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# REVIEW

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## **Antitrust Issues and Payment Systems Networks**

*Proceedings of a Symposium held at the Federal Reserve Bank of St. Louis, March 30, 1995*

**Shared ATM Networks—  
The Antitrust Dimension**

**Payment Systems  
and Antitrust: Can  
the Opportunities for  
Network Competition  
be Recognized?**

**Antitrust and Payment  
Technologies**

**Commentaries**



# REVIEW

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## Editor's Introduction

This Review contains the proceedings of a symposium on antitrust issues in the operation of payment system networks, sponsored by the Federal Reserve Bank of St. Louis in March 1995. This article introduces the topic and provides an overview of the articles in this issue.

Antitrust enforcement in the banking industry, which dates from the early 1960s, has focused primarily on banking consolidation, not on the operation of payment systems. For several decades preceding the 1960s, the overriding objective of federal banking regulation had been the safety and soundness of banks. Restrictions on banking competition were part of a policy to limit the chances of bank failure.<sup>1</sup> Federal legislation and rulings of the U.S. Supreme Court in the early 1960s, however, changed this policy by making the banking industry subject to the antitrust laws.

The new legislation and court rulings sparked research on the effects of consolidation on competition among banks.<sup>2</sup> Research on the determinants of banking competition has focused primarily on the concentration of deposits or assets among banks with offices in local markets. In this framework, researchers assume that all banks in a market compete with each other for consumers, who are limited to services from banks in their market. Banks in markets with higher concentration are assumed to compete less aggressively for local customers.<sup>3</sup>

This framework is not adequate for dealing with some issues concerning banking competition. An efficient payment system requires that banks cooperate to process the payment orders of their depositors. The challenge of applying the principles of antitrust to the payments activities of banks involves permitting enough cooperation among banks to facili-

tate an efficient payment system, while preserving incentives for competitive behavior.

The development of clearinghouses in the United States illustrates how banks can improve the efficiency of the payment system through cooperation. Myers (1931, pp. 94-97) describes the problems that banks in New York City had in operating the payment system prior to the formation of the clearinghouse in that city in 1853. To settle for banknotes and checks drawn on other banks, each bank would send messengers with banknotes or checks to other banks to receive gold coin in exchange. Banks had to hold large inventories of gold to meet these demands and had to face the risks inherent in having their couriers moving about the city with large amounts of gold.<sup>4</sup> Bankers learned that they could settle their accounts more efficiently by exchanging bank notes and checks at a local clearinghouse, which also would hold the gold inventories of the clearinghouse members. Settlement among banks in the clearinghouse involved the movement of gold within the vaults of the clearinghouse.<sup>5</sup> In addition, banks coordinated their activities through clearinghouses when facing widespread runs by depositors.<sup>6</sup>

The cooperation of banks through clearinghouses also became a means to limit competition. Clearinghouses attempted to coordinate restrictions on the interest rates that banks paid on deposits.<sup>7</sup> At times, clearinghouses expelled member institutions that were considered to be competing for deposits or loans too aggressively or unfairly.<sup>8</sup>

Banks must cooperate to achieve efficiencies for themselves and their customers in operating networks of automated teller machines (ATMs). The first two articles in this issue examine the history of antitrust policy on mergers of ATM networks from

<sup>1</sup> White (1992), pp. 1-3.

<sup>2</sup> Kaufman, Mote and Rosenblum (1989).

<sup>3</sup> For a survey of these studies, see Gilbert (1984).

<sup>4</sup> Myers (1931), pp. 94-97.

<sup>5</sup> Cannon (1910).

<sup>6</sup> Dwyer and Gilbert (1989).

<sup>7</sup> Cox (1966).

<sup>8</sup> Tallman and Moen (1995).



the perspective of antitrust lawyers: Donald I. Baker, "Shared ATM Networks — The Antitrust Dimension" and David A. Balto, "Payment Systems and Antitrust: Can the Opportunities for Network Competition be Recognized?" Baker and Balto note that a series of ATM network mergers have resulted in virtual monopolies of ATM systems within large regions of the country. They interpret the actions of the antitrust authorities (including the Federal Reserve in its role of approving acquisitions by bank holding companies) as reflecting the view that regional ATM networks have characteristics of natural monopolies. Baker and Balto challenge the view that regional ATM networks are natural monopolies and argue for the benefits of preserving network competition. They cite cases of vigorous competition between ATM networks that ceased when networks merged. Baker ends his article with a warning that the policy of permitting the formation of ATM network monopolies over large regions will require involvement of government agents (including the Federal Reserve). Because banks can argue that participation in regional monopoly networks has become essential for remaining viable, the government will have to participate in settling disputes over the terms on which banks may join the networks.

The third article focuses on the privilege of payment systems to restrict their membership: Dennis W. Carlton and Alan S. Frankel, "Antitrust and Payment Technologies." Their article focuses largely on a court case involving Visa and Discover Card. Visa denied an application for membership by a depository institution owned by Discover Card, and Discover Card sued Visa. Their analysis of this case includes evidence that the entry of aggressive competitors into the Visa credit card network made the credit card industry more competitive.

One of the discussants, James J. McAndrews, examines the arguments of Carlton and Frankel concerning two aspects of the market for credit cards: interchange fees and duality. Interchange

fees involve the payments from banks that issued cards to the banks that received the deposits of the merchants that accepted the credit cards as means of payments. The issuing banks pay a fraction of the amounts purchased with the cards to the acquiring banks. The fraction of the purchase price withheld by the issuing bank is called the interchange fee. Carlton and Frankel examine the potential for members of credit card systems to extract monopoly profits from merchants through interchange fees. McAndrews challenges the argument that the existence of interchange fees necessarily reflects anti-competitive practices by members of a payment system.

Duality involves the freedom of banks to offer their customers access to more than one competing payment system. In the past Visa and MasterCard restricted duality. A bank that joined one card system was not permitted to join the other. The credit card systems removed this restriction and permitted duality in response to a legal challenge. Some antitrust analysts, including Baker and Balto, argue that duality reduces the degree of competition among payment systems. McAndrews argues that a policy of restricting duality may be ineffective as a means of promoting competition among credit card networks. To increase its market share, a network would have to induce banks to switch all of their credit card business from other networks, possibly disrupting relations with its merchant customers and card holders. The costs to banks of switching networks may be too high for effective competition among networks, operating under restrictions on duality.

Nicholas Economides, a second discussant, examines the competitive implications of payment system networks from the perspective of his research on other industries characterized as networks, such as the telephone industry. He suggests a solution to the natural monopoly issue that is being implemented in other network industries: connectivity. To illustrate, long-distance companies are authorized to route their customers' calls

over lines owned by other telephone companies, including their competitors. The equivalent arrangement in the operation of ATM and point-of-sale (POS) systems would be a network with no ATM or POS terminals in a given market area offering its payment services through the terminals of the existing regional monopoly network. This would be a new approach to dealing with the natural monopoly issue in the operation of payment systems.

The articles and discussant comments in this issue of the *Review* deal primarily with two components of the payment system—ATM networks and credit card systems. The articles and comments indicate that issues concerning competition among payments networks are far from settled. These issues are relevant for other components of the payment system, since all components of the payment system function as networks. In addition, development of new payment instruments, such as stored value cards, will have implications for the competitive pricing of payment services. These development will create new challenges for research.

— R. Alton Gilbert

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## Shared ATM Networks—The Antitrust Dimension

**Donald I. Baker**

### WHERE HAVE ALL THE NETWORKS GONE?

The automated teller machine (ATM) has become an increasingly more important part of the average modern consumer's financial life and for this reason presents an ever-more pressing set of difficult antitrust questions for networks, financial institutions and government decision-makers. Thirty-two years ago, the Supreme Court emphasized in its landmark *Philadelphia National Bank* decision that convenience and location were key to competition in the retail banking sector and ruled that "the fact that banking is a highly regulated industry critical to the Nation's welfare makes the play of competition not less important, but more so."<sup>1</sup> Today ATMs are the key to consumer convenience in banking, and yet it is not at all clear that the Supreme Court's *Philadelphia National Bank* message about the importance of competition has gotten through to the policymakers and courts making decisions about ATM networks.

In the last decade, large and successful ATM networks have been created, and such names as MAC, NYCE, STAR and HONOR have become familiar landmarks in different parts of the country. Meanwhile, the number of ATM network alternatives available in any particular region has continued to decrease.

Why has antitrust policy been such a random—and not particularly construc-

tive—factor as mergers have helped create dominant ATM networks in various regions of the country? Natural monopoly economics? Or just honest uncertainty and indecision? The Board of Governors has told us that "the largest regional networks now account for 80 percent of all regional ATM network transactions in the United States" and used this as a reason for approving another network merger in the Electronic Payments Services, Inc./National City case.<sup>2</sup>

Meanwhile, Department of Justice (DOJ) officials have influenced the course of events over the years with what they have said, done or—more often—not done. They have thus left the field largely to private plaintiffs, the private attorneys general who are necessarily more interested in winning battles than in establishing policies and precedents. It is hard to dig out of the resultant patchwork of DOJ press releases and Business Review Letters, private complaints and a few consent judgments any coherent vision of the modern ATM network as a competitor or of the markets in which networks operate. Probably the most serious effort at illumination was entirely private: Former U.S. Assistant Attorney General Thomas E. Kauper's long opinion, as a private arbitrator in the 1988 *First Texas/Pulse* arbitration.<sup>3</sup>

DOJ has not been a factor in the network merger area. Its most instructive enforcement effort—its 1994 complaint, consent decree and competitive impact statement in *United States v. Electronic Payments Services, Inc.*—dealt with the consequences (rather than the creation) of monopoly power.<sup>4</sup> It was DOJ's first antitrust enforcement action in the electronic funds transfer (EFT) sector in 17 years. Significantly, DOJ's complaint asserts that *branded ATM network access* is a relevant market and recognizes that ATM networks may enjoy substantial market power on a regional basis. (The DOJ

<sup>1</sup> *United States v. Philadelphia National Bank* in 374 United States Reports (U.S.) 321 (United States Supreme Court, 1963).

<sup>2</sup> *Banc One Corporation, et al.*, March 6, 1995, p.17 (the *EPS/National City* opinion). See also *Banc One Corp., Federal Reserve Bulletin*, vol. 81 (1995), pp.491-2. I have a client who is very interested in this proceeding. The views expressed here, however, are my own.

<sup>3</sup> *First Texas Assn./Financial Interchange* in 55 Antitrust & Trade Regulation Report 340 (1988). Professor Kauper wrote that opinion because the parties had agreed that he would do so as part of their arbitration agreement. (I was lead counsel for Pulse in that unique proceeding.)

<sup>4</sup> *United States v. Electronic Payments Services, Inc.*, No. 94-208 [U.S. District Court for the District of Delaware Apr. 21, 1994] 59 Federal Register (Fed. Reg.) 24711 (May 12, 1994).



consent decree enjoins one MAC network practice—concerning ATM driving—but leaves other restraints in place.)

By chance, the Federal Reserve System's most illuminating effort also involves the same ATM network—EPS or MAC—but the Board's extensive effort also turned out to be rather timid on both structural and conduct issues. On March 1, 1995, the Board of Governors announced that it was allowing a major expansion of this already dominant Pennsylvania network by allowing it to include National City Bank of Ohio in the ownership group. In a 28-page statement released five days later, the Board rejected the objection of a competing ATM network to "undue concentration of resources" with a statement that "the Board believes that, as a result of economic and market conditions, regions are likely to have one dominant ATM network."<sup>5</sup> At the same time, as Vice Chairman Alan Blinder's dissent made clear, the Board declined to follow up on the perceptive sets of questions concerning allegedly anticompetitive network rules that the Board staff had presented during its investigation. The Board seemed to take comfort from DOJ's prior inaction on some subjects in its consent decree proceeding.<sup>6</sup>

As observers and students, we can all be grateful to the MAC network for having been such a patron of antitrust learning in the ATM field. As critics and consumers, we may come away with some doubts about how well government agencies have done in meeting the challenge.

In sum, those sporadic government activities—plus a few private cases challenging leading ATM networks' pricing practices and operating rules—cannot be said to have added up to the kind of comprehensible body of law that *Philadelphia National Bank* spawned in the bank merger area. It simply has proved difficult for the Fed, DOJ and the courts to come to grips with the market realities and the competitive effects of these new and important financial enterprises—branded ATM networks. Like the federal budget deficit, this accumulated learning deficit may pose

larger burdens on the next generation of consumers and regulators: the real competitive issues are not likely to go away, even if we end up with largely an antitrust regime of rule making for regulated monopoly.

## NETWORK REALITIES: JOINT PRODUCTS, DIVERSE INTERESTS

Creation of any new network requires a great deal of cooperation among the proposed members. An ATM network is necessarily the reciprocal commitment by participants to issue cards, deploy machines, honor each others' cards at their machines and settle the resulting transactions.

A new network needs access to facilities for switching transactions among members, rules governing the terms and conditions on which members will honor each others' transactions and a recognizable trademark that will tell consumers where network services are available. The switching facilities may be (and often are) provided by a third-party processor under contract, whereas the rules and trademark may be created with extensive help from experienced professional advisors. Even so, somebody—presumably the investors and users—must work through a whole series of difficult business decisions to turn the network idea into an effective operational network.

The main reason for a depository institution to create or participate in such a network is competitive advantage—or at least the fear of being left behind in the changing payments marketplace. Different potential participants may have quite different visions of what they want a network to do for them. An aggressive growing bank may want a quite differentiated network offering its customers something not available from its sleepy competitors across the street or in the next town. Meanwhile, the competitor may want the opposite: a *universal or least-common denominator* network that guarantees the proverbial level playing field and ensures that nobody is left

<sup>5</sup> See *EPS/National City* opinion, p. 17.

<sup>6</sup> See *EPS/National City* opinion, p. 14.



behind in the new world of ATM-based banking convenience.<sup>7</sup> Thus there is a great deal of room for business and competitive disputes over what the network should have its members do, what it should do, and what it was going to charge members for doing it.

## ANTITRUST REALITIES

A shared ATM network requires collective action involving competitors. This can be in the form of: (1) a joint venture of participating institutions or (2) a series of contracts between a single system operator and the other participants in its network. Either way, the network arrangements fall within the "contract, combination, or conspiracy . . . in restraint of trade" rubric of section 1 of the Sherman Act.<sup>8</sup> Therefore, disputes among members of a network over business questions that in any way relate to competition can be framed as antitrust cases. Because the Clayton Act automatically awards treble damages, disputes are very likely to end up as antitrust cases, especially when the plaintiff's hand is strengthened by being able to show that the defendant is a regionally dominant network or controls such a network.<sup>9</sup> Effective network planning and antitrust counseling becomes ever more essential as regional ATM markets become more monopolistic.

The treatment of joint ventures has been one of the most confusing areas of antitrust jurisprudence in the United States, as well as in many foreign countries. Agreements among direct horizontal competitors have been treated severely under antitrust law and, where they involved pricing restraints or customer allocations, could be labeled cartels. Meanwhile, full integration by merger has generally been analyzed under market structure standards in which results depended primarily on the nature of the market and the parties' share of it. Joint ventures have historically—but unevenly—been subjected to cartel rules.<sup>10</sup> The modern trend, however, has been to look at joint

ventures that created something new under merger rules or under the fact-based rule of reason theory.<sup>11</sup> Market power (rather than form) is critical to such an inquiry.

This conclusion is not so confusing as it might seem at first blush. Today, it is possible to say both that: (1) under modern antitrust rules, it is likely that creation of a joint venture and corresponding rules will be looked at in a context that includes evaluation of market power and relevant market, and (2) we have very little idea precisely what definition of a relevant market will be used to evaluate the competitive effect of an ATM network merger or of a rule imposed by a major ATM network. A narrow market definition, of course, may produce high market shares (and even an inference of monopoly power), whereas a broad market definition may make all activity appear benign.

## DEFINING MARKETS FOR NETWORK SERVICES

Commentators, regulators, enforcers and the courts have not developed any consistent way of defining markets for ATM networks, or indeed for networks generally. They have not really figured out how to factor the brand element into the analysis of the relevant market for ATM networks. The presence of a brand would seem to make an ATM network very different from a joint venture pipeline or electric power pool (but not necessarily from a long distance telephone network or a credit card network). Both DOJ and the Fed have finally seemed to recognize this difference.

Recognizing the differences between brand and nonbrand markets is not just a matter of intellectual curiosity. Determination of the relevant market is often critical in antitrust litigation. The plaintiff tries to define the market as narrowly as possible to strengthen the claim that the defendant has market power or the ability to increase prices above the competitive level. The defendant argues that the market is almost

<sup>7</sup> In more than 20 states, smaller banks have successfully led populist political campaigns to mandate universality solutions by passing compulsory sharing legislation that requires each bank to share its ATM facilities with every other bank on equal, or nondiscriminatory terms. See Baker and Brandel (1995) ¶ 25.03 [4] [a].

<sup>8</sup> 15 United States Code (U.S.C.) § 1.

<sup>9</sup> 15 U.S.C. § 15.

<sup>10</sup> See, for example, *United States v. Topco Assocs.*, 405 U.S. 596 (1972); *United States v. Sealy, Inc.*, 388 U.S. 350 (1967) (territorial and price restraints); *United States v. Columbia Pictures Indus.*, 507 Federal Supplement (F. Supp.) 412, 430 [U.S. District Court for the Southern District of New York (S.D.N.Y.) 1980, affirmed in a memorandum decision (aff'd mem.), 659 Federal Reporter 2d Series (F.2d) 1063 U.S. Court of Appeals for the Second Circuit (2d Cir.) 1981].

<sup>11</sup> See generally, Chapter 21 "Special Antitrust Problems of Joint Ventures" in Baker and Brandel (1988), discussing especially *Broadcast Music, Inc. v. CBS*, 441 U.S. 79 (1979) and *NCAA v. Board of Regents*, 468 U.S. 85 (1984).

<sup>12</sup> See, for example, *CB&T Bancshares, Inc.* (1984), *Atlantic Bancorporation* (1983), cf. *Center Bancorporation* (1983) (the provision to unaffiliated financial institutions of data processing services, particularly the operation of an ATM network exchange), *Interstate Financial Corp.* (1983) (same).



<sup>13</sup> See, for example, *Citicorp* (1986) (provision of ATM services), *Sovran Financial Corp.* (1986) (same), *Barclays Bank PLC* (1985) (competition in the provision of ATM or POS services).

<sup>14</sup> 682 F. Supp. 269 (U.S. District Court for the District of New Jersey (D.N.J.), *aff'd mem.*, 853 F.2d 921 (3d Cir. 1988).

<sup>15</sup> *Id.* at 279 (emphasis in original).

<sup>16</sup> 59 Fed. Reg. 24713 (May 12, 1994). Similarly, in the *PULSE* arbitration, Professor Kauper rejected proposed markets of *all payment systems and all means of obtaining cash*, and instead identified a narrow retail market of ATM services on the grounds "that there is a significant group of ATM users who value the characteristics of ATMs and for whom other means of obtaining cash are not reasonable substitutes." He thus concluded that "ATMs are themselves a relevant, if fragile, market for antitrust purposes." 55 Trade Reg. Rep. (BNA) No. 1380, at 356.

<sup>17</sup> 59 Fed. Reg. 24712 (May 12, 1994). In *PULSE*, Professor Kauper identified a wholesale market of *network switching*, and concluded that *PULSE* had market power because "existing subnetworks, regional networks and national networks do not presently provide a reasonable substitute for the [switching] service *PULSE* provides to its members." *Id.* at 355. Other regional networks were found to be only potential alternatives for Texas ATM owners and substantial barriers (including the national networks' antiduality membership rules, the preference by banks for local networks and the fact that *PULSE* was very efficient and well established) were said

boundless. The relevant market typically is determined on the basis of a factual inquiry into the practical alternatives available to customers—which in the ATM network business can mean either institutions or their depositors.

The decisions on relevant ATM network markets have been all over the board. In its early orders approving bank holding companies' acquisitions of voting stock in shared EFT networks, the Federal Reserve Board typically defined the relevant market as *the provision of data processing services to unaffiliated financial institutions*.<sup>12</sup> By the mid-1980s, however, it began to define the markets with reference to consumer payment networks (but it never found a case in which a merger would create market power).<sup>13</sup> Similarly, in *The Treasurer, Inc. v. Philadelphia National Bank*, the District Court adopted a broad definition of the relevant product market in rejecting a private challenge to the acquisition of the Mellon Cashstream network by the owner and operator of the then proprietary MAC network.<sup>14</sup> The court defined the relevant product market as "electronic data processing to all ATMs plus all of those institutions which have unaffiliated ATM systems and those institutions which do not currently have ATMs but have the capacity to install them and utilize market technology to its fullest."<sup>15</sup>

Recently, the market definition issue has become more focused—thanks to DOJ, the Fed and the MAC network. In its *EPS* complaint, the Antitrust Division of the DOJ defined two relevant markets. The first was a market of *regional branded ATM access*, based on the needs of banks to provide their depositors "ubiquitous access to their accounts." It observed the following:

*While a bank can deploy its own ATMs, the advantage to a shared ATM network is that a bank's depositors will be able to use ATMs at many more locations than one bank alone could practicably support. The areas a bank seeks to serve through a shared ATM network*

*include the areas in which its depositors live, work and sleep, and the broader areas in which they move regularly. A bank's ability to offer its depositors access to other banks' ATMs, and thereby to offer its depositors convenient access to their accounts, is in most bankers' view necessary to attract and retain deposits. . . . Because no other service constitutes a reasonably close substitute for regional ATM network access, regional ATM networks constitutes a product market.*"<sup>16</sup>

The DOJ's second market was *ATM processing*, which involved "providing the data processing services and telecommunications facilities and services used" in providing regional ATM access.<sup>17</sup>

The Board revisited the market definition question in its recent *EPS/National City* decision:

*The Board notes that ATM networks have been recognized as encompassing separate product markets . . . . On the basis of these considerations and all the other facts of record, the Board concludes that network access, network services, and ATM processing constitute the relevant product markets for evaluating the competitive effects of this proposal.*"<sup>18</sup>

On the question of geographic market, the Board pointed to a Federal Reserve staff study that "suggests that the geographic market for network access is an area significantly larger than local banking markets."<sup>19</sup> The Board then added that "the markets for network services and ATM processing are at least regional."<sup>20</sup>

Ultimately, how a fact finder analyzes the relevant product market in cases involving bank networks depends in part on how much weight is accorded to the value of the network trademark. If one looks only to the data processing function of shared ATM networks, it may be plausible to conclude, as the Board of Governors has



in the past, that the data processing industry is unconcentrated, that entry barriers are low, and that there are numerous alternatives available to financial institutions that want to do their own data processing and that a network—even a dominant regional network—does not have market power. On the other hand, if the ATM network is viewed as the purveyor of a unique branded product marketed under the network logo, the fact finder should probably reach very different conclusions about the product market.

There have been very few new entries into the *branded ATM network* market anywhere in the country. It requires a critical mass of cards and ATMs. Participating institutions have a lot of reasons to be concerned about having to switch from one network to another—in part because it would involve reissuing cards, reassigning ATMs and, perhaps more important, reeducating customers.

Market analysis has been further complicated because networks are clearly subject to economies of both scope and scale. Indeed, DOJ noted the economies of ubiquity in analyzing ATM network arrangements back in the mid-1980s—a time when it was not particularly active as an antitrust enforcer.<sup>21</sup>

Continuing uncertainty as to what market concepts should be used to evaluate ATM network arrangements has no doubt caused government decisionmakers to be cautious about taking structural antitrust action in the ATM network area, while causing ATM networks to be cautious about accepting the risks of private litigation. Both effects have contributed to the regional monopolies that we have seen emerge in some key areas. Let us turn to that subject.

