interchange rate.[124] Suppose, counterfactually, that a system set the interchange fee below the transactions-maximizing level. Then the system could choose a higher fee that both raised the number of transactions and their weighted margins. Hence, weighted profits would rise, contradicting the private optimality of the original choice. Similarly, starting at the transactions-maximizing fee level, there is no first-order loss of quantity from a small increase in the fee, but there is a first-order increase in weighted margins. Hence, profits would rise here too.

128. With respect to the second point, as has already been discussed, setting the intechange fee to maximize the use of credit and charge cards may not be socially optimal. Instead, it may promote the overuse of cards.

129. Lastly, Visa asserts that policy restrictions on interchange fees could lead large banks to set up their own credit card schemes.[125] As Visa points out, one should take into account any increases in organizational costs and the possible loss of network benefits.[126] Visa fails to point out, however, that increased inter-systems competition resulting from new schemes might generate static and dynamic efficiency gains.

VII. WELFARE ANALYSIS OF NO-SURCHARGE RULES

130. No-surcharge rules are attempts by the credit and charge card networks to regulate retail pricing. The welfare effects of this regulation are equal to the differences in the welfare levels under the equilibrium outcomes with and without no-surcharge rules in effect. At a broad level, the imposition of no-surcharge rules has several effects:

- No-surcharge rules may force retailers to engage in price discrimination because the rules induce the same prices for transactions with potentially different costs.
- No-surcharge rules alter the nature of competition and thwart the use of retail price signals to guide consumers' choices among payment mechanisms.
- No-surcharge rules remove the neutrality of interchange rates.

Several arguments have been put forth for and against no-surcharge rules.

A. ADVERSE WELFARE EFFECTS OF NO-SURCHARGE RULES

131. Consider first the adverse effects of imposing a no-surcharge rule.

1. Suppressed Consumption by Non-Card-Users

132. Under a no-surcharge rule, a merchant charges the same price for card-based transactions and others. In setting this common retail price, a rational, profit-maximizing

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124 This relationship between weighted margins and the interchange rate holds in the *Rochet and Tirole* model, for instance.

125 *Delivering a Level Playing Field* at 43, for example.

126 *Delivering a Level Playing Field* at 45.

merchant takes into account its marginal costs for the average transaction. When credit and charge card-based transactions are more costly to the merchant than are transactions supported by other payment mechanisms, the retail price based on the cost of an average transaction will be higher than would be a retail price that applied only to transactions using the less costly payment mechanisms, all else equal. Thus, in most economic models, removal of a no-surcharge rule leads to lower retail prices charged to non-card users under the assumption that merchants find credit and charge card transactions more costly than others.[127]

133. Higher retail prices tend to reduce the quantities of goods and services purchased by consumers. There can be distortions in the consumption levels across different markets or between market and non-market goods.[128] The first sort of distortion arises when the extent of credit and charge card use differs across markets, and thus the extent to which non-card prices are distorted upward varies across markets. The resulting changes in relative prices across markets (*i.e.,* prices rise proportionately more in markets with high levels of credit and charge card use) distort the consumption decisions and thus give rise to efficiency losses. The second type of distortion is, essentially, an extension of the first. Goods and services produced in non-market settings (*e.g.,* leisure or home-cooked meals) do not have their "retail prices" affected by credit and charge card use. Hence, when no-surcharge rules raise the retail prices of market goods and services, consumption decisions are distorted toward non-market goods, again creating efficiency losses.

2. Economically Excessive Use of Credit and Charge Cards

134. When merchants face different costs from different payment mechanisms, a no-surcharge rule blocks the use of retail price differentials as a means of creating incentives for consumers to choose lower-cost means of payments. Hence, when merchants' cost differences represent social cost differences, a cardholder may use his or her card inefficiently often because he or she does not bear the costs imposed on merchants through the decision to use a credit or charge card.[129, 130] These effects arise when there are payment mechanisms that are substitutes for one another, for at least some set of consumers and/or transactions.[131]

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127 See, for example, *Schwartz and Vincent*, Lemma 4 at 13. One exception is *Regulating Interchange Fees*, where—due to the special structure assumed for consumer demands—consumers do not use credit cards for their marginal transactions and thus the merchant sets the common price under the no-surcharge rule equal to the cash-only price that prevails under surcharging. (*Regulating Interchange Fees* at 9.)

