COMPETITION TRIBUNAL
TRIBUNAL DE LA CONCURRENCE

RECEIVED / REÇU
May 3, 2012

REGISTRAR / REGISTRAIRE

OTTAWA, ONT.	by / par C. Fortin doc. no. 251

COMPETITION TRIBUNAL
TRIBUNAL DE LA CONCURRENCE
File No/No de dossier: CT-2010-010

Exhibit No.
No. de la pièce A-70
Filed on
Déposé le May 17, 2012
Registrar/Greffier: Jos LaRose

PUBLIC

CT-2010-010

THE COMPETITION TRIBUNAL

IN THE MATTER OF the *Competition Act*, R.S.C. 1985, c. C-34, as amended;

AND IN THE MATTER OF an application by the Commissioner of Competition pursuant to section 76 of the *Competition Act*;

AND IN THE MATTER OF certain agreements or arrangements implemented or enforced by Visa Canada Corporation and MasterCard International Incorporated.

BETWEEN:

THE COMMISSIONER OF COMPETITION

Applicant

- and -

VISA CANADA CORPORATION and
MASTERCARD INTERNATIONAL INCORPORATED

Respondents

- and –

CANADIAN BANKERS ASSOCIATION and
THE TORONTO-DOMINION BANK

Intervenors

EXPERT REPORT OF RALPH A. WINTER
March 12, 2012

Table of Contents

I. Introduction

1. I have been asked by counsel for the Commissioner of Competition (the "Commissioner") to provide an economic analysis of particular rules implemented and enforced by Visa Canada Corporation ("Visa") and MasterCard International Incorporated ("MasterCard" and together with Visa, the "Respondents") through their Operating Rules (defined below) and in various agreements with parties in their respective credit card networks.

2. Among other things, these Operating Rules prohibit merchants from surcharging on purchases made using credit cards, including those credit cards that are particularly costly for merchants (the "No-Surcharge Rule"); from refusing to accept particular credit cards, including higher-cost premium credit cards, within each of the networks (the "Honour-All-Cards Rule"); and, at least in the case of MasterCard, from taking other actions to discourage in any way the use of particular credit cards (the "No-Discrimination Rule"). In this report, I refer to these three types of Operating Rules collectively as the "Merchant Rules".

3. I have been asked to consider certain issues relevant to the application of section 76 of the *Competition Act*[1] to the Merchant Rules. Specifically, I have been asked to examine whether the Merchant Rules:

   (a) have influenced upward or discouraged the reduction of the price at which customers of Visa and MasterCard supply a product within Canada (subparagraph 76(1)(a)(i)); and;

   (b) have had, are having, or are likely to have an adverse effect on competition in a market (paragraph 76(1)(b)).

II. Qualifications

4. I hold the Canada Research Chair in Business Economics and Public Policy at the Sauder School of Business at the University of British Columbia. I have published more than 50 articles, as well as two books. The majority of my publications pertain to issues of competition policy or closely related areas of industrial organization, which is the economics of markets and firm strategies. My publications include co-authorship of the book *The Law and Economics of Canadian Competition Policy*, which won the 2003 Douglas Purvis Prize as the year's outstanding contribution to Canadian Public Policy.

---

1 *Competition Act*, R.S.C. 1985, c. C-34, as amended.

5. I have also been awarded several other research prizes, including a Killam Research Award from the University of British Columbia and the Sauder School of Business Senior Research Award. I have held positions as President of the Canadian Economics Association and President of the Canadian Law and Economics Association. I am an Associate Editor of the RAND Journal of Economics, which is one of the most highly-ranked academic journals specializing in the economics of industrial organization. I have consulted extensively on competition policy on behalf of numerous private parties, the Competition Bureau and the U.S. Department of Justice, and have been qualified as an expert before the Competition Tribunal. I have taught undergraduate and graduate courses in industrial organization and finance at the University of Toronto and the University of British Columbia, and competition policy in the Faculty of Law at the University of Toronto.

6. The U.S. Supreme Court cited my research in *State Oil*[2] and *Leegin*,[3] two of the most important recent cases involving vertical restraints on prices. In Canada, my research has been attributed with influencing changes in competition policy on resale price maintenance, one of the practices to which section 76 of the *Competition Act* applies.[4]

7. My *curriculum vitae* is attached as Appendix "B" to this report.

8. I understand and acknowledge the Competition Tribunal's code of conduct for expert witnesses, as indicated in the acknowledgement attached as Appendix "C". I have had access to the documents, pleadings and transcripts from the examinations for discovery (including responses to undertakings) that have been produced in this case, as well as information that is available publicly concerning these issues. In this report, I have relied upon the materials and information cited in footnotes throughout and which are also listed in Appendix "D" to this report.

III. Summary

Background

9. Visa and MasterCard each operate a credit card network commonly referred to as a "four-party" credit card network. In addition to the credit card company (such as Visa or MasterCard), the following four parties are involved in each credit card transaction between a cardholder and a merchant:

(a) the consumer using the credit card (the "cardholder");

---

2 *State Oil Co. v. Khan*, 522 U.S. 3 (1997).

3 *Leegin Creative Leather Products, Inc. v. PSKS, Inc.*, 551 U.S. 877 (2007).

4 See James William Morrow, "Resale Price Maintenance under Review", (1990) 11:1 Canadian Competition Policy Record 39.

(b) the financial institution issuing the credit card to the cardholder (the "Issuer");

(c) the financial institution that supplies Credit Card Network Services to the merchant (the "Acquirer"); and

(d) the merchant.

10. Issuers issue credit cards to cardholders; maintain cardholder accounts; establish terms of credit card programs, such as the fees paid by the cardholder and the credit card interest rates; fund rewards (*e.g.*, air miles) for cardholders; and settle transactions with Acquirers.

11. Through their Acquirers, the Respondents supply services to merchants that enable merchants to accept credit cards as a form of payment. These services include the authorization, clearing and settlement of credit card transactions. I refer to these services collectively as "Credit Card Network Services". In addition, Acquirers often provide the physical infrastructure necessary to process credit card payments.

12. When a customer makes a purchase with a credit card, the merchant receives payment from the Acquirer. The Acquirer collects payment from the Issuer. The Issuer collects payment from the cardholder. In addition to the settlement of the purchase amount, cash flows in a credit card network consist of various fees; namely: (i) the "Interchange Fees" paid by the Acquirer to the Issuer; (ii) the "Issuer Network Fees" paid by the Issuer to the credit card company (*e.g.*, Visa or MasterCard); (iii) the "Acquirer Network Fees" paid by the Acquirer to the credit card company; and (iv) the "Merchant Service Fee" paid by the merchant to the Acquirer.[5] These various fees are described in further detail below.

