# GOVERNANCE, ISSUANCE RESTRICTIONS, AND COMPETITION IN PAYMENT CARD NETWORKS*

by

Robert S. Pindyck

Massachusetts Institute of Technology
Cambridge, MA 02142

June 2007

**Abstract**: I discuss the antitrust suit brought by the U.S. Department of Justice against Visa and MasterCard in 1998. Banks that issue Visa cards are free to also issue MasterCard cards, and vice versa, and many banks issue the cards of both networks. However, both Visa and MasterCard had rules prohibiting member banks from also issuing the cards of other networks, in particular American Express and Discover. In addition, most banks are members of both the Visa and MasterCard networks, so governance is to some extent shared. The DOJ claimed that restrictions on issuance and shared governance were anticompetitive and should be prohibited. Visa and MasterCard argued that these practices were procompetitive. The case raised important questions: Given that many banks issue both Visa and MasterCard, and that most merchants that accept one also accept the other, do the two networks really compete, and if so, how? And do Visa and/or MasterCard have market power, if so, in what market, and how is it exercised?

**JEL Classification Numbers**: L40; L44, G20

**Keywords**: Payment cards, credit cards, debit, card networks, membership restrictions, network competition, network governance.

---

*This paper was written as a chapter in *The Antitrust Revolution*, Fifth Edition, J. E. Kwoka, Jr., and L. J. White, eds., Oxford Univ. Press. My thanks to the editors, John Kwoka and Larry White, as well as Dennis Carlton, Emily Cotton, David Evans, Steve Herscovici, Rebecca Kirk, Martha Samuelson, Richard Schmalensee, and Rebeccah Weiss for helpful comments and suggestions. The author served as an expert witness for MasterCard in its antitrust case against the government; the views expressed here are solely those of the author and should not be attributed in any way to MasterCard.

# 1. Introduction.

Payment card networks provide what has become essential infrastructure for much of the country's economic activity, so it is important that they compete effectively and operate efficiently. If two networks restrict the ability of their members to join other networks, should that raise antitrust concerns? And what if those two networks also have shared governance? Could such practices have pro-competitive aspects that benefit consumers, or should they always be prohibited?

In October 1998, the Antitrust Division of the U.S. Department of Justice brought an antitrust suit against two of the major payment card networks, Visa and MasterCard.[1] Any bank that issues Visa cards is free to also issue MasterCard cards, and vice versa, and indeed, many banks issue the cards of both networks. However, both Visa and MasterCard had rules prohibiting their issuing banks from also issuing the cards of other networks, in particular American Express and Discover. In addition, most banks are members of both the Visa and MasterCard networks, and it is the members that control the networks, so that governance of the two networks is to some extent shared. The DOJ claimed that both practices – restrictions on issuance and shared governance – were anticompetitive and should be prohibited. Visa and MasterCard argued that these practices were, on net, pro-competitive. In the end, after a trial and a failed appeal by the two card networks, the DOJ won on its issuance restriction claim, but lost on shared governance.[2]

Putting the results of the trial aside, the government's case made several things clear: The structure of the payment card industry is unique, market definition is unclear, the nature of competition among card networks is complex, and assessing the competitive impacts of various practices is not easy. The case also raised fundamental questions. Most importantly, given that many banks issue both Visa and MasterCard credit cards, and that most merchants that accept

---

[1] *United States of America v. Visa U.S.A. Inc., Visa International Corp., and MasterCard International Incorporated*, Complaint for Equitable Relief for Violations of 15 U.S.C. §1, October 7, 1998.

[2] The government's case was wholly separate from a case against the two networks that was brought by Wal-Mart and other large merchants, alleging illegal tying of debit cards to credit cards: in re Visa Check/MasterMoney Antitrust Litigation (Case No. 96-CV-5238), U.S. District Court for the Eastern District of New York. The merchants claimed that the associations' "Honor All Cards" rules, which required merchants accepting Visa and MasterCard credit cards to also accept Visa and MasterCard signature debit cards, allowed the associations to charge supracompetitive interchange rates on debit transactions. The case settled in 2003; the associations agreed to pay the plaintiff class more than $3 billion, and to separate acceptance of debit cards from acceptance of credit cards.

one also accept the other, do the two networks really compete, and if so, how? And do Visa and/or MasterCard have market power, if so, in what market, and how is it exercised?

To understand the issues in this case, one must first understand how payment card networks operate, differ from each other, and compete. To this end, the next section provides a brief overview of the structure of the industry. I return to the DOJ's case against Visa and MasterCard in the following section, and discuss the government's claims in more detail. The next section deals with the question of market definition, and contrasts the DOJ's view with that of the defendants. The sections that follow discuss the competitive effects of the Visa and MasterCard issuance restrictions, and the competitive effects of shared governance, once again contrasting the DOJ's and the defendants' views. The remaining section discusses the outcome of the case and offers some concluding remarks.

## 2. Industry Structure.

Before turning to the government's antitrust case and trying to assess the competitive impacts of the specific practices at issue, it is important to be clear about how payment card networks operate, the nature of the product or service they provide, and how consumers and merchants view them in relation to other products and services. Accordingly, a brief overview of the structure of the industry is appropriate.[3]

**What Are Payment Cards and What Do They Do?** General purpose payment cards come in three basic flavors: *charge cards*, *credit cards*, and *debit cards*. What all three types of cards have in common is that they act as a payment mechanism; i.e., they provide an essential service: *a means of payment*. As long as a merchant accepts a particular payment card, one can use it to make purchases from that merchant. Of course payment cards are not the only products that act as a payment mechanism; cash, checks, Internet payment accounts (such as Pay Pal), and stored value cards, among other products, do as well. Indeed, an important question, related to market definition and discussed below, is the extent to which these various payment mechanisms are substitutable with each other.

How do these three types of payment cards differ? A charge card provides a means of payment, and other than some ancillary services (such as rental car and travel insurance, end-of-

[3] For a thorough and very readable account of the structure and history of the payment card industry, see Evans and Schmalensee (2005). For a discussion of some of the underlying economic theory, see Rochet and Tirole (2002).

year expenditure summaries, etc.), only a means of payment. In terms of annual charge volume, the leading charge card in the U.S. is the American Express ("Amex") card, which in 2006 had an annual U.S. charge volume of about $400 billion. (American Express also issues credit cards, but that has historically been a relatively small part of its business.) One can use an American Express charge card to pay for purchases from merchants that accept the card, but not to borrow money; i.e., the cardholder is expected to pay each monthly balance in full.