128 For a formal analysis, see *Schwartz and Vincent.*

129 This conclusion also depends, of course, on the relationship between card holding and usage fees and the issuers' costs.

130 Formally, these effects arise in the models of *An Economic Analysis*, *Rochet and Tirole*, and *Schwartz and Vincent*, as well as in the alternative model developed in the Technical Appendix.

131 As explained in the second appendix below, the existence of this degree of substitution is

3. Reduced Merchant Acceptance of Credit and Charge Cards

135. If merchants were allowed to surcharge and did so, they could have greater incentives to accept cards. In particular, allowing surcharges removes a primary reason why a merchant might not otherwise accept credit cards. Professors Rochet and Tirole state that:

> When merchants are allowed to apply card surcharges, their accepting the card is no longer an issue, since they can charge a price for payment card transactions at least equal to the cash price plus their cost of payment card transactions. [132]

Of course, to the extent there are fixed costs of card acceptance, these could be disincentives to accept low-volume cards even when surcharging is allowed.[133] The disincentives would be much lower, however, than if surcharging were banned. Moreover, if merchant acquirers charged only on a per-transaction basis and/or acquirers (possibly aided by payments collected through the network) offered to help merchants cover their fixed acceptance costs, merchants would have little reason not to accept credit and charge cards.

B. FIVE ARGUMENTS PUT FORTH IN SUPPORT OF NO-SURCHARGE RULES

136. At least five principal arguments have been made in support of no-surcharge rules.

1. Assertion that there are No Cross-Subsidies

137. The first argument in support of no-surcharge rules is defensive: It is asserted that no-surcharge rules do not give rise to the cross-subsidization of credit and charge card users by non-card users. Specifically, Frontier Economics asserts that a principal objection raised to no-surcharge rules is that they lead to cross-subsidies but that, under an economic definition of cross-subsidy, there is in fact no cross subsidy.[134] Frontier Economics is correct that several parties have asserted that a no-surcharge rule can lead to cross subsidies[135] and that, by a

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consistent with credit and charge cards' constituting a relevant antitrust market.

132 *Rochet and Tirole* at 18. Original contains a footnote noting the need to treat fixed merchant costs in the absence of a network subsidy.

133 For example, the Australian Retailers Association reported that the average annual rental cost to merchants for card processing terminals is $300, and it ranged as high as $960. Australian Retailers Association, "Submission to the Reserve Bank of Australia and Australian Competition and Consumers Commission," January 2000, at 7.

134 Frontier Economics, "Joint Bank Review of Credit Card Membership and Interchange Fees," *Report on Credit Interchange Fees to Review Banks,* January 2001, §8.2.4.

135 For example, Rochet and Tirole state that a no-surcharge rule can reduce social welfare by creating "cross-subsidization between cardholders and non-cardholders." (*Rochet and Tirole* at 20.) The *Joint Study* (at 52 and 54-55) also raises the possibility of cross subsidization.

standard definition of cross subsidy, there may be no cross subsidy.[136] However, what matters for consumer welfare and efficiency is what actually happens, not what labels are attached to the effects. Whatever labels one uses, imposition of a no-surcharge rule can harm non-card users and economic efficiency by raising the prices paid by non-card users.

138. First, consider the effects on consumers. When card-based transactions are more costly to merchants than are non-card-based transactions, non-card users are hurt by card use because merchants have incentives to raise retail prices to reflect their higher costs due to some consumers' using relatively expensive payment means.[137] As Professor Rochet and Tirole find in their formal analysis, "The no-surcharge rule leads, as one would expect, to a redistribution toward cardholders."[138]

139. Visa and others have put forth a counter argument that non-card-users benefit from credit card use under a no-surcharge rule because merchants enjoy increased sales and, in the presence of increasing returns to scale, these increased sales may lead merchants to charge lower prices to all of their customers.[139] As discussed above in Part III.B, this is a seriously flawed argument which fails to recognize that, to the extent card use merely diverts sales among

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136 A standard economic definition of cross subsidy due to Professor Gerald Faulhaber ("Cross-Subsidization: Pricing in Public Enterprise," *American Economic Review,* **65,** Issue 5, December 1975, 966-977) builds on the notion of incremental costs. The incremental costs of serving a group of consumers are equal to the difference in total costs when the supplier serves that group and all other existing consumers and total costs when the supplier serves solely the other existing consumers. Under Faulhaber's definition, prices are said to be subsidy free when there is no group of consumers that pay less than the incremental costs of serving them. Presumably merchants will accept card customers only if on average they cover their incremental costs (including the costs of both the merchandise and the payment systems used), and thus other groups of customers will not cross-subsidize them as a group in this sense. However, individual customers might be cross-subsidized when the net costs of serving consumers varies among them and merchants are unable selectively to refuse the patronage of unprofitable customers.

