
Overview of Recent Developments in the Credit Card Industry

by Douglas Akers, Jay Golter, Brian Lamm, and Martha Solt*

Since the 1980s, Visa U.S.A. (Visa) and MasterCard International (MasterCard), the bank-controlled credit card associations that together account for approximately 70 percent of today's credit card market, have been able to control the use of and access to their networks to the advantage of their bank members. Recently, however, the credit card industry has been changing:¹ some merchants are now large enough to exert their own leverage, legal defeats have impeded the ability of credit card associations to control the market, and some participants have developed new arrangements and alliances that may be a prelude to further changes in the industry. This article surveys recent developments in an industry that is facing new competitive dynamics.

The article begins by describing the formation of the payment card industry and then its structure. The article continues by explaining the functioning of credit card networks: the various kinds of network models, and the significance of interchange fees in the most complex model. Next discussed are recent industry-altering litigation involving Visa and MasterCard, and significant aftereffects of the litigation. The article concludes by noting the main challenges facing the industry today.

The Formation of the Credit Card Industry

Although merchant credit may be as old as civilization, the present-day credit card industry in the United States originated in the nineteenth century. In the early 1800s, merchants and financial intermediaries provided credit for agricultural and durable goods, and by the early 1900s, major U.S. hotels and department stores issued paper identification cards to their most valued customers. When a customer presented such a card to a clerk at the issuing establishment, the customer's creditworthiness and status were instantly established. The cards enabled merchants to cement the loyalty of their top customers, and the cardholders benefited by being able to obtain goods and services using preestablished lines of credit. Generally these cards were useful only at one location or within a limited geographic area—an area where local merchants accepted competitors' cards as proof of a customer's creditworthiness.

* All the authors are in the Division of Insurance and Research at the Federal Deposit Insurance Corporation. Douglas Akers is a research assistant, Jay Golter a financial analyst, Brian Lamm a senior financial analyst, and Martha Solt a senior economist.

¹ The term "credit card industry" as used in this article refers to the four major payment card networks: Visa, MasterCard, American Express, and Discover. In addition, Diners Club is a very small participant.

Overview of Recent Developments in The Credit Card Industry

In 1949, Diners Club established the first general-purpose charge card,² enabling its cardholders to purchase goods and services from many different merchants in what soon became a nationwide network. The Diners Club card was meant for high-end customers and was designed to be used for entertainment and travel expenses. Diners Club charged merchants who accepted the card 7 percent of each transaction. Merchants found that accepting Diners Club cards brought more customers who spent more freely. The Diners Club program proved successful, and in the following decade it spawned many imitators.

In the late 1950s, Bank of America, located on the West Coast, began the first general purpose credit card (as opposed to charge card) program. At that time, banking laws placed severe geographic restrictions on individual banks. Virtually no banks were able to operate across state lines, and additional restrictions existed within many states. Yet for a credit card program to be able to compete with Diners Club, a national presence would be important. To increase the number of consumers carrying the card and to reach retailers outside of Bank of America's area of operation, therefore, other banks were given the opportunity to license Bank of America's credit card. At first Bank of America operated this network internally. As the network grew, the complexity of interchange—the movement of paper sales slips and settlement payments between member banks—became hard to manage. Furthermore, the more active bank licensees wanted more control over the network's policy making and operational implementation. To accommodate these needs, Bank of America spun off its credit card operations into a separate entity that evolved into the Visa network of today.

In 1966, in the wake of Bank of America's success, a competing network of banks issuing a rival card was established. This effort evolved over time into what is now the MasterCard network. In addition, firms that were not constrained by interstate banking restrictions formed card networks on the single-issuer model (the model established by Diners Club, in which many merchants accept payments on a card with a single issuer; see the discussion of

figure 2). For instance, the American Express Company (American Express) introduced its charge card system in 1958, and Sears, Roebuck and Co. (Sears) established the Discover Card credit card in 1986.³

Among the challenges each of these networks faced was bringing together large numbers of cardholders with large numbers of merchants who accepted the cards as payment. Achieving a sufficiently large network was hard, partly because merchants, especially larger retailers, were reluctant to honor credit cards that would compete with their own store-branded credit cards. Some smaller merchants, however, viewed general-purpose credit cards as a way they could compete with larger merchants for customers.⁴ Merchants of all sizes were averse to having fees imposed on them by the credit card network.

Currently the U.S. credit card industry is a mature market. Today credit cards are widely held by consumers: in 2001 an estimated 76 percent of families had some type of credit card.⁵ Recent estimates suggest that among all households with incomes over \$30,000, 92 percent hold at least one card,⁶ and the average for all households is 6.3 credit cards.⁷ Credit cards are also widely accepted by merchants, and with the recent addition of fast-food and convenience stores to the credit card networks, credit card payments are now processed at nearly all retail establishments.

²The holder of a charge card, unlike the holder of a credit card, must pay the monthly statement balance in full.