## MARKET STRUCTURE ISSUES—THE ROAD TO REGIONAL MONOPOLY

Many ATM networks were started by those who sought competitive advantage for themselves over local competitors or out-of-state institutions that could become

increasingly competitive from the distance in the plastic and electronics mode.

Despite this competitive advantage impetus in the early stages, network consolidation has turned out to be the trend. Two factors have led to this trend: (1) lack of government antitrust enforcement of ATM network mergers; and (2) *de facto* network mergers brought about by the ability of some banks to use antitrust boycott claims to force entry into competing networks and thereby defeat network exclusivity.

**Mergers.** Since the mid-1980s there has been tremendous consolidation among ATM networks. For a generation, DOJ and the Board of Governors have allowed every ATM network merger they reviewed, even when the result was a regional monopoly.<sup>22</sup> The most striking example was the 1988 MAC-Cashstream acquisition (in which Philadelphia National Bank acquired Mellon's branded ATM network). These two networks together controlled virtually all the branded ATMs in Pennsylvania, where they competed vigorously for members and transactions. Their merger was challenged—unsuccessfully—by a third network, the acquisition of which (by MAC) eliminated most competition in southern New Jersey.<sup>23</sup> The DOJ had declined to act, and the Board was not involved in the transaction.

In the 1990s, the Board of Governors has continued to approve major network mergers. An important 1994 example, scrutinized carefully by both the Board and DOJ, was the merger of NYCE and Yankee 24, which competed in parts of New England and were together joined by Citibank's ATM network. In approving the merger, the Board noted that "a number of factors should mitigate the loss of Yankee 24 . . . as an independent competitor."<sup>24</sup> In particular, the Board relied on the network's operating rules, which permit (1) third-party processors to participate; (2) members to participate in other networks; (3) card issuers to determine routing; and (4) institutions to participate on a nondiscriminatory basis. Of particular importance may be the card issuer routing rule, which might

to impede competition from the national networks, PLUS and CIRRUS. *Id.* at 353-4.

<sup>18</sup> *EPS/National City* opinion, p. 7 (footnotes omitted.)

<sup>19</sup> *Id.* at 8-9.

<sup>20</sup> *Id.* at 9.

<sup>21</sup> Former U.S. Assistant Attorney General Charles F. Rule suggested in 1985 that, in analyzing ATM network consolidation, the antitrust division focused more on the economies of ubiquity and the resulting consumer benefits achievable by widespread sharing of ATMs, and he indicated that the division would not challenge shared ATM networks based on size alone. See Charles F. Rule, "Antitrust Analysis of Joint Ventures in the Banking Industry — Evaluating Shared ATMs," Remarks Before the Federal Bar Association and American Association (May 23, 1985), reprinted in Baker and Brandel (2d. ed. 1988), at A-139.

<sup>22</sup> Balto, "Payments Systems and Antitrust: Can the Opportunities for Network Competition be Recognized?" speech before the D.C. Bar Association, January 25, 1995.

<sup>23</sup> *The Treasurer, Inc. v. Philadelphia National Bank*, 682 F. Supp. 269 (U.S. District Court for the District of New Jersey 1988), *aff'd mem.*, 853 F.2d 921 (3d Cir. 1988). The court dismissed the suit on the grounds that the plaintiff had suffered no antitrust injury as required under sections 4 and 16 of the Clayton Act and hence lacked standing to sue.

<sup>24</sup> Decision of Oct. 3, 1994, at 8.



permit banks to choose lower cost networks if the merged network attempted to raise prices.

Then, in the even more recent *EPS/National City* order, the Board seems to abandon regional network competition as an important factor, even where the network rules were open to more serious competitive questions. In this decision, the Board said:

*It has been recognized that MAC has a significant position in ATM network access services in certain states in the Mideast region. However, the significant position of a regional ATM network is not, standing alone, contrary to the public interest. Network externalities, such as the economies of ubiquity, tend to promote consolidation of regional ATM networks. As a result, in various geographic areas, like the Mideast region, dominant ATM networks have been emerging throughout the EFT industry. One recent study indicates that the ten largest regional networks now account for 80 percent of all regional ATM network transactions in the United States. In this light, the Board believes that, as a result of economic and market structure conditions, regions are likely to have one dominant ATM network.<sup>25</sup>*

Inaction by the DOJ and the regulators appears to have been driven by two factors: (1) recurring doubts over whether *branded network service* is, in fact, a relevant market; and (2) uncertainty about the economics of ubiquity—which loosely translated means, the more coverage the better. Under this concept, a merger between ATM systems seemed procompetitive because it increased the number of cardholders and ATMs in a network, improving accessibility for consumers. They do so at the price of eliminating competition for institutions that issue cards and deploy ATMs and creating a risk of monopoly pricing and market cornering.

In many regions, all this merger activity

leaves only the national ATM networks (PLUS and CIRRUS) as possible challengers to regionally dominant networks. Although the national networks offer a degree of coverage comparable to a dominant regional network, they depend for coverage on the same regional leaders which control the regional network and hence may be unlikely to be seen as vigorous competitive alternatives. The competitive impact statement in the *EPS/National City* case noted that national ATM networks are “by design networks of the last resort.”

## ***De facto Mergers Resulting From Boycott Claims***

Threats of private litigation based on “boycott” theories have also tended to reduce the differentiation of ATM networks. A member of one network may attempt to join a competing network, perhaps to gain some sort of competitive advantage. If it and others are admitted, the result may be a *de facto* merger between the two networks and a concomitant loss of inter-system competition. Because the antitrust standards have never been very clear and private litigation possess the threat of treble damages, these cases usually end up with the admission of the complaining nonmember—followed by similarly situated competitors.

This reality is well illustrated by what happened in Texas in 1982—when DOJ deferred action based on uncertainty. At the time, there were two separate, very competitive ATM networks in Texas: PULSE and MPACT. PULSE was a nonprofit joint venture and MPACT was a shared propriety network owned by Mercantile Texas Corporation. A large thrift institution, First Texas Savings and Loan Association, was an MPACT member and wanted to join PULSE, which had an exclusive membership rule. PULSE resisted this, and counsel for the parties eventually agreed that the issues would be resolved through the DOJ business review procedure, rather than litigation. PULSE asked whether the division would take enforcement action if it: (1) admitted as a

<sup>25</sup> *EPS/National City* opinion, at 17 (footnotes omitted).

<sup>26</sup> See Baxter, Cootner and Scott (1977).



member First Texas; (2) generally admitted members of competing networks; or (3) barred its members from participating in a competing network such as MPACT. U.S. Assistant Attorney General William F. Baxter, a leading author in the field, answered only the first question.<sup>26</sup> He said that the incremental consumer convenience that would result from admitting the savings and loan association appeared to outweigh the restraint on rivalry that might occur between the two competing networks.<sup>27</sup> The other two questions were not answered because DOJ did not consider them ripe for review. Thereafter, PULSE admitted virtually all the depository institutions in Texas, and DOJ did not do anything about it. Thus PULSE became the universal network in Texas, and MPACT became a substantial competitive participant in it.

Similarly in 1986, BayBanks, at the time operator of one of the largest proprietary ATM networks in the United States, sued Yankee 24, a new joint venture ATM network, when it was denied access to Yankee 24.<sup>28</sup> At the time, competition between the established BayBanks and the nascent shared network was very active. Yankee 24 offered an aggressive pricing structure to attract banks, and both networks offered low fees to consumers to attract accounts. The parties settled; BayBanks was admitted, and Yankee 24 eliminated its incentive pricing structure.<sup>29</sup>

The recent, high-visibility *Dean Witter/Visa* decision by the 10th U.S. Circuit Court of Appeals may provide much needed guidance in this area.<sup>30</sup> The case involved a boycott challenge to a Visa bylaw that denied membership to any institution that issues Discover cards, American Express cards "or any other card deemed competitive by the Board of Directors." After long pretrial sparring, the case went to trial in fall 1992 and the plaintiff prevailed before the jury. In September 1994, the appellate court reversed because it determined that Visa lacked market power in a properly defined market (in which Visa was treated as separate from MasterCard) and because

the Visa rule promoted intersystem competition in card issuance. If followed, this decision should reduce the likelihood that a competitor can use the threat of a boycott claim to reduce the ability of competing networks to differentiate themselves. This message may be a little late in the branded ATM network markets where only one alternative exists.

## EMERGENCE OF MONOPOLY NETWORKS PRODUCES A BIGGER REGULATORY ROLE FOR ANTITRUST ENFORCERS AND COURTS

Modern antitrust analysis of joint ventures since *Broadcast Music* has tended to turn very heavily on market power considerations under the rule of reason.<sup>31</sup> In simplest terms, this means that a small network without market power should be able to do things that a big network with market power would be prohibited from doing. The message has great practical importance as fewer and fewer ATM networks are becoming ever more dominant in their regional markets.

The message was reemphasized last year when, after more than a generation of silence, the antitrust division reentered the *EFT network enforcement* market with a suit against the largest ATM network in the United States—MAC, operated by EPS.<sup>32</sup> Originally started by Philadelphia National Bank (the most famous antitrust defendant in the financial sector), EPS had become a joint venture of four leading Pennsylvania and Ohio bank holding companies. It had approximately a 90 percent market share in Pennsylvania and a strong position in adjacent mid-Atlantic states (as a result, in part, of prior mergers that DOJ had not challenged). The DOJ complaint alleged that EPS barred banks that belonged to its network from buying data processing service from third parties and used its control over ATM processing to prevent member banks from connecting with competing networks. It alleged violations under both sections 1 and 2 of the Sherman

<sup>27</sup> See also letter from William F. Baxter, assistant attorney general, antitrust division, to Donald I. Baker (Aug. 3, 1983), discussed in Baker and Brandel (1995) ¶ 24.06 [3].

<sup>28</sup> See *BayBanks, Inc. v. New England Network, Inc.*, No. 86-3532-K (U.S. District court for the District of Massachusetts) filed Dec. 9, 1986). I was one of the defendants' attorneys in this proceeding.

<sup>29</sup> Similar access issues have been raised by nonbank banks such as Merrill-Lynch, American Express and Sears, seeking access to ATM networks. These cases were settled with the admission of the nonbank banks to the network. See *Household Bank, F.S.B. v. Cirrus System, Inc.*, No. 87C2353 [filed U.S. District Court for the Northern District of Illinois, Mar. 2, 1987]; *Household Bank, F.S.B. v. Money Station, Inc.*, No. C-2-88-0274 [filed U.S. District Court for the Southern District of Ohio, Mar. 2, 1988].

In 1993, BuyPass Corp., the owner of the MAC ATM network, sued the NYCE ATM network seeking access for its processing subsidiary. The case was settled with an agreement that both MAC and NYCE could act as a third-party processor in each other's network. See *BuyPass Corp. v. New York Switch Corp.*, No. 93-CV-3201 [U.S. District Court for the Eastern District of Pennsylvania filed June 15, 1993].

<sup>30</sup> *SCFC ILC, Inc. v. VISA U.S.A.*, 36 F.3d 958 (10th Cir. 1994).

<sup>31</sup> *Broadcast Music, Inc. v. CBS*, 441 U.S. 1 (1979).

<sup>32</sup> *United States v. Electronic Payments Services, Inc.*, No. 94-208 (D. Del. Apr. 21,



Act. The tying violation alleged that *regional ATM network access* and *ATM processing* were separate products and that MAC's rules and practices effectively forced its customers to purchase ATM processing from EPS. The monopolization claim alleged that EPS "willfully has maintained its monopoly power in the market for regional ATM network access in the affected states through exclusionary practices."

The consent decree required EPS to open its network to independent ATM processors on a nondiscriminatory basis. EPS was permitted to provide volume discounts for processing, but these must be provided on a nondiscriminatory basis. EPS was also required to sell its network services "at prices that will not vary with the processor selected" and to provide a more open environment for third-party processors.

The ATM driving rule was only one of a series of EPS rules that seemed to be clear restraints on competition both by third-party processors and other networks, including the national networks. The parallel of the challenged rule to the Supreme Court's decision in *Eastman Kodak v. Image Technical Services, Inc.* is obvious.<sup>33</sup> There Kodak tied equipment servicing to its sales of new equipment but provided an exception for those who did self-servicing internally. The Supreme Court sustained the plaintiffs' tie-in claim against the defendants' summary judgment motion. Thus what we see in *EPS/National City* is DOJ singling out one particular restraint and securing its elimination by consent decree in the context of substantial monopoly power in the *branded ATM network access* market that the government alleged.

One can anticipate more of this type of litigation from the DOJ, private parties and probably the state attorneys general. Any dominant network rule that discriminates against a particular class of market participants (for example, third-party data processors) is an obvious target, as are price discriminations and restraints by a monopoly network on participants using

competitive networks. All of these would seem to be classic actions of the types punishable under sections 1 and 2 of the Sherman Act when undertaken by a dominant firm.

## Major Antitrust Conflicts Among Networks

The potential for conflict between (1) a dominant network; and (2) network participants, network competitors, network users or government enforcers falls into a variety of categories. They include the following:

1. interchange fees and routing rules;
2. direct customer charge on network transactions, acquirer surcharges and issuer foreign fees;
3. routing rules;
4. switch fees in for-profit networks;
5. trademark usage rules and fees;
6. processing rules (including those related to third-party processors);
7. use of nonbank cards and ATMs on a network; and
8. scope of network services.

Let us look at each of these in turn.

**Interchange fees.** ATM networks, like other payment systems, have traditionally provided an interchange fee set by the network to encourage activities that the network believes need subsidizing. In an ATM network, the interchange fee is paid by the card issuer to the ATM owner. Otherwise the ATM owner has no incentive to allow a foreign card in its machine, and the card issuer has no guaranteed outlet for its cards. Stated more generally, the ATM network interchange fee is designed to encourage acquirers to commit their ATMs to the network. ATM network interchange fees have been challenged at least once by a private antitrust plaintiff in the 1988 *First Texas-PULSE* arbitration as horizontal price fixing or a card issuers' cartel. The arbitrator, however, held that the fee was not illegal as long as the individual ATM

1994), 59 Fed. Reg. 24711 (May 12, 1994).

<sup>33</sup> 504 U.S. 451 (1992).

<sup>34</sup> *First Texas Savings Assn./Financial Interchange, Inc.*, 55 Antitrust & Trade Reg. Rep. 340 (1988) (Thomas E. Kauper, arbitrator).

<sup>35</sup> *Valley Bank of Nevada v. Plus Systems, Inc.*, 749 F. Supp. 223 (U.S. District Court for the District of Nevada (D. Nev.) 1989) affirmed 914 F.2d 1186 (9th Cir. 1990) (Commerce Clause litigation).

<sup>36</sup> *Southtrust Corporation v. PLUS System*, CV-93-P-2291-S (U.S. District Court for the Northern District of Alabama 1994).



owner was free to levy surcharges or offer rebates.<sup>34</sup>

**Regulating direct customer charges for network transactions—ATM surcharges and issuer fees.** Any ATM network has a legitimate (but not necessarily unlimited) interest when participants levy any transaction fees that may substantially reduce network volume. These fees fall into two categories: *surcharges* charged by ATM owners and *foreign fees* charged by card issuers. A network prohibition on individual pricing by participants is certainly subject to a price fixing claim and must be defended by the network on the *Broadcast Music* ground that uniform pricing is necessary to make the joint network service work. Interestingly, many ATM networks have sought to restrict surcharges, but apparently no network has yet dealt with the parallel subject of issuer fees. The two seem to fall logically in tandem. Higher issuer fees may cause issuance of additional cards, whereas surcharges may encourage deployment of additional ATMs. They may or may not generate additional network volume (or may reduce it) depending on the level of the fees and consumers' response to them. To prevail in a challenge to a surcharge or issuer fee prohibition and to pass muster under *Broadcast Music*, the network will have to make a reasonable showing that the prohibited (or regulated) fee is likely to reduce network volume substantially or reduce the value of the network trademark substantially. Litigation to date has been indecisive.<sup>35</sup> We anticipate, however, that more is to follow.<sup>36</sup>

**Routing rules.** ATM networks have also developed compulsory routing rules that tell acquirers (and sometimes the issuer, too) how to route every transaction. These two subjects are closely related because if both the ATM and the card are eligible to participate in two separate networks, then the *acquirer* has every incentive to send the transaction back home by whichever network has the higher interchange fees. This is not necessarily a

form of competition that antitrust law should seek to encourage because the ultimate effect may be higher charges to consumers. By contrast, an issuer routing rule gives the card issuer, which pays the switch and interchange fees, freedom to designate the routing in such circumstances, presumably based on both fees and efficiency.

In any event, serious antitrust concerns are raised if a monopoly network—or even a very strong one—insists that all transactions be routed by it wherever possible. This makes the creation of a new network competitor very difficult indeed and should probably be illegal on a tie-in or boycott theory.<sup>37</sup> The lower courts have also generally applied the rule of reason in cases involving boycott challenges to compulsory routing rules. The most illuminating is a D.C. Circuit decision by Judges Robert Bork and Ruth Bader Ginsberg, who applied a rule of reason analysis to routing rules in the household moving industry. In this case the defendant had a clear free riding problem and lacked market power.<sup>38</sup>

Although ATM routing rules have generated considerable controversy, only one private case, *BayBanks, Inc. v. New England Network, Inc.*, has challenged a network routing rule on antitrust grounds.<sup>39</sup> In that case, BayBanks, the operator of the XPress 24 network in Massachusetts, sued the Yankee 24 network and several New England banks that were instrumental in organizing the network. Bay Banks challenged a compulsory routing rule that required the major organizing banks to run all the transactions between them through the network switch, rather than a subswitch. In March 1988, the parties settled the case, thus leaving these interesting antitrust issues unresolved.

**Switch fees.** Obviously a network switch has to be supported, and therefore a reasonable switch fee is easily within the *Broadcast Music* standard. In the context of a nonprofit joint venture, any switch fee presents little problem for antitrust. The situation is quite different where there is a proprietary network with market power that is owned

<sup>37</sup> See Baker and Brandel (1988) §23.07[3][6] (Bypass and Routing).

<sup>38</sup> *Rothery Storage & Van Co. v. Atlas Van Lines*, 792 F.2d 710 [U.S. Court of Appeals for the District of Columbia Circuit (D.C. Cir. 1986) petition for certiorari denied 479 U.S. 1033 (1987)]. This case involved a rule of Atlas Van Lines that required that any Atlas order received by one of its carrier agents be transported under the operating authority of Atlas. The rule was generated by deregulation of the moving industry in 1979 that made it easier for the local carrier agents to obtain their own interstate authority and compete against the national van lines (such as Atlas). Thus carrier agents could free-ride on Atlas' efforts while cutting prices to attract business that otherwise would have gone to the van line. In response to this threat, Atlas imposed a rule that required its carrier agents, if they chose to take their own orders, to do so only through a separately owned enterprise using its own operating authority; the new entity could not use the facilities or services of Atlas, nor could it use the Atlas name. Applying the rule of reason, the D.C. Circuit concluded that the restraint was lawful—both because the defendant lacked market power and because the rule was justified as a legitimate attempt by Atlas to eliminate free-riding. 792 F.2d at 229.

<sup>39</sup> No. 86-3532-K (D. Mass. filed Dec. 9, 1986). As discussed below, the complaint also challenged the trademark license fee that Yankee 24 proposed to levy on transactions that could have been routed to the Yankee 24 switch.



by a few major banking institutions (or even a single one) but necessarily used by everyone. In this context, the switch may look like a monopoly toll bridge, and the switch fee may be characterized as *opportunistic gouging*, or at least an important revenue source for the shareholder-owners. In these circumstances, a very high switch fee could be credibly attacked by nonowner users or DOJ under a horizontal price fixing, monopolistic price squeeze or essential facility theory under the Sherman Act.<sup>40</sup> Similarly, a fee that discriminated strongly against some group (for example, small banks or out-of-state issuers) could also be subject to a monopolistic abuse theory under section 2 of the Sherman Act. As more regional ATM networks become monopolies, their switch fees are likely to create a more pressing antitrust issue.

**Trademark usage rules and fees.** An ATM network has to create a consumer product and establish the organization and infrastructure necessary to make it work. It is logical therefore for the network to view its principal asset—namely, its service mark—as a device for supporting the promotional costs of the network.<sup>41</sup> Several service mark licensing approaches have been tried, including a royalty on (1) every card accessing the network, (2) every ATM accessing the network and (3) every network transaction, regardless of whether it uses the network switch.

The per-transaction royalty fee has had an uneven history. When Connecticut Switch expanded in 1986 to become the New England Network and adopted a service-mark licensing fee of several cents per transaction, BayBanks promptly sued, challenging this fee as price-fixing and monopolization.<sup>42</sup> By contrast, in the *EPS* consent decree, DOJ allowed the defendant to reserve the right to charge a per-transaction trademark fee that was as high as its switch fee—a right that would obviously deter routing of transactions to other switches and thereby deter entry of a new network.

Even if a high per-transaction fee constitutes an unreasonable restraint when

imposed by a *monopoly* network bent on deterring new entry, a *competitive* network with a valuable trademark should be able to charge license fees on any of a variety of bases. Competition from another network should ensure that such fees would not be exorbitant.

**Processing rules.** A network needs to have detailed specifications and rules to operate. As long as these are objective or technically defensible, there should be no antitrust problems. However, the processing rules can raise the kinds of issues that arise in standards-making cases under the antitrust laws. From time to time, certain products have been arbitrarily excluded from certification or the certification process has been skewed to favor certain enterprises over others.<sup>43</sup>

Moreover, a processing rule that requires all ATM transactions to be driven by the network switch is plainly bad if imposed by a monopoly (or even a very powerful) branded ATM network. This is exactly what DOJ ordered eliminated in the *EPS/National City* consent decree on tie-in and monopolization theories.

**Nonbank ATMs.** Increasingly, supermarkets and third-party processors are deploying ATMs, and a variety of merchants are deploying POS arrangements with cash back features that function similarly to ATMs. Attempts by traditional banking organizations controlling a joint venture network to exclude nonbank ATM deployers from the network will raise serious boycott questions, if the network has a significant degree of market power in its market.<sup>44</sup> In a monopoly network situation the compulsory access principles of *St. Louis Terminal Railroad* and its progeny may come into play, as we shall see shortly.<sup>45</sup>

**Scope of network services.** In the network joint venture context, intense disputes can exist over expansion of a joint venture's network services. Often, the joint venture offers small institutions certain things that large institutions can offer alone. This type of dispute is most likely to occur

<sup>40</sup> See *Delaware & Hudson Ry. Co. v. Consolidated Rail Corp.*, 902 F.2d 174, 179-80 (2d Cir. 1990), cert. denied 500 U.S. 928 (1991) (high rate treated as an access issue).

<sup>41</sup> See Baker and Brandel (1995) ¶ 24.07[4](c).

<sup>42</sup> This practice was abandoned apparently as part of the BayBanks settlement.

<sup>43</sup> See *Radiant Burners, Inc. v. Peoples' Gas Light & Coke Co.*, 364 U.S. 656 (1961).

<sup>44</sup> See *Associated Press v. United States*, 326 U.S. 1 (1945) and its progeny. I have a lot of difficulty with the sweep of the *Associated Press* rule. See Baker (1993), hereinafter *Compulsory Access*.

<sup>45</sup> *United States v. Terminal Railroad Assn.*, 224 U.S. 383 (1912).



openly in a nonprofit joint venture in which different sizes and types of institutions have board representation. It has occasionally turned into an antitrust dispute. (My favorite example was Citibank's mid-1970s case against the MasterCard joint venture to enjoin it from issuing traveler's checks, a market in which Citibank—a leading MasterCard issuer—was a major player. The case never went to trial.)