137 Dr. Wright argues that '[t]here can be no presumption that card paying customers are being subsidized by cash paying customers." (*Optimal Interchange Fees* at 20.) He bases this argument on the claim that merchants may enjoy transactions benefits that exceed merchant service fees. ARA data (see footnote 25 and accompanying text above) and merchants' desires to be able to steer consumers to other payment mechanisms suggest that this is an unrealistic case for many merchants.

138 *Rochet and Tirole* at 18.

139 Specifically, the Visa argument is the following: Merchants accepting credit cards enjoy increased retail sales. Without credit card acceptance, a merchant would have lower sales and thus its average costs would be higher because its fixed costs would be spread over fewer transactions. Thus retail prices would be higher in the absence of credit card acceptance and use. (*Visa Response* at 31.) In addition to the problems with this argument discussed in the text, the argument fails to make economically relevant distinctions between marginal and average costs.

merchants, it has no effect on aggregate sales and the realization of economies of scale. To be valid, one would have to demonstrate either that economywide sales increase or that sales are reallocated to merchants that tend to enjoy high degrees of economies of scale relative to others. I am unaware of any such evidence's having been put forth. Moreover, if credit and charge cards would be used in the presence of surcharging (*i.e.,* in absence of no-surcharge rules), non-card users would enjoy the claimed benefits of scale without suffering the losses that arise from having to pay retail prices that reflect the higher merchant costs of card use.

140. Next, consider economic efficiency. The cited economic test for cross-subsidies (*e.g.,* incremental cost floors) is neither a necessary nor sufficient test for economic efficiency. By distorting relative prices, the no-surcharge rule can harm economic efficiency even if all prices are above incremental costs. These effects have two sources. One is from distortions in the use of alternative payment mechanisms. The other is from distortions in the retail purchases made by consumers not using the credit or charge card at issue.

2. Merchants will Exploit Card Users

141. In their comments, parties point to two pieces of evidence that they assert demonstrate that merchants will use surcharges to exploit credit card users if allowed to do so. However, this evidence does not stand up to scrutiny.

142. Visa points to "high" charges for theatre bookings by telephone in the United Kingdom and asserts that these charges represent surcharges for credit card use.[140] However, Visa offers no evidence that it is cheaper to purchase tickets by telephone using other payment mechanisms. Indeed, this is unlikely to be so, because credit cards are often the only way to purchase by telephone. Visa offers no means of distinguishing between a "surcharge on credit card use" and a "surcharge on booking by telephone". Evidence suggests that it is the latter. It is my understanding that theatres do not have differential charges for the use of alternative payment mechanisms at the box office (*e.g.,* credit at the box office versus cash at the box office).

143. Visa also points to the surcharge imposed by Cabcharge for the processing of credit card payments.[141] Cabcharge is a payment service owned by the taxi industry. It includes both a proprietary payment mechanism (via a Cabcharge account accessed either through a docket or a card) and "Freeway," which is an electronic payments system used to process transactions not only on Cabcharge proprietary accounts but also on non-proprietary credit, charge and debit cards. Riders paying their fares with Cabcharge's proprietary card are charged a fee equal to ten percent of the fare. Riders paying with a general purpose credit, charge, or debit card are charged a fee equal to 11 percent of the fare,[142] which Visa describes as "clearly not cost reflective," and "an example of rent-taking by the intermediary in a credit card

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140 *Visa Response* at 37.

141 *Visa Response* at 36.

142 11 percent is equal to a ten percent charge by Cabcharge plus GST of ten percent of the ten-percent charge.

transaction."[143] This is a non-representative situation, however. Cabcharge is owned by the taxi industry and is used in 90 percent of taxis. Cabcharge is an unusual situation in which an industry has created its own payment mechanism and apparently acts on a cartelized basis to enforce an agreement to charge high prices to consumers. It is my understanding that this is an extremely unusual situation in the Australian economy and thus the experience with Cabcharge is not a good predictor of what would happen in the rest of the Australian economy if no-surcharge rules were prohibited.