³Whereas American Express processes all of its credit- and charge-card activity through the American Express Bank, a wholly owned subsidiary it has held for nearly 100 years, Discover processes all of its card-related transactions through Greenwood Trust, a wholly owned subsidiary of Discover's parent company, Morgan Stanley Dean Witter & Co. (In order to process the Discover Card transactions, Sears, Roebuck and Co. purchased Greenwood Trust through its Allstate Enterprises subsidiary in 1985 and converted it to a nonbank bank. Morgan Stanley purchased the bank, along with Dean Witter and Discover, in 1997.)

⁴For more information on the history of credit cards, see Evans and Schmalensee (2005) and Mandell (1990).

⁵Aizcorbe, Kennickell, and Moore (2003). This is the most recent data on this topic from the Federal Reserve Board.

⁶Gould (2004).

⁷Day and Mayer (2005).

The Structure of the Credit Card Industry

As noted above, the general-purpose card market is dominated by Visa and MasterCard, two bank-controlled card associations. Table 1 shows the U.S. market share of the top four card networks, with Visa and MasterCard together holding about 70 percent of the market share.

Table 1

Total U.S. Transaction Volume		
Fiscal Year Ending September 30, 2004		
Card Network	Purchases and Cash Advances (\$ billions)	Market Share (percentage)
Visa	\$526.87	39.8
MasterCard	399.90	30.2
American Express	304.80	23.0
Discover Card	93.67	7.0
Total	\$1,325.24	100.0
<i>Source: The Nilson Report, Issues 825 and 826, HSN Consultants</i>		

The four major card networks have a variety of corporate structures. Visa is a nonstock for-profit membership corporation that as of 2004 was owned by approximately 14,000 financial-institution members from around the world.⁸ Until 2003 MasterCard was a nonstock not-for-profit membership association, but then it converted to a private-share corporation known as MasterCard Inc., with the association's principal members becoming its shareholders. MasterCard has more than 23,000 members (including the members of MasterCard's debit network).⁹ The Board of Directors of Visa is elected by the member banks with voting rights based primarily on transaction volume.¹⁰ Control of the Visa and MasterCard card associations is roughly proportional to the transaction volume of member issuing banks. American Express is an independent financial services corporation, and Discover Financial Services (Discover) is now a subsidiary of investment bank Morgan Stanley Dean Witter & Co. (Morgan Stanley).¹¹

The issuance of credit cards is concentrated among five banks (table 2). Further concentration will result from two acquisitions announced in June 2005: Bank of America is acquiring the holding company MBNA Corporation, including its sub-

sidary MBNA America Bank, NA (MBNA), a monoline credit card bank,¹² and Washington Mutual, Inc. (Washington Mutual) is acquiring Provident Financial Corporation, including its Provident National Bank (Provident), another monoline credit card bank. The implications of these transactions are addressed below.

Table 2

Top Bank Credit Card Issuers			
2004			
Rank	Bank Name	Outstandings (\$ millions)	Number of Active Accounts (in thousands)
1	JP Morgan Chase	\$134,700	42,966
2	Citigroup	115,950	47,880
3	MBNA America	82,118	21,199
4	Bank of America	61,093	18,773
5	Capital One	53,024	24,429
6	HSBC Bank	19,670	13,870
7	Provident	18,536	8,726
8	Wells Fargo	13,455	2,789
9	U.S. Bancorp	10,578	4,056
10	USAA Federal Savings	7,104	1,956
	Total	\$516,228	186,644
<i>Source: American Banker</i>			

In the industry today, debit cards are a fast-growing product line. Debit transactions reached a record \$15.6 billion in 2003 (see table 3). Debit cards are essentially ATM cards that can be used on Visa, MasterCard, or other networks as well as at ATM machines. The amount of a payment made using a debit card is immediately withdrawn from the cardholder's checking account, with the result that, for the card issuer, both the opportunity to earn interest on revolving balances and any inherent credit risk are eliminated.

The ability to use the Visa and MasterCard networks to post debit transactions was developed in the 1970s, but not until the 1990s was there a sig-

⁸ Visa U.S.A. Inc. (2005).

⁹ MasterCard International (2005).

¹⁰ Evans and Schmalensee (2005).

¹¹ See Note 3. Whether Discover will remain a subsidiary of Morgan Stanley is uncertain as of this writing and is discussed more fully below.

¹² A monoline bank engages primarily in only one line of business.

Overview of Recent Developments in The Credit Card Industry

Table 3

Annual Number of Noncash Payments 2000 and 2003			
	2000 Estimate (\$ billions)	2003 Estimate (\$ billions)	Compound Annual Growth Rate (percent)
Check	\$41.9	\$36.7	-4.3
Credit Card	15.6	19.0	6.7
ACH	6.2	9.1	13.4
Offline Debit	5.3	10.3	24.9
Online Debit	3.0	5.3	21.0
Electronic Benefits Transfer	0.5	0.8	15.4
Total Noncash Payments	\$72.5	\$81.2	3.8
<i>Source: Federal Reserve System</i>			

nificant volume of transactions in these systems. If a merchant has a personal identification number (PIN) entry keypad at its sales location, the transaction is routed much the way an ATM transaction is. In the absence of a keypad, the merchant can have the customer sign a transaction authorization. These transactions then travel through the payment systems much as a credit card transaction does (except that the cardholder's bank will be informed of the transaction immediately and will be able to hold the customer's funds until settlement is completed). The differing fees charged to merchants for transacting PIN debits and signature debits became the basis for an important lawsuit that is described more fully below.