Antitrust conflicts of the types just outlined are inevitable in an environment where diverse competitive interests must depend on a facility for which there are no clear alternatives—especially when it is controlled by a small group of competitors. The dominant network is necessarily subject to stricter antitrust rules when aggrieved competitors have fewer network alternatives. By allowing dominant regional ATM networks, the DOJ and the Federal Reserve have simply created a larger field of antitrust risks for more networks. More business disputes have been taken out of the market and will be switched—potentially—to the courthouse, where treble damages and attorneys' fees under the Clayton Act will encourage private plaintiffs to frame their claims in antitrust terms whenever possible. We have seen this in a good many private antitrust cases challenging ATM network practices during the past decade—including cases brought by large and aggressive banks against networks. In such an environment, antitrust planning is a prudent exercise for any important ATM network and its major participants. Most major ATM networks are largely controlled by their leading institutions, which issue the bulk of the network cards and deploy the bulk of ATMs. In some instances (for example, EPS), the network is a profitable enterprise owned by a few of its largest members, which, as shareholders, elect all the directors and collect all the profits. In others (for example, Pulse), the network is a nonprofit entity with election of directors on a town meeting basis,

but with guaranteed seats for certain founding members.

## *Advance Planning by Networks to Reduce Antitrust Risks*

My suggestions for antitrust planning by a dominant network fall into three general areas:

- More representative corporate governance arrangements;
- Greater flexibility in use of the network facilities or competitive alternatives by participants; and
- Use of alternative dispute resolution procedures for handling antitrust disputes among network participants.

None of these steps depends on the others, but they work well as a package.

**Corporate Governance.** Whenever a network board of directors (or the management that it has elected) is obliged to make a decision that affects different network participants in different ways, the decision becomes easier to defend if all affected interests were represented in the decision making process. Thus, in principle, it is advisable to have small institutions represented on the board or even to have public directors elected from outside the ownership or network participants.<sup>46</sup>

**Operational Flexibility.** A dominant network should be careful that its technical standards are technically justifiable—and not more restrictive of competition among users than technically necessary. The network needs to be especially careful that technical justifications are not just a guise for what is really a monopoly rent enhancement scheme.<sup>47</sup> Giving members operational flexibility to route transactions over alternative networks is likely to be a particularly important operational issue in the case of regional monopoly ATM

<sup>46</sup> See Baker and Brandel (1995) ¶ 24.08. Interestingly, when the New York Stock Exchange (a very dominant network) came under heavy antitrust and political fire for its rate fixing on broker commissions in the late 1960s, the exchange began appointing distinguished public directors, who did not represent NYSE firms.

<sup>47</sup> See *United States v. Electronic Payments Services Inc.* (1994) and generally Baker and Brandel (1995) ¶¶ 24.07 [2] and [3].



networks. This is an issue of not only computer programs and switches, but also fee structures for gateways and trademark usage on bypass transactions.

**Alternative Dispute Resolution.** In 1985, the Supreme Court opened the door to arbitration of antitrust cases between those in a contractual relationship.<sup>48</sup> As a result, an ATM network—even a monopoly—can institute a reasonable arbitration program as part of its membership and participation arrangements; it can even appoint a particular arbitrator or panel to hear cases. As long as the arbitrator or panel is neutral, industry expertise can be injected into the process—and some greater certainty can be generated in the context of proceedings that have a limited time for decision. The process is likely to be successful in reducing the cost and uncertainty of disputes only if a lot of care goes into designing the process and selecting arbitration panels.<sup>49</sup>

Of course, arbitration only provides assistance where the antitrust dispute is among a network and its participants.<sup>50</sup> By contrast, if the charge is discrimination against an outsider (for example, a nonmember financial institution, another network or a third-party processor) then the antitrust case will go to the federal courthouse. The same is true if the practice is being challenged by DOJ or a state attorney general.

To conclude, any dominant ATM network faces a real antitrust exposure; it should do everything possible to avoid being arbitrary in its decisions or the way it goes about making them.

## CONCLUSION: THE PAST AS PROLOGUE?

It is fitting—and indeed almost Biblical—that we should come to St. Louis for today's discussion. For it is out of your history here that the next chapter of the ATM network antitrust history may yet be written.<sup>51</sup>

When the railroads came west, they came to St. Louis, and this crucial crossing

point on the Great River became a vital bridgehead and terminal. Some 24 railroads connected here. Through a series of acquisitions, a smaller group of presumably richer railroads extinguished the competing ferry service and acquired all the rail links to the two big bridges across the Mississippi. Their joint venture company (owned by 14 railroads) monopolized the East St. Louis traffic that had no alternatives, while being competitive for traffic that could use the bridges upriver at Alton, Illinois or downriver at Memphis. The Terminal Railroad Association of St. Louis (Terminal Company) discriminated against nonowner railroads. Into this thicket charged President William Howard Taft's Department of Justice and urged that the monopoly Terminal Company be broken up into competitive pieces. It was a simpler age, and the DOJ probably proceeded without economic counsel, let alone expert witnesses armed with intriguing regression analyses.

The two district judges who heard the evidence here in St. Louis could not decide what to do and issued no opinion or findings. The government appealed.

The U.S. Supreme Court thus became the court of first (as well as last) resort in the case. In its celebrated *Terminal Railroad Assn.* decision of 1912, the court decided that breaking up the monopoly (as DOJ had urged) would be inefficient given the local terrain. Instead, the court decided that the Terminal Company should be restructured so that all market participants could become owners—or, if they preferred, could be offered access to the terminal, as the Court said, "on as nearly an equal plane as may be with respect to expenses and charges" as the owners.<sup>52</sup>

The *Terminal Railroad Assn.* principle has been applied to a variety of regional monopoly facilities—including a fish market, several tobacco markets, sports stadiums, and even a couple of Fed-supported regional automated clearinghouse facilities.<sup>53</sup> It remains a vital principle in today's world of ever more sophisticated networks. Yet it is a second best principle: competition

<sup>48</sup> *Mitsubishi Motors Corp. v. Soler Chrysler-Plymouth, Inc.*, 473 U.S. 614 (1985).

<sup>49</sup> See, Baker and Stabile (1993).

<sup>50</sup> There is one famous example of an antitrust arbitration of a major ATM network dispute. *The First Texas/Financial Interchange, Inc. Arbitration*, 55 ATRR 420 (1988). I worked on it for the respondent network.

<sup>51</sup> See Baker (1993) at 1020-25, discussing *United States v. Terminal Railroad Assn.*, 224 U.S. 383 (1912).

<sup>52</sup> 224 U.S. at 409.

<sup>53</sup> See Baker and Brandel (1995), ¶ 22.03[4] [c], discussing *U.S. v. Rocky Mountain Automated Clearing House Assn.*, C.A. No. 77-391 (U.S. District Court for Colorado 1977); and *U.S. v. California Automated Clearing House Assn.*, C.A. No. 77-1463-LTZ (U.S. District Court for the North District of California 1977).



among networks is generally preferable to having a federal court sit as a public utility commission to restructure and supervise the terms of access to a network.<sup>54</sup>

*Terminal Railroad* is still the best principle that we have to deal with the situation where natural monopoly economics or government decisions based on natural monopoly assumptions have created a joint venture monopoly for which there is no likely substitute. Because the Board of Governors now seems to assume that regional monopoly is a way of life in ATM networks, we can expect to hear a lot more about *Terminal Railroad*—as those who have been excluded from ownership in the monopolies seek ownership rights or a position “on as nearly an equal plane” with those whom the Fed and the DOJ have authorized to own these vital electronic bridgeheads.

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- The Bank of New York Company, Inc., *Federal Reserve Bulletin*, vol. 80 (1994), pp. 1107-11.

<sup>54</sup> See Baker (1993), especially 1076-8.







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## Payment Systems and Antitrust: Can the Opportunities For Network Competition Be Recognized?

**David A. Balto**

**V**iews of payment systems competition have evolved during the past generation. When automated teller machine (ATM) networks were first created in the 1970s, policymakers considered two models for these emerging networks: (1) a monopoly/public utility network model, with open access obligations and (potentially) some form of regulation or (2) a competing network model, with numerous networks competing in a lightly regulated environment. This article describes how these visions of network competition have evolved. Even though the network competition model was chosen in the 1970s, because of a history of nonenforcement by antitrust agencies and regulators, it appears that by the close of this century the monopoly/public utility model may be victorious. This article describes how that change occurred and considers whether it is appropriate.

The first section of the article describes general trends in antitrust enforcement affecting payment systems networks since the 1970s. The next

section examines the framework applied to antitrust analysis of ATM network mergers and is followed by a section applying this analysis to two recent ATM network mergers. The article examines how the monopoly/public utility model appears to have prevailed in the ATM network merger context.

### THE SEARCH FOR PAYMENT SYSTEMS COMPETITION: TRENDS IN ENFORCEMENT

#### *The 1970s — Providing the Opportunities for Network Competition in New Markets*

As the technology for automated payment systems arose, Congress perceived the need to address the creation of these systems in a single forum, and created the National Commission on Electronic Funds Transfer (NCEFT). The Antitrust Division of the Department of Justice (the division) played an important role in informing the NCEFT whether and in what form competition could arise in the newly formed networks.

One important question addressed by the NCEFT was whether these networks would be natural monopolies because of the substantial processing efficiencies involved. At the time, some commentators argued that, because a single network could serve all ATMs at lower cost, these networks were natural monopolies. Based on that conclusion, they argued that the networks should be open, that is, compelled to share their facilities with all financial institutions in a given area.

In proceedings before the NCEFT, the antitrust division opposed the concept of mandatory sharing, in particular because it would deter the incentives to create competing networks.<sup>1</sup> The NCEFT adopted the division's view. It observed that mandatory sharing "would inevitably

<sup>1</sup> See U.S. Department of Justice (1977).



result in fewer competitors... . Maximum competition usually spells rapid technological improvement and lower prices to consumers."<sup>2</sup> Thus the commission expressly rejected any sharing requirement, based on its assessment that there was potential for the creation of a number of competing networks.<sup>3</sup>

The division continued to advocate its vision of network competition in a number of forums. It actively opposed the adoption of state sharing statutes.<sup>4</sup> The division argued that mandatory sharing would undermine the incentive to create networks in the first place by creating a free rider problem. That is, if the creator of a network knew it would have to share ownership with others and share the fruits of its efforts after the network succeeded, it might be deterred from creating the network in the first place. Moreover, the division suggested that mandatory sharing would lead to the formation of monopoly networks.

Despite the division's intervention, many states adopted various forms of mandatory sharing. Since these laws require a network to admit any bank as a member, they dampened the opportunity for intersystem competition. More recent economic analysis of these sharing laws suggests that the division was correct in suggesting that mandatory sharing would not serve the interests of consumers. In those states with mandatory sharing laws, output in terms of ATM deployment and card usage is less than in those states that do not require sharing.<sup>5</sup>

In the 1970s, scores of ATM networks were created. When these networks appeared to interfere with the potential for network competition, for example, by being too large or overinclusive, the division raised concerns and threatened enforcement action. In 1977, the division issued a business review letter refusing to clear a proposed statewide electronic funds transfer (EFT) network in Nebraska, primarily because of the proposed venture's all-inclusive nature.<sup>6</sup> At the time of the letter, the proposed network comprised 66 percent of the commercial

banks in the state, which collectively accounted for 86 percent of deposits. The network attempted to justify its size based on the amount of capital required, the degree of risk, and the economies of scale involved in operating an EFT system. The division concluded that these efficiencies did not necessarily justify the all-inclusive nature of the proposed network.<sup>7</sup> Because of the division's action, competing networks were created in Nebraska, and other networks avoided becoming over-inclusive.

## *The 1980s—Economics of Ubiquity Take Center Stage*

In the 1980s, the division basically disappeared from the enforcement radar in payment systems. The lack of enforcement, especially in the merger area, was based on the recognition that there were efficiencies from the consolidation of ATM networks. Charles Rule, former assistant attorney general of the Antitrust Division, discussed this factor in a 1985 speech. Rule stated that the division was focusing more on the economies of ubiquity and the resulting consumer benefits achievable by widespread sharing of ATMs. Rule observed that the consolidation of ATM networks benefits consumers by, among other things, increasing the available ATMs in a single network; similarly, increasing the number of cardholders tends to increase the deployment of ATMs. Thus Rule indicated that the division would not challenge the creation or merger of shared ATM networks based on size alone.<sup>8</sup>

Unsurprisingly, the division did not challenge, or even apparently investigate, any ATM mergers during the 1980s. The Federal Reserve Board approved every ATM merger before it because it viewed the ATM network as primarily a system of computers and consequently focused almost exclusively on the networks' "back office" operations when approving these mergers.<sup>9</sup>

Perhaps the most notable merger was the 1988 acquisition of the Cashstream network by the MAC network in 1988—

<sup>2</sup> See *EFT in the United States* (1977).

<sup>3</sup> At the time, because ATM networks were in their infancy, there were no significant barriers to entry.

<sup>4</sup> See Rule, reprinted in Baker and Brandel (1988).

<sup>5</sup> See Laderman (1990).

<sup>6</sup> The division has a procedure, known as a business review, which it uses to indicate whether it will bring an enforcement action.

<sup>7</sup> See Baker (1977).

<sup>8</sup> See Rule, (1988), pp. 142-43.

<sup>9</sup> See *infra* notes 35-36 and accompanying text. The Board did appear to consider whether a proposed network "may represent so large a proportion of possible ATM terminals in local markets that no other switches could successfully compete." See Barclays Bank PLC (1985); Center Bancorporation (1983).



two mid-Atlantic networks which competed in Pennsylvania and New Jersey. The division did not challenge the merger. Rather, the merger was the subject of a private antitrust challenge brought by The Treasurer, a competing ATM network. A district court rejected this challenge in *The Treasurer, Inc. v. Philadelphia National Bank*. The court adopted an approach similar to the Board's—that the relevant market included anyone capable of providing computer processing and that market was unconcentrated. MAC continued to acquire almost all of its neighboring networks, ultimately securing a dominant position in Pennsylvania and many adjoining states.

**PULSE business review.** The one matter that forced the division to confront intersystem competition was a business review request submitted by the PULSE ATM network in 1983. At the time there was aggressive competition in Texas between two similar sized networks: PULSE and MPACT. MPACT, in particular, competed through an incentive price program. First Texas Savings and Loan, a member of MPACT, sought to join PULSE, and PULSE declined.

PULSE was faced with a peculiar quandary posed by the antitrust laws. If PULSE refused to admit the bank, First Texas could claim that its exclusion from PULSE constituted an illegal group boycott and it could seek treble damages in a private antitrust suit.<sup>10</sup> If PULSE admitted First Texas, this would create a de facto merger with MPACT, and PULSE might face a government antitrust challenge because the network had become too large and the merger eliminated intersystem competition.<sup>11</sup>

Faced with this dilemma, PULSE sought a business review from the division. PULSE posed three alternatives to the division: (1) admitting First Texas; (2) generally admitting members of competing networks; or (3) implementing an anti-duality rule, that would prohibit membership to members of competing networks.

The division addressed only the first alternative, saying that at the time, admitting First Texas would not pose an antitrust violation. The division noted that the incremental consumer convenience that would result from admitting First Texas appeared to outweigh the loss of rivalry that might occur between the two competing networks.<sup>12</sup> The other two alternatives were not addressed because they were not considered ripe for review. Faced with the lack of support from the division and the potential of a private antitrust suit, PULSE admitted First Texas. The impact on intersystem competition was immediate; within six months of the business review letter, practically every MPACT member joined PULSE. MPACT eliminated its incentive pricing. There was a similar effect on consumers, as several banks increased their consumer fees.

## *The States Intervene—The Entree Case*

Because of the division's inaction, attention to intersystem competition issues seemed dormant and ATM network consolidation seemed uncontroversial. This trend changed in the late 1980s with the challenge by state attorneys general (the states) to the formation of the Entree national point of sale (POS) joint venture between VISA and MasterCard.<sup>13</sup> At the time, POS was in its infancy and was perceived as a competing (and perhaps superior) technology to ATM networks and credit cards. VISA and MasterCard had informed the division of the formation of Entree, but no enforcement action was taken.

The states alleged that VISA and MasterCard violated the antitrust laws through the formation of the Entree POS debit program, their respective acquisitions of interests in PLUS and CIRRUS (the national ATM networks), and VISA's acquisition of Interlink, a California POS network. The states alleged that by forming Entree and acquiring the ATM networks, VISA and MasterCard sought to retard the development of on-line POS

<sup>10</sup> Section 1 of the Sherman Act, 15 U.S.C. § 1 (1988), prohibits certain restraints of trade. Courts have held that the denial of membership in a joint venture may violate Section 1. See *Northwest Wholesale Stationers, Inc. v. Pacific Stationery & Printing Co.*, 472 U.S. 284 (1985).

<sup>11</sup> Up until that time both networks were exclusive. If First Texas was a member of both networks, it would serve as a gateway and could enable any bank in one network to access the ATMs in the other network. Once the exclusivity provisions were bridged, arguably intersystem competition between the two networks would diminish.

<sup>12</sup> See Letter from William F. Baxter, Assistant Attorney General, Antitrust Division, to Donald I. Baker (Aug. 3, 1983).

<sup>13</sup> See *State of New York v. VISA, U.S.A. and MasterCard Int'l*, No. 89-Civ-5043 (S.D.N.Y. filed July 26, 1989).



debit, a payment system they feared would compete with and erode the profitability of credit cards. Entree, the states alleged, was a combination of the five most likely entrants into the POS market. The states further alleged that as part of the joint venture, MasterCard and VISA had agreed not to introduce their own separate systems to compete with Entree. As part of their allegations, the states challenged provisions in the Entree agreement that limited its membership to banks that were members of both associations, thereby excluding nonbanks such as Sears/Discover Card and American Express.

The complaint sought divestiture of CIRRUS (by MasterCard) and PLUS and Interlink (by VISA), as well as an injunction against the implementation of Entree. In 1990, VISA and MasterCard agreed to abandon the Entree joint venture.<sup>14</sup> VISA kept its ownership of Interlink, and both card associations were permitted to keep their interests in the national ATM networks.<sup>15</sup>

Although arguments about the economics of ubiquity may have been persuasive in other contexts, they did not persuade the state attorneys general involved in the Entree case. One could argue that a single national POS network would have offered the opportunity for greater customer convenience by putting all of the POS terminals in a single network. Similarly, aggregating all of the cardholders in a single network may have persuaded merchants to use the new POS network. A single network may have fostered development of the new technology. But these arguments were unavailing. The states recognized that even if a single network might present some of these efficiencies, they were outweighed by the potential loss of competition between competing POS networks.

Five years after the settlement it appears that the states' assessment was correct. After the settlement, VISA and MasterCard created their own independent POS programs (Interlink and Maestro, respectively). In response to the concerns of the states, each of the national POS net-

works adopted anti-duality rules, which prevent any bank member from belonging to a competing network. Competition between the networks, in terms of product promotion, product development, and pricing, has been aggressive and far more significant than that in the credit card market, where duality is permitted.<sup>16</sup>

Each of the networks has competed vigorously to sign up both banks and merchants. Both networks have adopted different switch and interchange fees, to make more attractive packages for consumers.<sup>17</sup> The fees charged by the networks, including interchange fees, are far less than those charged by credit card networks.<sup>18</sup> Interlink charged additional annual card service fees and merchant location fees. When Maestro entered, it did not charge these fees. Of particular significance, Interlink initially charged a transaction service fee of \$0.02 for every transaction conducted by an Interlink cardholder at an Interlink terminal even if the transaction was actually processed through a regional network (in other words, if the bank attempted to bypass the Interlink network). Maestro entered without such a bypass fee, and its entry forced Interlink to eliminate the fee.

In April 1994, Maestro sought to eliminate its anti-duality rule to permit issuer duality. After considering the proposal for several months, the states rejected it in December 1994. The states observed that both networks were competing aggressively and that the networks appeared to be thriving in terms of transaction volumes and merchant participation. Moreover, unlike other payment system markets, competition from nonbanking participants, such as Discover Card or American Express, was unlikely because debit card services are necessarily linked to a financial institution's demand deposit account. Most important was the states' concern that eliminating Maestro's anti-duality rule "would bring to an end the aggressive intersystem competition between the two bankcard associations" in the POS market. Thus the states concluded that they could not assure Maestro that

<sup>14</sup> See *State of New York v. VISA U.S.A., Inc.*, 1990-1 Trade Cas. (CCH) ¶ 69,016 (S.D.N.Y. 1990).

<sup>15</sup> See Constantine (1990).

<sup>16</sup> See "Bankers are Burying the Hatchet" (1994); Balto (1995).

<sup>17</sup> The switch fee is the fee charged by the network for moving a transaction over the network's switch. The interchange fee is a fee paid between the merchant bank and the cardholder's (consumer's) bank for processing a credit card or debit card transaction. Both fees are set by the bankcard association.

<sup>18</sup> See "Bank of America" (1994); "Debit Card War" (1994); "Economics—More Issuers" (1994) for a description of competition in interchange fees.



elimination of their anti-duality rule would not lead to an enforcement action.<sup>19</sup>

For the states, abstract arguments about efficiencies were simply a guise to deter the emergence of intersystem competition. Their enforcement action led to increased intersystem competition and concomitant benefits for consumers. As important, the Entree case began to affect how regulators and enforcement agencies assessed the opportunities for network competition.

## The 1990s—Renewed Attention to Network Competition

**Exclusive processing rule challenged—MAC ATM network settlement.** The reemergence of the division in the payment system competition venue occurred in April 1994, when the division challenged the exclusivity rules of the MAC ATM network. In the six years since the division took a pass on the Cashstream acquisition, MAC had acquired almost all of its neighboring competing networks, had a monopoly in several mid-Atlantic states and had become the largest ATM network in the United States. At issue at this point was not a merger, but rather certain exclusivity arrangements that MAC used to enforce its monopoly position. The division challenged these restrictions as illegal tying and monopolization, under sections 1 and 2 of the Sherman Act.<sup>20</sup>

To understand the action, we set forward the different functions of an ATM network. In its most basic sense, an ATM network comprises a trademark, a computer switch, and a set of rules. Some networks have their own computer system that drives the computer switch; other networks contract for that service. Some networks engage in "processing," that is, they drive (operate) their members' ATMs; other networks permit their members to drive their own ATMs or use third-party processors, such as EDS Corp. This market for "ATM processing" was the focus of the division's enforcement action. At the time of the enforcement action, Electronic Payment Services (EPS), which

operates the MAC network, was a joint venture of four bank holding companies: CoreStates Financial Corp., Banc One Corp., PNC Bank Corp., and Society Corp. The MAC network has approximately a 90 percent market share in Pennsylvania and a dominant position in adjacent mid-Atlantic states. The MAC network handles 92 million transactions each month for 27 million depositors at more than 13,000 ATMs.

Most ATM networks are nonexclusive, that is, they permit their members to belong to any of a number of networks. Until 1992, MAC generally did not permit its bank members to participate in rival ATM networks. These exclusivity rules created an almost impervious barrier to competitive entry because if a bank wanted to join a competing network it would have to withdraw all of its ATMs from MAC. Faced with that all-or-nothing decision, few banks chose to align with competing networks.<sup>21</sup> The rules helped MAC acquire and maintain its dominant position in the market. The rule against multiple affiliations was formally dropped in 1992 after being challenged in a private antitrust suit.<sup>22</sup>

In this case, the division's focus was on other rules which restricted the ability of banks to participate in other networks or use competing third-party processors. The division alleged that a rule that required banks either to obtain ATM processing from MAC or to provide ATM processing in-house (which is prohibitively expensive for many smaller banks, thrifts, and credit unions) effectively made it impossible for these smaller banks to belong to rival networks while belonging to MAC. MAC generally forbade its network members from obtaining ATM driving from any of the several third-party processing firms that provided that service.

The MAC rules and practices, the complaint alleged, "prevent willing buyers and sellers from conducting business at competitively determined prices and terms." By preventing banks from obtaining ATM processing from others, MAC effectively prevented these banks

<sup>19</sup> See "State Antitrust Officials" (1994).