A credit card provides a means of payment, bundled with a second service, revolving credit. Of consumers that hold credit cards, about half regularly make use of the credit service (i.e., they maintain revolving balances), and the remainder do so rarely or never. Finally, a debit card also provides a means of payment, but it is linked to the cardholder's checking account, from which purchase costs are debited as they are incurred. At the discretion of the cardholder's bank, the checking account might include a line of credit, giving the debit card a credit-like feature. Some debit cards are essentially bank ATM cards that can be used to make purchases by entering a PIN number after swiping the card through a card reader ("on-line" debit). Most debit cards, however, are issued within the Visa or MasterCard networks, have the Visa or MasterCard logos, and can be used to make purchases in the same way as a credit card ("off-line" or "signature-based" debit), or, at the discretion of the cardholder, "on-line" by entering a PIN number.

Of the three types of payment cards, the most rapid growth in the U.S. has been in the use of debit cards. Table 1 shows debit purchase volume and total credit plus debit purchase volume for the years 2000 through 2006. Over this six-year period, debit purchase volume has grown at an annual rate of about 21 percent, from about 16 percent of total purchase volume in 2000 to about 27 percent in 2006.

The government's antitrust case focused almost entirely on the use of cards as a means of payment. Thus the discussion that follows will likewise focus on the payment mechanism service, which is provided by all three types of cards.

**What Is a Card Network?** A card network consists of a set of consumers who hold and use the card, a set of merchants that accept the card as a means of payment, a system for processing payment flows, and a set of rules or standards governing the design, uses, and acceptance of the card. Any card issued through the MasterCard network, for example, must show the MasterCard logo, and any merchant that accepts MasterCard must also display the logo, and may not impose a surcharge on a consumer for using the card instead of some other form of payment. Thus the

cardholder knows that her card can be used to make purchases from any merchant that displays the logo, and can be used interchangeably with cash at no additional cost. (This last point is particularly important for the issue of market definition.)

Clearly the value to consumers and merchants of participating in a payment card network increases with the size of the network, i.e., with the total number of consumers who carry and use the cards, and with the number of merchants that accept the cards. This creates a "chicken and egg" problem: to create a card network, consumers must be convinced that merchants will accept the card, and merchants must be convinced that consumers hold the card and want to use it. This makes the creation of a new network difficult at best, and creates challenges for an existing network that wants to expand to other regions of the world where currently its presence is minimal or nonexistent.[4]

Every network must deal with three crucial functions – issuing cards to consumers, signing up ("acquiring") merchants and servicing them, and processing transactions. These functions are performed in different ways, depending on whether the network is "open" or "closed."

**Open vs. Closed Networks.** Visa and MasterCard are open networks. As long as it is willing to abide by the network's rules and standards, any bank can join the Visa or MasterCard associations and issue cards to consumers under the Visa or MasterCard networks. Likewise, any bank can become a Visa or MasterCard "acquirer," and sign up and service merchants. Issuing banks benefit from annual fees charged to cardholders, from the fees and interest payments from cardholders who maintain revolving balances, and from the "interchange" fee collected on all card transactions. Acquiring banks likewise receive (much smaller) fees on transactions. The Visa and MasterCard associations provide authorization and settlement services (often through contracts with third-party processors), for which they charge small fees, and also set the networks' rules and standards, advertise the network brands, and support product innovation (such as the development of "smart cards"). Issuing banks will also innovate and design products (such as "affinity" cards that are linked with some organization, e.g., a university alumni credit card), and are free to set their fees and the interest rates they charge on credit balances. Visa and MasterCard were operated as not-for-profit associations of their respective

[4] Payment card networks are an example of a "two-sided platform," i.e., an entity that brings together two or more different groups of customers, in this case cardholders and merchants. For a general discussion of two-sided platforms, including antitrust issues that sometimes arise, see Evans (2003) and Evans and Schmalensee (2007).

issuing and acquiring member banks, and they have been governed by and operate for the benefit of their member banks.[5]

By contrast, through 2004, American Express and Discover were closed networks. Only American Express issued American Express charge cards to consumers in the U.S. and acquired and serviced merchants.[6] American Express would also process all transactions, and invest in advertising and innovation to promote and expand the American Express network. Discover has been doing the same for its network.[7]

In a Visa or MasterCard credit card purchase, the merchant receives about 98 percent of the amount of the purchase. The remaining 2 percent is called the "merchant discount," which is the sum of the fee paid to the merchant's acquiring bank, the Visa or MasterCard processing fee, and the roughly 1.5 to 1.7 percent interchange fee that is collected by the cardholder's issuing bank. Thus the interchange fee, which is set by the Visa or MasterCard organization, accounts for most of the merchant discount. It is important to note that the issuing bank owns the consumer's account and takes the payment risk. The interchange fee helps to offset that risk as well as other costs of issuance. In an Amex purchase, on the other hand, American Express – which owns the consumer's account and thus takes the payment risk – receives the entire merchant discount (which for most transactions has historically been about 2-1/2 to 3 percent).

Open and closed networks each have their own advantages and disadvantages. As a closed network, American Express has more control over its brand, and can better maintain uniform standards when dealing with cardholder requests and complaints and responding to fraudulent transactions. In addition, it can collect and utilize data on all its cardholders, making it more effective in "cross-selling" other products and services, such as travel agency and concierge services. In an open network, cardholders deal with their issuers, and issuers will differ in terms

[5] Visa and MasterCard were associations of member banks at the time the government filed its antitrust claims. Since then, MasterCard has become a publicly traded corporation, and in October 2006 Visa announced its intention to also become a publicly traded corporation. However MasterCard (and Visa) remain open networks and operate largely in the interests of the member banks (which in the case of MasterCard hold large equity shares).

[6] This is no longer true. American Express decided in 1996 to open its network and seek bank issuers, but given the cost of losing their Visa and/or MasterCard portfolios, no bank concluded an issuance deal with Amex. However, as an outcome of the government's antitrust suit, Visa and MasterCard can no longer prevent their member banks from issuing American Express or Discover cards. At the time of this writing, American Express had negotiated issuance agreements with six banks. More on this later in the discussion of the outcome of the case.