Control of debit card transaction processing is mostly in the hands of banks. In Germany, however, half of all debit transactions are processed via a merchant-controlled debit card system by piggy-backing on the low-cost Automated Clearinghouse network, and the system has no interchange fees. In the United States, Debitman Card Inc. has been working on such an effort for PIN-based debit transactions.¹³

The Functioning of Credit Card Networks: Models and Interchange Fees

The most complex form of credit card network is the one with the greatest number of participants: the multi-issuer card model. The cards in a multi-issuer network represent a complex form of two-

sided markets whereby merchants are more willing to accept cards that have many cardholders, and cardholders want cards that are accepted at many establishments. The payment network benefits the merchant and the buyer jointly and entails joint costs, and it must price its service so that it gets—and keeps—the two sides participating in the network.¹⁴ It does this largely by setting interchange fees at levels that will maintain balance in the incentive structures of issuing banks (banks that issue credit cards) and acquiring banks (banks that service merchants and process their credit card transactions).¹⁵ Interchange fees are collected by issuing banks when they send payments for purchases to acquiring banks.

Network Models

Figures 1 through 3 illustrate the increasing complexity of a credit card network as more parties participate. Figure 1 illustrates the simplest bilateral model, where information and funds flow between a merchant and a cardholding customer when the merchant extends credit. On a monthly basis, the merchant will present a bill to the cardholder listing all transactions for the month. The cardholder then remits payment.

Figure 2 illustrates the single-issuer model, which has a more complex closed-loop card-association system in which many merchants accept payments on a card with a single issuer. In this system, the merchant sends information about each purchase, including the customer account number, the transaction amount, and verification to the card issuer. With modern telecommunications and data processing technology, these steps are usually completed at the point of sale. The card issuer pays the merchant and sends a monthly statement to the cardholder listing all transactions which occurred during the statement period. The customer then pays the balance due, in whole or in part, based on the credit terms that were extended to the card-

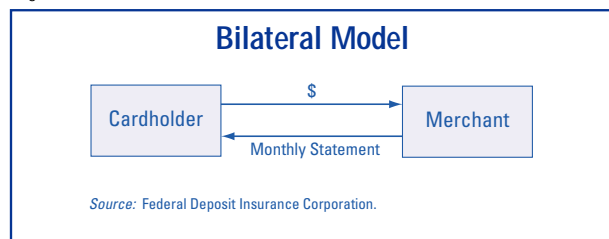
¹³ FinanceTech (2004).

¹⁴ Evans (2002).

¹⁵ Schmalensee (2001).

Overview of Recent Developments in the Credit Card Industry

Figure 1



holder by the issuer. This description applies to the original Diners Club model and, until very recently, to the Discover Card and American Express models (which have now converted to the multiple-card-issuer model, see figure 3).

Finally, figure 3 provides a basic illustration of the most complex model, the model with one card association, many cardholders, many merchants, and multiple banks. In this model, the card association (or network) plays an important role by imposing rules for issuing cards, clearing and settling transactions, advertising and promoting the brand, authorizing transactions, assessing fees, and allocating revenues among transaction participants. Further, each participant in the credit card transaction has an incentive for participating in the network.¹⁶ Figure 3 shows the typical flow of information and funds for a sample \$100 credit card purchase. The process begins when the cardholder presents the credit card to the merchant to purchase a good or service. The merchant transmits to the acquiring bank the cardholder's account number and the amount of the transaction. The acquiring bank forwards this information to the card association network requesting authorization for the transaction. The card association forwards the authorization request to the issuing bank. The issuing bank responds with its authorization or denial through the network to the acquiring bank and then to the merchant. If approved, the issuing bank also sends to the acquiring bank, via the network, the transaction amount less an interchange fee.¹⁷ The interchange fee is established by the card association. The example illustrated in figure 3 shows \$98.00 (\$100.00 purchase price minus 200 basis point interchange fee) flowing from the issuing bank, though the network, to the acquiring bank. The acquiring bank, after subtracting its own service