13. A credit card company generates revenue from the sale of its product, Credit Card Network Services, through Acquirers to merchants. The price charged for this product is the total fee per transaction paid by Acquirers and passed on to merchants. This fee, which I refer to as the "Acquirer Fee", is the sum of the Interchange Fee and the Network Fee paid by the Acquirer in respect of a given transaction. A large fraction of this revenue is allocated by Visa and MasterCard to Issuers in the form of the Interchange Fee. The remainder is retained by each of the credit card companies to cover its costs, including the costs of operating its network and marketing, as well as profits.

---

5 The fee paid by the merchant to the Acquirer, is commonly referred to as the "Merchant Discount Rate" or the "Card Acceptance Fee". I refer to this fee as the "Merchant Service Fee".

Relevant Market and Market Power

14. I conclude in this report that the relevant market for the purpose of assessing the competitive effects of the Merchant Rules is the supply of Credit Card Network Services.

15. Contrary to the assertions of Visa and MasterCard, the relevant market does not include the broader set of payment methods, such as debit cards, cash or cheques, because credit cards have unique attributes, not duplicated by the other payment methods. Credit Card Network Services is the smallest set of products that includes the Respondents' products and for which a single firm selling the entire set of products could exercise market power.

16. Visa and MasterCard, with market shares of approximately 62 percent and 30 percent of credit card transactions by volume of sales in Canada, respectively, are close to a duopoly in the relevant market.[6] Each can profit by raising Acquirer Fees (prices) by a small but significant amount above the competitive level. That is, the Respondents have market power. This conclusion is reinforced by my finding, in analyzing the competitive impact of the Merchant Rules, that these rules suppress competition between Visa and MasterCard.

Competitive Impact of the Merchant Rules

17. I refer to the conditions in section 76, outlined in paragraph 3 above, as the "upward-influence condition" and the "adverse-competitive-effect condition", respectively. I conclude that both of these conditions are met in this case. The Merchant Rules adversely affect competition in the market for the supply of Credit Card Network Services in Canada. This adverse competitive impact leads directly to higher prices (*i.e.*, higher Acquirer Fees) which are passed on to merchants in the form of higher Merchant Service Fees. The Merchant Rules therefore influence upwards and discourage the reduction of Merchant Service Fees, which are the prices charged by Acquirers, customers of Visa and MasterCard, to their merchant customers.

18. The Merchant Rules have an adverse effect on competition by suppressing the incentive for either Visa or MasterCard to compete via Acquirer Fees in the relevant market. The No-Surcharge Rule, in particular, constrains the ability of either firm to capture a larger market share by lowering its Acquirer Fee because the drop in its fee cannot be passed through to consumers in the form of either a reduced surcharge or the elimination of a surcharge. The Merchant Rules suppress the essential competitive discipline that would otherwise operate in the market.

19. The Merchant Rules also adversely impact competition through a "cost externalization" mechanism. Under the No-Surcharge Rule, any increases in the

---

6 The market share figures are from 2010 purchase volume data. Source: *The Nilson Report* 967 (March 2011) at 8 (GSSS5389_00002602 at 2608).

prices for Credit Card Network Services charged by the credit card companies, instead of being passed on to the credit card companies' customers (*i.e.*, cardholders) alone, are also spread across consumers that pay with other methods of payment, including cash and debit. The credit card customers therefore bear only a fraction of the cost of higher upstream prices. The competitive discipline that any firm in a supply chain faces against raising its price, which comes from downstream buyers purchasing less of its product, is suppressed when the incidence of higher prices falls only partly on the downstream customers.

20. As a result of the adverse competitive impact of the No-Surcharge Rule, through both the competition-suppression mechanism and the cost-externalization effect, Visa and MasterCard have the incentive to set higher prices in the relevant market (*i.e.*, higher Acquirer Fees). These higher fees are passed on by Acquirers to merchants in the form of higher Merchant Service Fees.

21. I conclude this summary with an economist's perspective on the statutory interpretation of the upward-influence condition in subparagraph 76(1)(a)(i). As a section 76 case, the current matter is somewhat unusual in two respects: (1) the matter does not involve a physical article being resold by the customers of the Respondents (*i.e.*, by Acquirers), but rather involves a service that I refer to as Credit Card Network Services; and, (2) the upward influence of the Acquirer Fee is not in the form of a vertically imposed price floor. This matter is not like a simple case in which a manufacturer places a retail price floor on a pair of jeans.

22. Section 76, however, is not confined to agreements that specify a price floor. Subparagraph 76(1)(a)(i) applies to any agreement which "directly or indirectly ... has influenced upward, or has discouraged the reduction of, the price at which the person's customer ... supplies or offers to supply ... a product within Canada."[7] Visa and MasterCard enter into agreements with their customers, Acquirers, which in turn sell Credit Card Network Services to merchants. The agreements between Visa, MasterCard and their respective Acquirers dictate the terms upon which Credit Card Network Services may be supplied by Acquirers to merchants, including contractual clauses that impose and enforce the Merchant Rules. The Merchant Rules are structured so as to eliminate or substantially reduce important sources of competitive discipline on and between Visa and MasterCard. This substantial reduction or elimination of competition between Visa and MasterCard has the effect of influencing upward and discouraging the reduction of the prices at which Acquirers supply Credit Card Network Services to merchants. From the perspective of economics, the upward-influence condition and adverse-competitive-impact condition of section 76 are met.

---

7 A "product" includes both "an article and a service", as defined in subsection 2(1) of the *Competition Act*.

IV. An Overview of the Product and Industry

23. General purpose credit cards ("credit cards"), such as Visa or MasterCard credit cards, are cards that may be used to purchase goods and services from a variety of merchants on credit, allowing cardholders to pay for their purchases over time, including the option of paying with interest after an initial grace period. Credit cards include cards issued to individuals for personal use and commercial cards that are issued to individuals and firms for business use.

24. A credit card company's network provides the infrastructure and services enabling merchants to obtain authorization, clearance and settlement of transactions (previously defined collectively as "Credit Card Network Services") for merchants' customers that pay using that credit card company's own brand of credit cards.