[7] Visa, MasterCard, American Express and Discover are the major payment card networks in the U.S. The focus will be on them and the much smaller networks, such as Diner's Club and JCB, will be largely ignored.

of their responsiveness to cardholder complaints and overall quality of service. On the other hand, issuers in an open network compete with each other to attract consumers, which can lead to more rapid network expansion. Also, various issuers may find different ways to innovate in terms of the products and services they offer.

**Duality.** Most banks that have been members of the Visa association have also been members of the MasterCard association, and many banks issue the cards of both networks. Because each association is essentially controlled by its members, overlapping membership also implies overlapping governance. Members of the two associations can sit on the Boards of either one (but not on the boards of both). This overlapping membership is generally referred to as "duality." However, it is important to distinguish between two aspects of duality: *Issuance duality* refers to the fact that many banks issue the cards of both networks, while *governance duality* refers to the shared governance of the two associations. The DOJ objected to governance duality, not issuance duality (although as a practical matter it is unclear how the two could be separated).

In addition to issuance duality, almost every U.S. merchant that accepts Visa also accepts MasterCard, and vice versa. This overlapping merchant acceptance, overlapping membership, and overlapping governance raises two questions.

First, do we really need both networks? Isn't MasterCard (or Visa, the larger network) redundant, or would consumers and merchants lose if one of the networks were to disappear? Second, even if we accept that the two networks compete with each other, thereby creating benefits from having both of them, isn't governance duality anticompetitive in that it must reduce the intensity of competition?

Neither the government nor Visa or MasterCard claimed that there is redundancy; all parties agreed that there is substantial competition between the networks, so there is a benefit from having both of them in operation. Banks that are members of both networks benefit from this competition because even though it consumes resources (which are ultimately a cost to the member banks), it leads to innovation and network expansion, which are beneficial to the members. The government claimed, however, that governance duality harms consumers by reducing the intensity of the competition between the two networks, and should therefore be prohibited. To assess this claim, one must understand how payment card networks compete.

**Competition among Networks.** Competition among Visa, MasterCard, Amex and Discover occurs through the merchant discount, advertising, and innovation. The main objectives of competition are the expansion of the network itself and the wider usage of the network's cards. All four organizations promote the expansion of their networks into new retail and service sectors through incentive interchange and discount rates and promotional programs. For example, in the early 1990s all of the networks encouraged supermarkets and grocery stores to accept their cards by offering those stores a lower merchant discount. (Visa and MasterCard did this by reducing the interchange fee, and Amex by directly reducing the merchant discount, on purchases from supermarkets and grocery stores.) More recently, Visa and MasterCard successfully expanded into smaller transactions, such as "swipe-and-go" (no signature required) purchases at McDonalds. The networks also compete for new and existing cardholders via cardholder fees and rewards programs, which also encourage cardholders to use their cards at every opportunity, and via brand advertising, technological and product innovations, and promotional deals to acquire new accounts. Advertising is important because it creates brand identity, which helps expand the network. There is also some network differentiation. American Express has targeted higher income consumers whose average purchases are larger, and as a result, merchants are willing to accept a higher merchant discount. Discover has traditionally targeted the other end of the income spectrum. Visa and MasterCard have been in the middle, although more recently they have sought higher-income consumers through the development and promotion of their premium cards.

Competition between the Visa and MasterCard networks also occurs via advertising, innovation, and the development and introduction of new types of cards (such as affinity and co-branded cards). But in addition, these two networks compete through, and for, the issuing banks. The idea of competing through issuing banks may seem counterintuitive given duality (i.e., the fact that most issuing banks belong to both networks), but duality can actually enhance competition. The reason is that by belonging to both networks, member banks can switch part or all of their cardholder portfolios from one network to the other, and use this ability to extract concessions from the networks in the form of cash payments, assistance with technology adoption, etc.

Competition also occurs among issuers, who compete to sign up (and retain) cardholders. This competition takes the form of consumer solicitations, offering more advantageous terms

(e.g., with respect to APRs, annual fees, rewards, and rebates), and introducing new products such as affinity cards (where rebates might go to, say, the cardholder's college alma mater). Competition has increased over the years as issuers try to differentiate their cards from each other by offering such benefits as frequent flier miles, rebates on purchases, no or low annual fees, purchase protection/security, discounted introductory interest rates, and travel accident insurance. Issuer competition has helped to expand the Visa and MasterCard networks, and thus is a benefit of an open network.

In 2006, total U.S. payment card charge volume for purchases and cash advances for the four major networks, including signature-based debit cards, was about $3.0 trillion, up from about $2.1 trillion in 2003. Table 2 shows the 2006 market shares of the four major networks. Of the 2006 total, Visa accounted for 53.6 percent (about $877 billion in credit and $720 billion in debit), MasterCard accounted for 28.9 percent (about $610 million in credit and $252 million in debit), American Express accounted for 13.7 percent, and Discover 3.8 percent. Excluding debit, the Amex share was about 20 percent, and the Discover share about 6 percent.

## 3. Outline of the Case.

Although the government agreed that Visa and MasterCard compete with each other and with American Express and Discover, it claimed that governance duality and the issuance restrictions reduced the intensity of that competition, and that as a result, Visa and MasterCard were in violation, on two counts, of Section 1 of the Sherman Antitrust Act. Specifically, the DOJ stated in its Complaint that it was acting to prevent Visa and MasterCard from "violating the antitrust laws by restraining competition in general purpose card network products and services." The Complaint alleged that the governance structures of the two associations "… substantially lessened competition between Visa and MasterCard," and that the membership rules and policies of the associations have "[eliminated] certain forms of competition among the Visa and MasterCard member banks, and have effectively precluded American Express and Discover/Novus from competing to enlist banks in the U.S. to issue their cards."[8] The Complaint also alleged that these Section 1 violations occurred in the context of a relevant

---

[8] *United States of America v. Visa U.S.A. Inc., Visa International Corp., and MasterCard International Incorporated*, Complaint for Equitable Relief for Violations of 15 U.S.C. §1, October 7, 1998, pages 1—2.

market consisting of "[t]he products and services provided by general purpose card networks," which, interestingly, excluded debit cards and other forms of payment.[9]

As the plaintiff, to prove these claims and show competitive harm the DOJ had to demonstrate five things: (1) its definition of a "general purpose card" market – as opposed to some broader market – was consistent with the data; (2) Visa and MasterCard should be treated as a single entity that exercised monopoly power, or that Visa and/or MasterCard individually had and exercised monopoly power; (3) governance duality reduced competition between Visa and MasterCard and thereby contributed to their monopoly power; (4) Visa and MasterCard exercised monopoly power through their issuance restrictions, and this resulted in harm to Amex and/or Discover; and (5) the exercising of monopoly power by Visa and MasterCard resulted in a market outcome significantly different from a competitive outcome, harming consumers.