<sup>20</sup> *United States v. Electronic Payments Services, Inc.*, No. 94-208 (D. Del. Apr. 21, 1994), 59 Fed. Reg. 24,711 (May 12, 1994), 59 Fed. Reg. 44,757 (Oct. 14, 1994).

<sup>21</sup> As the division observed, "The small banks that wish to join another network (which might offer ATM network access at lower prices) will not be able to do so unless the other network has enough of a presence to provide small banks' depositors with sufficient ubiquity and convenience. The entrant network, of course, cannot achieve the critical mass necessary to attract banks." *Elec. Payment Servs.*, 59 Fed. Reg. 24,711, 24,720.

<sup>22</sup> See *BuyPass Corp. v. New York Switch Corp.*, No. 93-CV-3201 (E.D. Pa. filed June 15, 1993). The rule had survived a private antitrust challenge, when MAC acquired Cashstream in 1988. See *The Treasurer, Inc. v. Philadelphia National Bank*, 682 F. Supp. 269, 280 (D.N.J.) (upholding exclusivity provisions which "were and are intended to structure [the owner's] distribution of network services, and to provide a return... for developing, maintaining and promoting the network and to prevent free riding by competitors," aff'd mem., 853 F.2d 921 (3d Cir. 1988). Of course, in 1988, MAC had a far less significant competitive presence than it did in 1994.



from participating in other ATM networks. In turn, MAC's rules made it substantially more difficult for other networks to enter into MAC's area of dominance, thereby excluding competitors and maintaining MAC's monopoly position.

The division alleged that regional ATM network access and ATM processing were separate products and that MAC's rules and practices effectively forced its customers to purchase ATM processing from MAC. The monopolization claim alleged that MAC "willfully has maintained its monopoly power in the market for regional ATM network access in the affected states through exclusionary practices," including its processing rule.

The consent decree requires MAC to open its network to independent ATM processors on a nondiscriminatory basis. MAC is prohibited from tying the use of its trademark to the purchase of processing services. Under it, MAC must permit its participants to use third-party providers of ATM processing, to display multiple network trademarks on all their ATMs, and to permit multiple branding of ATM cards issued by MAC members in areas where MAC has or could soon have market power.

The objective of the decree is to provide banks with the opportunity to use other networks or third-party processors for their processing services. MAC is also required to sell its network services "at prices that will not vary with the process selected" and to provide a more open environment for third-party processors. In addition, MAC would be limited in the extent to which it can keep banks from displaying symbols of other ATM networks on their ATMs and ATM cards.

The decree permits a wide range of other activities that may raise exclusionary concerns. First, MAC is permitted to charge a royalty fee for transactions processed outside the MAC switch.<sup>23</sup> This royalty fee can be as much as the fee for a transaction processed through the MAC switch. Second, MAC can prohibit its members from bypassing the switch, a practice known as subswitching. Third,

MAC is permitted to provide volume discounts, but these must be provided on a nondiscriminatory basis.

Whether the decree adequately solved the competitive problem is an open question. The consent decree received a tremendous amount of adverse commentary; many competing networks stated that the proposed decree would permit MAC to achieve the same objective through a variety of other types of exclusionary conduct.<sup>24</sup> In addition, as described later, the Board staff raised concerns over the sufficiency of the relief when it examined the EPS-National City Bank merger.<sup>25</sup>

The division's enforcement action demonstrated that the economics of ubiquity no longer rule the day. The division was able to do that by separating ATM services into two separate product markets: ATM processing (or the back office operations) and branded regional ATM access (which reflects the value of membership in the network and the network mark). As the division observed, ATM processing can be provided as a service distinct from branded ATM network access and can be performed in the facilities of the ATM switch, a depository institution's own facilities, or in the facilities of a data processing service organization.

Of course the irony here is that had the division not signed on to the economics of ubiquity bandwagon, and had examined the nature of network competition more carefully, it may have challenged the earlier acquisitions by MAC, and ultimately this enforcement action may have been unnecessary.

**Payment systems merger challenge—consumer money transfer services.** The only enforcement action brought against a payment systems merger was the challenge by the Federal Trade Commission (FTC) to the acquisition of the Western Union consumer money transfer system (owned by First Financial Management Corp.) by First Data Corp., the owner of the MoneyGram system—in *re First Data Corp.* (First Data).<sup>26</sup> Consumer wire money transfer systems involve one-way money transfers,

<sup>23</sup> A royalty fee requires the ATM owner to pay a fee to the network for each transaction it chose to route through an alternative network.

<sup>24</sup> See Public Comments on Proposed Final Judgment, *Electronic Payment Services*, 59 Fed. Reg. 44,757 (Aug. 30, 1994).

<sup>25</sup> See footnotes 67-69 and accompanying text.

<sup>26</sup> *First Data Corp.*, FTC File No. 951-0107 (Sept. 21, 1995). The FTC brought an earlier action against First Data in August 1994, when it intended to bid on the assets of Western Union in a bankruptcy court auction. First Financial was the successful bidder and the FTC's settlement was never made final. *First Data Corp.*, FTC File No. 931-0090 (Aug. 18, 1994).

<sup>27</sup> Consumer money transfer services involve the transfer between two parties of funds through consumer money transfer agents, typically check cashing, private postal, or grocery stores. Customers wishing to transfer money today begin the process by going to a consumer money transfer agent, such as a check casher or grocery store, and completing a transaction form, which includes an explanation of how the recipient will identify himself or herself when receiving the cash. The sender then gives the agent the money to be transferred and



typically between two consumers.<sup>27</sup> Wire transfer agents include a wide variety of retail outlets including grocery stores and check cashing outlets.

Western Union has been the dominant firm in the market and had been a regulated monopoly until the late 1970s. The Federal Communications Commission (FCC) had deregulated Western Union based on the expectation that technological advancement had reduced the barriers to entry.<sup>28</sup> Those expectations were overly generous; entry was neither easy, nor timely.

In the mid-1980s, Citibank attempted to enter the market, but their entry was stifled by two factors: (1) developing a minimum viable scale nationwide network of money transfer agents; and (2) establishing name recognition and customer acceptance of its services through large-scale advertising and promotion. Long-term agent contracts used by Western Union made acquiring a sufficient agent network difficult. To build brand name recognition, substantial investment would be required over several years. Citibank's attempted entry failed after several years of significant losses.<sup>29</sup>

MoneyGram, which was originally owned by American Express, entered in the late 1980s. It was able to overcome these barriers in part because it could rely on the trade name and the agent base of American Express. After several years of losses, MoneyGram overcame the barriers to entry and introduced competition into an environment in which a monopolist had dictated annual price increases.

Competition from MoneyGram led to lower prices, better services, and higher commissions for agents. Prior to MoneyGram's entry, Western Union imposed regular annual price increases of 5 percent to 8 percent. MoneyGram entered by competing aggressively on price; Western Union responded by refraining from price increases and offering special promotions and discounts to customers.<sup>30</sup> In 1994, MoneyGram launched a frequent user discount program to increase sales and customer loyalty; Western Union

responded with a similar program. Non-price competition increased, including increased price advertising, the development of a more extensive will-call system, and free long-distance telephone calls.

Competition between the two networks also led to almost a threefold increase in wire transfer agents, which provided consumers with a dramatic increase of convenience when using money transfer services. As both networks competed for agents, agent commissions increased, the networks provided greater amounts of cash at more agent locations, and the networks increased their advertising. Competition created these consumer benefits indirectly by pushing the companies to pay their transfer agents higher commissions and significant bonuses for increasing customer volume.

At the time of the FTC's action, Western Union had approximately a 90 percent market share. According to the complaint, MoneyGram and Western Union were the only two services in the U.S. consumer money transfer market and it would be difficult for new companies to enter the market. The complaint noted that First Data's acquisition of Western Union would create a monopoly in the market. Further, the FTC contended that entry was unlikely because of the difficulty of gaining brand name recognition and establishing a nationwide network of retail outlets. Thus absent the settlement, the FTC alleged that the acquisition would increase the likelihood that, among other things, consumers would be forced to pay higher fees and receive less service and agents would be forced to accept reduced commissions.

The proposed consent agreement permits First Data to acquire Western Union as long as it divests either the MoneyGram or Western Union consumer money wire transfer business. The divestiture package includes the MoneyGram or Western Union trade name, contracts with a sufficient number of retail sales agents to have a minimum viable scale network, and enough other necessary assets to run the business. The settlement also includes

pays the transaction fee. The transferring agent then inputs the information into the data base by computer (or by calling the service supplier, who inputs the information). This database allows the receiving customer to go to any receiving agent in that service's agent network and obtain the cash with proof of identity.

A large portion of consumer money transfer users do not have banking relationships; they account for 20 percent to 25 percent of U.S. households. For those consumers with limited or nonexistent banking relationships, consumer money transfers offer the only means to transfer money quickly from one person to another.

<sup>28</sup> See *Graphnet Systems, Inc.*, 71 F.C.C. 2d 471, 515 (1979) (FCC observed that, "We are confident that the public will be served by enabling multiple entry into this market.").

<sup>29</sup> See "Citicorp Express" (1987).

<sup>30</sup> When First Data entered, it priced domestic transfers of \$300 or less at \$9; at the time Western Union priced these transfers at between \$13 and \$29. Western Union brought an antitrust suit charging that First Data's pricing was predatory. The suit was unsuccessful. See *Western Union Financial Services v. First Data Corp.*, 20 Cal. App. 4th 1530 (1993).



<sup>31</sup> 15 U.S.C. § 18 (1988).

<sup>32</sup> *National Bancard Corp. ("NaBanco") v. VISA U.S.A., Inc.*, 596 F. Supp. 1231, 1258 (S.D. Fla. 1984), *aff'd*, 779 F.2d 592 (11th Cir.), *cert. denied*, 479 U.S. 923 (1986). Baxter (1977) argued that "no significant degree of market power" will exist in that stratum of communities serviced by only one on-line system because "the preexisting technology," defined to include "currency, checks, off-line credit cards and check guarantee cards subject to floor limits," "will constrain pricing freedom and service quality." The *NaBanco* analysis is criticized in a recent article. See Carlton and Frankel (1995). It, however, was adopted by a recent district court decision involving ATM network fee setting. See *Southtrust Corp. v. PLUS System, Inc.*, No. CV-93-P-2291-S (N.D. Ala. Aug. 10, 1995).

<sup>33</sup> *The Treasurer, Inc. v. Philadelphia National Bank*, 682 F. Supp. 269 (D.N.J.), *aff'd mem.*, 853 F.2d 921 (3d Cir. 1988).

<sup>34</sup> 682 F. Supp. at 279 (emphasis in original).

<sup>35</sup> For example, see, CB&T Bancshares, Inc. (1984); Atlantic Bancorporation (1983); cf. Centerre Bancorporation (1983) The Board observed that the product market was "the provision to unaffiliated financial institutions of data processing services, particularly the operation of an ATM network exchange"; Interstate Financial Corp. (1983) (same).

In other orders, it defined the markets more narrowly. For example, see Citicorp (1986) ("provision of ATM services"); Sovran Financial Corp. (1986)

various provisions designed to ensure that there would be an agent network sufficient to support the divested business. Finally, the settlement expressly permits First Data to provide data processing services to the acquirer of the MoneyGram or the Western Union assets, provided that First Data, among other things, shields any nonpublic information it receives from any First Data employees who are involved in First Data's consumer money wire transfer.

The importance of the *First Data* action was in differentiating between the importance of the back office or systems operation, and the agent network and trade name. Like the FCC, the FTC did not contend that the back office operation posed an entry barrier. However, the years of experience gained since the FCC decision had shown that ease of entry at the back office level would not guarantee a competitive market. Thus the proposed consent order does not require the divestiture of the back office system and in fact permits First Data to provide back office services to the acquirer of the divested assets. Rather, the FTC focused its relief on the trade name and agent network, which it contended were the most significant barriers to entry.

## EVALUATING MARKET POWER IN PAYMENT SYSTEMS CASES

Antitrust analysis examines the effects of mergers on competition. The purpose of this analysis is to determine whether the effect of an acquisition "may be substantially to lessen competition or to tend to create a monopoly."<sup>31</sup> Such analysis involves identifying the relevant product sold by the firms and the geographic scope of markets in which they sell their products. This section discusses the nature of defining markets and assessing market power for payment systems.

### Market Definition Issues

Antitrust analysis of payment system mergers or other competitive activity

depends critically on whether the system has market power. This is typically a difficult question to answer in part because the delineation of relevant markets is itself a complex and uncertain undertaking. The definition of the relevant market has both product and geographic market components. In both respects, the markets defined have become more precise and narrow over time.

**Product market definition.** One of the uncertainties in counseling payment systems is traceable to the difficulties in defining the relevant product market for purposes of measuring market power. Many different approaches have been used. Product market definition has become more precise as regulators have become more sensitive to the competitive problems raised by network competition. In particular, both the division and the Board have begun to differentiate between the back office and trademark aspects of a network in defining the market. Typically fact finders define the product market from the perspective of the cardholder (the retail market) and the card issuing bank (the wholesale market).

*A payment systems market.* One of the earliest cases, *NaBanco*, involved a challenge to a credit card interchange fee. The district court defined a broad retail market consisting of all payment systems, which it defined further as:

*a market consisting of VISA and all payment services used in retail sales. This market includes VISA, MasterCard, T & E cards, merchants' proprietary cards, merchants' open book credit, cash, travelers cheques, ATM cards, personal checks and check guarantee cards.*<sup>32</sup>

The court acknowledged that none of these was a perfect substitute but relied on an examination of cross-elasticities of supply and demand to determine that they



were sufficiently close substitutes for the VISA card.

*A data processing market.* In terms of a wholesale market, in early cases fact finders emphasized the data processing functions of ATM networks. For example, in *The Treasurer*, the district court adopted a broad definition of the relevant product market.<sup>33</sup> That case involved a challenge by The Treasurer ATM network in New Jersey to the acquisition of the Cashstream network by Philadelphia National Bank, the owner and operator of the MAC network. Although he ultimately dismissed the case for lack of antitrust injury, Judge Politan also examined the case on the merits. In so doing, he defined the relevant product market as "electronic data processing to all ATMs plus all of those institutions that have unaffiliated ATM systems and those institutions that do not currently have ATMs but have the capacity to install them and use market technology to its fullest."<sup>34</sup> In other words, the market included all firms capable of performing the electronic communication function performed by an ATM network.

Similarly, in the 1980s, in orders approving bank holding companies' acquisitions of voting stock in shared EFT networks, the Federal Reserve Board typically defined the relevant market as "the provision of data processing services to unaffiliated financial institutions."<sup>35</sup> In addition, the Board noted that the market for data processing and related ATM services is "unconcentrated, with many competitors and few barriers to entry."<sup>36</sup>

*An ATM services and network switching market.* In more recent decisions and enforcement actions, fact finders have defined more narrow markets, focusing primarily on demand side factors. For example, in the *Financial Interchange* arbitration, which involved ATM network interchange fees, the arbitrator rejected proposed markets of *all payment systems* and *all means of obtaining cash*, similar to the approach taken by the Board and the courts in *NaBanco* or *The Treasurer*.

Instead, it identified a narrow retail market of "ATM services" on the grounds "that there is a significant group of ATM users who value the characteristics of ATMs and for whom other means of obtaining cash are not reasonable substitutes."<sup>37</sup>

In addition, in *Financial Interchange*, the arbitrator identified a wholesale market for network switching, and concluded that PULSE had market power because "existing subnetworks, regional networks and national networks do not presently provide a reasonable substitute for the [switching] service PULSE provides to its members."<sup>38</sup>

In the EPS consent decree, the antitrust division took a similar approach, albeit focusing on the wholesale side of the market.<sup>39</sup> First, it defined a market for regional ATM service, based on the needs of banks to provide depositors "ubiquitous access to their accounts." It observed that "while a bank can deploy its own ATMs, the advantage to a shared ATM network is that a bank's depositors will be able to use ATMs at many more locations than one bank alone could practicably support. The areas a bank seeks to serve through a shared ATM network include the areas in which its depositors live, work and shop, and the broader areas in which they move regularly. A bank's ability to offer its depositors access to other banks' ATMs, and thereby to offer its depositors convenient access to their accounts, is in most bankers' view necessary to attract and retain deposits... Because no other service constitutes a reasonably close substitute for regional ATM network access, regional ATM networks constitutes a product market."<sup>40</sup>

Similarly it defined a second market for ATM processing. This market involves *providing the data processing services and telecommunications facilities and services used in providing regional ATM access*.<sup>41</sup>

*Network access, network services, and ATM processing.* In its analysis of the EPS-National City Bank merger (hereinafter *Banc One Corp.*), the Federal Reserve

(same); Barclays Bank PLC (1985) ("competition in the provision of ATM or POS services").

<sup>36</sup> For example, Sovran Financial Corp. (1986).

<sup>37</sup> In *re Arbitration between First Texas Sav. Ass'n & Financial Interchange, Inc.*, 55 Antitrust & Trade Reg. Rep. (BNA) 340, 356 (Aug. 25, 1988) (Financial Interchange) (arbitration decision by Professor Thomas Kauper, former antitrust division assistant attorney general).

<sup>38</sup> *Id.* at 355. Other regional networks were found to be only potential alternatives for Texas ATM owners and substantial barriers (including the national networks' antiduality membership rules, the preference by banks for local networks, and the fact that PULSE was very efficient and well established) were said to impede competition from the national networks, PLUS and CIRRUS. *Id.* at 353-54. For a similar approach, Rule, *supra* note 4, at A-144 (assessing ATM networks in terms of wholesale and retail ATM services).

<sup>39</sup> *United States v. Electronic Payments Services, Inc.*, No. 94-208 (D. Del. Apr. 21, 1994), 59 Fed. Reg. 24711 (May 12, 1994).

<sup>40</sup> 59 Fed. Reg. 24713 (May 12, 1994).

<sup>41</sup> 59 Fed. Reg. 24712 (May 12, 1994).



Board further refined the division approach by defining three markets: (1) network access (access to an ATM network identified by a common trademark or logo displayed on ATMs and ATM cards); (2) network services (the switching functions for the network); and (3) ATM processing (the data processing and telecommunications facilities used to operate, monitor, and support a bank's ATMs).<sup>42</sup>

According to the Board, *network access* includes: (1) the right to brand ATMs and ATM cards with the trademark or logo of the ATM network; (2) the ability of the ATM cardholder with an account at one member depository institution to initiate withdrawal and other account transactions at an ATM owned by another depository institution that is a member of the same network; and (3) minimum standards for network performance and products offered through the network.

Similarly, the Board defined network services as including the switching functions performed by the ATM switch and gateway services with other networks. Finally, the Board defined ATM processing as including the provision of terminal driving, transaction routing and authorization, and account reconciliation services.

*An observation.* How a fact finder analyzes the relevant product market in cases involving bank networks depends in part on how much weight is accorded to the value of the network trademark. If one looks only to the data processing function of shared ATM networks, it may be plausible to conclude, as did the *Treasurer* court, that the data processing industry is unconcentrated, that there are numerous alternatives available to financial institutions to perform their data processing, and that a network—even a dominant regional network—does not have market power. On the other hand, if the network is viewed not so much as a vendor of undifferentiated data processing services, but rather as the purveyor of a unique branded product marketed under the network logo, the fact finder may reach

a very different conclusion, as in *Banc One Corp.* or *Financial Interchange*.

In this respect, the Board's decision in *Banc One Corp.* is a significant analytical advancement. By identifying a "network access" market which focuses on the "branded product" aspect of the network, the Board's decision provides a mechanism for more careful and precise analysis of market power.

**Geographic market definition.** The geographic market can be defined only with reference to a specific product or service market, and there are uncertainties here as well. Markets have been defined as national, regional, or local depending on the product market selected.

For example, early court opinions that addressed the geographic market applicable to a payment systems market suggested that it is national.<sup>43</sup> If the focus of a fact finder is a product market defined in terms of data processing for unaffiliated institutions or network switching services, the geographic market should be national because those services are generally provided on a national basis. On the other hand, in cases such as *Financial Interchange*, which focused on a retail market, the geographic market was assumed to be local in scope.<sup>44</sup>

The most recent decisions have defined ATM networks as participating in regional markets.<sup>45</sup> In *Banc One Corp.*, the Board observed that most networks were regional in scope (that is, consisting of several states), and a Federal Reserve study found that the markets for ATM network access were at least regional.<sup>46</sup> The Board decided that the appropriate geographic market in which to analyze the competitive effects of the merger was MAC's Mideast Region (western Pennsylvania, Ohio, Indiana, Kentucky, and West Virginia), where National City had a competitive presence.

In *Banc One Corp.*, the Board also seems to suggest that in some cases the geographic market may be national in scope.<sup>47</sup> The Board observed that companies are able to provide ATM processing

<sup>42</sup> *Banc One Corp.* (1995), pp. 491, 494.

<sup>43</sup> See *NaBanco*, 596 F. Supp. at 1259 (where the parties agreed that the market was nationwide); see also Complaint, ¶¶ 77-80 in *New York v. VISA U.S.A., Inc.*, No. 89-Civ-5043 (S.D.N.Y. July 26, 1989) (the states alleged a nationwide market for credit cards and point of sale debit cards marketed by national joint venture).

<sup>44</sup> See *Financial Interchange*, 55 Trade Reg. Rep. (BNA), No. 1380, pp. 356 (although the geographic boundaries of the retail market were not directly addressed in this proceeding, retail markets are presumably local because consumers will use only ATMs close to where they are).

<sup>45</sup> See EPS consent decree, 59 Federal Register 24,711; *Banc One Corp.* (1995), pp. 494.

<sup>46</sup> See *McAndrews and Kauffman* (1993).

<sup>47</sup> *Banc One Corp.* (1995), p. 494.



and network services through data processing facilities regardless of geographic proximity and that some firms provide these services on a nationwide basis.

One issue that arises in ATM cases is whether national ATM networks (for example, PLUS and CIRRUS) compete with regional networks. In the *Financial Interchange* arbitration, the arbitrator held that national ATM networks did not provide an adequate alternative to PULSE because neither could duplicate the coverage of the PULSE network. The antitrust division in the EPS consent decree has taken a skeptical position about the level of competition offered by national networks. In its Competitive Impact Statement it observed the following:

*National ATM networks exist, but these are by design networks of last resort, used only where the two banks involved in a transaction do not both belong to any one regional ATM network. National ATM network transactions are typically more expensive, and those networks provide only a subset of the transactions available through regional ATM networks.*<sup>48</sup>

## Measuring Market Power

There is relatively little guidance as to what statistical base should be used as a surrogate for measuring the power of a particular network. In *Financial Interchange*, the arbitrator variously examined the share of all ATM transactions (which "understate[d the venture's] position in the market"), the share of interprocessor switching transactions, the share of available ATMs, and the cardholder base.<sup>49</sup>

In *The Treasurer, Inc. v. Philadelphia Nat'l Bank*, the court suggested that market power should be measured by the number of ATMs.<sup>50</sup> It wrote that "the principal competitive advantage of any ATM network is the number of ATMs utilized by the system."<sup>51</sup> The court also examined

financial institution deposits in holding that measurement of the market cannot be confined to network ATMs, but must take account of "the large number of unaffiliated ATMs that are open territory for competition."<sup>52</sup>

Other possible measures for assessing market power include the number of ATM locations (as distinct from number of ATM machines), the value of ATM transactions (as distinct from number of transactions), the number of member institutions, and the value of retail deposits accessible by ATM. The interpretation of any statistical measure must be tempered by the recognition that ATMs, cardholders, and institutions may have simultaneous access to multiple networks. Ultimately, in the bank network context, statistical market share evidence—at least in terms of a share of ATM transactions—may be an imperfect measure of market power. Because of the availability of alternative networks, historical market share may overstate the market power of a network. Yet because of the difficulty competing networks may have acquiring the necessary critical mass, market shares may tend to understate market power. Similarly, because of the significance of entry barriers in the ATM access market, market shares will also understate market power. Thus a fact finder must exercise caution before relying on any individual statistical measure.<sup>53</sup>

## Analysis of Entry Barriers

Essential to the analysis of market power in payment system cases is consideration of the existence of entry barriers. Where entry is "easy," it is difficult for a network to raise prices or reduce output since that exercise will lead new firms to enter the market and cease the competitive opportunity. According to the antitrust division and the FTC entry is "easy" only if it would be timely, likely and sufficient in magnitude to counteract the competitive effects of concern.