25. Issuers contract with cardholders in a number of dimensions, such as: the credit limit; the grace period that the cardholder has before interest is charged; the minimum monthly payment amount for and interest rate on outstanding balances; the annual fee paid by the cardholder to the Issuer; the rewards, points and other benefits that may be received by the cardholder in connection with use of his or her card; cash advance transaction fees; foreign exchange fees, and others. In these various dimensions, Issuers compete to attract cardholders to the credit cards that they issue and also compete for a greater share of transactions among existing cardholders.

26. Acquirers compete for the business of merchants, offering a variety of services, such as guaranteeing prompt payment; banking and deposit arrangements; providing the technology and hardware to accept credit card payments; certain financial management services; statement provision and other services.

27. Table 1 provides a list of Issuers and Acquirers for Visa and MasterCard in Canada.[8] Table 2 provides an indication from available data of the market structure for Acquirer services. There are at least nine Acquirers in Canada for each of Visa and MasterCard. The market for issuing services also has many firms, with at least 12 Issuers for Visa and at least 19 Issuers for MasterCard.

28. Competition among Acquirers is strong as reflected in the small portion of the Merchant Service Fees retained by Acquirers. [redacted] The remainder of the Fee, as I explain below, is accounted for by

---

[8] All tables appear in Appendix A to my report.

[9] [redacted]

payments to the Issuer and to the Credit Card Company.) The implication of Acquirer competition that I will draw upon is that changes in costs faced by Acquirers are passed on to Merchants via corresponding changes in Merchant Service Fees. In a competitive market, marginal costs are fully passed through.

29. It is useful to illustrate, in a simplified way, the basic cash flows involved in a credit card transaction. Consider the following transaction as a hypothetical example: a product is purchased with a credit card for an amount of 100 dollars; the Interchange Fee is 1.50 percent or $1.50; the Network Fees paid by each of the Issuer and Acquirer are 0.06 percent or $0.06, for a total of $0.12; and the Merchant Service Fee charged to the merchant on that transaction is 1.60 percent or $1.60. In this example, the Merchant Service Fee is the sum of the following three components:

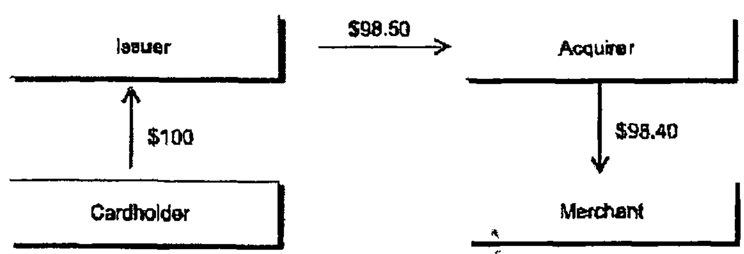
(a) the Interchange Fee that is retained by the Issuer, equal to 1.50 percent (or $1.50) of the transaction value;

(b) the Acquirer Network Fee, equal to 0.06 percent (or $0.06) of the transaction value; and

(c) the margin retained by the Acquirer, equal to 0.04 percent (or $0.04) of the transaction value.

30. Although Network Fees are settled separately, the Interchange Fee and Acquirer's margin are typically deducted from the 100 dollar payment flowing from the cardholder to the merchant, as illustrated in Figure 1 below:

Figure 1: Cash Flows in Example



31. It is helpful to decompose the hypothetical transaction into the flow of the payment and the flow of the various fees levied in connection with that transaction. As shown in Figure 2A, below, the 100 dollars is paid by the consumer to the Issuer, which pays the Acquirer, which then credits the merchant's account. Setting aside the fees, these payments are obviously uncontroversial and not at issue in the current matter. What is at issue are the fees and the impact that the Merchant Rules have on the fees.

Consequently, the more important payment flows are illustrated in Figure 2B, below, which shows the effective fees being paid by the participants in this hypothetical transaction.[10]

Figure 2: Decomposition of Payment Flows in Example

Figure 2A: Settlement of $100 (Without Accounting for Fees)

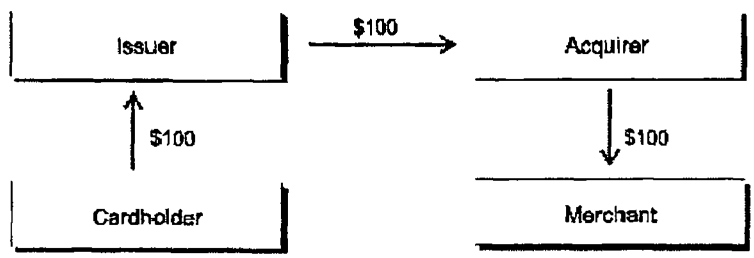
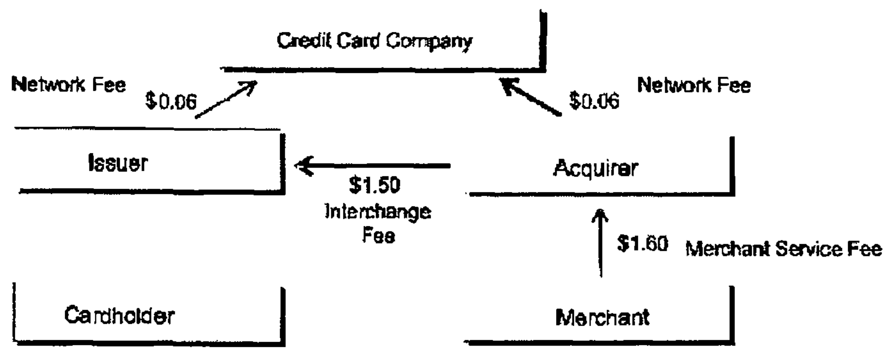


Figure 2B: Effective Payment of Fees



32. A credit card company depends, for its success in the market, upon attracting both cardholders and merchants to its network. The total volume of transactions on which the credit card company collects its Network Fees depends on both the number of cardholders using the credit card company's credit cards and the average volume of transactions by each cardholder, which in turn depends, in part, upon the number of

10 The Merchant Service Fee in Figure 2B is in most cases not paid as a separate cash flow but rather is deducted from the amount that the Acquirer credits the merchant's account. Hence the common terminology for the payment as the "Merchant Discount Rate".

merchants accepting the credit card company's credit card. Moreover, there is interdependence between the cardholder and the merchant sides of the market: the number of consumers willing to carry a particular card depends on the acceptance rate of that card among merchants; and the willingness of merchants to accept a particular credit card depends on the number of cardholders using that card. This interdependence is captured in the common description of a credit card network as a "two-sided market".