Remember that the objective of the antitrust laws is to protect consumers, and not necessarily competitors. Suppose that dual governance and issuance restrictions did reduce competition between Visa and MasterCard and did enhance their market power by weakening American Express and Discover. How would that harm consumers? The DOJ alleged that dual governance reduced the incentives for Visa and MasterCard to compete by constraining innovation and investments in new and better products, resulting in the delayed introduction of chip-based smart cards, Internet encryption standards, informative advertising, and premium cards. The DOJ also alleged that the Visa and MasterCard issuance restrictions limited consumer acceptance of Amex and Discover cards, thereby reducing merchant acceptance levels and restraining the ability of American Express and Discover to develop and distribute new products and features such as smart cards. The DOJ further alleged that the issuance restrictions foreclosed American Express or Discover from issuing off-line debit cards (which in the future could be linked to credit card functions on a single smart card), and deprived consumers of the ability to obtain credit cards that combine the features of their preferred bank with any of four network brands, each of which has different qualities, characteristics, features, and reputations.

The case went to trial on June 12, 2000, before United States District Judge Barbara S. Jones.[10] Judge Jones' decision was filed on October 9, 2001 and after an appeal by Visa and

---

[9] Complaint, ¶14. The Complaint claims (¶8) that "General purpose cards are payment devices that a consumer can use to make purchases (a) from unrelated merchants and (b) without accessing or reserving the consumer's funds at the time of purchase," which would include credit and charge cards, but not debit cards.

MasterCard, was affirmed by the Second Circuit on September 17, 2003.[11] The associations' appeals were exhausted when the Supreme Court denied *certiori* in October 2004.

## 4. Market Definition.

To determine whether Visa or MasterCard had market power, one must begin with a definition of the relevant market. Clearly the credit and charge cards issued by Visa, MasterCard, American Express, and Discover are in the market, but are there other products that act as payment mechanisms, and that are reasonably close substitutes with credit and charge cards? Should debit cards, for example, or other means of payment, such as cash and checks be included in the market? And should supply substitutability, as well as demand substitutability, be part of market definition?

The textbook definition of a market is the collection of buyers and sellers that, through their interactions, determine the price of a product or set of products.[12] Clearly, then, both supply and demand substitutability determine market boundaries. Two products will be in the same market if *either* demand substitutability *or* supply substitutability is high, because either condition will lead to a high correlation of prices for the two products.[13] U.S. antitrust authorities, however, typically focus only on demand substitutability, and limit the supply side analysis to the possibility of entry (see, for example, the discussion of market definition in the DOJ's *Merger Guidelines*), and indeed, Judge Jones did just that in her Decision. But in fact both demand and supply side substitutability are relevant, and are discussed below.

One difficulty faced by both sides of this case is that there is no clear "price" that users of payments cards (versus other means of payment) pay, and this complicates any assessment of demand or supply substitutability based on the estimated impacts of a price change. For payment cards, the price that consumers pay might be some combination of annual fees, late fees, and

---

[10] Expert testimony was presented by Michael Katz on behalf of the DOJ, by Richard Schmalensee and Richard Rapp on behalf of Visa, and by Robert Pindyck on behalf of MasterCard.

[11] *United States v. Visa USA Inc., Visa International Corp., and MasterCard International Incorporated*, 163 F. Supp. 2d 322 (S.D.N.Y. 2001), *disposition affirmed,* 344 F.3d 229, No. 02-6074, 02-6076, 02-6078 (2d Cir. Sep. 17, 2003).

[12] See, for example, Pindyck and Rubinfeld (2005).

[13] Suppose, for example, that one is trying to decide whether two airline routes – New York to San Francisco and New York to Los Angeles – are in the same market. Demand substitutability across these routes is probably low. However, insofar as airlines serving those routes could readily shift flights from one route to the other in response to price and profit differences (so that supply substitutability is high), both routes will be in the same market.

other financing charges, minus the value of rewards and rebates. The price that merchants pay – which is effectively the price received by the parties that make up the card network – is the merchant discount. What about the price of an alternative means of payment such as cash? For consumers the price is the inconvenience of obtaining and carrying cash, including the possibility of loss or theft. For merchants, the price is largely the cost of theft, which can be substantial but may be hard to quantify.

All parties agreed that the relevant geographical market was the United States. The disagreement was over the set of products that should be included in the market. As one might expect, the DOJ's position was quite different from that of Visa and MasterCard.

### 4.1. The Government's Position on Market Definition.

As mentioned above, the DOJ claimed that relevant market consisted of "[t]he products and services provided by general purpose card networks." The DOJ argued that credit and charge cards issued through the Visa, MasterCard, American Express, and Discover networks are included in the market under this definition, as well as the Diners' Club charge card (which is used by relatively few consumers). According to the DOJ, however, debit cards – whether cards in the Visa or MasterCard networks that can be used off-line, or on-line cards – should be excluded from the market. Needless to say, other forms of payment, such as cash and checks, were likewise excluded by the DOJ.

The DOJ based its definition of the relevant market on a view about demand substitutability that focused on the notion that general purpose cards provide specific functions that other products do not provide. The specific functions cited by the DOJ include widespread acceptance, security, and deferred payment options. The DOJ argued that other forms of payment do not have all of these functions, so that they belong in a separate market. (Note, however, that charge cards do not provide deferred payment options beyond the grace period, whereas checks with overdraft protection do.) The exclusion of debit cards was based on the notion that they do not provide a deferred payment option (although they would if the bank provides overdraft protection). The DOJ also ignored the considerable supply substitutability that exists between credit and debit; credit and debit use the same network facilities, so that many banks can easily choose to issue either one, or both.

The DOJ's market definition implied that Visa and MasterCard had a large combined market share, and even large individual shares. Based on the DOJ's market definition, at the time of the trial, Visa's share of payment card purchase volume in the U.S. was about 45 percent and MasterCard's was about 30 percent, for a combined market share of about 75 percent. Both the individual and combined shares were sufficiently large for the DOJ to argue that Visa and MasterCard had monopoly power.