In the network environment analysis of entry becomes more complex because of the critical mass nature of networks. A

<sup>48</sup> 59 Fed. Reg. 24719 (May 12, 1994). The Federal Reserve Board has taken a similar position. *Banc One Corp.*, p. 494, n.21.

<sup>49</sup> 55 Trade Reg. Rep. (BNA), No. 1380, pp. 353, 356.

<sup>50</sup> 682 F. Supp. 269 (D.N.J.), *aff'd mem.*, 853 F.2d 921 (3d Cir. 1988).

<sup>51</sup> *Id.* p. 279.

<sup>52</sup> *Id.*

<sup>53</sup> See Blumenthal (1989).



network may not be able to effectively enter unless it acquires a sufficient number of participants to offer a viable product. This poses a "chicken and egg" problem; potential members are reluctant to join unless they are assured that a sufficient number of other firms will join to make the network viable.

Moreover, network externalities may also impose significant entry barriers. ATM networks provide an example that illustrates the difficulty a challenger faces in duplicating the network externality of an incumbent firm. ATM networks exhibit a positive externality: large networks yield increased convenience to consumers, thus increasing the network's value to the consumer. Thus a new network is unlikely to succeed unless it can demonstrate that a substantial number of transactions and cardholders within the market will be available on a long-term basis. Effective entry requires that a new ATM network offer the same (or better) convenience and ubiquity offered by the incumbent network. As the division observed in the EPS competitive impact statement, in order to be competitive, a network must provide "enough of a presence to provide [their] depositors with sufficient ubiquity and convenience."<sup>54</sup>

As in the analysis of relevant product market, the analysis of entry barriers in the network context has varied significantly. One approach, which focuses on competition at the "back office" level, has been to suggest that entry can be accomplished relatively easily. For example, in *The Treasurer*, the court focused on competition in providing automated data processing services to banks. In this market there were a number of potential entrants including third-party processors, regional and national ATM networks. Of course, *The Treasurer* was decided in 1988, in a context in which there were large numbers of banks that were unaffiliated with any network and in which no network was dominant. Thus, the potential for a new network to arise and compete with MAC was far more significant than it is today.

A more sophisticated approach to

analysis of entry was provided by the arbitrator in the *Financial Interchange* matter. The PULSE network argued that barriers to entry might not be significant. Faced with the exercise of market power, PULSE suggested, individual banks could use other networks or form their own quasi-network by bypassing the PULSE network switch. Although these opportunities for bypass existed, the arbitrator suggested that entry barriers were significant because of both network externality and critical mass factors. Although there was the opportunity for the formation of smaller networks through individual bypass between member banks, this was insufficient to alleviate the concern over market power. Expert testimony established that a new ATM network could not succeed without providing consumers a level of convenience comparable with that of the PULSE network. The arbitrator found that a new network could not support the number of ATMs required to furnish such convenience without achieving "major defections" from PULSE, and that such defections were unlikely. These findings ultimately led the arbitrator to conclude that the PULSE network did have market power, even though the complainants could have bypassed PULSE and created their own local network.

Analysis of entry barriers is essential to determining whether networks have the ability to exercise market power. This analysis should focus on whether potential entrants have the ability to attract a sufficient number of firms to join a new network and whether that network has the ability to deter the exercise of market power. This analysis should focus on competition at the brand or ATM access level, where network externalities and critical mass play an important role.

## ATM NETWORK MERGERS— THE LEGAL FRAMEWORK

Since the mid-1980s tremendous consolidation among ATM networks has occurred. The number of regional ATM networks has been reduced substantially, and in relatively few areas is there head-to-

<sup>54</sup> EPS, 59 Fed. Reg., p. 24,720.



head competition between networks. Some commentators have predicted there may be as few as 10 regional networks by the end of the century.<sup>55</sup> In this section, we discuss the legal framework for analyzing ATM network mergers.

## The Legal Framework

Mergers and acquisitions of ATM networks may be challenged under either the Sherman Act or the Clayton Act by the division, state attorneys general, or private parties. To prevail, the plaintiff must demonstrate that the merger or acquisition may have a significant adverse effect on competition, and this, in turn, requires the plaintiff to prove a relevant product and geographic market. In addition, a private party, unlike the government, must also prove that the challenged merger or acquisition will cause it to suffer antitrust injury. Where the private-party plaintiff is a competitor of the merging parties, this will be a difficult burden to satisfy because the plaintiff must demonstrate that it will be injured by higher prices charged by the merging parties.<sup>56</sup>

Mergers and acquisitions between ATM networks may also require regulatory approval. Thus, for example, where the network's shareholders are bank holding companies, the shareholders typically must receive the approval of the Federal Reserve Board (or the relevant Federal Reserve Bank) before acquiring another network.<sup>57</sup> The parties to a network acquisition may also be required to file notification with the FTC and the antitrust division under the Hart-Scott-Rodino Act, although the size of most network acquisitions and the parties making them will usually be below the size thresholds. Other exemptions may also apply under certain circumstances.<sup>58</sup>

To date, there have not been any challenges to ATM network mergers by the division, and the Board has declined to stop any mergers. The only decided case involved a private challenge to a regional ATM network merger. In 1988, The Treasurer network sought a preliminary

injunction to stop the acquisition of the Cashstream network by Philadelphia National Bank, which operated the MAC Network.<sup>59</sup> The court dismissed the suit on the grounds that the plaintiff had suffered no antitrust injury as required under sections 4 and 16 of the Clayton Act and hence lacked standing to sue. After the acquisition, MAC also acquired The Treasurer.

## Renewed Attention to ATM Network Mergers

Both the antitrust division and the Federal Reserve Board have given renewed attention to ATM network mergers. Reportedly, both agencies have investigated the NYCE-Yankee 24 and the EPS-National City Bank mergers (discussed later), but neither has taken any enforcement action.<sup>60</sup>

Enforcement officials at the division have provided some guidance about their new interest in ATM network mergers. The division no longer adheres to the catechism of economics of ubiquity and is now subjecting ATM mergers to much greater scrutiny. Robert Litan, the former antitrust division deputy assistant attorney general, said that the division is revisiting the assumption of economics of ubiquity.<sup>61</sup> He suggested that the division is not convinced that ATM networks are natural monopolies. Rather than taking a doctrinal view in favor of ATM mergers, Litan suggested that these mergers will receive greater scrutiny and that the networks would carry a significant burden of proof. He also observed that the procompetitive benefits of mergers might be acquired through less restrictive alternatives: "[i]t is very possible that they can achieve the same economies of scale without going to full-scale mergers."<sup>62</sup>

The EPS consent decree suggests how the division is likely to consider some issues that arise in ATM network mergers. First, defining the product market is the first step in merger analysis. In EPS, the division identified separate markets for *ATM processing* and *Regional ATM access*. Thus the division will look at the competi-

<sup>55</sup> See The Bankers Roundtable (1994).

<sup>56</sup> See *Brunswick Corp. v. Pueblo Bowl-O-Mat Inc.*, 429 U.S. 477, 489 (1977); *Cargill, Inc. v. Monfort of Colorado, Inc.*, 479 U.S. 104 (1986).

<sup>57</sup> See 12 U.S.C. 1843 (1988); 12 C.F.R. Parts 225.21-25 (1994).

<sup>58</sup> See 15 U.S.C. 18a (1988); 16 C.F.R. Parts 801-803 (1994).

<sup>59</sup> *The Treasurer, Inc. v. Philadelphia National Bank*, 682 F. Supp. 269 (D.N.J.), *aff'd mem.*, 853 F.2d 921 (3d Cir. 1988).

<sup>60</sup> See *Bank of New York Co.* (1994) approving merger of Yankee 24 and NYCE; *Bank One Corp.* (1995) approving merger of EPS and National City Bank.

<sup>61</sup> See "Bank, ATM Mergers" (1994), p. 2.

<sup>62</sup> *Id.*



tive effects of mergers in both markets. The ATM network access market is likely to raise more competitive issues because some competitors, including third-party processors, do not provide effective alternatives in that market.

Second, apparently the only competitive alternatives in the ATM network access market are regional networks. Thus arguments that other types of networks or processors offer competitive alternatives may not succeed. In particular, national networks, although they offer a degree of coverage comparable to regional networks, are unlikely to be seen as competitive alternatives. The Competitive Impact Statement in the *EPS* case noted that national ATM networks are "by design networks of the last resort."<sup>63</sup>

Finally, exclusivity rules, such as those challenged in the *EPS* case will be an important part of the analysis; these rules may prevent the entry of alternative networks into the market. If many of the available banks are committed to long-term exclusive dealing arrangements with a dominant network, an alternative ATM network may be unable to acquire the critical mass of banks necessary to achieve a minimum viable scale. Where these rules are present, antitrust enforcers should be especially vigilant to ensure that the merger will not prevent the entry of competing networks.

## RECENT ATM MERGER DECISIONS—REPAVING THE ROAD TO REGIONAL MONOPOLY

The remainder of this article addresses the decisions of the Federal Reserve Board in two recent mergers—Yankee 24-NYCE and EPS-National City Bank and the implications of those decisions for future network competition.

### Yankee 24-NYCE

A recent network merger that received a great deal of scrutiny by both the Board

and the division was the merger of the NYCE and Yankee 24.<sup>64</sup> NYCE was the third largest network in the United States with 95 million transactions monthly, more than 13,000 ATMs and a dominant position in New York. Yankee 24 was the ninth largest network, with 23 million transactions and more than 4,000 ATMs, and competed throughout New England. Both networks competed in parts of New England, primarily in Massachusetts and Connecticut.

Even though there was direct competition between the two networks, it did not receive a great deal of attention in the Board's decision. The Board did not address the nature of the head-to-head competition between the networks or its significance. In approving the merger, the Board did not appear to believe that the loss of competition between the two networks would be significant. It observed that "a number of factors should mitigate the loss of Yankee 24...as an independent competitor."<sup>65</sup> In particular, the Board observed that other providers of EFT services would remain in the market, including third-party processors and other regional and national ATM and POS networks.

Further analysis of the nature of competition would have been useful. For example, the Board did not discuss or identify the nature of competition between the two networks. Its observations on competitive alternatives also deserved elaboration. Although third-party processors offer competition in the ATM processing market, they do not compete in either the network access or network services markets. The only other regional network in the market, MAC, had a competitive presence only in New Hampshire. The competitive significance of national networks is limited, as noted in the *EPS* decree. Thus the Board's reasons for finding there was no significant loss of competition seem open to question.

The most interesting aspects of the order were not the observations about the level of current competition, but rather what the Board had to say about the merged network's commitment to an *open network* structure, the existence of poten-

<sup>63</sup> 59 Fed. Reg. 24712 (May 12, 1994).

<sup>64</sup> Bank of New York Co. (1994).

<sup>65</sup> *Id.*



tial efficiencies and how these factors justified the loss of competition.

**Operating rules—the importance of an open network structure.** The critical factor from the Board's perspective was the new operating rules offered by the network, which permitted all non-equity members to bypass the network and enter into arrangements with alternative networks or third-party processors. The network's operating rules permit: (1) third-party processors to participate in the network; (2) members to participate in other networks; (3) card issuers to determine routing; and (4) institutions to participate on a nondiscriminatory basis.

The first and second of these rules provide member banks with possible alternatives, including processing from third parties and ATM switching services from other networks. The third and fourth rules provide mechanisms by which small institutions can enhance their ability to obtain competitively priced services from the network. Of particular importance may be the card-issuer routing rule, which would permit banks to choose lower cost networks if the merged network attempted to raise prices.<sup>66</sup>

**Efficiencies.** The Board also found that the merger would result in public benefits that outweighed any loss of competition. These were primarily in economies of scope and reduced costs, including: (1) increased transaction volume, which would increase economies of scale and reduce costs (primarily in transaction processing); (2) increased ability to offer POS services to retailers; and (3) increased consumer convenience.

## **Banc One Corp.—The EPS-National City Bank Merger**

Sometimes networks expand by admitting new financial institutions in adjacent areas as owners. One such merger that received a lot of scrutiny by the Federal Reserve Board was the application to admit National City Bank of Ohio as an owner of

EPS; the Board approved the application in a 5-1 vote in March 1995.<sup>67</sup>

Compared with a merger of a neighboring networks, adding new owners may be a preferable (and less expensive) method of expanding geographically. Antitrust enforcers, however, should treat these transactions as mergers because in many cases they may result in the diminution of competition between the two networks. For example, if the expanding network has some sort of exclusivity arrangement (either *de jure* or *de facto*), the transfer of one institution's ATMs could drive the neighboring network below the minimum efficient scale needed to operate. Once the neighboring network is driven below minimum efficient scale, its competitive significance will cease. In other words, the net result could be the same as a merger.

National City Bank (NCB) sought to join EPS as a 20 percent equity member and in turn, EPS would acquire National City's branded ATM network (Money Center), which operates in Ohio, Indiana, and Kentucky (it has just under 900 ATMs). NCB was a member of Money Station, a neighboring joint venture ATM in Ohio. Money Station filed a protest. The Board staff considered the application for several months, received several pleadings from the parties, and conducted an informal meeting.

**The loss of competition.** Money Station claimed that the acquisition would eliminate actual and potential competition and would increase the barriers to entry or expansion by existing or potential ATM networks. NCB was one of Money Station's largest members. By acquiring Money Station, EPS would have a substantial share of ATMs in several Ohio markets, including Cleveland and Columbus. In Money Station's view, by permitting the acquisition, NCB would be eliminated as an actual or potential competitor because as an equity owner of EPS, it would have no incentive to participate in alternative networks. In addition, the merger would increase the

<sup>66</sup> For a discussion of the importance of card-issuer routing rules, see Grimm and Balto (1993).

<sup>67</sup> *Banc One Corp.* (March 6, 1995) (Vice Chairman Alan Blinder dissenting).



difficulty for existing or potential competing ATM networks to retain or assemble the necessary critical mass of terminals and cardholders required by economic considerations, such as economies of scale and ubiquity, to be effective competitors of MAC.

The Board rejected the argument because the facts of record did not support the view that NCB would be particularly likely to enter the market independently or through another joint venture in competition with MAC if this proposal were denied. Of particular importance was that NCB abandoned its attempts to form a new regional ATM network with other large banking organizations in 1992 and instead became a participating member of the MAC network. NCB also ceased offering ATM processing services to unaffiliated third parties thus the loss of actual competition in network services was minimal. Thus in the Board's view, NCB did not compete in either the ATM access or ATM processing markets. In addition, MAC would remain subject to actual and potential competition from other providers of EFT services. Thus the Board concluded there was no significant loss of competition.

**Operating rules.** The Board relied heavily on the role the division consent decree would play in ensuring that the market remained competitive. In particular, the Board appeared to believe that by opening the MAC network to third-party processors, banks could easily find a competitive alternative to MAC. Moreover, the Board held that these third-party processors could provide a channel for entry by competing regional ATM networks.

Money Station contended that various MAC rules permitted the network to thwart any procompetitive effects achieved under the division consent decree. The Board staff investigated the effects of four rules: (1) MAC's prohibition of sub-switching between members; (2) MAC's rights under the consent decree to charge a royalty fee if subswitching were to be per-

mitted; (3) MAC's requirement that national network transactions be routed through the MAC network; and (4) MAC's holding company rule that generally requires membership of all affiliated banks. The Board staff specifically asked the parties what would be the competitive effect of changing these rules.<sup>68</sup> Without securing any evidence, the Board concluded that modification of these rules was not necessary (although Vice Chairman Alan Blinder would have required the changes). The Board did so because "the consent decree recently became effective, and that its terms are designed to achieve procompetitive effects over time during the 10-year duration of the decree."<sup>69</sup>

**Efficiencies/public benefits.** The Board concluded that there were potential public benefits because NCB would make cash infusions that would enable EPS "to continue and expand its research and development efforts," improving its ability to offer innovative electronic banking products.

**Dissent.** Vice Chairman Blinder dissented. He noted that although the loss of competition was modest, the public benefits did not outweigh this loss of competition. He observed that the application "demonstrates no such benefits to the public, in my view," as required by Sec. 4(c)(8) of the Bank Holding Company Act. The vice chairman would have required modification of MAC's operating rules, apparently as suggested by the staff, to meet the public benefits test.

## Assessment

The Board's approach in these cases is very much a mixed bag. Some aspects of their decision making appear to give credence to the opportunities for network competition, yet ultimately they seem to assume that a regional monopoly is foreordained.

<sup>68</sup> Letter from Stephen A. Rhodes, Assistant Director, Division of Research and Statistics, to Allen Raiken, *et al.* (Feb. 15, 1995).

<sup>69</sup> The Board's understanding of the purpose of consent decrees appears mistaken. The purpose of the decree is to remedy the competitive problem at the time the decree is entered, not during the pendency of the decree.



**Defining the relevant market.** Critical to understanding the analysis of network mergers is disaggregating the different dimensions of the network and analyzing the effect of mergers on competition for each dimension. A network has several components, including a trademark, a computer switch, and operating rules. As noted earlier, too often enforcers and regulators have focused on the unconcentrated nature of back office operations, and have given too little attention to competition at the brand level.<sup>70</sup> Differentiating between the two is important because there may be relatively few firms capable of competing at the brand level. Moreover, the barriers to entry may be dramatically different in the back office or brand level. Similarly, even though there may be efficiencies from consolidation at the systems level, these efficiencies may not outweigh the loss of brand competition.

The most encouraging aspect of the Board's decision in *Banc One Corp.* was their effort to disaggregate the dimensions of competition in their analysis of the relevant product market. As noted earlier, the Board had previously viewed the relevant market as basically the network's back office operations—an unconcentrated market in which entry barriers would be relatively trivial.

In *Banc One Corp.*, the Board recognized the distinction between the back office and brand aspects of competition. As noted earlier, it defined three relevant markets: network access, ATM processing and network services. The last two markets reflect the value of the back office operations and the network switch, respectively. The first market reflects the value of the brand name, reputation, and agreements between the network and its members.<sup>71</sup>

**Competitive effect analysis.** Critical in the analysis of any merger is a determination of the competitive effects of the merger, that is, what will be the ability of the merged firm to exercise market power after the merger. In both *Yankee 24* and *Banc One Corp.*, the Board appeared to rely

on the general structure of the market and the operating rules (discussed later) in concluding that anticompetitive effects were unlikely. In both cases the competitive analysis of the Board was rather limited. Particularly in *Yankee 24*, where the two networks had competed directly in Connecticut and Massachusetts, an analysis of the impact of that competition on both banks and consumers would have been useful. Some relevant issues, similar to those in *First Data*, would have included the impact of network competition on network fees, fees to consumers, output (in terms of ATMs and transactions), advertising, and revenue to bank members.

Another important issue in *Banc One Corp.* was whether NCB's incentives in participating in alternative networks would be altered because of becoming an equity owner of EPS. If NCB's incentives were altered and it dedicated its ATMs exclusively to MAC, Money Station might fall below minimum viable scale and its competitive viability might be in doubt. The Board concluded that this concern was "too speculative at this time to represent a significant potential adverse effect," because MAC no longer required exclusively for its members.

The Board's analysis of the likelihood of *de facto* exclusivity may be deficient by failing to recognize how NCB's ownership interests in EPS would affect its incentives. NCB has no ownership in Money Station. As an owner of EPS, it is in NCB's interest to direct as many transactions as possible through MAC. Thus it seems simple to predict that the likely outcome is that NCB will dedicate its transactions to the network that will enhance its revenue. That a financial interest can create *de facto* exclusivity has been recognized by the division and the FTC in several recent cases in nonbanking markets and in the recently issued *Health Care Policy Statements*.<sup>72</sup>

**The importance of network operating rules.** The Board's approach to the

<sup>70</sup> See Baker (1993).

<sup>71</sup> The Board explained that network access includes: (1) the right to brand ATMs and ATM cards with the trademark or logo of the ATM network; (2) the ability of the ATM cardholder with an account at one member depository institution to initiate withdrawal and other account transactions at an ATM owned by another depository institution that is a member of the same network; and (3) minimum standards for network performance and products offered through the network.

<sup>72</sup> Home Oxygen, FTC File No. 901-0109 (Nov. 2, 1993) and Homecare Oxygen, FTC File No. 901-0020 (Nov. 2, 1993) (healthcare joint ventures were *de facto* exclusive; physician ownership interests deferred incentive to participate in competing ventures); U.S. Department of Justice and Federal Trade Commission, Statements of Enforcement Policy and Analytical Principles Relating to Health Care and Antitrust (Sept. 27, 1994), at 69-70 (describing factors that lead to *de facto* exclusivity).



importance of operating rules seems confusing. In *Yankee 24-NYCE*, the commitment to an open network structure that permitted members to bypass the network and enter into arrangements with alternative networks or third-party processors appeared critical to the Board's conclusion that there was little potential for exercise of market power.

Yet in *Banc One Corp.*, the Board seemed unwilling to follow that precedent. The Board staff appeared concerned that MAC rules that imposed restrictions on subswitching between members would make it difficult for members to bypass the network. Vice Chairman Blinder would have preferred that the Board require that MAC amend these rules. If the Board was correct in *Yankee 24*, that would seem the preferable approach.

Amending network rules may be necessary to resolve concerns over the exercise of market power, but is it sufficient? Should network rules that create an open architecture in and of themselves immunize a merger where the merged firm will have market power? Is the opportunity to form subnetworks between individual network members sufficient to alleviate concerns about market power?

The Board is basically sailing on uncharted waters in this area. The only case to address the issue, the *Financial Interchange* arbitration, did not provide clear guidance on whether open architecture would alleviate the concerns of market power. (In this case, the network (PULSE) permitted its members to route transactions through subnetworks).<sup>73</sup> In determining whether alternative routing would diminish the threat of market power, the arbitrator wrote:

*Because ATM owners control routing of ATM transactions, they could choose in some instances to elect to route transactions within a subnetwork. If, for example, the interchange fee within the subnetwork is higher than that of PULSE, the ATM*

*owner has the incentive to use subnetwork routings if available. The same could be true in reverse if issuers could control routing. This competition within the existing structure could decrease PULSE's revenue... Interprocessor subnetworks functioning within the PULSE system can provide some limit on PULSE's freedom to establish interchange fees.*<sup>74</sup>

Nonetheless, the arbitrator discounted the significance of this open architecture in part because of the universal access offered by PULSE:

*The very fact that all Texas subnetworks are PULSE members at least suggests that they perceive the need for sharing on a broader basis. The number of cards and ATMs in each of these networks is far smaller than in PULSE. Moreover, single processor capability is limited. Even within local markets such as Dallas or Houston, the access provided by subnetworks falls far short of that of PULSE. Unless cardholders are indifferent to the added access PULSE participation provides, intraprocessor switching is not an adequate substitute; reliance solely on such switching would place financial institutions at a significant disadvantage... The combination of existing subnetworks might of course provide an alternative to PULSE... but single subnetworks as they now exist are no real substitute.*<sup>75</sup>

Ultimately, individual subnetworks (or third-party processors) were not a viable competitive alternative because they did not offer the level of universal access provided by PULSE. Similarly, in *Banc One*, although individual third-party processors might be capable of entering into the area dominated by MAC, it seems unlikely any of them could provide the level of universal access provided by MAC. As important, third-party processors can

<sup>73</sup> A subnetwork could be an alternative ATM network.

<sup>74</sup> 55 Trade Reg. Rep. (BNA), No. 1380, at 353.