33. Visa and MasterCard each set default Interchange Fees applicable to credit card transactions involving their own brands of credit cards. [redacted] The establishment of default Interchange Fees by the credit card company is not directly at issue in this matter.

34. Tables 3A and 3B provide a summary of the 2011 default Interchange Fees for Visa and MasterCard credit cards. The Interchange Fee is the largest component of the payments made by Acquirers and passed on to Merchants via the Merchant Service Fee. Visa's Interchange Fees for consumer and commercial credit card products vary by card type and by category, from 1.00 percent for purchases from merchants in "emerging segments" using a standard credit card to 1.85 percent for payments made using a premium credit card in certain merchant segments. MasterCard's Interchange Fee for consumer expenditures ranges from [redacted] percent for purchases from high-transaction-volume petroleum merchants using a standard MasterCard credit card to [redacted] percent for particular transactions using MasterCard's "Premium High Spend" credit cards.

35. [redacted]

---

[11] See, *e.g.*, Examination for Discovery of Michael Bradley on behalf of Visa Canada Corporation, December 5, 2011, pp. 160-61, Qs. 438-41; [redacted]

Figure 3: MasterCard Weighted Average Interchange Fees

[redacted]

36. [redacted] As of December 9, 2011, Visa Acquirers and Issuers paid Network Fees, including volume assessment fees of [redacted] respectively.[13] The volume assessment fees are the largest component of the Network Fees imposed by Visa and MasterCard, but there are a myriad of other fees that may be applicable depending on the nature of the transaction. These are reported in Tables 4 and 5.

37. The total volumes of Visa and MasterCard credit card transactions over the 2005 to 2010 period are illustrated in Table 6.

---

12 [redacted]

13 See answers to undertakings, advisements and refusals given by Michael Bradley on December 8, 2011 at Q. 2969, Tab 32 - VISASUPP00007306 and Examination for Discovery of Michael Bradley on behalf of Visa Canada Corporation, December 9, 2011, p. 1105, Qs. 3136 and 3138.

V. Market Definition and Market Power

38. In assessing whether the "upward-influence" and "adverse-competitive-effect" requirements of section 76 are met in this matter, an initial step is to define the relevant market and determine whether the Respondents have the ability to exercise market power within that market. The ability to exercise some degree of market power is a necessary precondition for a finding that a business practice has an adverse effect on competition. If the Respondents faced such powerful competition so as to prevent the exercise of any degree of market power, then it is unlikely that the Respondents could adopt practices that influence prices upwards or have adverse effects on competition.

The Relevant Product and Price

39. Before discussing the issues of market definition and market power, I address an even more basic set of questions; namely: (i) for the purpose of assessing the applicability of section 76, which parties are the "customers" of Visa and MasterCard and what "product" do they purchase?; and (ii) what is the "price" at which that product is sold? These are questions with obvious answers in most competition cases. In the current case, however, as there is a large set of fees and cash flows being exchanged (illustrated in Figure 2, above), it is useful to address these basic questions at the outset.

40. Acquirers are, undeniably, customers of Visa and MasterCard. The total payment by an Acquirer is therefore an appropriate concept of price: the payment by customers for the product is, in any market, the definition of price. I elaborate below on the basis for this characterization of price.

41. First, if the flow of funds in a four-party credit card system were arranged so that the credit card company collected the entire Acquirer Fee (Interchange Fee plus Acquirer Network Fee) from each Acquirer and then paid the Interchange Fee to the Issuer, the appropriate concept of price would be very clear. The credit card company would be collecting revenue from its customers, the Acquirers, and then allocating some (in fact, most) of the revenue to Issuers for issuing activities. Visa and MasterCard would each be like a firm in any market that charges its customers a price and allocates some revenue to inputs, including promotion and product enhancement. The price would be the total amount paid by Acquirers, just as the price in any market is the amount paid by the customers. The total amount paid by Acquirers would be, and is, the Interchange Fee and Acquirer Network Fees (which I refer to collectively as the "Acquirer Fee").

42. Second, whether or not Interchange Fees flow directly from the Acquirer to the Issuer, rather than spending a micro-second in the accounts of the credit card company, is irrelevant in terms of arriving at an appropriate characterization of price or, more

broadly, in the economic analysis in this matter.[14] This is just a technicality. With the reality that the Interchange Fee flows directly to Issuers rather than through the accounts of the credit card company, the total payment by Acquirers remains an appropriate concept of price, and Acquirers an appropriate concept of customers, for the application of section 76.

43. My conclusion that Visa and MasterCard compete on the basis of the total payment by Acquirers can be clarified further with an analogy drawn from a simpler market. Suppose that a number of competing restaurants each directed their respective customers to pay the majority of their bills to the restaurants' chefs (at rates controlled by each restaurant) and the remainder of the bills to the restaurants to cover profits and non-food costs. The payments would be made by each of the customers to two parties, in amounts decided upon by the restaurants. The relevant concept of price would nonetheless be the total amount paid by the customers. This is the price on which restaurants would compete. The separation of bills would be merely a technical matter of accounting. In the present matter involving four-party credit card networks, such as Visa and MasterCard, part of the total payment by the Acquirers is made to the credit card companies with the remainder paid to the Issuers on terms set by the credit card companies in almost all cases. The price on which credit card companies compete remains the total payment made by Acquirers for each transaction.[15]

Market Definition: The Hypothetical Monopolist Methodology

44. The approach taken to assessing the market power condition in competition law cases starts with a determination of the relevant product market in which the Respondents compete.

45. The relevant product market in a competition case consists of the products of the responding parties (Visa and MasterCard in this case) and sufficiently close substitutes to these products. How close is "sufficiently close" for inclusion in the relevant market? The approach to market definition accepted in Canadian competition law cases and in competition policy generally (both in merger cases and in cases involving allegations of anticompetitive practices) is the hypothetical monopolist test.[16] This

---

14 If a seller in any market directs its customers to send part of their payment directly to suppliers of promotional activities or any input into the seller's product, instead of to the seller, the "price" in the market is unchanged. It remains the total payment by customers for the product.

15 In terms of the relevant market analysis developed below, applying the hypothetical monopolist test to the Merchant Service Fee paid by merchants rather than the Acquirer Fee paid by Acquirers would not alter my conclusions.

16 The Tribunal stated in *(Canada) Commissioner of Competition v. Superior Propane Inc.* (2000), 7 C.P.R. (4th) 385 at para. 57 (Comp. Trib.), that it "agrees with the approach taken in the Merger Enforcement Guidelines ... which seeks to identify the smallest competition market, in terms of the number of included products, over which market power could be exercised".

approach identifies the smallest market, in terms of the number of included products, over which market power could profitably be exercised by a hypothetical monopolist.