## 4.2. The Visa and MasterCard Positions on Market Definition.

Visa and MasterCard argued that the relevant market was much broader than just credit and charge cards – that it certainly should include debit cards, as well as other general forms of payment such as cash and checks. They pointed out that it can be misleading to define markets in terms of functionality, because functionality is a vague concept, it often has many dimensions, and it is hard to measure. Instead, markets are usually defined based on demand and/or supply substitutability. Focusing on demand substitutability, one must ask whether credit and charge cards are substitutable with other forms of payment for at least a reasonable fraction of purchasing decisions by consumers.

Visa and MasterCard argued that from the point of view of consumers, although they are not perfect substitutes, credit and charge cards, debit cards, cash, and checks are highly interchangeable, at least for many purchases. Although credit cards and cash are probably not interchangeable when it comes to paying a large hotel bill, they are quite interchangeable for smaller purchases, and indeed many consumers will sometimes pay with a credit card and sometimes with cash (or a check). MasterCard supported this argument in part by conducting a telephone survey of consumers, the results of which showed a considerable willingness to substitute among different forms of payment. As for debit cards, the off-line cards that are part of the Visa or MasterCard networks function much like credit and charge cards, and are virtually indistinguishable from Visa and MasterCard credit cards in terms of their use and acceptance. In addition, merchants often view these different means of payment as highly interchangeable, as they all have fairly similar costs associated with them. (Although there is no merchant discount for cash or checks, as there is for credit, charge, and debit cards, there are other costs of accepting cash or checks, such as the risk of theft or a check bouncing.) Finally, as mentioned

above, Visa and MasterCard argued that the considerable supply substitutability between credit cards and debit cards also implies that they are part of the same market.

Broadening the market definition to include off-line debit does not change the Visa and MasterCard shares much, because most off-line debit is within the Visa and MasterCard networks. However, if cash and checks are also included in the market, the combined Visa-MasterCard share falls dramatically.

## 4.3. The Court's Opinion on Market Definition and Market Power.

Judge Jones adopted the DOJ's market definition, i.e., that there is a general purpose card market separate from other forms of payment. It seems that this decision was arrived at in part because of the difficulty of measuring demand substitutability. The Decision stated that "it is highly unlikely that there would be enough cardholder switching away from credit and charge cards to make any such price increase unprofitable for a hypothetical monopolist of general purpose card products. This conclusion is buttressed by the fact that (1) few, if any, cardholders actually can or do observe price increases, including interchange rate increases and increases in service fees charged by issuing banks; and (2) the burden of such increases is at least partly passed on by merchants and so is shared by consumers who use other means of payment."[14]

With respect to debit cards, the court decided that "Consumers also do not consider debit cards to be substitutes for general purpose cards." This view was not surprising for on-line debit cards, which, "due to their relative lack of merchant acceptance, their largely regional scope, and … which require a pin number, are not adequate substitutes for general purpose cards."[15] For off-line debit, on the other hand, the court cited Visa and MasterCard research which "demonstrates that consumers do not consider off-line debit cards to be an adequate substitute for general purpose cards, even though they have attained widespread merchant acceptance."

With this rather narrow definition of the market, the court came to the conclusion that Visa and MasterCard each individually had market power. The evidence that the court cited to support this conclusion was examples of conduct. For example, the decision mentioned that "both Visa and MasterCard have recently raised interchange rates charged to merchants a

---

[14] *United States v. Visa USA Inc., Visa International Corp., and Mastercard International Incorporated*, 163 F. Supp. 2d 322, at 336 (S.D.N.Y. Oct. 9, 2001).

[15] *United States v. Visa USA Inc*., at 336.

number of times, without losing a single merchant customer as a result." And: "Defendants' ability to price discriminate also illustrates their market power. Both Visa and MasterCard charge differing interchange fees based, in part, on the degree to which a given merchant category needs to accept general purpose cards."[16]

By coming to the conclusion that the defendants had market power, the Court could proceed to evaluating the specific practices that the DOJ claimed were Sherman Act Section 2 violations – issuance restrictions and dual governance.

# 5. Competitive Effects of Issuance Restrictions.

Visa's Bylaw 2.10(e) precluded its member banks from issuing the credit and charge cards of any competing network, other than MasterCard's. Likewise, MasterCard's Competitive Programs Policy precluded its member banks from also issuing the credit and charge cards of any competing network, other than Visa's.[17] Both Visa and MasterCard instituted these regulations to help maintain the loyalty of their members, while preventing individual members from free-riding on the assets of the respective association.

The DOJ claimed that these rules prevented American Express and Discover from gaining access to banks as potential issuers, and thus prevented them from competing as effectively as they could have. In particular, the issuance restrictions reduced the number of consumers that carry Amex and Discover cards, thereby reducing merchant acceptance levels and restraining the ability of American Express and Discover to innovate and develop new features, with the overall result of decreased network-level competition and fewer and less varied credit card products available to consumers. The DOJ argued that consumers were also harmed because they were unable to obtain credit cards that combine the features of their preferred bank with any of four network brands, each of which has different characteristics and features.

## 5.1. Anticompetitive Effects of Issuance Restrictions.

Visa's Bylaw 2.10(e) and MasterCard's Competitive Programs Policy did not foreclose American Express and Discover from the payment card industry; indeed, for American Express

[16] *United States v. Visa USA Inc., Visa International Corp., and Mastercard International Incorporated*, 163 F. Supp. 2d 322, at 337 (S.D.N.Y. Oct. 9, 2001).

[17] MasterCard's membership policy grandfathered two arrangements: Citibank's ownership of the Diner's Club network and Household Bank's plan to issue JCB cards.

merchant acceptance, the number of cardholders, and annual charge volume had all grown substantially during the decade preceding the antitrust suit. On the other hand, these policies did prevent American Express and Discover from issuing their cards through most banks in the U.S., unless those banks were willing to cease issuing the cards of Visa and MasterCard.

Recall that one of the advantages of an open network like Visa's is that issuers compete with each other to attract consumers. In addition to advertising and promotional mailings, issuers compete by finding different ways to innovate and differentiate the products and services they offer. This innovation and differentiation can take the form of designing and offering new products (such as premium cards, and co-branded or affinity programs with airlines and other organizations), and by setting different fees and interest rates. By promoting their products and enabling consumers to find products that more closely match their preferences, this issuer competition may help to expand the size of the network, which in turn makes it more valuable to consumers and merchants alike. Of course American Express and Discover also can (and do) promote their networks through advertising and mailings, and innovate and develop new products and services. But the Visa and MasterCard issuance restrictions forced them to do this largely on their own. To the extent that this reduced Amex and Discover's investments in marketing, innovation, and product design, it led to less diverse product offerings and networks that were smaller than they would have been otherwise, thereby reducing consumer welfare.