144. Although unrepresentative in many respects, the Cabcharge situation does illustrate a point made earlier in Part VII.A.3: Allowing merchants to surcharge increases their incentives to accept credit and charge cards. Visa does not allow surcharges and is not accepted in Australian cabs, while MasterCard allows the Cabcharge surcharge and is accepted.[144] Even with an 11 percent surcharge, a MasterCard user is better off as a result—he or she has the option of paying with his or her MasterCard if he or she chooses to do so.

145. Lastly, there is evidence from other countries that merchants will set much lower surcharges than indicated by the Cabcharge experience. Specifically, an empirical study of merchant surcharging behavior in the Netherlands found that merchants, when they are allowed and choose to surcharge, charge an amount that is on average equal to or below the merchant service fees they pay for card transactions.[145]

3. Few Merchants would Surcharge

146. In their comments, some parties argue that most Australian merchants would not levy surcharges and, in some cases, point to evidence in other countries that the lack of no surcharge rules has not led to widespread merchant adoption of the practice.[146] Further, some argue, only those merchants imposing excessive surcharges will take advantage of the option to levy surcharges.[147]

147. In studies conducted in the Netherlands and Sweden on the effect of lifting no-surcharge rules, it was found that only a small portion of merchants imposed surcharges.[148] No-surcharge

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143 *Visa Response* at 36. Visa does not provide transaction cost data. Cabs have mobile credit and charge processing terminals and process low-dollar value transactions, both of which could increase transactions costs. The text assumes, *arguendo*, that Visa's characterization is correct.

144 *Visa Response* at 36.

145 ITM Research, "The Abolition of the No-discrimination Rule," March 2000, at 8.

146 Access Economics Pty Limited, "The Appropriate Scope of Credit Card Scheme Regulation," prepared for American Express International, Inc., June 2001, at 20 and 21; *Visa Response* at 36-37.

147 See, for example, *An Economic Analysis* at 6.

148 ITM Research, "The Abolition of the No-discrimination Rule," March 2000; IMA Market Development, "Study Regarding the Effects of the Abolition of the Non-discrimination

rules were lifted in the Netherlands in 1997 and in Sweden in 1995. In the Netherlands, 10 percent of retailers applied surcharges in 2000. This low percentage apparently reflects, in part, a lack of merchant information. Of the merchants who were expressly aware that the no surcharge rule had been abolished, 18 percent surcharged.[149] The differential rates of surcharging suggests that any policy of prohibiting no-surcharge rules should be accompanied by an education and outreach program aimed at informing merchants of their options.

148. In Sweden, only 5 percent of all merchants surveyed surcharge. One should not read too much into this finding, however, given that Visa reports that in Sweden it is very common for acquiring banks to impose no-surcharge rules on merchants, even though the credit card networks are prohibited from having such rules.[150]

149. Even if it were true that many merchants would choose not to surcharge after lifting the no-surcharge rules in Australia, there might still be important non-price dimensions to "surcharging." For instance, a merchant might use signage or oral requests by their employees to steer customers to low-cost payment mechanisms. This steering could be between various credit and charge cards, or in some cases between credit and charge cards and other forms of payment such as debit cards, cheques, and cash. To the extent that merchants' costs are social costs, this steering could bring consumers' choices among payment mechanisms more in line with efficiency.

4. Network Effects will not be Internalized

150. A fourth argument made in support of no-surcharge rules is that, in their absence, external benefits will fail to be internalized.[151] To a large degree, this claim has already been addressed in the discussion of network effects and pricing. To summarize earlier findings, merchant surcharges may themselves provide a way of internalizing external effects. If credit and charge cards create strong transactional benefits for merchants, then merchants have

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Rule in Sweden," February 29, 2000.

149 Half of those merchants who surcharged were unaware that the rule had been abolished yet surcharged anyway. It is possible that these merchants were never aware that surcharging had been prohibited in the past because they came into existence after the rule had been abolished.

150 *Visa Response* at 36.