Figure 2

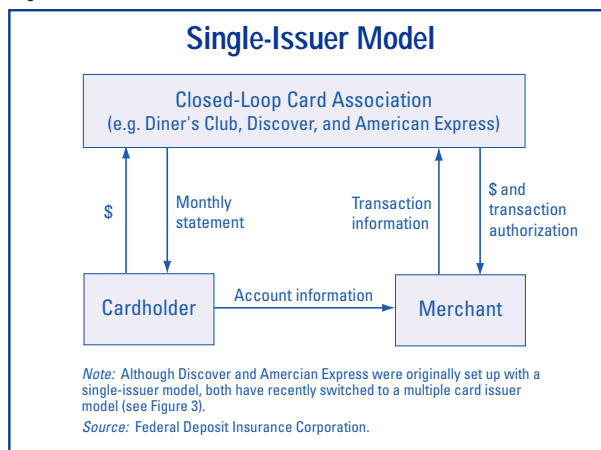
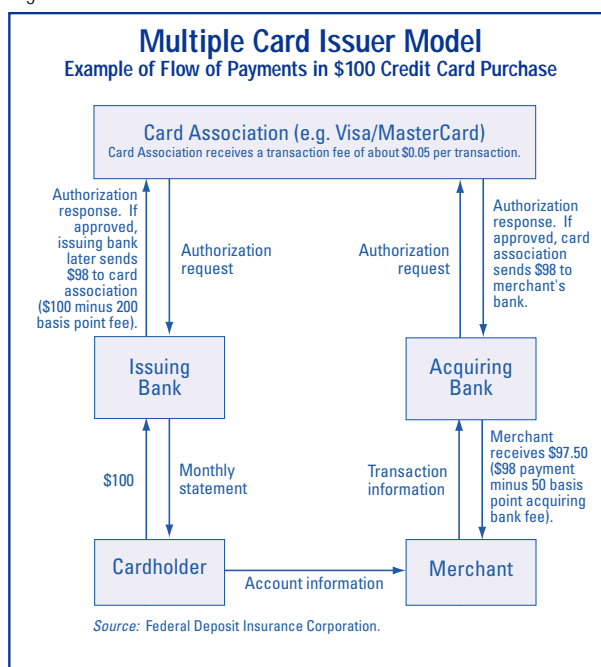


Figure 3



fee, passes the payment on to the merchant.¹⁸ In figure 3, the merchant receives \$97.50 (\$98.00

¹⁶ See also figure 4.

¹⁷ Funds flow between the card association and participating banks, not on a transaction-by-transaction basis but on a batch basis, several times per day, with the card association effecting settlement among the participating banks by determining each of their net positions in order to balance the system.

¹⁸ The Acquiring Bank sets its own fee which is deducted from the merchant payment. That fee must be high enough to cover the cost of the interchange fee and the Acquiring Bank's own expenses for the transaction. Interchange fees amount to a large portion of the fees charged to merchants by Acquiring Banks, and changes in interchange fees in the past have led to roughly equal changes in fees charged to merchants. See Schmalensee (2001).

minus a 50 basis point fee).¹⁹

Acquiring banks can outsource these functions. One such company that provides outsourcing services is First Data Corporation which handles over 50 percent of all MasterCard and Visa transactions processed at the point of sale.²⁰ The profit margins for servicing merchant processing of credit card payments are thin,²¹ and the competition is based on discount fees, support services, and the handling of chargebacks (which are the reversals of charges). The issuing bank bills the cardholder for the full amount of the purchase and receives payment from the cardholder. The card association receives a small fee, usually around \$0.05, for each transaction.

Figure 4 lists the costs and benefits to each type of participant in the credit card industry. In order to benefit from economies of scale, the card associations must construct rules that balance each party's needs so that large numbers of participants of each type choose to join (and stay in) the network. Over time, the dynamics among the various parties may change, with the result that network policies may need to be reassessed.

Interchange Fees

Interchange fees are set by the card associations and in 2004 were a source of some \$25 billion in revenue to card issuers.²² At the same time, interchange fees are a source of irritation to merchants and can be among the largest and largest-growing costs of doing business for many retailers.²³ A standard interchange fee is around 200 basis points, plus \$0.10 per transaction, but many transactions have lower fees and some have higher fees. Large merchants can negotiate directly with the card association for very low interchange fees, but these fees are not publicly circulated.

The pricing structure of interchange fees is complex. The specific interchange fee depends on the card association, the type and size of 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 signature debit card transactions, whose rates are higher than PIN debit card transactions. Sales transacted over the telephone or Internet have higher interchange rates, ostensibly to compensate for the greater risk of fraud associated with transactions that are not conducted in person.

There is considerable friction among network participants over the issue of interchange fees, and card associations are being challenged on the structure and application of those fees. Merchants increasingly view interchange fees as an unnecessary and growing cost over which they have no control. Furthermore, banks are now issuing credit cards with even higher interchange fees. Merchants are unable to refuse transactions made with these cards. Therefore, merchants perceive issuing banks as earning revenue at their expense, with no added value to merchants. Merchants pass on the costs of interchange fees to their customers, who are largely unaware of this cost.

Among other factors, the interchange fee structure that favors large merchants over smaller ones is inspiring merchants to challenge the interchange system more actively. Early in 2005, merchants formed a trade association for the purpose of changing interchange fees.²⁴ In addition, Visa and MasterCard will be defending the interchange arrangement anew from litigation filed in June 2005 by a group of smaller merchants.²⁵

Despite merchant discontent, card issuers have incentives to maintain or increase interchange fees. Issuers are marketing credit cards with reward or loyalty programs that encourage greater card use and reinforce customer loyalty to the brand. An estimated 12 to 24 percent of cards held by con-

¹⁹ Chakravorti (2003) presents a fuller description of the participants in the credit card industry and of the costs and benefits to each.

²⁰ Kissane and Duca (2005).

²¹ Wong (2004a).

²² Aite Group (2005).

²³ Wilke and Sidel (2005).

²⁴ Digital Transactions (2005) and American Banker Online (2005).

²⁵ Kuykendall and Lindemayer (2005).