A second alleged anticompetitive effect of the Visa and MasterCard issuance restrictions was that they limited the ability of American Express or Discover from issuing off-line debit cards. Off-line debit cards are linked to the checking accounts of the cardholders' banks, and thus are typically issued by the cardholders' banks.[18] Debit card usage has been growing more rapidly than usage of credit and charge cards, and in the future debit functionality may be linked to credit card functions on a single smart card. Thus the issuance restrictions may have limited an important source of network growth for American Express and Discover. To the extent that this caused their networks to be smaller than they would have been otherwise, consumer welfare would again be reduced.

---

[18] American Express was not completely precluded from issuing debit cards. Through its ownership of American Express Centurion Bank, a traditional bank with some $11 billion in assets, Amex offered *on-line* debit cards to its checking account holders. Amex could also offer PIN-based and signature-based debit functionality to customers of any bank if those customers authorized Amex to access their checking accounts. Nonetheless, the ability of Amex to expand its debit card base was clearly limited.

## 5.2. Procompetitive Effects of Issuance Restrictions.

There were also procompetitive aspects of the Visa and MasterCard issuance restrictions. As open associations, the Visa and MasterCard networks were vulnerable to free-riding by some of its members. Such free-riding, which could damage the quality and growth of the network, was prevented by the issuance restrictions, which in effect created a loyalty rule that forced *all* members of the network to invest in and promote the venture.

To understand this, suppose there were no issuance restrictions, so that American Express could sign issuance agreements with banks that issue Visa and/or MasterCard. An important way in which American Express differentiates itself is by attracting cardholders who are high per-transaction spenders. In fact, this is how American Express is able to justify to merchants its relatively high merchant discount. Thus it is likely that American Express would seek partnerships only with a select group of issuers, namely banks that have a large customer base with high average spending, or that have upscale private clients. If the largest and most profitable issuers partnered with Amex, those banks would still benefit from the investments made by the Visa and MasterCard networks and their other member banks. However, those banks would have less incentive to innovate and develop features to promote the Visa or MasterCard brands, or to support network initiatives to introduce new cards that would compete directly with their Amex offerings. The reason is that other competing banks cannot decide to issue Amex and thereby take advantage of the Amex products. In contrast, Visa and MasterCard are open networks, so any bank can issue their cards and benefit from new Visa and MasterCard products. If, for example, Visa developed a new corporate card, *all* issuers would have access to this product and not just a select few.

Preventing such opportunistic behavior – a few select banks partnering with American Express or some other closed network, at the expense of other banks in the network – was at the heart of the issuance restrictions. To the extent that this strengthened the Visa and MasterCard networks, there was a benefit to consumers.

## 5.3. The Court's Opinion.

In its decision, the court found that "defendants' exclusionary rules restrict competition between networks and harm consumers by denying them innovative and varied products."[19] Thus the court ordered Visa's Bylaw 2.10(e) and MasterCard's Competitive Programs Policy be repealed, and enjoined "any further prohibition by the defendants of the issuers' ability to issue general purpose and debit cards on other general purpose networks."[20] The Decision noted that "the abolition and prospective injunction of defendants' exclusionary rules will open the market to American Express and Discover to compete with MasterCard and Visa to enter into card issuing arrangements with banks. The combination of the distinct characteristics of the American Express and Discover networks with the specific attributes and issuing competencies of the issuing banks will result in increased output and consumer choice, in addition to strengthening the networks by increasing their scale and relevance."[21]

The court disagreed that removing the Visa and MasterCard issuance restrictions would lead to opportunistic behavior significant enough to weaken either of the two networks, and any such harm would be outweighed by the benefits that would accrue to consumers. As the court stated in its decision: "Multiple bank issuance of general purpose cards strengthens general purpose credit and charge card networks in three fundamental areas: increased card issuance, increased merchant acceptance, and increased scale. When combined with new products and services that bank issuance provides – such as the practical ability to offer customers a debit product on the network infrastructure – strengthening the networks in these areas benefits consumers both directly (by ensuring availability of new products and services) and indirectly (by lowering network costs that are passed on to consumers)."[22]

# 6. Competitive Effects of Dual Governance.

At the time of the government's lawsuit, duality had been in place for some 20 years, and, to use a distinction made by the DOJ, existed at both the issuance and governance levels. "Issuance

---

[19] *United States v. Visa USA Inc., Visa International Corp., and Mastercard International Incorporated*, 163 F. Supp. 2d 322, at 408 (S.D.N.Y. Oct. 9, 2001).

[20] *United States v. Visa USA Inc.*, at 408.

[21] *United States v. Visa USA Inc.*, at 408.

[22] *United States v. Visa USA Inc.*, at 387.

duality" refers to the fact that bank and non-bank issuers on one network could also issue on the other network. "Governance duality" refers to the fact that the Boards and advisory committees of each network could have members from institutions that issue on the competing network, and a member institution could have representatives on the Board of one association and on an advisory committee of the other association. The DOJ did not allege harm to competition from issuance duality by itself; its concern was with governance, but it argued that issuance duality was part and parcel of the problems that were created by dual governance.

The DOJ claimed that because of dual governance, MasterCard members did not promote the MasterCard brand at the expense of the Visa brand, and vice versa. More specifically, the DOJ argued that duality diminished the overall intensity of network competition between Visa and MasterCard, which resulted in reduced levels of advertising, innovation, and the development and introduction of new types of cards. Visa and MasterCard argued that issuance duality versus governance duality is a meaningless distinction, because duality basically boils down to overlapping members. Visa and MasterCard also argued that duality increased the level of competition among networks for bank issuers, and that there was no evidence of reduced levels of advertising innovation linked in any way to duality. Finally, as the smaller of the two networks, MasterCard argued that duality was essential in order to preserve the MasterCard network as an effective competitor.