151 Professors Gans and King also make a somewhat different argument. They suggest that advertising by card issuers, acquirers, and systems may help attract consumers to a merchant and that, absent a no-surcharge rule, merchants will be able to induce customers to use a payment mechanism other than the one that conducted the initial marketing. (Joshua Gans and Stephen King, "Observations on the Joint RBA/ACCC Study 'Debit and Credit Card Schemes in Australia: A Study of Interchange Fees and Access'," 3 November 2000 at 5.) They do not provide evidence of this effect, however. Moreover, surcharges might be used to move consumers toward the advertising payment mechanism or merchants might be charged directly for the advertising.

incentives to set retail prices that promote card use. Moreover, allowing surcharges could promote merchant acceptance of credit and charge cards, and thus generate additional positive network effects. With respect to merchant benefits from increased sales, these benefits arise only from transactions that would not have been made otherwise, and the collective benefits from merchants may be zero because one merchant's increased sales may come at the expense of other merchants' sales. These last two points raise doubts about the magnitude of increased-sales effects, even if they are externalities. Further, changes in current pricing practices (particularly charging annual fees to cardholders) might be a more effective way to internalize network effects.[152]

151. Some parties may nevertheless assert that no-surcharge rules are needed to internalize externalities generated by card holding and usage because merchants earn positive margins on sales made using credit and charge cards.[153] The argument has the following logical structure. Merchants typically sell goods and services at prices that exceed the merchants' marginal costs. Some people are willing to purchase a particular product from a particular merchant using any of a variety of payment mechanisms. Other consumers will purchase the product from that merchant only if the merchant accepts a particular brand of credit or charge card. Thus, in an intuitive sense, the card helps the merchant make sales, and the merchant benefits every time someone uses a card to make a purchase. However, to the extent that card transactions are more expensive, a profit-maximizing merchant will charge consumers more for card transactions than for others if allowed to do so. Therefore, a card network needs a no-surcharge rule.

152. One must be wary of drawing conclusions that are too far reaching. It would be misguided to adopt a public policy of declaring serious market failure due to externalities whenever a consumer takes an action (*e.g.,* reading a catalog or driving to a shopping district) that leads to the purchase of a good sold at a positive margin. Consider, for example, the following argument:

> Many restaurants sell slices of bread, sometimes on a standalone basis as toast, and other times as components of chicken sandwiches. Some people are willing to buy toast, but others will buy bread only if it is part of a chicken sandwich. Thus, "chicken helps sell bread," and restaurant owners benefit every time someone buys a chicken sandwich.[154] However, because chicken sandwiches cost more to make than does toast (and most customers are willing to pay more for chicken sandwiches) a profit-maximizing restaurant owner will charge consumers more for chicken sandwiches than for toast if allowed to do so. Therefore, the chicken producers should introduce a no-surcharge rule that

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152 See the discussion in Part VII.C below.

153 Frontier Economics, "Joint Bank Review of Credit Card Membership and Interchange Fees," *Report on Credit Interchange Fees to Review Banks,* January 2001, at 73, and *Visa Response* at 21.

154 Other customers might even benefit because a restaurant has a greater volume of business over which to amortize its overhead.

> requires restaurants to charge the same price for chicken sandwiches as they do for toast.

The above argument clearly is silly. Yet it has the same logical structure as that made by those who assert that externalities exist because merchants earn positive margins on sales made using credit and charge cards. Moreover, in analyzing the welfare effects of restrictions on merchant pricing, one must take into account the existence of multiple credit and charge card networks, as well as other payment networks. No-surcharge rules can limit the ability of competing payment systems to create consumer incentives that internalize any increased-sales benefits that they create. Taken to an extreme, one could argue that credit card holders should pay a fee whose revenues would be used to cross-subsidize cash users and debit cardholders in order to internalize external benefits that those consumers would generate for merchants. In short, the argument that no-surcharge rules are needed to internalize increased-sales benefits does not provide a sound basis for public policy.