Overview of Recent Developments in the Credit Card Industry

Figure 4

Benefits and Costs for Participants in the Credit Card Industry			
Type of Participant	Function	Benefits	Costs
Cardholder	<ul style="list-style-type: none"> ● Purchases goods and services 	<ul style="list-style-type: none"> ● Convenience of making purchases without carrying cash ● Ability to time payments to match cash flows ● Access to credit ● Access to float ● Use of bonus features 	<ul style="list-style-type: none"> ● Interest rates and fees ● Difficulty managing credit
Merchants	<ul style="list-style-type: none"> ● Sells goods and services 	<ul style="list-style-type: none"> ● Access to large number of consumers ● Ability to sell to consumer needing credit without carrying credit risk ● Guaranty of payment 	<ul style="list-style-type: none"> ● Need to pay interchange fees on sales to cardholders ● Loss of private credit accounts (customer loyalty, marketing information, interest income)
Issuing Bank	<ul style="list-style-type: none"> ● Collects payments from cardholders ● Extends credit to cardholders ● Distributes cards ● Finances receivables ● Authorizes transactions 	<ul style="list-style-type: none"> ● Ability to collect on interest rate spreads ● Ability to collect fees from cardholders ● Ability to share in interchange fees from merchants ● Ability to cross-sell to consumers 	<ul style="list-style-type: none"> ● Operational costs ● Fraud risk ● Credit risk
Acquiring Bank	<ul style="list-style-type: none"> ● Issues payments to merchant ● Routes information enabling authorization, billing, and payment to merchant 	<ul style="list-style-type: none"> ● Shares in interchange fees from merchants 	<ul style="list-style-type: none"> ● Operational costs ● Some fraud risk
Card Association	<ul style="list-style-type: none"> ● Promotes the brand ● Establishes rules, standards and protocols governing participation in network ● Sets interchange fee structure 	<ul style="list-style-type: none"> ● Collects transaction fees ● Collects assessment fees 	<ul style="list-style-type: none"> ● Marketing costs ● Cost of fraud reduction programs ● Operational costs of maintaining network

Source: Federal Deposit Insurance Corporation

sumers have rewards associated with them,²⁶ and in 2003 an estimated 60 percent of credit card spending was attributed to cards with rewards.²⁷ Card issuers are funding these increasingly popular reward programs through interchange fees.

Outside the United States, Visa and MasterCard have come under additional pressures to reduce interchange fees. Regulators in Australia, the European Union, Israel, and the United Kingdom, among others, have reviewed the effects of interchange fees on competition. Overseas, Visa and MasterCard have been pressured to reduce these fees.²⁸

Significant Litigation against Visa and MasterCard and Its Aftereffects

As indicated above, when Visa and MasterCard were building their dominant credit card networks, they imposed exclusionary rules and restrictions on other parties to credit card transactions. In two cases, whose outcomes are described in this section, merchants and the U.S. Department of Justice (DOJ) successfully challenged some of these practices. The decisions in the two cases²⁹ weakened some barriers to competition and reduced the control exercised by the card associations, thus influencing the future of the credit card industry. In fact, the aftereffects of the decisions have already begun appearing.

²⁶The lower estimate is from Swartz et al. (2004), and the higher estimate is from Wong (2004b).

²⁷Wong (2004b).

²⁸These efforts are criticized by Swartz et al. (2004) for not considering the benefits to all parties of payment card usage, and by Schmalensee (2001) for not considering the proper role of interchange fees.

²⁹They are: *United States v. VISA U.S.A., Inc.*, 163 F.Supp.2d 322 (S.D.N.Y., 2001) (original decision), with final decision in *United States v. VISA U.S.A., Inc.*, 344 F.3d 229 (2d Cir. 2003) and *In re VISA Check/Mastermoney Antitrust Litigation*, 287 F.Supp.2d 503 (E.D.N.Y. 2003) (original decision), with final decision in *Wal-Mart Stores, Inc. v. VISA U.S.A., Inc.*, 396 F.3d 96 (2d Cir. 2005). The second case is commonly known as the 'Honor-All-Cards' case.

Successful Legal Challenges

One case dealt with restrictions on banks' ability to issue cards that competed with Visa and MasterCard. The other related to a requirement forcing merchants to accept all types of MasterCard and Visa payment cards regardless of the fees associated with those transactions.

The decision in the first case prohibited Visa and MasterCard from banning member banks from issuing cards on rival networks. This litigation ended in October 2004, when the U.S. Supreme Court refused to hear an appeal of the case. The case began in October 1998 when the DOJ claimed that Visa and MasterCard, by not allowing their member banks to issue credit cards on other networks (including American Express and Discover Card), were limiting competition in the credit card market and therefore violating the Sherman Antitrust Act.³⁰