## 6.1. Anticompetitive Effects of Dual Governance.

Banks that issue (and thus exert control over) Visa have an interest in the success of the Visa network. Likewise banks that issue (and exert control over) MasterCard have an interest in the success of the MasterCard network. For the most part, however, these have been the same banks. The concern, then, is that these dual members may have financial incentives to reduce investments aimed at shifting share between the two networks. Advertising is an example of this; although MasterCard's advertising will to some extent take share from American Express and Discover, and will also generate new cardholders, at least some of the gain will come from shifting Visa cardholders over to MasterCard. Thus, at least in theory, duality could lead to some reduction in advertising by MasterCard and Visa. Some advertising, of course, is merely "persuasive" and has no informational content. However, to the extent that "suppressed" advertising would have been informative, it could lead to some reduction in consumer welfare.

It is also possible that duality might lead to a reduction in investments aimed at technological innovation or the development and introduction of new types of cards, insofar as those investments would cause a shift in share between the Visa and MasterCard networks. Indeed, the DOJ claimed that the development of chip-based smart cards and investments in encryption technology for Internet transactions by Visa and MasterCard was hindered for just this reason. To the extent that reduced incentives to compete indeed delayed or reduced investments in innovative technologies of this sort, it would mean a reduction in consumer welfare.

Of course it is impossible to know how much advertising and investments in new technology would have occurred in a "but-for" world without duality. But at least in theory, without duality the managers of Visa and MasterCard might have had a stronger incentive to compete against each other, possibly by differentiating the two networks to a greater extent. And it is possible that greater differentiation (in whatever direction it went) would have created products that better satisfied the tastes of some consumers. To the extent that duality stifled such product differentiation, it could have caused a reduction in consumer welfare.

## 6.2. Procompetitive Effects of Dual Governance.

There are also procompetitive aspects to duality. One of the most important is that it helps to ensure the survival of MasterCard, whose network is considerably smaller than Visa's. If issuing banks could be a member of only one of the two networks, it is likely that most would choose Visa. The Visa network would then grow further at the expense of MasterCard, and a "tipping point" might be reached at which nearly all issuers abandoned MasterCard so that they could join the Visa network. We would then be left with just one of the two networks, which cannot possibly yield an improvement in consumer welfare. (Not surprisingly, MasterCard was especially concerned that the Court might rule to end duality.)

In addition, it is not clear that duality leads to a net decrease in the intensity of competition between the Visa and MasterCard networks. The reason is that duality encourages the two associations to compete directly for issuers by making it easier for banks to switch part or all of their portfolios from one network to the other. Member banks use duality to extract concessions from the networks and pass a portion of these incentive payments on to consumers in the form of lower fees, lower interest rates, and increased rewards programs, thereby differentiating their cards from their competitors. For example, when banks consider new initiatives or the targeting

of a new group of consumers, Visa and MasterCard typically approach them to promote their networks and cards, and might offer incentive payments to support marketing or product testing in an effort to convince banks to go with one association over the other.

Finally, because issuers can (and many do) offer cards over both the Visa and MasterCard networks, they can benefit from initiatives taken by either association by changing the focus of their solicitations to consumers. This is analogous to a store's ability to promote competing brands of a product. Without duality, issuers would be able to take advantage only of innovations developed by the network of which they are members. To take advantage of a competing network's innovations, the issuer would have to convert its entire portfolio of cardholders over to that network. With duality, members of the associations benefit from the development, promotion, and adoption of new card features and technologies because these enable members to compete with other issuers, as well as with other card networks. This increases the intensity of competition between the two networks because one of the important ways that they compete is through, and for, issuing banks.

## 6.3. The Court's Opinion.

In its decision, the court found that "the Government has failed to prove that the governance structures of the Visa and MasterCard associations have resulted in a significant adverse effect on competition or consumer welfare."[23] The government had asserted that duality would reduce competition between the two networks, and thereby lead to less advertising, and a reduction in investments in innovation and in the development and introduction of new types of cards. The court found, however, that the government had failed "to establish causation between dual governance and any significant blunting of brand promotion or network and product innovations," and that such failure "is fatal to this claim."[24]

In fact, the court went further. It noted that with respect to duality, "defendants had no obligation to demonstrate its procompetitive effects. Nonetheless, the record evidence demonstrates that in some instances dual governance had procompetitive effects, most notably

[23] *United States v. Visa USA Inc., Visa International Corp., and Mastercard International Incorporated*, 163 F. Supp. 2d 322, at 327 (S.D.N.Y. Oct. 9, 2001).

[24] *United States v. Visa USA Inc.*, at 328.

by facilitating share-shifting competition by MasterCard."[25] Thus Visa and MasterCard have been free to retain duality – both in issuance and in governance.

## 7. Concluding Remarks.

In summary, the court ruled that the Visa and MasterCard associations could retain duality, but also ruled that their issuance restrictions were anticompetitive and had to be removed. Judge Jones' decision regarding the issuance restrictions was appealed by Visa and MasterCard, but was affirmed by the Second Circuit on September 17, 2003.[26] The associations then appealed to the Supreme Court, which denied *certiori* in October 2004.

What impact did the outcome of this case have on competition among payment card networks, and on the operation and growth of Visa and MasterCard? Remarkably little. In the end, duality remains in place, and the two networks have not been forced to change their systems of governance. MasterCard has since become a publicly traded corporation, but the member banks control most of the stock, and duality and governance have not been materially affected.[27]

On the other hand, Visa and MasterCard were forced to abandon their membership restrictions, so that banks issuing cards under either (or both) networks are now free to negotiate issuing agreements with American Express, Discover, or any other network. During the trial, Visa and MasterCard argued that this would lead to opportunistic behavior whereby some select banks would partner with, say, American Express at the expense of other banks in the network, thereby weakening the Visa and MasterCard networks. The government argued (and the court agreed) that removing the membership restrictions would strengthen the American Express and Discover networks by allowing them to compete more aggressively with MasterCard and Visa, resulting in increased output, product innovation and differentiation, and thus lower costs and greater choice for consumers. But in fact, American Express and Discover have remained largely closed networks. By the end of 2006, American Express had signed several issuance agreements (the largest with MBNA/Bank of America and Citibank), but only about 5.1 million

[25] *United States v. Visa USA Inc., Visa International Corp., and Mastercard International Incorporated*, 163 F. Supp. 2d 322 at 376 (S.D.N.Y. 2001).