153. Lastly, it is Visa's position that, although an individual merchant would gain from being able to surcharge, merchants are collectively better off with the no-surcharge rule than without it. Visa raises the example of card promotion funded out of merchant service fees and asserts that:

> [w]hile any given merchant would clearly prefer lower service fees, and accordingly might surcharge if it were permitted to do so, all merchants collectively are better off as a result of the cardholder promotion that is partially funded from service fees.[155]

A public policy of deregulating retail markets so that merchants could choose to levy surcharges would affect merchants *collectively*. Thus, if merchants agreed with Visa's assessment of the situation, they would support the imposition of no-surcharge rules by Australian credit and charge card systems. Visa has offered no evidence that large numbers of merchants or their trade groups support a public policy of allowing no-surcharge rules to be imposed. By the same logic, opposition to no-surcharge rules either by individual merchants or merchant trade groups contradicts Visa's view. In this regard it is notable that the Australian Retailers Association supports *removing* no-surcharge rules.[156]

154. To sum up the discussion, claims of externality appear overstated. Moreover, in some circumstances, rather than simply undermining the use of interchange fees, merchant surcharges are a substitute for interchange fees that ensure the internalization of what would otherwise be externalities.

5. The Car Park Analogy

155. The last argument proceeds by analogy. Visa argues that credit card acceptance is a service provided by merchants to consumers just as free car parks at shopping malls are a

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155 *Visa Response* at 30.

156 *Australian Retailers Submission* at 23.

service provided to consumers by merchants in those markets.[157] In both cases, the costs of the service are passed on to all consumers regardless of whether any particular consumer utilizes the service.

156. As constructed, the analogy is inapt for several reasons. First, there is competition among landlords, who presumably choose their policies independently and without overlapping ownership and governance. Second, there are a variety of parking and shopping arrangements. In some cases parking is free for all, in other cases there is shop validation that gives rise to free parking or reduced-rate parking, and in other cases consumers pay to park. Third, Visa has provided no evidence that landlords forbid merchants from surcharging from parking. It appears far more likely that retailers choose not to surcharge as part of their competitive strategies. Deregulating the credit and charge card market would have a similar effect—merchants would be free to make decisions whether to surcharge based on market conditions, rather than system rules. Fourth, the transactions costs of surcharging may be different. In cases where there is free parking without validation, transactions costs are avoided because the lot owner does not have to track parking usage and merchants do not have to identify which customers made use of parking and which did not. With a credit or charge card transaction, the merchant knows know who pays by card, and thus this type of transaction cost would not be incremental to the decision to surcharge. Moreover, when a consumer patronizes multiple merchants at a single shopping mall, it might be costly to allocate the costs across merchants—consumers would have to report the full set of merchants they patronized on a given trip and then merchants would have to have an agreed process for allocating costs. Lastly, the incremental costs associated with a shopper's choosing to park on a given day may be extremely low (given that a lot of sufficient capacity has already been constructed, possibly due to zoning requirements). In contrast, merchants face significant costs per card transaction.

157. A more appropriate analogy would be to ask what would happen if the vast majority of all landlords for retail space in Australia got together and insisted that merchants pay them for providing free parking but not pass any of those costs on specifically to consumers who drove. One would not be surprised to see competition authorities block an attempt to reach this sort of agreement.

C. ARE CURRENT CARD PRICING PRACTICES CONSISTENT WITH INTERNALIZATION CLAIMS?

158. Card issuers and the associations argue that no-surcharge rules and the use of interchange fees are socially desirable because they are necessary to internalize network effects. Additional light can be shed on this issue by examining whether other credit and charge card system policies are consistent with internalizing external effects. Specifically, light can be shed by examining whether the associations and their members pursue pricing policies for card services that promote membership.

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157 *Visa Response* at 26.

159. Credit and charge card users generally pay transactions fees that are below marginal cost. Indeed, a striking feature of the Australian credit card industry is that many cardholders face *negative* prices for using their credit cards. These negative prices are the result of rebates and rewards programs. For example, a cardholder may receive airline miles that can be redeemed for free flights. Loyalty programs have become increasingly important in the Australian credit card industry.[158] Even cardholders who are not members of loyalty programs generally pay below-cost transactions fees: The typical transaction fee levied on consumer charges is zero, although the associations and their members have stated that their marginal costs are positive.

160. There is a significant literature on pricing in the presence of network effects.[159] In addition to influencing optimal price *levels*, network effects influence the optimal price *structure*. In particular, there may be tradeoffs in the pricing of network *access* and network *use*. In the credit and charge card industry, access pricing corresponds to the annual fees associated with card holding, and usage pricing corresponds to the transactions charges or rebates and rewards that a consumer receives for utilizing a credit or charge card to make a purchase.