<sup>75</sup> *Id.*



offer competition only at the back office level; they do not provide competition at the network access or network services markets.

Of course, at this stage there is little evidence that the division consent decree with MAC has resulted in significant entry by third-party processors or competing networks. Even if the consent created an open network structure, there are several reasons why that structure might not ensure that a network—especially a dominant network—cannot exercise market power.

First, even with an open architecture, a network might attempt to impose *de facto* exclusivity through other types of rules or fees that raised the costs of entering into alternative arrangements. For example, a network could set a “royalty or bypass fee” that would make using alternative networks financially unfeasible. In addition, other incentives such as ownership in the network, may discourage the use of alternative arrangements.

Ultimately, open architecture may be an illusory solution. If members start to bypass the network to any significant extent, free-rider problems will arise; in turn, members may become increasingly reluctant to invest in the network. The network may respond by closing the network, banning subswitching or imposing a fee for bypassed transactions. For example, a network could impose a fee on transactions routed outside the network. These free-riding/routing disputes are some of the most contentious in the ATM area.<sup>76</sup>

The Board's failure to address the operating rules in *Banc One Corp.* sends a confusing message to ATM networks. If these rules are important to reducing the likelihood of the exercise of market power, they should be imposed where that threat is present. But even if the Board believes that operating rules can remedy the threat of market power, relying on this factor is at best a second-rate solution. If operating rules are important, a preferable position might be that taken by the states in *Entree*—to prevent the merger and permit

the networks to compete in terms of operating rules. Moreover, approving mergers based on operating rules will place the Board in the position of increasingly regulating these networks and eventually arbitrating the intranetwork disputes over these rules.

**The importance of efficiencies/network externalities.** In merger cases, the enforcement agencies evaluate whether the efficiencies that may arise from a merger may outweigh the potential for competitive harm. Prominent in network merger cases are arguments that efficiencies in terms of network externalities will outweigh any competitive harm. Network externalities reflect the view that the value of a network to a consumer depends on the number of users and the identities of specific users. The larger the network, the greater the number of consumers who will join it, and, conversely, the smaller the network, the fewer the number of consumers who will join it. Network externalities are especially common in electronic networks such as payment systems.<sup>77</sup>

In *Banc One Corp.*, the Board recognized the importance of network externalities. It observed that:

*as an ATM network expands the number of its financial institution members and available ATMs, its value to network cardholders increases due to the greater accessibility of their deposit accounts. Similarly, as the number of cardholders increases, so will the number of transactions and hence the economic return on ATM terminals deployed in the network. This increased economic return provides incentives for banks to establish additional ATMs, thereby further enhancing the network's value to cardholders. Accordingly, banks tend to place a greater value on membership in a network as its membership expands.*<sup>78</sup>

Some commentators have suggested

<sup>76</sup> See Grimm and Balto (1993).

<sup>77</sup> See Stevens (1993); Katz and Shapiro (1985).

<sup>78</sup> *Banc One Corp.* (1995), p. 494 n. 20.



that the existence of network externalities may counsel for a more laissez-faire approach in analyzing payment systems mergers.<sup>79</sup> Although the existence of network externalities may suggest greater potential for the existence of efficiencies, that does not mean that those potential efficiencies should lead to less antitrust enforcement. First, many of those efficiencies could be achieved by less restrictive alternatives. In the ATM context, for example, a subswitching arrangement (between the two networks) may permit the networks to achieve a level of ubiquity (and consumer convenience) without eliminating competition at the brand level.

Moreover, network externalities are not without limit. William Baxter, the former assistant attorney general in charge of the antitrust division, has observed that although ATM joint ventures can achieve efficiency benefits related to economies of scale, these efficiencies will cease to be significant once a joint venture reaches a certain size. Beyond the point where these efficiencies are significant, Baxter suggests that it is preferable to limit the size of the network to encourage the creation of competing networks rather than one large network.<sup>80</sup>

The Board's overall analysis of efficiencies in these cases seems lightheaded and superficial. The approach taken by the FTC and division and the courts require the parties to demonstrate that there are no less anticompetitive means for achieving the efficiencies and that these benefits will be passed on to consumers.<sup>81</sup> The Board did not consider these factors in either *Yankee 24-NYCE* or *Banc One Corp.* In *Banc One Corp.*, the argument—accepted by the Board—that NCB would make cash infusions that would enable EPS to continue and expand its research and development efforts would not pass this test because there are a number of alternative sources of revenue to fund such research. Similarly, the economies of scale recognized in *Yankee 24-NYCE* could have been achieved through a more limited merger of the two networks' back office operations, while preserving competition

between the networks at the network access level—similar to the FTC approach in *First Data*.

**The vision of the regional network monopoly.** Although the Board's analysis in these areas seems conventional, one aspect of the decision in *Banc One Corp.* poses an "ominous cloud on the horizon." In response to the concerns about the loss of competition, the Board articulated a vision of regional network monopolies apparently fated by economics.

*[T]he significant position of a regional ATM network is not, standing alone, contrary to the public interest. Network externalities, such as the economies of ubiquity, tend to promote consolidation of regional ATM networks. As a result, in various geographic areas, like the Mideast region, dominant ATM networks have been emerging throughout the EFT industry. One recent study indicates that the ten largest regional networks now account for 80 percent of all regional ATM network transactions in the United States. In this light, the Board believes that, as a result of economic and market structure conditions, regions are likely to have one dominant ATM network.<sup>82</sup>*

The Board appears to view the road to regional monopoly as foreordained and dictated by the economics of networks. Is that vision correct? The enforcement actions taken by the states in *Entree* and the FTC in *First Data* suggest that monopoly is not a foregone conclusion, even in settings where there may appear to be significant network externalities. In both cases, the antitrust enforcers were able to spur network competition by focusing on the impediments to entry at the brand level and carefully assessing efficiencies at the systems level.

Ultimately, the Board's view seems to harken back to the day when economics of ubiquity placed ATM network mergers into

<sup>79</sup> See Guerin-Calvert (1994).

<sup>80</sup> See Baxter, Cooter and Scott (1977).

<sup>81</sup> 1992 Horizontal Merger Guidelines of the Department of Justice and the Federal Trade Commission, 4 Trade Reg. Rep. (CCH) ¶ 13,104, Section 4.0 (April 2, 1992). This joint statement by the two agencies states that "the Agency will reject claims of efficiencies if equivalent or comparable savings can reasonably be achieved by the parties through other means.... [and that the] expected net efficiencies must be greater the more significant are the competitive risks identified...." See *FTC v. University Health, Inc.*, 938 F.2d 1206 (11th Cir. 1991) (a "defendant who seeks to overcome a presumption that a proposed acquisition would substantially lessen competition must demonstrate that the intended acquisition would result in significant economies and that these economies ultimately would benefit competition and, hence, consumers.").

<sup>82</sup> See *Banc One Corp.* (1995), p. 497.



the per se legal category. Although its decision in *Bank One Corp.* appears to advance the analytical model, the Board's conclusion appears to be that competition is not worth the candle. If the Board's view prevails, the road to regional monopoly may turn into a superhighway.

## CONCLUSION

Network mergers are particularly complex because they require careful differentiation of the elements of competition and thoughtful assessment of the potential for efficiencies. Too often, antitrust enforcers have quickly grasped the potential for theoretical efficiencies without giving sufficient attention to the opportunities for network competition. Payment systems networks play an increasingly important role in the today's economy. A monopoly/regulatory model—which may be the result of the Board's recent ATM decisions—may lead to less competition and higher prices.

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## Antitrust and Payment Technologies

**Dennis W. Carlton and Alan S. Frankel**

Joint ventures, particularly those involving networks that contain many industry participants, present some of the most interesting and difficult antitrust issues. Modern payment and electronic funds transfer networks are technologies that have greatly benefited consumers and the economy by reducing transaction costs and allowing consumers to economize on their holdings of non-interest bearing forms of money. Payment networks, however, may also be able to engage in collective actions that allow their members to exercise market power, and these networks have been involved in several significant antitrust disputes. If members of a payment network exercise market power, the effects can be equivalent to a privately imposed sales tax on all network transactions.<sup>1</sup> Retail sales of goods and services in the United States total about \$2 trillion per year. A significant fraction of these sales are made by merchants who accept credit cards and other electronic forms of payment, so even a small tax on transactions because of market power can affect a large volume of sales. And because networks often exhibit significant scale economies, rival systems may not exist or may be unable to constrain the dominant system's pricing significantly. Economies of scale can make it hard for a relatively small network to compete and grow if the dominant network is significantly larger.

It can be difficult to determine whether a particular collective rule, or a particular business combination between two com-

peting networks, creates net benefits or net harms to consumers. Though antitrust intervention with respect to a network's structure or policies has the potential to generate savings for society, it also carries potential risks. Ill-founded antitrust intervention can reduce or eliminate the benefits society could otherwise enjoy from efficient network mergers and practices and can deter other networks from embarking on efficient activities. Antitrust intervention should therefore take place only when the economic effects of intervention are well understood and there is clear evidence that the benefits from intervention outweigh the harms.

It is sometimes stated that there are two levels at which competition occurs in payment networks: *intrasystem* competition occurs among members of a given network, and *intersystem* competition occurs among competing networks. Though this dichotomy is useful for some purposes, it has also led to confusion about the competitive importance of particular network rules and structures. Courts and commentators sometimes have treated the number of independent (and nonoverlapping) networks as the sole determinant of society's welfare, though we believe that the competitive economics of payment networks are far more complicated.

In this article we examine the concept of network competition and the notion that consumers of payment services can always be best protected through vigorous efforts by courts and antitrust enforcers to prevent the formation of *overinclusive* networks. It is our view that one typically cannot determine, on the basis of theoretical considerations alone, whether permitting access to payment networks by firms that already provide payment services is, on net, beneficial or harmful to consumers or to society. Instead, we believe that a careful analysis of the facts and economic evidence concerning particular networks and their policies is necessary to justify antitrust intervention.

<sup>1</sup> We explain later that in some cases such a network might even be able to impose this tax on transactions that do not use the network.



In section 2 we describe our analysis of Visa's exclusion of Dean Witter, owner of the Discover Card.<sup>2</sup> The Dean Witter case illustrates many of the issues that arise in antitrust controversies involving payment systems. First, we show that despite assertions by Visa, an appellate court, and some antitrust commentators, intrasystem competition can be significantly affected by a rule that denies membership to a large-scale, price-cutting firm like Dean Witter, even when there are already thousands of members in the network. This analysis refutes the notion that society's welfare depends entirely on the number of independent networks in the market. Second, we examine Visa's purported justifications for its exclusionary policy and show that the evidence does not support their justifications. Third, we explain why maximizing the number of competing networks does not necessarily lead to the greatest possible consumer benefits. We explain how network rules (and merchants' transaction costs) affect the prices consumers pay for credit card services and for the goods and services they purchase from merchants that accept credit cards. We show that Dean Witter's membership in Visa was unlikely to have any significant harmful effects on intersystem competition and its exclusion by Visa is instead likely to retard the introduction of new competing networks. We conclude that in this case Dean Witter meets our high standard for antitrust intervention.

In section 3 we explain why the arguments raised by other symposium participants regarding the alleged harmful effects of ATM network mergers fall far short of our standard for supporting antitrust intervention. Though these participants condemn virtually all network mergers because they eliminate competition between competing networks, we show that mandating their version of intersystem competition through antitrust enforcement is not a competitive panacea and in fact is likely to harm society. We analyze the effects of an ATM network merger in Chicago to illustrate our point. Finally, section 4 presents a brief conclusion.

## NETWORK COMPETITION IN CREDIT CARD SYSTEMS: THE DEAN WITTER/VISA CASE

The confusion from equating society's welfare with the number of independent networks is evident in various discussions of the recent litigation between Dean Witter and Visa. The case involves an attempt by Dean Witter to overturn a Visa rule preventing Dean Witter from becoming a Visa member because Dean Witter also issues a competing credit card brand, the Discover Card.

Visa is a network joint venture comprising thousands of financial institutions that issue the Visa card, a general-purpose credit card. Visa members compete with each other and independently set annual fees, interest rates and other terms of their credit card programs. Dean Witter's Discover Card is also a general-purpose credit card, but it is issued on a proprietary basis by Dean Witter alone. Visa viewed the Discover Card, introduced in the mid-1980s, as a significant threat and undertook efforts to make it less successful.<sup>3</sup> Despite those efforts, however, Dean Witter persisted, and the Discover Card became successful. Then in 1989, Dean Witter applied for Visa membership.

At the time Dean Witter introduced the Discover Card, Visa and MasterCard (like Visa, a bank credit card joint venture, the membership of which largely overlaps Visa's) had policies of admitting as members any financial institutions that qualified for federal deposit insurance. The Dean Witter subsidiary that issued the Discover Card met this criterion. Indeed, at the time Dean Witter introduced the Discover Card, it had an affiliate that was already a member of Visa, but it subsequently allowed that membership to lapse. Visa tried to induce Dean Witter to convert its Discover Card into a Visa card, but Dean Witter declined. Subsequently, Visa denied Dean Witter's application for admission and passed a new rule prohibiting affiliates of Dean Witter, American Express, or any firm with a card brand deemed competitive by the Visa

<sup>2</sup> The authors and Lexecon Inc. were retained as experts on behalf of Dean Witter in the litigation. See *SCFC ILC, Inc. d/b/a MountainWest Financial Corporation v. VISA USA, Inc.*, 819 Federal Supplement 956 (U.S. District Court, District of Utah 1993), affirmed in part and reversed in part, 936 Federal Reporter, 2nd Series 1096 (U.S. Court of Appeals for the 10th Circuit, 1994); certiorari denied, 115 Supreme Court Reporter 2600 (1995). This case has already spawned a significant literature. See, e.g., Carlton & Frankel (1995a, 1995b), Carlton & Salop (1995), Evans & Schmalensee (1995), Hovenkamp (1995), Balto (1993, 1995a, 1995b), and Baker (1993). This section draws heavily on our previous two articles.

<sup>3</sup> For example, Visa made it difficult for some merchants to accept the Discover Card by refusing to allow them to process Discover Card transactions on the same merchant terminals as Visa transactions.



board from becoming Visa members. Visa pointedly did not deem competitive either MasterCard, despite the fact that most banks that issue the Visa card are also MasterCard issuers, or the proprietary cards Diners Club and Carte Blanche, which are issued by Citibank, Visa's largest member.

In 1990, Dean Witter acquired the assets of a Utah financial institution that was already a Visa member. When Visa learned of Dean Witter's plan to use this financial institution to issue millions of additional Visa cards, it blocked the issuance of those cards and litigation ensued. Dean Witter claimed that its exclusion from Visa caused antitrust injury because its Visa program would have benefited consumers directly by delivering low-priced credit cards to them and by causing a general increase in competition. (At the time that Dean Witter had planned to launch its *Prime Option* Visa card, it would have been the only major issuer of no-fee Visa cards or MasterCard cards; AT&T's no-fee offer had just expired, and Visa's largest members still maintained annual fees on most of their accounts.) Dean Witter also claimed that Visa's actions had the intent and effect of restricting competition in the market for credit card services by reducing the likelihood that Visa members would create their own proprietary credit card brands to compete with Visa. Visa's actions indicate that a Visa member would risk expulsion if it was successful in issuing a card outside the Visa system.

Visa raised four main defenses to Dean Witter's legal challenge. First, Visa claimed that it was *impossible* for it to exercise market power because it did not control the terms of credit card plans offered by Visa's thousands of individual members. Visa asserted therefore that the entry of one more member, Dean Witter, could not possibly benefit consumers. Hence exclusion of that firm could not possibly harm consumers. Second, Visa claimed that admitting Dean Witter into Visa actually would harm consumers by reducing intersystem competition between Discover Card and Visa. Third, Visa argued that even if Dean Witter's membership in

Visa would benefit consumers, Dean Witter would be *free-riding* on Visa. For example, Visa claimed that Dean Witter would be able to obtain confidential Visa information to use in promoting its Discover Card. Visa also argued that it was entitled to any profits it could earn by excluding Dean Witter or anyone else, even if consumers were harmed as a result, because to force it to do otherwise would be an infringement of Visa's property rights.

A district court jury found in favor of Dean Witter. In reversing this jury decision, the Tenth Circuit found, among other conclusions, that as a matter of law Visa lacked market power, even though its members collectively accounted for a large share of the market, because its *individual* members had small market shares. Therefore, it reasoned, Visa could not have exercised market power by excluding Dean Witter.<sup>4</sup> We examine each of Visa's main arguments in more detail and explain why we found that the evidence supports Dean Witter.

## **A Single New Visa Card Issuer Like Dean Witter Can Benefit Consumers**

Visa's first argument was that, because it already had thousands of issuers and did not set the terms of the card plans offered by those members, it could not keep prices higher and exercise market power by excluding any one potential member. As a logical matter, this argument is wrong. Exclusion of an unusually efficient firm can indeed adversely affect competition. Moreover, this argument was directly contradicted by evidence that Visa and its members expected that entry by a large-scale, low-price firm like Dean Witter would have depressed prices and profits significantly. Visa members had good reason to think so. In March 1990, one year before Dean Witter had planned to launch its Visa card, AT&T rocked the banking industry by launching a massive bank credit card program. Whereas the top credit card issuers generally charged a \$20 annual fee on their accounts, AT&T offered consumers a credit card *free for life* if they accepted during the program's first year and used the card at least once a year.

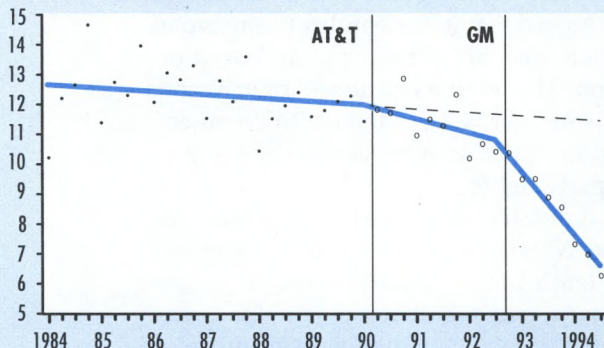
<sup>4</sup> The U.S. Supreme Court declined to review the Tenth Circuit's decision.



**Figure 1**

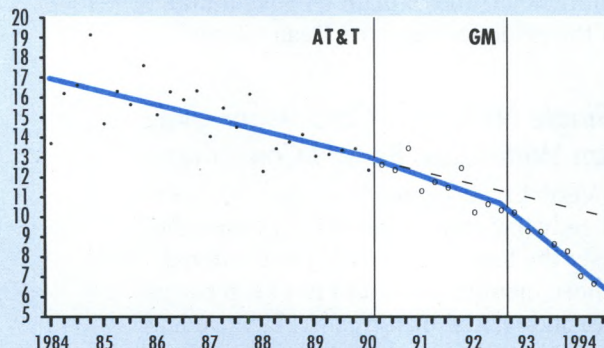
## Average Annual Fee Charged by Visa Issuers

Annual Fee (Current Dollars)


**Figure 2**

## Average Annual Fee Charged by Visa Issuers

Annual Fee (Constant 1992 Dollars)



Industry observers say the effect of AT&T on the credit card market was profound.<sup>5</sup> Hundreds of other banks began reducing or waiving their annual fees, and many industry participants and analysts credited AT&T with igniting a price war. Visa adopted rule changes to make more difficult a repeat of AT&T's program, and several banks tried to persuade various regulators that AT&T's program should be shut down because of alleged legal violations. Dean Witter tried to follow AT&T one year later, and General Motors did launch a major no-fee card of its own in late 1992. Others have since followed, and the annual fee, which became prevalent in the early 1980s when credit controls,

high interest rates and usury laws caused credit card issuers to incur significant losses, is now much less common.

In an earlier article we cited this AT&T effect as evidence that a large price-cutting entrant could generate significant benefits to consumers.<sup>6</sup> Figure 1 shows the trend in average credit card annual fees from 1984 to 1994.<sup>7</sup> Figure 2 shows the annual fee series in constant 1992 dollars. It is apparent from the figures that AT&T's entry caused not an immediate drop in fees, but instead an acceleration in the rate at which they were declining. It took time for AT&T to enroll its millions of cardholders. It also took time for competitors to feel the effects of AT&T's entry and to react. Some of their customers likely began defecting when their accounts came up for renewal after obtaining AT&T's card or hearing of its offer. As banks reacted with no-fee or low-fee card programs of their own, additional banks decided to drop their annual fees and some banks that initially dropped fees only for the first year decided later to make the no-fee feature permanent.

We estimate the following annual fee regression equations:

$$(1) \text{Log(RFee)} = \alpha + \beta_1 T + \beta_2 (T > \text{AT\&T Entry}) + \gamma (\text{Quarter Dummies}) + \epsilon$$

$$(2) \text{Log(RFee)} = \alpha + \beta_1 T + \beta_2 (T > \text{AT\&T Entry}) + \beta_3 (T > \text{GM Entry}) + \gamma (\text{Quarter Dummies}) + \epsilon$$

$$(3) \text{RFee} = \alpha + \beta_1 T + \beta_2 (T > \text{AT\&T Entry}) + \gamma (\text{Quarter Dummies}) + \epsilon$$

$$(4) \text{RFee} = \alpha + \beta_1 T + \beta_2 (T > \text{AT\&T Entry}) + \beta_3 (T > \text{GM Entry}) + \gamma (\text{Quarter Dummies}) + \epsilon,$$

where RFee is the average annual fee in constant 1992 dollars, T is a measure of time, and (T > AT&T Entry) and (T > GM Entry) are zero before the respec-

<sup>5</sup> See Carlton and Frankel (1995a, 1995b) for discussions of trade press accounts of AT&T's entry into and effect on the market.

<sup>6</sup> Carlton and Frankel (1995a).

<sup>7</sup> The data are those used by Evans and Schmalensee (1985). Evans and Schmalensee terminate their annual fee series in 1992. We updated their series through late 1994.



**Table 1**
**Summary of Effects of AT&T and GM on Average Real Annual Fee Charged by Visa Issuers**

Dependent Variable:	Log of Average Visa Annual Fee (in 1992 Dollars)		Average Visa Annual Fee (in 1992 Dollars)	
	Equation 1	Equation 2	Equation 3	Equation 4
$\beta_2$ : Years after AT&T's Entry (Zero before AT&T enters, or elapsed time in years after AT&T enters)	-0.104* (0.013)	-0.031* (0.015)	-0.767* (0.154)	-0.286 (0.215)
$\beta_3$ : Years After GM's Entry (Zero Before GM enters, or elapsed time in years after GM enters)		-0.187* (0.028)		-1.219* (0.415)
R <sup>2</sup>	0.941	0.973	0.945	0.956

\* Indicates significant at 95 percent confidence level. Standard errors in parentheses.

tive entry dates of those firms and equal to the amount of time (in years) that has elapsed since their entry thereafter.<sup>8</sup> The regression equations implicitly restrict average annual fees to be continuous at the date of AT&T and GM's entry.<sup>9</sup> Quarterly dummy variables account for seasonal effects.