The second case illustrated merchants' unwillingness to accept conditions and costs unilaterally imposed on them by the card associations. Some of the largest U.S. merchants—including Wal-Mart Stores Inc. (Wal-Mart), Sears, and Safeway Inc.—joined forces to battle rules imposed on them by MasterCard and Visa. These rules required the merchants to accept for payment any card that had the Visa or MasterCard logo. Merchants challenged the "Honor All Cards" rule because certain types of cards—namely, signature debit cards—had significantly higher processing fees than PIN debit cards, and merchants had no role in establishing these fees. Merchants argued that fees should be established in some proportion to the risks that the transaction poses to the network. As part of a 2003 settlement, Visa and MasterCard agreed to: pay retailers collectively \$3 billion over ten years, temporarily reduce debit card fees, permanently change the "Honor All Cards" policy as it relates to debit cards, and establish lower transaction fees.³¹ The settlement did not address requirements for merchants to accept premium credit cards.³²

The primary significance of these cases is that merchants have become a much stronger bargaining

partner in negotiations over the responsibilities and fees associated with credit card transactions. Merchants are no longer likely to tolerate quietly what they view as uncompetitive practices or unreasonable fees imposed on them by the card associations. One can assume, therefore, that the long and costly battle with Visa and MasterCard has not ended. Because sizeable segments of the merchants' customer base will want to use credit cards for payment, retailers will continue to have difficulty refusing to accept them, but by pursuing alliances with Visa and MasterCard's competitors and by encouraging their customers to use cards with lower merchant fees, merchants may find it easier to win cost concessions.

The Aftereffects: Recent Business Alliances and Developments

Already, merchants' freedom to refuse certain higher-fee cards and banks' freedom to issue any type of credit card have generated new alliances in the reinvigorated credit card industry. Some important deals have since taken place in the wake of the resolution of these cases. It remains to be seen how successful these new partnerships will be.

American Express cards, marketed mostly to wealthy customers on the basis of the cards' superior rewards program, are now offered by banks that were previously prohibited from offering those cards. In January 2004, MBNA became the first major issuer of Visa and MasterCard in the United States to offer American Express as an option to its

³⁰ After the final disposition of this case, both American Express and Discover filed lawsuits against Visa and MasterCard for unspecified damages.

³¹ On April 30, 2003, MasterCard settled the dispute. Terms of the settlement included agreements to (1) pay retailers about \$1 billion over ten years, (2) reduce the debit card fees it charges retailers, (3) change its "Honor All Cards" policy beginning in January 2004 by giving retailers the choice of accepting either online or offline debit cards, and (4) establish a separate interchange rate for its debit transactions (previously it had blended credit and debit transactions into a single interchange rate), reducing the interchange rate for its debit transactions by at least one-third. Visa's settlement agreement contained similar terms, some of which were that Visa would (1) pay retailers \$2 billion over ten years starting in 2004; (2) modify its "Honor All Cards" rule so that beginning in 2004 merchants may accept Visa check card only, Visa credit card only, or both; and (3) lower its fees for certain types of merchants.

³² Premium cards are a type of credit card typically targeted to more affluent customers that have more rewards and higher interchange fees.

customers;³³ Citigroup Inc. followed suit in December 2004,³⁴ and USAA Federal Savings Bank in May 2005.³⁵ In addition, a dual-branded American Express and Visa card (a charge card for American Express, a credit card for Visa) that provides a consolidated rewards program is anticipated to be offered by UBS in late 2005.³⁶

Another dual-branded card was announced by MasterCard and the much smaller Diners Club. Diners Club will reissue its cards to include the MasterCard number and to carry both the Diners Club and MasterCard brand marks, with the cards processed as MasterCard transactions in North America but continuing to receive the much superior Diners Club rewards. This deal creates more transactions on the MasterCard system enabling greater economies of scale. It also may bring additional cardholders and merchants into the MasterCard system.³⁷ Diners Club and its cardholders benefit because the card now will be accepted at almost three times as many merchants.³⁸

Discover also announced some potentially important deals. In January 2005, Discover announced plans with Wal-Mart and GE Consumer Finance (a unit of General Electric Company) to launch a new credit card on the Discover network.³⁹ Wal-Mart will benefit from this arrangement because the arrangement is structured in a way that enables the merchant to avoid paying interchange fees on any transactions made on that card on the merchant's own premises. GE Consumer Finance, the issuer for many large retailers' private credit cards, will issue the card—the first time that an entity other than Discover has issued one of Discover's cards. Should the Wal-Mart–Discover Card product prove successful, Discover may be able to persuade other stores to create similar products, thereby extending the size of its cardholder base. However, this arrangement will not provide Discover with much revenue on card transactions.

Earlier, in November 2004, Discover acquired the Pulse EFT Association for \$311 million. Pulse is the third-largest PIN debit network in the country and had been owned by the more than 4,000 financial institutions that were its members, with

90 million debit cardholders.⁴⁰ Discover's acquisition of Pulse provided Discover not only with a debit product but also possibly with a greater opportunity to market its credit card product to Pulse's member financial institutions or directly to their customers.

Consolidation among credit card issuers has increased. During a four-month period in 2005, the three largest monoline credit card banks—MBNA,⁴¹ Capital One Financial Corporation (Capital One),⁴² and Provident⁴³ (the third, fifth, and seventh largest credit card issuers, respectively)—all announced transactions that signaled significant changes in the structure of credit card issuers. MBNA is being acquired by Bank of America, and Provident is being acquired by Washington Mutual. In a mirror image of these transactions, Capital One is purchasing Hibernia Corporation, the holding company for a regional bank.