46. Assuming a particular geographic market, a competition market is the smallest set of products, including the products at issue, which would allow a hypothetical, single producer of the entire set of products to profitably maintain price above the competitive level by a small but significant amount for a non-transitory period. The phrase "small but significant" is generally interpreted as five percent and the term "non-transitory" is generally interpreted as one year. See, for example, the *Merger Enforcement Guidelines*[17] at paragraph 4.3. I adopt the five percent and one year standards here.

47. To identify a relevant product market, one starts with the products at issue and then expands the set of products, in order of closest substitutes, until a hypothetical, single producer of the set of products could profitably raise prices significantly above a competitive level for a non-transitory period of time (*i.e.*, five percent and one year, respectively). The relevant market is the market for the resulting set of products.

48. It is important to distinguish a relevant market for competition policy purposes, called a "competition market" by the Tribunal in *Superior Propane*[18] (and sometimes an "antitrust market") from the term "market" as used by business persons or economists in a broader sense. For example, it is sensible to refer to a broad market such as "the energy market" in some contexts, even though the relevant market in a competition case involving propane producers would be much narrower. And it is in some contexts sensible to refer to the "Canadian retail gasoline market" without implying that a gasoline station in Fredericton competes with a gasoline station in Victoria. As these examples illustrate, the general term "market" and the specific concept "relevant market for competition policy purposes" have different meanings.[19]

49. The ability of a hypothetical monopolist of a particular set of products to raise prices significantly above the competitive level depends on the number and strength of substitutes for the product in issue. The availability of substitutes is reflected in the elasticity of demand for the product. The elasticity of demand is a measure of the sensitivity of demand with respect to price.[20] If, for a particular set of products, demand is very elastic because of the availability of substitutes for that set of products,

---

17 Canada Competition Bureau, Merger Enforcement Guidelines, October 6, 2011, http://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/03384.html.

18 See *Superior Propane*, *supra* at paragraph 23.

19 To take another example, when Visa refers to a single credit card company network as a two-sided "market" in its Concise Statement of Economic Theory (see Appendix A of Visa's Response), it likely does not mean to suggest that a single credit card company is a relevant competition or antitrust market.

20 The elasticity of demand, more precisely, is the percentage drop in quantity demanded that would result from a one percent increase in price.

then a hypothetical monopolist could not profit from a five percent increase in price above the competitive level. The price increase would induce the loss of too many buyers (and therefore sales). The set of products would have to be expanded and the analysis repeated until the hypothetical monopolist is able to raise prices significantly above competitive levels for a non-transitory period.

50. The hypothetical monopolist test can be most clearly explained with an example. In *Superior Propane*, the market definition issue focussed on whether retail propane was a relevant product market or whether the relevant market should be expanded to include alternative fuels because consumers can and do switch to these alternatives. The Tribunal applied the hypothetical monopolist test, finding that a hypothetical, single supplier of retail propane could exercise market power and that the relevant market therefore did not need to be expanded to include other fuels, even though some consumers can and do switch to these alternatives.[21]

51. The circumstance where respondents in a competition law case compete as "upstream" producers of inputs into the production of a final good downstream merits discussion. Suppose, to take an example, that coffee beans were sold only to coffee houses, and that consumers drank coffee only at coffee houses. The producers of beans are upstream firms in the coffee supply chain that supply an input into the production of the downstream final product, brewed coffee. The demand for coffee beans is referred to as a *derived demand*, since it is derived from the demand for the final product. A well-established principle in economics is that the elasticity of derived demand depends in large part on the elasticity of demand for the final product by downstream buyers. In other words, in applying the hypothetical monopolist test in a coffee bean case, we would look to the willingness of consumers of a downstream product (brewed coffee) to switch to other products (tea, hot chocolate, and so on) in response to an increase in the price of coffee beans five percent above the competitive level, as passed on to downstream markets. If few consumers were willing to switch to tea (or other products), then the elasticity of derived demand for coffee beans would be low enough that a hypothetical monopolist supplier of coffee beans would profit from a price increase five percent above the competitive level. Coffee beans would be the relevant market.

The Hypothetical Monopolist Test in this Case

52. [redacted]

---

21 The Tribunal indicated that functional interchangeability and other indicia, while useful, "do not identify th[e] [relevant] set of products for competition purposes" (see *Superior Propane, supra.* at para, 67).

22 See Visa, "Canada Issued Data – Excludes Debit and Prepaid", March 29, 2011 (VISA00459310); Answers to undertakings, advisements and refusals given by Michael Bradley on behalf of Visa Canada

53. I take the geographic market in this case to be Canada. Visa and MasterCard apply different rules and fees to transactions in Canada. Further, with very limited exceptions, merchants cannot purchase Credit Card Network Services from Acquirers located outside of Canada.

54. The key question in determining the relevant market in this case is whether Credit Card Network Services are a relevant product market or whether (as the Respondents claim) the market must be expanded to include other means of payment such as cash and debit cards. The relevant issue to consider under the hypothetical monopolist test, in addressing this question, is whether a hypothetical monopolist supplier of Credit Card Network Services could profitably raise the price of those services by five percent (10 basis points) above the competitive level. The competitive level of Merchant Service Fees is certainly no higher than the current level. Would the drop in purchases of Credit Card Network Services resulting from a 10 basis point price increase in the current level of Acquirer Fees be significant enough so as to render such a price increase unprofitable? Since the demand by Acquirers for Credit Card Network Services is a derived demand, as it depends on the demand for credit card services in downstream transactions between merchants and consumers, the question becomes whether enough merchants and consumers would drop the use of all credit cards (by switching to cash, debit cards or other payment methods), in response to a 10 basis point increase in the Acquirer Fee by a hypothetical monopolist, so as to render the increase unprofitable.

55. In my assessment of the evidence, there is no doubt that a monopolist supplier of Credit Card Network Services could profit by raising the Acquirer Fee by 10 basis points above the competitive level. The 10 basis point price increase would be passed on by Acquirers to merchants through an increase in the Merchant Service Fee. Very few merchants, if any, would choose to stop accepting all credit cards in response to a 10 basis point increase in the Merchant Service Fee above the current level and therefore few would choose to stop accepting all credit cards in response to a 10 basis point increase in the Merchant Service Fee above the competitive level.