161. Dr. Wright argues that external effects create a tendency for too few consumers to hold cards.[160] In this situation, the economics literature identifies possible pricing strategies to internalize the positive external effects generated by network participation. The optimal policy depends on whether consumers at the margin of holding a card tend to use their cards for higher or lower volumes of purchases than do average cardholders. If the marginal consumer has lower transactions volume than average (as is intuitively sensible), then it is efficient to set annual fees below the fixed per-account costs borne by card issuers. To see why such a policy can be effective, suppose that annual fees are set at zero. Then it is valuable for a consumer to hold a card even if he or she expects to use it only once. If there is a need to raise issuer revenues, this can be done by setting transactions fees above marginal transactions costs. By raising revenues through above-cost transactions charges rather than above-cost annual fees, issuers would collect greater profits from the most intense card users (who presumably have the greatest incentives to hold cards) rather than collecting from all cardholders equally through annual fees.

162. Stated differently, economic analysis indicates that, when there are significant network effects, charging below-cost annual fees is a more effective means of encouraging cardholding than is paying rebates or charging below-cost transactions fees. This finding suggest that either the associations and their members have been unable to implement strategies to pursue their

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158 Mike Macrow, Craig Williams, and Alistair Scarff, "Credit Cards, An Ace Up the Sleeve," Merrill Lynch, 14 April 2000 at 23 and 24.

159 For a review of this literature, see Benjamin E. Hermalin and Michael L. Katz, "Retail Telecommunications Pricing in the Presence of External Effects," in *International Handbook on Emerging Telecommunications Networks,* G. Madden (ed.), (forthcoming).

160 *An Economic Analysis* at 4.

objective of encouraging membership, or below-cost pricing is driven by considerations other than internalizing network effects to promote cardholding (*e.g.,* the pricing might be used to promote excessive card use and thus increase issuer profits).

163. In order to promote lower annual fees, it may be necessary to take actions at the network level. This relationship could hold because the *structure* of the interchange fee can influence issuers' card services pricing structures. When interchange fee payments are based on transaction volumes, competition among issuers might drive them to set relatively high annual fees and high rebates in order to attract the highest-volume card users and thus collect the most revenue through interchange fees. If interchange fees had a per-capita component that partially replaced the usage-sensitive component, however, these incentives would be reduced.[161] Alternatively, a network might set caps on the annual fees charged by issuers.[162]

D. TWO INCONSISTENCIES

164. There are two ways in which the credit and charge card systems' policies appear to be internally inconsistent. First, these systems impose no-surcharge rules to ensure retail prices that are uniform across payment mechanisms. But the systems allow issuers to offer rebates and rewards to cardholders. As a result of these rebates and rewards, consumers face net retail prices that vary with the payment mechanism used. This inconsistency is also manifest in the treatment of proprietary or store cards. A prohibition of store card rebates would distort competition between store cards and general purpose cards and would raise questions of why only general purpose credit and charge cards should be allowed to offer rebates and rewards. On the other hand, if store cards can offer rebates—and thus merchants can charge different net retail prices depending on the payment mechanism used—why should merchants be allowed to set differential net retail prices for store credit cards, but not other payment mechanisms?

165. A second inconsistency arises from the fact that the associations charge different fees for fully electronic, card-present transactions and all other card transactions, apparently because they believe that prices (*i.e.,* merchant service fees, which depend in large part on interchange fees) should reflect cost differences. Yet, by imposing no-surcharge rules, the credit and charge card systems impose retail price regulation that forbids merchants from setting retail prices that reflect cost differences.

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161 This type of arrangement and potential incentives problems associated with it are briefly discussed in *Optimal Interchange Fees* at 34.

162 Although an association might express concern about objections by competition authorities, I am unaware of any association's ever having sought a ruling from competition authorities on whether a ceiling on annual fees would be acceptable. Moreover, I am unaware of evidence that the associations opposed the lifting of Australian government regulations that used to block annual fees.

E. TWO PROPOSED EXEMPTIONS FROM A PROHIBITION OF NO-SURCHARGE RULES

166. Two exemptions from any prohibition of no-surcharge rules have been proposed, one for open systems and the other for "voluntary" agreements.

1. Treatment of Open Versus Closed Systems

167. Parties responding to the *Joint Study* have stated opposing views on the extent to which open and closed networks should be treated similarly with respect to any public policy prohibition on no-surcharge rules.