Table 1 summarizes the AT&T and GM effects we estimate for these specifications. The results are quite clear. The decline in average Visa annual fees accelerated significantly after AT&T entered. Figures 1 and 2 and Table 1 also show another important phenomenon. When GM, a second aggressive no-fee entrant, introduced its program 2½ years after AT&T, the decline in annual fees accelerated further. This result supports our contention that Dean Witter, which would have entered 1½ years before GM, would have generated significant benefits to consumers.<sup>10</sup>

We also conduct a preliminary analysis of credit card interest rates (which some commentators have suggested are unusually unresponsive to movements in other market interest rates) and find evidence that credit card interest rates were also affected by AT&T's entry. Table 2 reports the results of several regression analyses we performed

using various consumer interest rate series published by the Federal Reserve.<sup>11</sup> The coefficients on the interaction between the AT&T dummy and the other interest rate series (that is, AT&T  $\times$  other interest rate) is generally positive and statistically significant, indicating that credit card rates became more responsive to movements in other market interest rates after AT&T's entry. The results also indicate that the overall level of credit card interest rates (that is, the coefficient on the AT&T dummy plus the coefficient on the AT&T  $\times$  other interest rate interaction variable multiplied by the actual other interest rate) fell slightly in the period following AT&T's entry, though this effect is not statistically significant.<sup>12</sup>

Within three years of AT&T's industry shake-up, average annual fees had fallen by 27 percent, and after 4½ years, annual fees had fallen by 53 percent. Credit card interest rates became more responsive to changes in other interest rates. We believe that AT&T and other entrants like GM had such significant effects, despite the existence of many other issuers, because they used novel marketing programs that included zero annual fees, rebates and discounts, massive national advertising,

<sup>8</sup> T is set equal to zero in 1990:1, and rises by increments of 0.25 per quarter.

<sup>9</sup> In the linear specifications there is no statistically significant change in the level of fees at the time of entry. In Equation 1, (with an AT&T, but no GM effect), there appears to be a slight upward shift in fees for the first three quarters, after which the net effect is negative and statistically significant. Because it may take time for consumers to switch issuers, we do not expect an immediate once-and-for-all downward shift in fees and instead impose the constraint that the average fee is continuous with respect to time. This constraint has only a minor effect on the other coefficients.

<sup>10</sup> Regression specifications correcting for serial correlation generally confirm the findings reported in Table 1. Evans and Schmalensee claim that annual fees were declining in inflation-adjusted terms even before AT&T entered, and a regression analysis shows no incremental effect of AT&T's entry on the level of fees. Their analysis, however, suffers from at least two serious defects. First, Evans and Schmalensee test for a once-and-for-all, immediate shift downward in fees at the time of AT&T's entry, after which they impose the constraint that fees continue to decline at the old rate. As our analysis shows, it is important to allow for a change in the rate of decline of annual fees to identify an effect. Second, they omit half of the post-AT&T data from their analysis.

<sup>11</sup> The quarterly Federal Reserve data are published in the monthly Federal Reserve bulletins and in electronic form and are reprinted in the appendix to this article.

<sup>12</sup> Regressions correcting for serial correlation and regressions allowing for effects operating with a lag generally confirm these findings.



**Table 2**

## Effect of AT&T's Entry on Credit Card Interest Rates

Dependent Variable:	Credit Card Plan Rate			Log (Credit Card Rate)		
	Equation 1	Equation 2	Equation 3	Equation 4	Equation 5	Equation 6
Intercept	14.860* (0.541)	13.702* (0.892)	12.199* (1.039)	2.448* (0.073)	2.219* (0.144)	2.011* (0.160)
AT&T	-1.681* (0.674)	-2.979* (1.237)	-5.569* (1.447)	-0.162 (0.087)	-0.402* (0.195)	-0.836* (0.219)
New Car Rate	0.284* (0.045)					
AT&T x New Car Rate	0.165* (0.061)					
Used Car Rate		0.280* (0.055)				
AT&T x Used Car Rate		0.198* (0.081)				
Personal Loan Rate			0.396* (0.068)			
AT&T x Personal Loan Rate			0.367* (0.098)			
Log (New Car Rate)				0.184* (0.029)		
AT&T x Log (New Car Rate)				0.071 (0.036)		
Log (Used Car Rate)					0.246* (0.052)	
AT&T x Log (Used Car Rate)					0.149* (0.071)	
Log (Personal Loan Rate)						0.327* .059
AT&T x Log (Personal Loan Rate)						0.308* (0.081)
R <sup>2</sup>	0.858	0.780	0.852	0.873	0.774	0.856

\* Denotes coefficient is significant at the 95 percent level. Standard errors in parentheses.  
Monthly Interest rates are taken from Board of Governors of the Federal Reserve, *Federal Reserve Bulletin*.

<sup>13</sup> Ausubel (1995) claims that overall credit card issuer profits remained high in the period after AT&T's entry. Regardless of whether one accepts this, industry pricing certainly was dramatically changed by AT&T's entry. (Even if Ausubel's claim is true, it is possible that profits would have been higher if AT&T had not entered the credit card market.) Annual fees fell, interest rates became more responsive, and according to Ausubel, miscellaneous fees increased—facts inconsistent with Visa's position that additional Visa members, such as AT&T, GM, or Dean Witter, should have no effect on what Visa claims is already a highly competitive market. In fact, recent evidence suggests that credit card profits may be declining. See "Competition and Expenses Put the Squeeze on Profits," *Credit Card News*, April 1, 1995, p.1.

and rapid achievement of scale economies (AT&T became the second largest Visa issuer within two years).

We conclude, based on statistical analysis that confirms industry opinion, that when AT&T entered the credit card market, something important happened that benefited many consumers significantly. Analysis also shows that the next large entrant (GM) generated significant

competitive benefits.<sup>13</sup> Had Dean Witter been permitted to issue no-fee Visa cards in early 1991, consumers would have been significantly better off because they would have enjoyed the benefits of lower credit card prices faster. Our conservative estimate is that consumers would have saved more than \$1 billion in annual fees had Dean Witter been allowed to issue Visa cards.



## *Visa's Free-Riding Justifications Are Unsupportable*

Visa claimed that it was necessary to exclude Dean Witter because otherwise Dean Witter would be able to free-ride on Visa. Visa identified two types of free-riding. The first involved outright Dean Witter appropriation of confidential Visa information, with which Discover Card could gain an unfair competitive advantage. The second claim was that Dean Witter would be free-riding on the investments made by founding members of the Visa joint venture and that Visa should not, under the antitrust laws, be forced to share its property with a competitor. Neither of these free-riding allegations is correct.

Visa has thousands of card-issuing members, most of which also issue MasterCard cards. Visa's largest member, Citibank, not only issues MasterCard cards, it also issues two proprietary card brands, Diners Club and Carte Blanche. Dean Witter itself had an affiliate that was a Visa member at the time it introduced the Discover Card. There is simply no evidence that these members have ever misappropriated valuable Visa information, and there is no basis to believe that misappropriation would be a problem for Dean Witter. There are few important secrets that are disseminated to 6,000 members and remain secret, and those that are, such as information conveyed in the approval of individual transactions, are protected by contract. So inconsequential is this concern of misappropriation that Citibank not only is allowed to serve on Visa's board of directors, but also was for several years guaranteed representation—despite its ownership of competing card brands. There is no reason to believe, nor did Visa argue, that misappropriation should be a greater concern for Dean Witter than anyone else.

Visa also alleged that Dean Witter's entry would allow it to free-ride on the investments made by its founding members, an investment on which Visa members were entitled to receive a return and should not be forced to share. According to Visa, such

forced sharing of property would have eroded the incentive for Visa to form and develop. However, most of Visa's thousands of members, including six of its largest 10 issuers, joined the network many years after Visa was formed. Even today Visa maintains an open membership policy, as long as the applicant does not issue any brands deemed competitive by the Visa board. This openness presumably demonstrates the lack of any inefficiencies from allowing new members and likely reflects the efficiencies Visa realizes from expanding the size of the network. Indeed, Visa's justification for excluding Dean Witter to protect investment returns of earlier members has nothing whatsoever to do with the fact that Dean Witter happens to issue a competing card brand. Every new Visa member shares Visa's property in exactly the same way that Dean Witter would have if it had been allowed to issue Visa cards. If taken seriously, Visa's argument would allow it to expel any firm selectively on the basis that it was not a founder and competed too vigorously with lower prices or better service. Though it is important to protect property rights, the antitrust laws do not grant joint ventures the unlimited property right to profits achieved through a collective exercise of market power.<sup>14</sup> Visa's past behavior in granting applications for membership reveals that its exclusion of Dean Witter cannot be justified on an argument that its entry will erode the property rights that were necessary to create the incentives to form and develop Visa.

## *Visa's Rule Threatens Intersystem Competition, But Dean Witter's Membership in Visa Does Not*

One check on the exercise of collective market power by members of a joint venture is freedom of its individual members to offer proprietary products and services outside the operation of the joint venture in competition with the joint venture's product. Payment systems are no exception. Though proprietary payment systems may be unable to realize the scale economies of the large joint ventures, they may at least

<sup>14</sup>The issue of preserving the profit incentive of joint ventures to invest, though easy to deal with in the Dean Witter case, is in general a difficult problem. See Carlton and Frankel (1995a, 1995b).



provide some constraints on prices. Visa's rule, which is likely to preclude any current or prospective Visa member from issuing any new proprietary card brands, eliminates or drastically reduces the threat of future competing proprietary cards like the Discover Card. Few if any firms would risk expulsion or exclusion from Visa to issue a proprietary card that competes with Visa. Visa's rule makes it less likely that Dean Witter's Novus network, on which it processes Discover Card transactions and can process other proprietary card transactions, will become an effective competitor of Visa and MasterCard in attracting the participation of other institutions because the most likely prospective participants are already members of Visa and would therefore be reluctant to issue a proprietary card.

So how would Dean Witter's entry into Visa threaten intersystem competition? Visa and its supporters argued that Dean Witter's membership in Visa would have been harmful to consumers because, though there are thousands of Visa issuers, there are only a few networks. They alleged that Dean Witter's membership in Visa is like a merger between the two, so there would have been even fewer networks competing independently. Visa claimed that Dean Witter would compete less vigorously once it became a Visa member. But these claims do not withstand careful analysis.

Dean Witter's membership in Visa would not have been at all like a merger between the two. Dean Witter would still have exclusive control and ownership of its proprietary network and would obtain only a small share of voting rights in Visa.<sup>15</sup>

Would Dean Witter have competed less vigorously once it was a Visa member? Visa's members thought the opposite was true, which is perhaps why they didn't want Dean Witter to become a member. Visa's own studies concluded that a large entrant within Visa would be a more effective competitor and put greater pressure on the prices and profits of incumbents than an entrant that had only a proprietary card program. Visa claimed that Dean Witter would have an unfair competitive advantage over other Visa members if it

could issue both the Discover Card and Visa cards. This may have concerned Visa's incumbents, but it should not by itself have been a concern of the antitrust laws.

Some commentators have alleged that Dean Witter would have competed less vigorously for merchant accounts if it became a member of Visa and that this would have allowed Visa to raise its interchange fees. Interchange fees in the credit card networks are paid by the bank servicing the merchant to the bank servicing the cardholder in transactions involving two different banks. These fees are set by the collective action of Visa banks. Discover Card has no interchange fees because its transactions always involve a single financial institution. But Discover Card, like Visa members, negotiates discount rates with merchants. The merchant receives not the total face amount of a credit card transaction, but only the net amount after deduction of the merchant discount. Visa merchant banks must pay the interchange fee out of the proceeds from the merchant discount. Therefore Visa members have an incentive to reduce their merchant discount rates as Visa reduces the interchange fee.

Visa's supporters argued that if Dean Witter became a Visa member, it would increase its merchant discount rate on Discover Card transactions to enable Visa to raise its interchange fee, (and consequently to allow Visa members to raise their discount rates). However, there is a flaw in this analysis. It assumes that Dean Witter's introduction of the Discover Card has caused Visa to keep interchange fees significantly lower than it would have otherwise. There is no evidence to support this assumption. It is true that Discover Card was introduced with lower merchant discount rates than were typically charged by Visa members. That was because Discover Cards were carried and used by relatively few consumers and merchants were unwilling to pay much for a Discover Card transaction, since they would lose few transactions if they declined to accept it. But Discover Card's lower discount rate would cause Visa to reduce its interchange

<sup>15</sup> Visa operates as a nonprofit joint venture in which members have voting power to elect board members according to their volume of credit card transactions.



fee only if significant numbers of merchants began to decline acceptance of Visa cards and Visa members could not reduce their merchant discount rates in response because the interchange fee was too high. This has not happened and is unlikely to happen. There are simply too many consumers using Visa cards for most merchants to be willing to accept only Discover Card (or, as explained later, induce consumers to use a Discover Card instead of a Visa card). This greatly attenuates the effect of intersystem competition on merchant fees.

There is another reason why Visa has not had to reduce its interchange fees in response to Discover Card. Most merchants do not distinguish their cash prices from their credit prices, and virtually no merchants charge different prices for different credit cards. There are several reasons to explain this behavior. First, many states ban surcharges on credit card transactions. Therefore while a discount for cash can be offered, this ban necessarily constrains all credit card transactions to occur at the same price. Second, credit card systems generally have contractual restrictions on merchants that prohibit merchants from doing anything—particularly with respect to price—at the point of sale to discourage the use of their brands in favor of others. Third, even where merchants are free to charge different prices for cash and credit, they usually do not. This implies that transaction costs permit at least some differences in transaction costs between different payment methods to persist and not be passed on to consumers at the point of sale. As a result, even when permitted, merchants generally do not offer inducements to consumers to use a particular brand of credit card even if its merchant discount rate is lower. Therefore once a credit card brand is accepted by a merchant, that brand gains no incremental sales by reducing its merchant discount rate. For all these reasons, Discover Card's merchant discount rate has little effect on the comparable rate for Visa.

In our earlier article we explained that we have neither performed nor seen

relevant studies that determine whether interchange fees are, on net, a procompetitive or anticompetitive practice compared with an at-par settlement system like that used for checks. Because merchants usually do not charge different prices for cash and credit, one effect of interchange fees is to raise the price to cash customers. (The merchant must raise the single price charged to recover the merchant discount, much of which reflects the interchange fee.) If credit card interchange fees are on balance harmful to consumers, then keeping Dean Witter out of Visa does little or nothing to solve that problem for the reasons explained previously. Moreover, if interchange fees somehow generate antitrust harm and excess profits, then antitrust policy should encourage card issuers' efforts, like those of Dean Witter, to rebate those profits to consumers, whether explicitly with cash or in-kind rebates, or implicitly with low prices for credit card services. In any event, antitrust policy should probably encourage the relaxation of restrictions on merchants' abilities to influence the choice of payment method at the point of sale.

In its argument, Visa stressed that Dean Witter doesn't *need* Visa to compete in the relevant market, so Visa should not have to admit Dean Witter. According to Visa, as long as a firm like Dean Witter can *survive* in the market on its own, it should have no recourse under the antitrust laws to demand entry into the dominant network. However, consumers can still be harmed even if a firm excluded from a dominant network can still survive. If Visa's reasoning were accepted, a dominant ATM network, for example, could expel banks that charged low fees, even if the only motive for and effect of the expulsion was an increase in market prices and profits of the remaining banks. Such expulsions would be immune from antitrust challenge under Visa's standard because the expelled banks could still compete by offering their own customers access to proprietary ATM terminals.

Our analysis of the *Dean Witter/Visa* case demonstrates why cases cannot be decided simply by comparing the number



of network *members* on the one hand with the number of *networks* on the other. The issues are far too complicated to settle on such simple grounds. We have shown through a careful analysis of the competitive effects resulting from Visa's exclusion of Dean Witter that mandating access to an intersystem competitor can sometimes be a sensible antitrust policy. We were able to reach this conclusion because Visa's efficiency justifications are meritless. In such a situation, Visa's exclusion of Dean Witter is a *naked exclusion*, one whose sole effect is to harm consumers.<sup>16</sup>

We are generally reluctant to recommend intervention in the operation or rules of a joint venture because we are concerned with the inefficiencies caused by interfering in an efficiently operating joint venture. When a rule like the Visa rule that excludes Dean Witter causes anticompetitive harm to consumers and has no offsetting efficiency benefit, however, such intervention is appropriate. If, on the other hand, there were significant legitimate efficiency considerations of roughly the same magnitude as the procompetitive benefit from Dean Witter's entry into Visa, we likely would have been unable to support Dean Witter's position.<sup>17</sup>

## INTERSYSTEM COMPETITION IN ATM NETWORKS

Our standard for supporting antitrust intervention in joint ventures is that the gain to society from intervention clearly exceeds the harm, taking into account all legitimate efficiencies—with the benefit of the doubt going to the joint venture in close cases. This standard generally can be met only by a careful analysis of the facts and evidence of a particular case. Our standard stands in sharp contrast to that offered by other participants in this symposium. David Balto and Donald Baker lament the decline of intersystem competition in payment systems and condemn virtually all network mergers and network duality.<sup>18</sup> The focus of their discussion is ATM network consolidation,

which they blame on antitrust enforcement that has, they say, for many years been far too lax. They claim that regulators followed a policy of favoring network mergers to achieve efficiencies of ubiquity and imply that that policy was misguided because those efficiencies pale in comparison with those that could have resulted from maintaining internetwork competition.

Balto and Baker would recommend unwinding many ATM network mergers because they think consumers have been greatly harmed. If that is the case, there should be by now (after many such mergers have occurred) plenty of evidence of that harm. However, they present little such evidence. They cite a few examples of ATM network mergers in which they claim that incentive discount membership programs were eliminated following a merger, but they present no evidence of aggregate consumer benefit or harm, or even of systematic increases in fees to consumers following mergers. Moreover, even if consumer prices *did* go up following mergers (and we are unaware of systematic evidence to that effect), consumers might still be better off as a result of the increased network size and geographic density. As the number of participants and terminals on the network increases, consumers can rely more on the network. The *full* cost of using ATM services, including search costs and the risk of being unable to find an operating terminal, might have fallen even if some fees increased. More relevant than price is quantity. If quantity rises as a result of a merger, that is evidence suggesting that consumers have benefited.

To illustrate how one might approach a systematic analysis of the competitive effects of ATM network mergers, we examine the results of a network merger between the only two regional shared ATM networks in Chicago, Cash Station and Money Network. Before 1987 these two networks competed with each other, but in late 1986 they agreed to merge. Following a transition that lasted more than a year, all consumers could use all ATM terminals belonging to members of the now-combined network in early 1988.

<sup>16</sup>See Rasmusen et al. (1991).

<sup>17</sup>In close cases, we likely would favor nonintervention. See Carlton and Frankel (1995a, 1995b).

<sup>18</sup>Duality means that a firm participating in one network is permitted to participate also in another competing network.



**Table 3**

## Effects of Merger Between Cash Station and Money Network

Year	Cash Station/Money Network			Total United States	
	Number of Terminals in Network (Cumulative percentage change)	Number of Interbank Transactions in millions (Cumulative percentage change)	Network Operating Cost Per Transaction in cents (Cumulative percentage change)	Number of ATM Terminals (Cumulative percentage change)	Number of ATM Transactions in millions (Cumulative percentage change)
1987	850	34.7	22.5¢	68,000	4,108
1988	1,042 (+22.6)	44.8 (+29.1)	10.92¢ (-51.5)	72,500 (+6.6)	4,581 (+11.5)
1989	1,335 (+57.1)	60.3 (+73.8)	9.79¢ (-56.5)	75,600 (+11.2)	5,274 (+28.4)
1990	2,089 (+145.8)	72.2 (+108.1)	7.59¢ (-66.3)	80,200 (+17.9)	5,942 (+44.6)
1991	2,256 (+165.4)	83.0 (+139.2)	7.12¢ (-68.4)	83,500 (+22.8)	6,642 (+61.7)
1992	2,398 (+182.1)	79.9 (+130.3)	7.14¢ (-68.3)	87,300 (+28.4)	7,537 (+83.5)
1993	2,817 (+231.4)	80.1 (+130.8)	7.06¢ (-68.6)	94,800 (+39.4)	8,135 (+98.0)
1994	3,422 (+302.6)	84.8 (+144.4)	7.79¢ (-65.4)	109,080 (+60.4)	8,958 (+118.1)
1995	3,550 (+317.6)	89.0 (+156.5)	7.81¢ (-65.3)		

Sources: U.S. data are from Faulkner & Gray, *Bank Network News*, reprinted in the *Statistical Abstract of the United States* (1994), Table No. 801; and *Bank Network News 1995 ETF Network Data Book*. Cash Station data were provided by Cash Station, Inc. We thank James Hayes of Cash Station for his helpful cooperation and comments.

How were consumers affected by this merger? Balto and Baker would probably have condemned it outright and would have favored antitrust intervention to prevent it. After all, they would reason, the market supported two networks before, so two networks can clearly survive in this market. Why lose the benefits of competition between the networks? However, this simple argument is insufficient to justify antitrust intervention. As Table 3 shows, output by any measure soared following the merger. In 1987, when the networks had already begun to merge, there were 850 ATM terminals in the network, and the combined networks processed 34.7 million interbank transactions at an average network operating cost of \$0.225

per transaction. By 1990 the number of terminals had increased by 146 percent (compared with an increase of 18 percent for the United States as a whole), the number of transactions had increased by 108 percent (compared with 45 percent for the United States), and the network's average cost per transaction had fallen by 66 percent. This huge growth in network participation and usage occurred despite the imposition by many banks, for the first time, of foreign fees on their customers when they use ATM terminals owned by other banks. In 1991 the merged network increased its interchange fee, the fee paid by a card-issuing bank to the bank that owns the terminal used by its customers. The interchange fee influences the issuers'



decision to levy *foreign fees*, but can also affect the incentive banks have to deploy terminals. In fact, the number of terminals in the network has grown faster than in the United States as a whole, and transaction volume exceeds the level that existed before the increase of the interchange fee.

These results suggest that the Cash Station/Money Network merger was procompetitive and benefited consumers. It demonstrates the risks associated with basing antitrust enforcement on a simple tally of the number of independent networks and suggests that preventing network mergers and instead relying on internetwork competition to generate consumer benefits in payment networks may entail too great a cost in foregone efficiencies from network consolidation.

## CONCLUSION

The goal of antitrust legislation is to maximize the benefits society obtains from competition. Payment system networks that are formed as joint ventures by competing financial institutions, like other types of joint ventures, present difficult antitrust issues because competing firms must cooperate to provide service. Some commentators have argued that the way to resolve these difficult issues is to use antitrust intervention to ensure that multiple payment networks remain separate and compete with one another. We have shown that this simple policy recommendation is inadequate. Instead, a thorough analysis of the competitive effects of any proposed antitrust intervention in these networks must be done before such intervention can be justified on the grounds of increasing society's welfare.

We showed how, in the *Dean Witter/Visa* case, one can perform such an analysis and support intervention when, as in that case, the evidence shows that the consumer benefit from intervention clearly exceeds the harm. We also showed, using an ATM-network merger as an example, that antitrust intervention based only on the number of networks can be misguided. The pursuit of competing and completely

nonoverlapping networks should not be the driving force of antitrust policy toward payment networks. In many cases society is likely to benefit from mergers of competing payment networks and is also likely to benefit from antitrust action that attacks restrictions imposed by a dominant network on the freedom of its members to compete as they wish. Payment systems continue to evolve, and new technologies are on the horizon. Antitrust can affect the extent to which society will benefit from these technologies. Antitrust enforcement that has a consistently positive effect on society's welfare will require serious and careful economic analysis.