[26] *United States v. Visa USA Inc., Visa International Corp., and MasterCard International Incorporated*, 163 F. Supp. 2d 322 (S.D.N.Y. 2001), *disposition affirmed,* 344 F.3d 229, No. 02-6074, 02-6076, 02-6078 (2d Cir. Sep. 17, 2003).

[27] Visa has announced its intention to become a publicly traded company as well.

Amex cards, out of a total of 48.1 million, had been issued by third-party banks. Furthermore, the 2006 transaction volume from these bank-issued Amex cards was only $7.81 billion out of a total Amex volume of $406.80 billion.[28]

Overall, the Visa and MasterCard networks do not appear to have suffered in any measurable way from American Express and Discover's ability to issue through banks. Furthermore, although output (as measured by charge volume or the numbers of cardholders) has continued to increase and there has been ongoing innovation and differentiation, there is no indication that this picture would look any different had the membership restrictions remained in place. Put simply, Visa and MasterCard's fears that many of their larger issuers would start issuing Amex cards have not come to pass. Why?

Recall that there are important advantages to being a closed network – e.g., a better ability to control standards and service quality, control over cardholder data, and potentially a better ability to cross-sell other products and services. In addition, it is important for American Express to maintain the identity of its payment cards as geared to higher-income and higher-spending consumers, and avoid cannibalization of its proprietary cards. If bank-issuers target consumers similar to Visa and MasterCard cardholders, American Express risks erosion of its premium brand; and if they target consumers similar to current Amex cardholders, there would be a greater risk of cannibalization. Thus when negotiating issuance agreements, American Express will quite naturally be very selective in its choice of banks and very demanding in the terms of any agreement. The larger and stronger banks (the ones that American Express might be interested in) will likewise be very demanding, as they have no interest in cannibalizing their Visa or MasterCard portfolios, and will want up-front payments and an interchange fee sufficient to offset the startup and ongoing costs of issuing American Express. As a result, we would expect that issuance agreements will be hard to come by, and that has indeed been the case.

Payment card networks are continuing to grow. Increasing numbers of merchants of all types (e.g., fast food outlets) have begun accepting payment cards, as they find their cost-effectiveness relative to cash or checks easily outweighs the merchant discount. As they gain wider merchant acceptance, and as the networks and their issuers continue to differentiate their card offerings, more consumers prefer using cards as a means of payment. All four networks are investing heavily in innovation, much of which is directed at what is currently one of the

---

[28] *The Nilson Report*, No. 872, January 2007.

greatest problems for continued network growth – fraud and other threats to card security. Another limit to network growth is saturation; in the U.S., most creditworthy consumers already hold several cards. As a result, the networks are investing heavily in international expansion, which has been progressing rapidly. The government's antitrust case has raised interesting issues, but so far has had little impact on the industry.

# References

Evans, David S., "The Antitrust Economics of Multi-Sided Platform Markets," *Yale Journal on Regulation*, 20 (2003): 325—381.

Evans, David S., and Richard Schmalensee, *Paying with Plastic*, 2nd Ed., Cambridge, MA: MIT Press, 2005.

Evans, David S., and Richard Schmalensee, "The Industrial Organization of Markets with Two-Sided Platforms," in *Issues in Competition Law and Policy*, W. Dale Collins, ed., ABA Press, forthcoming, 2007.

Pindyck, Robert S., and Daniel L. Rubinfeld, Microeconomics, 6th Ed., Upper Saddle River, NJ: Prentice-Hall, 2005.

Rochet, Jean-Charles, and Jean Tirole, "Cooperation among Competitors: Some Economics of Credit Card Associations," *RAND Journal of Economics*, 33 (Winter 2002): 549—570.

*United States v. Visa USA Inc., Visa International Corp., and MasterCard International Incorporated*, 163 F. Supp. 2d 322 (S.D.N.Y. 2001), *disposition affirmed,* 344 F.3d 229, No. 02-6074, 02-6076, 02-6078 (2d Cir. Sep. 17, 2003).

U.S. Department of Justice, *United States of America v. Visa U.S.A. Inc., Visa International Corp., and MasterCard International Incorporated*, Complaint for Equitable Relief for Violations of 15 U.S.C. §1, October 7, 1998.

U.S. Department of Justice and Federal Trade Commission, *Horizontal Merger Guidelines*, 1997.

**TABLE 1**
**Growth of Debit and Credit Card Use**

| | | Debit | | Total Signature-Based General Purpose | |
|---|---|---|---|---|---|
| | | **Purchase Volume ($billion)** | **Annual Growth Rate** | **Purchase Volume ($billion)** | **Annual Growth Rate** |
| [A] | 2000 | 209.98 | | 1,281.61 | |
| [B] | 2001 | 263.74 | 20.4% | 1,387.27 | 7.6% |
| [C] | 2002 | 317.78 | 17.0% | 1,514.38 | 8.4% |
| [D] | 2003 | 386.00 | 17.7% | 1,675.85 | 9.6% |
| [E] | 2004 | 459.64 | 16.0% | 1,890.97 | 11.4% |
| [F] | 2005 | 557.87 | 17.6% | 2,141.17 | 11.7% |
| [G] | 2006 | 657.45 | 15.1% | 2,406.23 | 11.0% |

**Sources:**
[A] *The Nilson Report,* No. 738, pp. 4, 7.
[B] *The Nilson Report,* No. 760, pp. 7-8.
[C] *The Nilson Report,* No. 784, pp. 7-8.
[D] *The Nilson Report,* No. 805, pp. 7-8.
[E] *The Nilson Report,* No. 828, pp. 7-8.
[F] *The Nilson Report,* No. 851, pp. 9-10.
[G] *The Nilson Report,* No. 874, pp. 8,11.

**TABLE 2**
**Market Shares by Total Charge Volume ($billion)**

| | 2006 | Percentage of Total | Excluding Debit |
|---|---|---|---|
| **Visa** | 1,596.44 | 53.6% | 43.7% |
| **Credit** | 876.78 | | |
| **Debit** | 719.66 | | |
| **MasterCard** | 862.35 | 28.9% | 30.4% |
| **Credit** | 610.19 | | |
| **Debit** | 252.15 | | |
| **American Express** | 406.80 | 13.7% | 20.3% |
| **Discover** | 113.55 | 3.8% | 5.7% |
| | | | |
| **Total Signature-Based Cards** | 2,979.14 | | |
| **Total Cards Excluding Debit** | 2,007.33 | | |

**Source**:
*The Nilson Report,* No. 874, pp. 8-11.