These transactions will affect the structure of the credit card issuer market. Bank of America now will become the largest issuer. Upon completion of each of these deals, the largest ten issuers will control 90 percent of the market. Greater concentration among card issuers also means that a smaller number of banks will control the card associations.

³³ American Express (2004a).

³⁴ American Express (2004b).

³⁵ American Express (2005b).

³⁶ American Express (2005a).

³⁷ Diners Club (2004) and MasterCard Inc. (2004).

³⁸ Lieber (2005).

³⁹ Wal-Mart (2005).

⁴⁰ Discover Financial (2004).

⁴¹ Bank of America (2005).

⁴² Capital One (2005).

⁴³ Washington Mutual (2005).

Conclusion: Challenges Facing the U.S. Credit Card Industry Today

The challenges facing the U.S. credit card industry are substantial. The largest U.S. merchants are now better able to negotiate lower interchange rates from all networks and may pressure other participants in the credit card transaction to lower costs. They could also develop innovative arrangements to retain a greater portion of the revenue stream. Additionally, other merchants are attempting to replicate these efforts. If successful, these developments could lead to a decline in pricing flexibility for the interchange rate structure on which the multiple card issuer networks are based.

At the same time, Visa and MasterCard's smaller competitors—Discover (the smallest of the major card networks) and American Express—are facing challenges of their own. As noted above, Discover has made moves that may give it access to the debit card market and opportunities to increase its cardholder base; alliances with other large retailers eager to reduce interchange fees may follow. Hindering Discover's efforts are lack of an international presence, limitations associated with its less affluent customer base, and its small number of cardholders and merchants. The future of Discover is largely dependent upon the objectives of its parent company. Management of Discover's parent company, Morgan Stanley, and decisions about Discover's continuing corporate relationship with Morgan Stanley have been uncertain since early 2005, impeding Discover's ability to develop and execute a clear business strategy for its own future.

American Express has made progress in increasing its cardholder base.⁴⁴ However, it is facing new competition for its higher net worth customers from MasterCard's World and Visa's Signature programs, both of which offer higher rewards than their traditional programs. The World and Signature programs charge interchange rates that are lower than those of American Express but higher than the two card associations' other programs.⁴⁵ American Express may therefore find it hard to maintain high fees, at least with some larger mer-

chants. Finally, greater numbers of consumers are expecting rewards with their card use.

The industry is also facing serious challenges from credit card fraud, identity theft, and the need to secure confidential information. These challenges have always been an operational risk, but the problem has intensified now that large quantities of confidential information are maintained in Internet-accessible systems and criminals are becoming more sophisticated in obtaining and using sensitive data. Besides being a costly drain on banks, these problems have the potential to erode consumer confidence in the credit card industry. Consumers' concerns about the security of credit cards and confidential information need to be addressed. Otherwise, consumers may become reluctant to continue using credit cards as freely as they do now.⁴⁶

Consumers' growing sophistication in the use of their credit cards goes beyond their greater awareness of fraud issues. An important element of the business model of credit card issuers is interest income. However, increasing numbers of cardholders—an estimated 55 percent of them—are “convenience users,” paying their balances in full each month to avoid interest charges.⁴⁷ On the other hand, others are having difficulty managing the use of their cards, incurring debt potentially beyond their means to repay and representing credit risk to card issuers.

⁴⁴ However, it is unclear whether Bank of America, after its acquisition of MBNA, will implement MBNA's previous decision to issue American Express cards.

⁴⁵ Mason (2005).

⁴⁶ Both Visa and MasterCard have recently instituted zero-liability policies in an effort to combat these concerns. Visa states: “Use your Visa card to shop online, in a store, or anywhere, and you're protected from unauthorized use of your card or account information. With Visa's Zero Liability policy, your liability for unauthorized transactions is \$0—you pay nothing.” MasterCard states: “As a MasterCard cardholder you are not liable in the event of an unauthorized use of your U.S.-issued MasterCard card. This coverage extends to purchases made in a store, over the telephone, or online.”

⁴⁷ Aizcorbe, Kennickell, and Moore (2003).

Overview of Recent Developments in the Credit Card Industry

In short, the highly competitive credit card industry is in flux. Credit card associations, controlled by a diminishing number of large card issuers, are caught between cardholders seeking greater rewards and merchants trying to lower the cost of accepting payments. At the same time, the card

associations are not only incurring increasing expenses because of fraud and fraud prevention but they are also bearing the costs of recent and pending litigation. For decades it was not hard to envision what the credit card industry would look like five years into the future. This is no longer true.

