, even if a dominant payments processor, like the government's role in check clearing, were the least expensive means of routing charge card transactions, it is doubtful that any such monopoly would be hospitable toward innovation that would be in consumers' interests. Private sector bodies, especially if they are competing, are more likely to develop and implement innovations than any government or monopoly provider. Thus, the private card industry has successively developed and diffused the charge card, many types of credit cards, the debit card, and multiple benefits (such as frequent flyer awards, car rentals, and so forth) associated with each of these payments mechanisms. In contrast, the Federal Reserve continues to process checks – carting them around by airplanes and trucks – much as it has for decades. We are skeptical that the Federal Reserve would be any more dynamic in introducing innovations in the charge card business, let alone doing better than the private sector would do through the competitive process.

Second, if the government in any way were involved in the issuance of credit cards, it is more than likely that political considerations eventually would intrude into decisions about who is to obtain credit and under what conditions, rather than to have those decisions made by private actors. In particular, the government would be subject to pressure to subsidize individuals belonging to certain groups or living in certain locations, much as the government at both the federal and state levels has responded to voter pressure to adopt or enforce subsidies for telecommunications services and insurance (in some states). The costs of those subsidies would be borne by taxpayers, while credit markets would be distorted. This is an outcome that we hope few policy makers would embrace.

In sum, nationalization of some or all parts of the charge card industry is interesting to ponder as a theoretical exercise, but should never be anything more than that.

Breakup of MasterCard/Visa

This scenario can be viewed as the extreme opposite of nationalization: breakup of both the cooperative networks, perhaps into four separate organizations, each with exclusive membership or ownership. One way this scenario might come about is through a plaintiffs' victory in the interchange fee cases, but one which extends beyond damages and an injunction against the networks setting a uniform interchange fee or fee schedule. To obtain such a far-reaching remedy, plaintiffs (or the U.S. government in a separate action) would have to demonstrate not only that the current interchange fee system has been unlawful, but that it has led to dominance of the card network market by MasterCard and Visa that can only be remedied by a breakup of those networks.

We believe such an outcome is highly unlikely, not only because it would require overturning *Nabanco*, but also a holding that the market success the two cooperative networks have achieved since that ruling is somehow unlawful, which we find difficult to square with the fact that the associations in the meantime simply have complied with the *Nabanco* ruling. This makes the antitrust litigation against the charge card associations very different from the anti-monopolization case against Microsoft. In the case of the latter, one of the authors (Litan) argued that Microsoft's unlawfully maintained a monopoly position it initially earned fairly, and that the only way to correct that outcome was through a form of breakup (and indeed the district court in that case initially did mandate a different type of breakup, only to be reversed in the court of appeals). However, in the charge card cases, even if a court eventually decides that the interchange fee system must change in the future, it seems inappropriate to argue that any form of breakup is warranted when the charge cards have been operating under a legal regime – the one approved in *Nabanco* – they thought to be entirely appropriate.

Furthermore, we are skeptical that breakup would bring substantive benefits for consumers. Given the network externalities and economies of scale characteristic of this market may naturally drive it toward the market structure that now exists, or even one that might be even more concentrated than the current market. If this were true, then a court-ordered breakup would result in multiple, more costly networks, which would not be in consumers' best interests. It is interesting in this context that the pieces from the breakup of AT&T – the once seven Regional bell Operating Companies – have since consolidated (into four RBOCs, one which now owns AT&T, with potentially more consolidation down the road quite possible).

Reorganization of MasterCard/Visa

Our final scenario, as we have already mentioned, is reorganization of the membership nature of both cooperative networks into proprietary companies more like American Express and Discover. The major impetus for such a move would be to reduce the exposure of both cooperative networks to allegations of unlawful joint decision-making in setting interchange fee schedules and possibly other joint activities (such as marketing, research and development, and the like).

In fact, as we have discussed, both organizations already have moved in the proprietary direction, although MasterCard's structural changes have been more ambitious than those of Visa. MasterCard is planning an initial public offering in 2006, and thus will convert from a cooperative corporation to a publicly held corporation (though the current members at least initially will hold a substantial portion of the outstanding equity in the form of non-voting and limited voting shares). Visa so far will continue to remain a membership body, but has announced that future major policy decisions, including the setting of fees and prices, will be made by a board that is no longer controlled by bank representatives; a majority of the board will be independent.