56. The evidence supporting this conclusion relates to, among other things, the unique attributes of credit cards. Credit cards are ubiquitous in Canada and provide a means of transacting with a range of benefits that, for many transactions, cannot be replicated by cash, debit or other payment methods. A consumer would not be able to duplicate closely the functions of a credit card by adopting an alternative means of transacting, such as cash or debit cards. Therefore, few (if any) merchants, facing demand by

---

Corporation on December 8, 2011 at Q. 2969, Tab 32 (VISASUPP00007306); [redacted] consumers who cannot duplicate closely the functions of credit cards, would stop accepting credit cards in response to the increase in the Merchant Service Fee.

57. The most important economic difference between credit cards and debit cards is that credit cards do not require immediate payment from the purchaser's bank account, whereas debit cards do. Debit cards directly access the cardholder's bank account. The consumer cannot make a payment by debit card without funds in his or her account. In contrast, when a cardholder uses a credit card, she is accessing not an asset account, but rather a line of credit. The line of credit generally allows purchases to be paid within a specified period (by the next monthly payment date or the following monthly payment date) without interest, or over a longer period at a specified interest rate. Credit cards therefore enable purchases in the absence of sufficient immediate funds in the purchaser's asset account, as well as purchases that can only be made on credit. Neither of these types of purchases is possible with a debit card or cash.

58. Credit cards are overwhelmingly the payment method of choice in many sectors, in spite of debit cards having a cost to merchants of only, on average, about 12 cents per transaction.[23] This may be contrasted with the cost to merchants of credit cards that may exceed 2 dollars on a transaction of (for example) 100 dollars. If debit cards and credit cards were functionally substitutable in providing a means of transacting, then the market could not sustain such a large price difference, and merchants would not accept credit cards as a form of payment given the significantly higher costs associated with credit cards.

59. [redacted] Merchants faced significant price increases, without

[23] See http://www.interac.ca/merchants/fees.php, accessed February 25, 2012.

[24] [redacted]

any conceivable offsetting benefits. Nevertheless, merchant acceptance of MasterCard credit cards continued to increase.

60. The application of the hypothetical monopolist test demonstrates that the relevant market is Credit Card Network Services and does not include other forms of payment, such as cash and debit.

61. An examination of the margins associated with the supply of Credit Card Network Services provides additional support for this conclusion. Consider the impact on the profits of a hypothetical monopolist from a 10 basis point increase in price above the competitive level. The monopolist would have the option, in undertaking this price increase, of leaving the Interchange Fee unchanged and, instead, raising the total Acquirer Network Fee by 10 basis points. The price increase would be profitable if the increase in the profit margin to the monopolist on each unit sold more than offsets the decrease in demand, in terms of the impact on total profits.

62. [redacted]

63. Assuming the hypothetical monopolist retained the entirety of this increase (though nothing hinges on that), the 10 basis point increase would more than double the hypothetical monopolist's profit margins, based on competitive levels. In order to render such an increase in the hypothetical monopolist's mark-up unprofitable, the demand for Credit Card Network Services would have to fall by more than *half* in response to only a 10 basis point increase in Acquirer Fees. Obviously, demand is nowhere near that sensitive in this market. The evidence shows, in short, that the relevant market is no broader than Credit Card Network Services.

64. The application of the hypothetical monopolist test and other evidence demonstrates that the relevant market for the assessment of market power on the part of the

---

[redacted]

25 [redacted]

Respondents is no broader than the supply of Credit Card Network Services in Canada, and does not include other forms of payment, such as cash, cheques or debit.

VI. The Impact of the Merchant Rules

65. In their agreements with Acquirers, both Visa and MasterCard require the Acquirers to impose restrictions on merchants (previously defined as the "Merchant Rules") as a condition of providing Credit Card Network Services to merchants. The Merchant Rules prohibit merchants who accept the credit cards of a particular network from, among other things:

(a) declining to accept particular credit cards, such as those with higher Merchant Service Fees;

(b) surcharging on purchases for which a consumer uses one of the Respondents' credit cards; and

(c) in the case of at least MasterCard, engaging in other forms of discrimination that discourage the use of MasterCard credit cards.

66. This section of the report examines the impact of the Merchant Rules on competition in the relevant market, the impact of the Merchant Rules on the price of transactions using cash and debit cards, and whether the Merchant Rules influence upward or discourage the reduction of the Merchant Service Fee.

67. It might appear, at first blush, that a rule prohibiting surcharges cannot influence prices *upwards*, and that such a rule cannot have an adverse competitive impact. A No-Surcharge Rule, after all, places a ceiling (of zero) on a price: the price of using a particular credit card. How can such a rule influence prices upwards?

68. I discuss in this section two mechanisms or channels through which the Merchant Rules have an adverse impact on competition and influence prices upwards. I discuss first the nature of the competitive process in the market for Credit Card Network Services in the absence of the Merchant Rules and then show that the Merchant Rules suppress this competitive process. I then explain a second mechanism, a "cost-externalization" mechanism, through which the Merchant Rules have an adverse competitive impact and influence prices upwards.

69. In analyzing below the competitive impact of the Merchant Rules, I shall not discuss the merchants' option to offer discounts as an alternative to credit card surcharging. I discuss in the final section of this report the inadequacy of discounts as a substitute for surcharges on credit card transactions.

Competition in the Absence of the Merchant Rules

70. In any market in which firms compete aggressively, prices in excess of competitive levels cannot be sustained. Any firm in the market could undercut a high price,

gaining a large market share in return for a slightly lower price. Firms would continually reduce prices in an attempt to gain market share until prices fell to competitive levels. Competition among firms thus forces prices to fall to competitive levels.

71. The ability of any firm to undercut a high price in a market is the very essence of competition because it is this ability that prevents high prices from being sustained. A business practice or agreement that restricts the ability of firms to undercut high prices or dampens the incentive to do so is anticompetitive. Such a practice or agreement allows firms in the market to sustain high prices with a reduced risk of being undercut by a rival.