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## Appendix

### Federal Reserve Series of Average Consumer Interest Rates

#### Average Interest Rate

Year/ Quarter	Post-AT&T Entry	Credit Card Loans	48-Month New Car Loans	Used Car Loans	Personal Loans
84Q1	0	18.73%	13.32%	17.52%	16.16%
84Q2	0	18.71	13.53	17.64	16.35
84Q3	0	18.81	14.08	18.10	16.75
84Q4	0	18.82	13.91	18.34	16.63
85Q1	0	18.85	13.37	17.78	16.21
85Q2	0	18.74	13.16	17.77	16.09
85Q3	0	18.62	12.72	17.31	15.84
85Q4	0	18.57	12.39	17.22	15.61
86Q1	0	18.48	12.29	16.63	15.52
86Q2	0	18.32	11.45	16.06	14.89
86Q3	0	18.15	11.00	15.23	14.70
86Q4	0	18.09	10.58	15.12	14.19
87Q1	0	18.10	10.35	14.40	14.10
87Q2	0	17.92	10.23	14.47	14.00
87Q3	0	17.85	10.37	14.58	14.22
87Q4	0	17.82	10.86	14.97	14.58
88Q1	0	17.80	10.72	14.77	14.46
88Q2	0	17.78	10.55	14.83	14.40
88Q3	0	17.79	10.93	15.46	14.81
88Q4	0	17.77	11.22	15.80	15.06
89Q1	0	17.83	11.76	16.12	15.22
89Q2	0	18.11	12.44	16.45	15.65
89Q3	0	18.07	12.13	16.22	15.45
89Q4	0	18.07	11.94	16.10	15.42
90Q1	0	18.12	11.80	15.97	15.27
90Q2	1	18.14	11.82	16.00	15.41
90Q3	1	18.18	11.89	16.03	15.46



## Appendix cont.

Year/ Quarter	Post-AT&T Entry	Average Interest Rate			
		Credit Card Loans	48-Month New Car Loans	Used Car Loans	Personal Loans
90Q4	1	18.23	11.62	16.04	15.69
91Q1	1	18.28	11.60	15.82	15.42
91Q2	1	18.22	11.28	15.74	15.16
91Q3	1	18.24	11.06	15.60	15.24
91Q4	1	18.19	10.61	14.90	14.88
92Q1	1	18.09	9.89	14.19	14.39
92Q2	1	17.97	9.52	13.89	14.28
92Q3	1	17.66	9.15	13.44	13.94
92Q4	1	17.38	8.60	13.66	13.55
93Q1	1	17.26	8.57	13.21	13.57
93Q2	1	17.15	8.17	12.55	13.63
93Q3	1	16.59	7.98	12.52	13.45
93Q4	1	16.30	7.63	12.33	13.22
94Q1	1	16.06	7.54	12.68	12.89
94Q2	1	16.15	7.76	13.78	12.96

Source: Board of Governors of the Federal Reserve System.



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## Commentary

**James J. McAndrews**

I'm honored to speak before such a well-informed audience and after such thoughtful and intelligent speakers, and I wish to thank the Federal Reserve Bank of St. Louis for sponsoring, and especially R. Alton Gilbert for organizing, this symposium. My comments today do not necessarily represent the views of the Federal Reserve Bank of Philadelphia or the Federal Reserve System.

The paper by Carlton and Frankel (1995) is excellent. It focuses on two issues of concern in credit card joint ventures: the collective setting of interchange fees and exclusionary restrictions on membership in the system. I agree with their conclusion that collective exclusion of competitors can harm consumers and with their estimates of the relatively weak importance of systems competition in the credit card marketplace. The evidence that Carlton and Frankel produce concerning credit card pricing in the wake of the AT&T and GM market entries is compelling.

I'll speak on three issues raised by the paper: collective setting of interchange fees, the possible benefits of duality agreements when systems competition (called end-to-end competition by Professor Economides) is imperfect and finally, the anticompetitive effects of collective restraints in associated product markets. All of these issues have a common aspect—namely, imperfections in competition between payment systems.

### INTERCHANGE FEES

Carlton and Frankel explain how collectively set interchange fees can be used

to generate more revenue for members of credit card systems at the expense of merchants when there are imperfections in the payment systems market. They remain “unconvinced ... whether interchange fees are, on net, a procompetitive or anticompetitive practice.” It is illustrative to compare these interchange fees with those used in the purely private-sector checking system in the National Bank period of 1863–1914. The history of the National Bank system does not offer much support to the view that collectively set interchange fees were used in an anticompetitive way.

During that period, as recounted by Cannon (1908) and Spahr (1926), banks did impose interchange fees for the collection of checks. They called the fees, simply, exchange fees. The clearinghouses created in that era were organized primarily to exchange local checks and to establish a uniform set of interchange fees and collection times. The collection of out-of-town checks, known as foreign checks, was a complicated business. Because of the ad hoc nature of the many bilateral interchange fee agreements, checks would sometimes travel thousands of miles before being presented to a bank only dozens of miles from the bank of first deposit, all to avoid an interchange fee of one to one and a half percent.

Part of the Fed's mandate was to establish a national system of payment, and it succeeded, by and large, in establishing par exchange for checks quite early in its history. Par exchangeability is the same as zero interchange fees and is, of course, the desired goal of Salop (1990), which Carlton and Frankel mention. But par exchangeability came about nationally only after the establishment of the Federal Reserve System. Even local clearinghouses, according to Cannon (1908), charged positive (but uniform) interchange fees, often as little as 15 basis points, which is less than if they had been set unilaterally.



Outside the local clearinghouses, the evidence is consistent with Baxter (1983), Kauper (1988), and Gilbert (1991), who conclude that unilateral decisions on interchange fees can result in an inefficient set of fees and can lead to costly and complicated countermeasures to avoid transactions with particular members of the network. The authors attribute these inefficiencies to network economies of check clearing. The Fed, as the check network operator, was able to enforce a particular uniform fee of zero. In choosing a uniform interchange fee, the Fed was constrained by the common law history of par exchange under direct presentment. Par exchange, as mentioned previously, is the exchange of checks at par value, with no interchange fee. Based on this history, the Fed chose an interchange fee of zero. Absent that common law constraint, the Fed may have chosen a positive interchange fee. As I mentioned, the local clearinghouses set positive interchange fees.

I therefore believe that we would not see zero interchange fees in checking today had the Fed not been created. The level of fees chosen collectively by the private clearinghouses, however, was substantially below the level chosen unilaterally by banks. I believe it is unlikely that they were used anticompetitively. In any case, the arbitration by Kauper in the *First Texas Savings Association* case suggests that interchange fees that are carefully matched to cost can be upheld as legal, and I think that this decision will stand further challenges.

## DUALITY IN THE CREDIT CARD SYSTEM

Carlton and Frankel argue that duality in credit card systems may contribute to a more competitive credit card market. They cite the apparently procompetitive merger of two regional ATM networks—Cash Station and Money Network. I wish to further support this thesis by reviewing evidence of greater competition within the two national ATM networks, Cirrus

and Plus, following their duality agreement. In addition, I'll take a closer look at imperfections in systems competition that suggest that duality or cobranding may provide a remedy for two imperfections in ATM systems competition.

The two leading national ATM networks agreed to a limited form of duality in 1990. It was a more limited form of duality than that seen in credit card networks. For a low fee, the agreement allowed a single bank to put either network's logo on its machines, but not its cards. The growth of ATM locations affiliated with Plus or Cirrus before and after duality suggests that the arrangement was welfare enhancing. Using data supplied by Plus and Cirrus, Kauffman and Wang (1992) have fitted growth curves to the data on Plus and Cirrus ATMs from the inception of the systems in 1984 through 1992. The actual growth of ATM locations affiliated with each network exceeds the amount of growth that would have been predicted based on the preduality experience. There was no similar boost in the total number of ATMs nationally. Furthermore, transaction volume doubled for Cirrus and Plus between 1990 and 1992, whereas for regional shared networks as a whole, transaction volume increased by only 30 percent. As in credit cards, these developments can reflect either a procompetitive response of the systems under duality (and there is excellent anecdotal evidence that Cirrus in particular took advantage of duality to compete more vigorously) or an increased value of membership in each of the systems because of network externalities, or economies of ubiquity, in demand. Either interpretation is consistent with a view that duality can enhance efficiency. Given this evidence of increased output under duality, showing that duality is, on net, harmful, will require more significant evidence of harm than has been found or suggested so far.

Indeed, determining whether exclusionary rules enhance efficiency requires a careful consideration of the nature of the competition under the exclusionary rules and consideration of how this competition



would be affected by something similar to cobranding or duality or by a merger of systems.

It is often the case that the systems competition we observe in payment systems under exclusionary rules is imperfect. In ATM networks, as in the early credit card merchant processing business, there are high costs to consumers when changing networks (because of their need to switch banks to gain access at a different network) and to banks of location-based product differentiation (because networks are characterized by different machine locations). These characteristics are associated with weak incentives to compete on price. Competition among networks with exclusionary practices or rules is product-based competition; this type of competition can be inefficient.

Surprisingly, cobranding and duality can work to reduce this inefficiency by lowering the high costs of changing networks and of location-based product differentiation. By offering banks the opportunity to join both of two networks that compete, consumers need not change banks to change network usage patterns. Moreover, by giving consumers access to all of the facilities in the two networks, product differentiation is reduced and the need to compete by product differentiation is lessened. This can lead to greater incentives for price competition between the networks.

Of course, early in the development of a system, location-based product differentiation may be welfare enhancing in that it quickens the development of the system. However, the greater value consumers place on a larger network may work to hasten development without the exclusionary practices. The point that I wish to drive home is not that exclusionary rules are in all cases bad, but rather that exclusionary rules can be used to reduce price competition.

The proponents of systems competition—and Donald Baker and David Balto have been eloquent advocates of the efficiency of systems competition—have argued that it is vital to maintain systems competi-

tion. I believe that equal emphasis must be given to determining what type of competition flourishes under exclusionary rules.

The evidence that Carlton and Frankel present on the effects of the entry of AT&T and GM in the credit card market is compelling. They find significant decreases in both the average annual fees charged by Visa issuers and in credit card interest rates after the entry of AT&T and GM, which suggests that the performance of the credit card market was not competitive, despite its competitive structure. Calem and Mester (1995) investigate several hypotheses that might account for the results of Carlton and Frankel. One such hypothesis is that there are substantial costs borne by a consumer when switching credit card providers. A consumer's history with a credit card issuer can lead the issuer, if the consumer is creditworthy, to grant the consumer high credit limits. This information is private and induces a switching cost: the consumer cannot obtain such generous credit limits elsewhere. So an issuer that lowers its rates will tend to attract less creditworthy borrowers—an adverse selection problem. Ausubel (1991) and Calem and Mester (1995) find significant divergence in performance of the credit card industry from its competitive structure.

## COLLECTIVE RESTRAINTS

Collective restraints in payment systems can include restraints on competition in related markets, that is, tie-ins, in addition to outright exclusion from participation. The Department of Justice, in its complaint against EPS and its MAC network, alleged that EPS engaged in tying its ATM processing to its provision of branded network access.

Another way tie-ins can yield an advantage to the owners of a payment system is discussed here. Consider a payment system with access associated with a logo and transactions processing. Suppose, furthermore, that because of the economies of ubiquity there is a monopoly in the access market; processing, however, is an activity in which there are no inherent



scale advantages. Then a payment system operator could tie the sale of processing to the sale of access, in which it has a dominant market position.

A monopoly access provider would not necessarily gain by tying processing to access because of reduced sales. However, in the case of a bank holding company joint venture that competes in the downstream retail banking market against customers of its system, the joint venture has another margin it can exploit. By tying the sale of processing to the provision of access, the joint venture can raise the processing fees above the level of cost. Accordingly, prices for the service in the retail market will rise to match the level of the transaction fee because these fees are usage sensitive.

Providing access, on the other hand, does not entail, to the extent that processing does, a usage-sensitive cost. Pricing for access then usually takes the form of card-based and machine-based fees or monthly fees. These fees are less transaction sensitive, and therefore we would not expect them to be translated into consumer pricing at the point of the transaction, but rather would expect them to be included in yearly checking account fees, a lower checking account interest rate or higher minimum checking account balances. Hence by tying processing to access, the joint venture gains control of a usage-sensitive cost that affects pricing to the ultimate consumers.

Tying processing to access allows the joint venture to *raise rivals' costs* by setting the processing fee above marginal costs. Salop and Scheffman (1983) show that raising rivals' costs allows one to gain competitive advantage over rivals. The average cost to the joint venture's affiliate banks is not affected as much because profits flow to the bank holding company owners and can be allocated to the affiliate banks. Hence the affiliates of the owners gain an advantage in the retail marketplace, over and above the profits that accrue to the owners of a successful regional brand or logo for network access.

This suggests that networks whose owners are all in-market would have a more limited incentive to exploit this margin to raise rivals' costs, whereas a network whose owners had little banking market overlap would be more apt to exploit this incentive to tie a processing service to an access monopoly.

This model would also suggest that the remedy that EPS and the Department of Justice agreed to in their consent decree—which was to allow competition in ATM processing—was appropriate. Tying the sale of any processing to system access should concern antitrust authorities, especially when the owners of the system compete in the retail market.

## SUMMARY

The effects of collectively set interchange fees, duality and collective restraints on membership and associated products differ depending on the nature of competition among competing systems and depending on competition in the downstream retail banking market. In general, the features of the payment products that I've discussed in this talk, including network externalities in demand, high costs for consumers (or merchants) to change systems under exclusionary rules, opportunistic vertical integration and competition in product differentiation rather than in price, all suggest that the nature of systems competition is likely to be far from the perfectly competitive ideal and that antitrust policy will play an important continuing role in this industry. Furthermore, the results of research on duality and cobranding in credit card networks and in ATM and POS networks, both from an empirical and theoretical viewpoint, suggest that these interconnection agreements can manage both to reduce the imperfections of systems competition under exclusivity agreements and to extend the benefits of network externalities in demand.



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## Commentary

**Nicholas Economides**

### FEATURES OF CREDIT CARD NETWORKS

A first glance at credit card networks reveals a complex transaction and payment structure. A typical credit card transaction has four parties: the customer, the bank that issued the customer's card, the merchant, and the merchant's bank.<sup>1</sup> The four parties are complementary links in the transaction. The transaction begins when the customer (lower left corner of Figure 1) makes a \$100 purchase from the merchant with a credit card. The merchant is paid less than the customer pays to the card-issuing bank. For example, the merchant may collect only \$96 on the \$100 purchase; the difference is called the discount. Thus there are at least two possibilities of collecting rent: first, by the card-issuing bank through the interchange fee and second, by the merchant bank, which collects the difference between the discount and the interchange fee.

Three out of the four parties of a typical transaction compete with other firms that sell substitute goods or services. Clearly merchants compete with other merchants for customers; merchant banks compete with other banks for merchants; and card-issuing banks compete for customers. To compete, firms may create brand names, differentiate their products, and add extra services to the basic service that they provide. Thus competition in credit card networks is complex. Nevertheless, credit card networks adhere to the basic principles of operation of all networks. To understand credit card networks better, we turn to a general analysis of competition in networks.

### GENERAL FEATURES OF NETWORKS

A comprehensive analysis of the basic structure of networks and a survey of recent research on networks can be found in Economides and White (1993) and Economides (forthcoming), respectively. We borrow and summarize a number of those results here. A central feature of networks is that network goods or services exhibit network externalities: adding another customer adds value to the existing customers of the network. A consumer's willingness to pay for a network good or service increases with the level of expected network sales. In general, network externalities arise out of the complementarity between the various pieces of the network. A physical network is made of complementary components. For example, in Figure 2, a simple star telephone network, consumers are connected to a switch, S. A phone call between A and B (good ASB) comprises two complementary components, AS and SB. That is, customer A can use the telephone services only by talking to another network customer, and in consuming good ASB, both customers A and B simultaneously use the switching service, S.

The analysis extends to virtual networks. Virtual networks have complementary components, that is, components of vertically related products. Examples of virtual networks include the combination of computer software and hardware, and the collection of compatible computer central processing units and video monitors. The Visa credit card virtual network has a Visa issuing bank, a merchant bank, a merchant that accepts Visa cards, and a customer with a Visa card. An integrated system of automated teller machines (ATMs) is a network that includes banks that issue ATM cards, the system that provides ATMs and the data processing functions necessary for their operation, and the customers

<sup>1</sup> Baxter (1983) and Carlton and Frankel (1995). Figure 1 taken from Carlton and Frankel (1995), p. 647.



who use their ATM cards. One may even think of buyers and sellers in a financial exchange, such as the NYSE, as constituting a virtual network.<sup>2</sup>

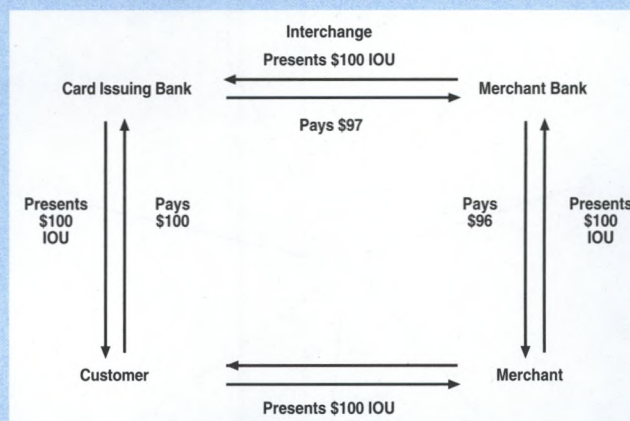
The network structure of Figure 3 can be interpreted as a long-distance network. One may imagine that customers Ai are in New York, while customers Bj are in San Francisco. Then a phone call from New York to San Francisco passes through the circuits of NYNEX (Ai SA), the lines of AT&T, MCI or Sprint in the long-distance part (SA SB), and the lines of Pacific Bell (SB Bj). A local phone call within New York is Ai SA Aj. Both Figures 2 and 3 depict two-way networks; transactions that have the same endpoints but go in opposite directions are distinct. For instance, a call from A1 to B1, which is charged to caller A1, is distinct from a call from B1 to A1.

The network structure of Figure 3 can also be interpreted as depicting an ATM network. Then Ai is an ATM and Bj is a bank. Customers of any bank Bj can use any ATM Ai. In this interpretation, the only transactions for which there is demand are the long-distance ones, for example, Ai SA SB Bj. There is no demand for any local transactions, such as Ai SA Aj and Bk SB Bl. In the ATM interpretation, this is a one-way network because there is no sense of direction.

The existence of network externalities implies that an extra sale has positive benefits to other buyers which the last buyer does not receive. It also implies that perfect competition is inefficient; it does not decentralize the optimal (social-welfare maximizing) allocation. To reach optimality requires two-part tariffs or other complicated nonlinear pricing schemes. Perfect competition fails because it doesn't internalize the externality. The much debated question of whether monopoly can do better is discussed in Economides and Himmelberg (1995), who conclude that monopoly cannot do better as long as no two-part tariffs are used. Thus there is no justification for monopoly on optimality grounds because of the network externalities.

**Figure 1**

## Flow of Funds in Credit Card Transactions



Despite significant research, there is no comprehensive analysis of oligopoly in networks.<sup>3</sup> This is essentially because the network structure implies that competition in a network industry is both for individual components and for end-to-end service. Incompatibilities—for example, refusal to interconnect or refusal of access—limit the varieties of end-to-end service available to customers, as well as the extent of network externalities. The general flavor of current knowledge on the issue of compatibility is that a firm with a small market share desires compatibility more than a firm with a large share.<sup>4</sup> Thus incumbents may want to thwart entry through the creation of artificial incompatibilities or through refusal of access.<sup>5</sup>

## JOINT VENTURES

Joint ventures in network industries can have strong positive effects by setting compatibility standards and through coordination.<sup>6</sup> It is best if a joint venture is among firms that are only vertically related; end-to-end railroads, manufacturers of complementary components, and manufacturers and retailers are examples. If firms are also horizontally related, that is, they compete in some segments, there may be significant problems. For example, in an extreme case, a joint venture may be a

<sup>2</sup> See Economides (1993).

<sup>3</sup> See Economides (1996).

<sup>4</sup> Economides (1989, 1991).

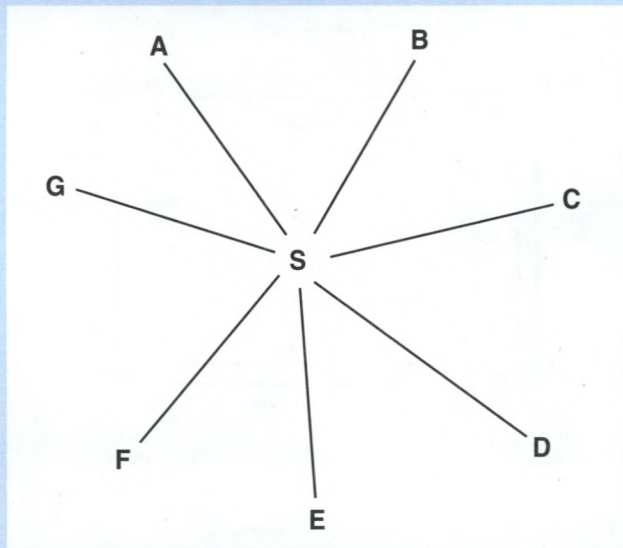
<sup>5</sup> If incumbents have the possibility of collecting "interconnection fees" to give access to the network to an entrant, they may implement a price squeeze through high interconnection fees rather than refusing to deal or interconnect. See Economides and Woroch (1992).

<sup>6</sup> See Carlton and Klammer (1983), and Economides and White (1993).



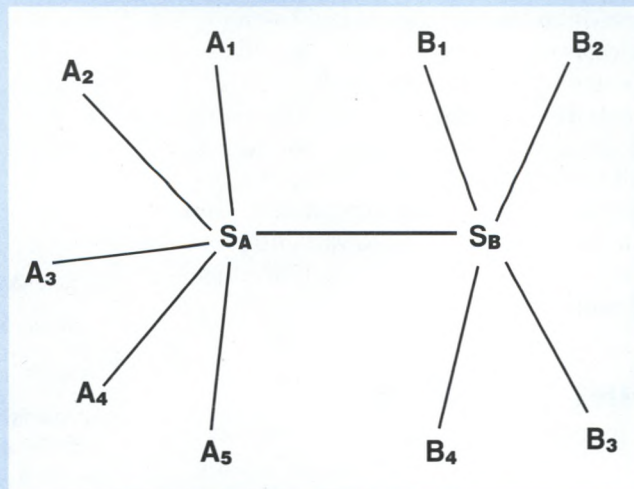
**Figure 2**

## A Simple Star Network



**Figure 3**

## A Long Distance (or Automated Teller Machines) Network



vehicle for blatant horizontal price fixing or other forms of collusive pricing of the products of the joint venture.<sup>7</sup> Alternatively, a joint venture may be a vehicle for implicit coordination among competitors. Finally, a joint venture may be a vehicle to keep mavericks out of the industry. In that

case, the refusal of access to the joint venture is similar to the refusal to interconnect in a network or a decision by a manufacturer to make the components of its product incompatible with components of other manufacturers.

## ISSUES ARISING IN THE VISA DISPUTE

The credit card virtual network of Figure 1 is similar to the long-distance (or ATM) network of Figure 3, where SA Ai are the customers, SB Bj are the merchants, and the service SASB is provided by the participating banks. An important difference between a credit card network and a long-distance network is that today a long-distance network has full interoperability, that is, any call can go to any destination irrespective of the carrier. In contrast, credit card networks are incompatible. For example, a Visa transaction is only between a Visa cardholder, a Visa bank, and a Visa merchant.

Given that credit card networks are incompatible, entry is a crucial issue. Admission of new members should, in principle, intensify competition in the pricing of components that the members of the network provide, that is, intra-network competition. If members of the network (joint venture) cannot participate in a competing network, usually that should diminish competition among end-to-end services, that is, inter-network competition. In exceptional cases, this exclusion could promote competition. However, it is likely that the refusal to allow a member of, for example, the Discover Card network to issue a Visa Card and therefore have access to the Visa network, reduced inter-network competition.

Furthermore, in the Visa case, Discover wanted to enter with a long list of customers (as did AT&T earlier). Besides intensifying intra-network competition, the addition of a significant number of new customers would have created significant external benefits to all Visa banks, merchants, and customers because of the associated network externalities. Thus the

<sup>7</sup> See *Financial Interchange*.



refusal of Visa to let Discover enter may have prevented the creation of significant additional social benefits.

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Donald I. Baker, "Shared ATM Networks—The Antitrust Dimension."

David A. Balto, "Payment Systems and Antitrust: Can the Opportunities for Network Competition be Recognized?"

Dennis W. Carlton and Alan S. Frankel, "Antitrust and Payment Technologies."

(Commentaries by James J. McAndrews and Nicholas Economides.)



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