Under these circumstances, the cooperative networks have a plausible argument that even should they lose the interchange fee litigation based on the past structure, it would be totally unnecessary for any court to go further and to prohibit the ability of the reorganized networks to set a uniform interchange fee schedule going forward. The cooperative networks could be expected to point to the proprietary networks, American

Express and Discover, each of which has merchant discounts (presumably not without give-and-take with merchants, especially larger ones), although by definition no interchange fees. In short, interchange fees in a world without *Nabanco*¸ but with the announced reorganizations of the cooperative networks, should be set by each proprietary network firm, reflecting market conditions, and treating all participating financial institutions as customers, not members.

The first question we take up, however, is whether the courts would insist that the cooperative networks take further reorganizational measures should the plaintiffs prevail in the interchange cases? Plaintiffs might argue that even with the announced measures, the existing members need only to gain the support of a number of other board members to have effective control of interchange fee-setting. If a court were to agree with that position, then it is possible it could order the former member and now shareholders of MasterCard or Visa to reduce the number "bank" board seats. Indeed, it is also conceivable that the networks could reach a settlement with the plaintiffs that yields a similar outcome.

But what if the *cooperative networks* prevail in the interchange cases? Is it likely that they unilaterally would take additional steps to ward off future antitrust challenges? We doubt that this would be case. We presume that both networks have gone as far as they have because they believed these steps would provide sufficient insulation against further litigation, although the two networks have made different judgments about what is appropriate or necessary.

Finally, what impacts will the announced reorganizations, or perhaps supplemental changes to them, have on consumers, merchants, and the networks? In general, we do not foresee major changes from the status quo.

Take the setting of interchange fees, the heart of recent debates about the cooperative networks. Even as the cooperatives become more proprietary, they have new incentives to maximize their profitability, which other things being equal, means that they will strive to maximize their network size. In the past, associations have done this by providing card issuers with additional revenue – beyond that required to cover the processing and capital costs of the networks themselves – to fund promotional efforts, and to reduce fees levied on cardholders. In the context of the two-sided market analysis discussed earlier, the cooperative networks both have decided that it is most efficient to provide the cost of funding the promotion of the network through the interchange fee.

There is no reason this calculus should change as MasterCard and Visa become more proprietary and less member-operated. Those who are running the network will continue to have incentives for network success, just as do the managers and the boards of the existing proprietary card networks.

If interchange fees are not likely to change much under the proposed reorganizations, then one would not anticipate much change in fees paid by cardholders or merchant discounts paid by merchants. As for market structure, we doubt much of an impact here either, since if we are correct, the "new" more proprietary networks' profit-maximizing incentives drive network expansion much as they did in the "old" cooperative structures. It is unlikely that their competitive behavior or market structure will change as a result.

Indeed, it is precisely because so little change is likely from the proposed reorganizations that the plaintiff merchants in the current interchange cases may seek directly through those cases (or indirectly seek to persuade the Justice Department to intervene on their behalf or mount a separate challenge) to urge the court to take more radical measures than simply prohibiting uniform fee setting, such as ordering a breakup of both networks into multiple pieces. As discussed above, we conclude that though this is possible, it is unlikely and in any event probably would not benefit consumers because of the peculiar economics of networks.

6. Conclusion

We are not sufficiently clairvoyant to predict which of the multiple scenarios for the card industry will come to pass. Our educated guess at this point is that if the interchange fee cases eventually go to trial and run the gamut through the appeals courts, the cooperative networks ultimately will prevail. They not only have economics of network externalities on their side, but a prior judicial ruling (*Nabanco*) that the courts would have to explicitly overturn. Plaintiffs have an uphill fight on their hands to reach this result.

The cooperative networks may view the possible damage liability as too great to take the risk of going to trial. In that event, some version of our last scenario – continuing reorganization to remove the issuing banks even further from the interchange fee-setting process, to clarify their role as customers, not members.

Whatever happens in the interchange fee litigation in the United States, there will continue to be pressures from regulators in other countries to impose caps on interchange fees. For now, that pressure will continue to be aimed only at the cooperative networks. But in the future, if regulators perceive the charge card market to be a payments system utility, they could be tempted to extend regulation of interchange fees to other features of the networks (and the proprietary networks) as well.

We do not believe, however, there is any convincing evidence that price regulation benefits consumers. Nor is there a clear cut theoretical or empirical case that the way that the charge card has evolved has been detrimental to social welfare. What has been good for the card networks appears to be consistent with what is good for the societies in which they have so notably grown and flourished.

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