72. Consider the nature of competition between Visa and MasterCard in a four-party credit card system without the Merchant Rules. In a market without the Merchant Rules, merchants could surcharge on credit card transactions. Visa and MasterCard would be competing in the relevant market on the basis of prices, *i.e.*, fees charged to Acquirers (as well as the proportion of the price allocated to Issuers). In the absence of the Merchant Rules, a supra-competitive price by either firm could not be sustained. A supra-competitive price charged by Visa, for example, would give MasterCard an incentive to reduce the fees it charges to Acquirers, in order to undercut Visa's price and thus reduce the likelihood of, or level of, surcharging by merchants. MasterCard's lower Acquirer Fee would be passed on by Acquirers to merchants in the form of lower Merchant Service Fees, given the significant competition between Acquirers. Merchants would, in turn, pass on some or all of the lower Merchant Service Fees in the form of lower prices on MasterCard transactions, either by not surcharging MasterCard credit cards or by applying a lower surcharge on MasterCard credit cards than on Visa credit cards. The lower fee for MasterCard credit card transactions would then attract a greater volume of transactions – a higher market share – from three sources:

(a) those consumers who had MasterCard credit cards even before the reduction or removal of surcharges would respond to the reduced surcharges by using their MasterCard credit cards for more transactions. This would be potentially a very strong source of increased market share for MasterCard because the consumer holding multiple credit cards would, at the point of sale, have the opportunity to buy the same product, but at a lower total price.[26] [redacted]

---

26 For example, a store clerk might well ask "Would you like this item at a price of $100 with your standard credit card or pay an extra $1.50 to use your premium credit card?".

27 [redacted]

(b) additional consumers would obtain MasterCard credit cards, attracted by lower surcharges or the absence of surcharges; and

(c) some of the merchants that did not accept MasterCard credit cards would begin to accept them, since they would face lower Merchant Service Fees. The merchants would also respond to the fact that MasterCard would be more popular among cardholders (because of the effects described in subparagraphs (a) and (b), above).

73. All of these sources of increased demand that result from undercutting high Acquirer Fees would prevent credit card companies from imposing or sustaining supra-competitive Acquirer Fees in a competitive market for Credit Card Network Services supplied to Acquirers. In a world with surcharges, the ability to differentially surcharge between Visa and MasterCard credit cards would be a significant source of competitive discipline that would keep Merchant Service Fees at competitive levels.

74. Prices (Acquirer Fees) in a competitive market would be set so that the Acquirer Network Fee and Issuer Network Fee components of the price would cover the costs of operating the network. The main component of the price, the Interchange Fee, would be set at a level that maximized output for each credit card company, by balancing the two sides of the two-sided market, allowing the company to compete efficiently. A credit card company that set the Interchange Fee too high - or too low, with the consequence of inadequate issuing activities - would not survive in a competitive market.

75. Interchange Fees are a mechanism by which a credit card company strikes a balance between low prices to Acquirers in the relevant market and greater expenditures on promotion, product enhancement and other demand-enhancing activities undertaken by Issuers.

76. The "balancing" problem that a credit card company faces between low prices and greater expenditures (via the Interchange Fee) on issuing activities, is the problem that *any* firm faces between setting low prices and offering more product promotion, product enhancement or product quality. The fact that a credit card company in a four-party system contracts out its issuing activities to Issuers does not distinguish the "two-sided market" balancing problem that the credit card company faces from the balancing problem faced by any firm in a conventional one-sided market.[28]

---

[28] To be more precise, if a firm in any market can increase output by raising its price by a dollar, while allocating the entire dollar to promotion, quality or product enhancement, it will increase profits by doing so. Achieving an *output-maximizing balance* in this way between low prices and higher promotion for a firm in any market is identical to the balance that a credit card company achieves in setting the Interchange Fee to maximize output. In terms of economic theory, this output-maximizing balance of price and promotion (or quality) for the firm in a conventional one-sided market is given by the Dorfman-Steiner Theorem (Robert Dorfman and Peter O. Steiner, "Optimal Advertising and Optimal Quality" (1954) 44:5 American Economic Review 826); the output-maximizing choice of the Interchange Fee in a four-party

77. A high Interchange Fee is not, in and of itself, anticompetitive. Many markets that economists would classify as competitive in fact involve prices substantially above production costs, with the difference between price and operating expenses being spent on product promotion. The market for perfumes or the market for high-end sports shoes, to take two examples, may be both competitive and involve prices substantially above production or operating costs, with the revenue in excess of operating costs being spent on promotion.

78. Competition policy, however, does not allow anticompetitive, price-enhancing practices to be successfully defended on the grounds that the resulting excess in price is invested largely or entirely on product promotion or improvement. The presumption in competition policy is that competitive markets yield efficient and thus desirable outcomes, including an efficient balance of price and non-price competition. Business practices or agreements that distort this balance by suppressing competition in prices are proscribed in competition policy generally.

79. For this reason, in assessing whether the Merchant Rules raise prices in the relevant market through an adverse impact on competition in that market, and thereby influence upwards the downstream Merchant Service Fees, I need not address the issue of whether the excess revenue from the higher price takes the form of higher Interchange Fees or higher Network Fees.

80. A final remark on a competitive credit card market, without the Merchant Rules, is that premium credit cards, such as the MasterCard World Elite, would only be offered if the benefits to consumers from the premium cards more than offset the higher costs to merchants of those cards. In the absence of the Merchant Rules, premium cards would either not be accepted or the higher Merchant Service Fees would be passed onto consumers in the form of higher surcharges. Premium cards would continue to be used only by those cardholders who believed that the benefits of such credit cards exceeded the cost, both in surcharges and in any inconvenience resulting from refusals by merchants to accept the cards. In a market without the "No-Surcharge Rule" and the "Honour-all-Cards Rule", credit cards would be subject to the standard comparison of costs and benefits, and would survive only if the net benefits to consumers and merchants were positive.

---

credit card network balances elasticities (normalized by price) on each side of the two-sided market (Eric Emch and T. Scott Thompson, "Market Definition and Market Power in Payment Card Networks," (2006) 5:1 Review of Network Economics 45). The Emch-Thompson formula is equivalent to the Dorfman-Steiner theorem applied in the context of a four-party credit card network. Economic theory, in short, supports the claim that the balancing problem faced by a credit card company setting the Interchange Fee in a four-party network is simply the balancing problem faced by any firm.

Adverse Competitive Effect I: Competition Between Credit Card Companies is Suppressed by the Merchant Rules

81. Consider next the credit card market as it stands today, with the Merchant Rules. The ability of a supplier of Credit Card Network Services to capture a large market share by undercutting a high price – the essential mechanism for competitive discipline against high prices within the relevant market – is severely hampered by the Merchant Rules. The two main sources of increased demand for a price-cutter, (a) and (b) in paragraph 72 above, are completely eliminated. The source (a) of increased demand is eliminated because a consumer, in making the choice of which credit card to use, does not face the costs of different credit cards. The merchant is prohibited from passing on these differential costs to consumers in the form of surcharges. Because merchants are unable to effectively differentiate the credit cards on the basis of cost, cardholders have no incentive to shift their credit card business to the lower-priced credit card network. Therefore, consumer choices of cards at the point of sale do not provide an incentive to undercut high prices. Similarly, source (b) of increased demand is eliminated because additional consumers are not attracted to carrying lower-cost credit cards: under the Merchant Rules, the use of these lower-cost cards does not translate into lower costs for consumers.