168. Access Economics argues that closed systems should not be included under any prohibition of no-surcharge rules because closed systems do not have interchange fees.[163] This argument is incorrect on at least two counts. First, American Express has an Australian partner bank, AMP, that issues cards that run over the American Express network. Although American Express does not have a charge formally labeled as an interchange fee, American Express does have arrangements governing compensation between itself—in its roles as both acquirer and network—and its partner issuer. Second, even a closed system with no partner issuers collects charges from merchants in its role as an acquirer, which then affect its incentives to price card services to consumers in its role as an issuer. Although there can be some differences in terms of specifics, the potential economic distortions identified above for open card systems apply at a broad level to closed systems as well.[164]

169. Visa argues that closed general purpose credit card schemes such as American Express and Diners Club, and store cards that are issued by third parties, such as G.E. Capital, should fall under the same regulations as the open card schemes. Visa asserts that all of these cards are close competitors to the credit cards issued by the open schemes and that differences in regulatory treatment will provide the closed schemes unfair competitive advantages and thus harm efficiency.[165] Although Visa disagrees with the justifications that the *Joint Study* put forward for prohibiting no-surcharge rules, Visa argues that those justifications apply more strongly to the closed schemes than to the open schemes because the closed schemes levy a merchant service fee that exceeds that typically assessed in the open schemes.[166]

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163 Access Economics Pty Limited, "The Appropriate Scope of Credit Card Scheme Regulation," prepared for American Express International, Inc., June 2001, at 32.

164 For example, *Rochet and Tirole* (§6.2) and *Schwartz and Vincent* (compare Proposition 6 at 27 with the paper's earlier results) identify some differences in the behavior of associations and proprietary systems.

165 Visa, "Inclusion of Closed Card Schemes in the Designation Process, Submission to the Reserve Bank of Australia, 17th April 2000, at 3, and *Delivering a Level Playing Field* at 7-9.

166 Visa, "Inclusion of Closed Card Schemes in the Designation Process, Submission to the Reserve Bank of Australia, 17th April 2000, at 15 and 19.

170. The screen for whether a credit or charge card system should be subject to a ban on no-surcharge rules should be based on market power. If a system does not have market power, then that system acting on its own will not be able force merchants to accept inefficient no-surcharge rules because the merchants will be able to turn to other payment mechanisms to meet consumers' payment needs. This point is also relevant for the assessment of whether distortions would arise if no-surcharge rules were banned for some systems but not others. If no-surcharge rules were forbidden for all systems with market power, competition from these systems could be expected to force card systems without market power to abandon their no-surcharge rules in situations where the rules were inefficient.

171. A full analysis of market power in the Australian market for credit and charge card systems is beyond the scope of this report. There is, however, one issue that deserves mention here. By itself, the finding that credit and charge cards issued on the American Express or Diners Club networks comprise small shares of total cards or support small shares of total card-based transactions does not prove that these systems lack market power in the sense relevant for the analysis of no-surcharge rules. For example, if business travelers using American Express corporate cards were required to use those cards when traveling for business purposes in order to qualify for reimbursement by their employers, then this requirement might generate market power for American Express with respect to merchants, particularly merchants catering to business travellers, such as airlines, hotels, and restaurants. Visa also argues that American Express cardholder rewards programs could have similar effects for other consumers.[167]

2. "Voluntary" No-Surcharge Agreements

172. American Express attempts to draw a distinction between mandatory and optional no-surcharge rules. Specifically, American Express argues that "card issuers and/or merchant acquirers should be permitted to offer incentives or differential pricing to merchants who do not surcharge."[168] This proposal, as stated, is meaningless. Under the present system merchant acquirers offer differential pricing to merchants who do not surcharge—those who do not surcharge pay the standard merchant service fees and those who wish to surcharge are, in effect, charged punitive merchant service fees (*i.e.,* they are denied admission to the acceptance network). Without constraints on the nature of the incentives or price differentials, there might be no practical difference between a voluntary and mandatory rule.

VIII. CONCLUSION

173. The issues addressed by the *Joint Study* are complicated ones, but they are amenable to careful theoretical and empirical economic analyses. Perhaps the most central finding of these analyses is that, while network effects are a prominent feature of credit and charge card markets, there are multiple mechanisms through which these effects may be internalized.

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[167] *Delivering a Level Playing Field* at 32.

[168] *American Express Submission* at 11.