REFERENCES

- Aite Group. 2005. Summary: Five Misconceptions about Interchange in America. <http://www.aitegroup.com/reports/200504042.php>. [August 8, 2005].
- Aizcorbe, Ana M., Arthur B. Kennickell, and Kevin B. Moore. 2003. Recent Changes in U.S. Family Finances: Evidence from the 1998 and 2001 Survey of Consumer Finances. *Federal Reserve Bulletin* (January): 1–32.
- American Banker Online*. 2005. In Brief: Restaurant Group Joins Protest. May 20. www.americanbanker.com. [August 8, 2005].
- American Express. 2004a. American Express and MBNA Announce Card-Issuing Alliance. Press Release January 29. www.americanexpress.com. [July 22, 2005].
- . 2004b. American Express Announces Card Issuing Alliance with Citibank. Press Release December 13. www.americanexpress.com. [August 8, 2005].
- . 2005a. UBS Selects American Express, Juniper Bank, and Visa to Provide Its Dual-Card Program with Consolidated Rewards for UBS Wealth Management USA Clients. Press Release April 18. www.americanexpress.com. [August 8, 2005].
- . 2005b. American Express and USAA Announce Card-Issuing Alliance. Press Release May 31. www.americanexpress.com. [August 8, 2005].
- Bank of America. 2005. Bank of America to Acquire MBNA. Press Release June 30. www.bankofamerica.com. [August 8, 2005].
- Capital One. 2005. Capital One to Acquire Hibernia Corporation for \$5.3 Billion in Stock and Cash. Press Release March 5. www.capitalone.com. [July 22, 2005].
- Chakravorti, Sujit. 2003. Theory of Credit Card Networks: A Survey of the Literature. *Review of Network Economics* 2, no. 2:50-68.
- Day, Kathleen, and Caroline E. Mayer. 2005. Credit Card Penalties, Fees Bury Debtors. *Washington Post*, March 6, sec. A, p. 1.
- Digital Transactions. 2005. New Merchant Group Forms to Win Regulatory Relief on Interchange. www.digitaltransactions.net. [August 3, 2005].
- Diners Club. 2004. Diners Club and MasterCard Finalize Groundbreaking Alliance. Press Release September 28. www.dinersclubnewsroom.com. [July 20, 2005].
- Discover Financial. 2004. Pulse EFT Association to Merge with Discover Financial Services. Press Release November 15. www.discovercard.com. [July 22, 2005].
- Evans, David. 2002. The Antitrust Economics of Two-sided Markets. AEI-Brookings Joint Center for Regulatory Studies. Related Publication 02-13. September.
- Evans, David S., and Richard Schmalensee. 2005. *Paying with Plastic*. Massachusetts Institute of Technology.
- FinanceTech. 2004. Are Merchant-Controlled Debit Networks the Next Big Thing? FinanceTech. www.financtech.com. [May 25, 2005].
- Gould, John. 2004. Credit Card Customer Acquisition Strategy. The Tower Group, Inc.

Overview of Recent Developments in the Credit Card Industry

- Kissane, Jim, and Kristen J. Duca. 2005. First Data Corp. – Outperform: Western Union Improves; Merchant Weakens. Bear Sterns Equity Research. July 17. Bear, Stearns & Co. Inc.
- Kuykendall, Lavonee, and Isabelle Lindemayer. 2005. Small Merchants File Suit over Interchange. *American Banker*. June 24.
- Lieber, Ron. 2005. The Diners Club Card Tries a Comeback; After Falling into Disuse, It Vastly Expands Reach; Racking Up Airline Points. *The Wall Street Journal*, March 30, sec. D, p. 1.
- Mandell, Lewis. 1990. *The Credit Card Industry: A History*. Twayne Publishers.
- Mason, Howard K. 2005. AXP: The Threat to Interchange from Retailer-Sponsored Credit Cards on the Discover Network, such as the GE-WMT. Bernstein Research Call. January 26. Sanford C. Bernstein & Co.
- MasterCard, Inc. 2004. Diners Club and MasterCard Pursue Alliance to Expand Customer Acceptance. Press Release. April 29, 2004. www.mastercardinternational.com. [July 20, 2005].
- MasterCard International. 2005. MasterCard International Corporate Overview. MasterCard Incorporated.
- Schmalensee, Richard. 2001. Payment Systems and Interchange Fees. Working Paper 8256. National Bureau of Economic Research.
- Swartz, Daniel D. Garcia, Robert W. Hahn, and Anne Layne-Farrar. 2004. The Move toward a Cashless Society: A Closer Look at Payment Instrument Economics. Working Paper 04-20. AEI-Brookings Joint Center for Regulatory Studies.
- Visa U.S.A. Inc. 2005. Visa U.S.A Annual Report 2004. Visa U.S.A., Inc.
- Wal-Mart. 2005. Wal-Mart and GE Consumer Finance Plan to Issue a New Credit Card by Discover. Press Release January 21. www.walmartfacts.com. [August 8, 2005].
- Washington Mutual. 2005. Washington Mutual to Acquire Provident Financial; Strategically Compelling Fit for Both Companies. Press Release June 6. www.wamu.com. [July 22, 2005].
- Wilke, John R., and Robin Sidel. 2005. Merchants Expand Credit-Card Fight; Lawsuits Claim Visa, MasterCard Collude on Fees; Could Hit Issuer Profits. *The Wall Street Journal*. June 23.
- Wong, Regan. 2004a. The Business of Merchant Acquiring: Business Processes and Market Overview. The TowerGroup, Inc.
- . 2004b. Cobranding in the U.S.: Overviews and Trends. The TowerGroup, Inc.