82. The elimination by the Merchant Rules of these potentially strong incentives to undercut high prices influences upwards or discourages the reduction of prices in the relevant product market. The sole remaining source of increased demand for a price-cutter, source (c) in paragraph 72 above, is weak: so many significant merchants already accept both Visa and MasterCard credit cards[29] that the prospect for a price-cutter of signing up more merchants represents at most a modest potential gain in market share.[30] Visa and MasterCard each have an incentive to set higher prices, knowing that its rival lacks offsetting incentives to undercut a high price.

83. The weak remaining source of competitive discipline against high prices under the Merchant Rules, the ability merchants to refuse a credit card, is further diminished by another of the Merchant Rules: the Honour-All-Cards Rule. The anticompetitive impact of the Merchant Rules is strongest for premium credit cards because these

---

29 See Bruce McElhinney, "Visa Global Acceptance Strategy, May 26, 2010 at 9 (VISA00165420 at 5429): "Canada is nearing the top of the acceptance development curve."

30 This explanation of the weakness of additional merchant acceptance as a source of increased demand for a price-cutting credit card company is based on the high levels of acceptance that Visa and MasterCard already enjoy. A supporting explanation for the weakness of this source of increased demand is in the prediction of low *sensitivity* of merchant acceptance decisions to changes in Merchant Service Fees. Benjamin Klein, Andres Lerner, Kevin Murphy and Lacey Plache, "Competition in Two-Sided Markets: The Antitrust Economics of Payment Card Interchange Fees" (2006) 73 Antitrust Law Journal 571 state that "the demand for a particular system's payment card is likely to be significantly less price-sensitive for merchants than for cardholders" (p. 586) and explain this in detail at pages 585-586. The explanation of this point is developed in Klein et al for the case of price increases, but the relative insensitivity of merchant acceptance decisions to price also holds for price reductions.

cards impose the highest cost on merchants. It is precisely these credit cards for which the option of merchants to decline to accept certain credit cards within a brand would be the most important source of competitive discipline. Under the Honour-All-Cards Rule, merchants cannot selectively decline to accept premium credit cards. Merchants that are forced into a choice of accepting all Visa credit cards or no Visa credit cards, for example, are much less likely to respond to an increase in the Interchange Fee on premium Visa credit cards than if they had the option to drop only premium cards. The cost to a merchant of dropping all Visa credit cards is higher than the cost of dropping only premium credit cards, making the merchant less responsive to increases in the cost of any one type of credit card.

84. My conclusion, in short, is that the Merchant Rules substantially limit the ability and incentive of either Visa or MasterCard to capture greater market share by undercutting a high price on the part of its rival. This essential source of competitive discipline in the relevant market, achieving higher market shares by lowering price, is suppressed by the Merchant Rules. In economic terms, this suppression is an adverse effect on competition in the relevant market.

85. The immediate impact of the adverse effect is, as explained, higher prices in the relevant market. These higher prices (Acquirer Fees) paid by Acquirers are passed directly onto merchants in the form of higher Merchant Service Fees. In other words, the prices at which the Acquirers offer their product to merchants are influenced upwards by the Merchant Rules.

86. Evidence from Australia is consistent with my conclusion that there is a link between merchants' ability to surcharge to credit consumers downstream and lower Acquirer Fees set by a credit card company upstream. [redacted]

Adverse Competitive Effect II: The Impact of the Merchant Rules when a Share of Purchases are Undertaken with Cash or Debit Cards

87. The Merchant Rules have an adverse competitive effect in the relevant market through a second mechanism, whenever some customers use cash, debit cards or other non-credit-card methods of payment.

88. By way of background, I outline the basic economic theory of the pricing decision faced by any supplier that sells a product to a downstream retailer for resale to final buyers. When the supplier raises its prices by $1.00, it gains $1.00 from all buyers that are not discouraged by the price increase and continue to purchase the product. The seller loses the profit margin on each unit no longer purchased by the customers of the

---

31 [redacted]

downstream firm because of the price increase. The seller sets the profit-maximizing price by balancing, at the margin, the benefits of higher revenue from retained buyers downstream against the cost of losing buyers discouraged by the price increase.

89. As a general economic principle, if the costs of a price increase by a supplier are borne downstream not just by the customers in its own supply chain, but by other consumers as well, then fewer customers will penalize the supplier (by declining to purchase the product) when the supplier increases its price. As a consequence, where a portion of the cost increases are borne by customers outside of the supplier's supply chain, the supplier has a greater incentive to set prices at higher levels. For example, if the impact of an increase in the price of coffee beans is shared by tea drinkers (because of a vertical restraint that the price of brewed coffee not exceed the price of tea) then a monopoly supplier of coffee beans has an incentive to set a higher price.

90. Suppose, for example, that the supplier's own downstream customers bear only 50 percent of the cost of a price increase, because the supplier imposes a restraint that the price of its product (purchased by half of the buyers at the downstream firm) cannot exceed the price of another product sold downstream. The supplier will face a smaller drop in demand from any price increase than if that supplier's own downstream customers bear 100 percent of the cost of a price increase. The supplier will therefore have an incentive to set its price at a higher level.

91. The principle that a supplier will raise the price of its product when buyers other than its own customers share in the costs of a price increase applies directly to this case. When a credit card network raises prices in the presence of a No-Surcharge Rule, some of the costs of the resulting increases in Merchant Service Fees are passed onto parties outside the credit card network, in particular those customers who purchase with cash or debit cards. Because of the Merchant Rules, merchants in retail markets cannot raise prices selectively through the application of surcharges on credit cards. Merchants therefore raise prices to all consumers to cover the costs of higher Merchant Service Fees, including those customers that purchase using methods of payment other than credit cards.

92. When a credit card company increases its prices, instead of downstream customers who use credit cards bearing the entire cost of a price increase, consumers from outside of the credit card system bear a portion of these costs. The price increases for consumers outside the system do not carry the penalty of decreased demand for the credit card company. This source of discipline against price increases by the credit card company is suppressed. A profit-maximizing credit card firm will necessarily set higher prices in the presence of the Merchant Rules.

93. Note that this incentive to raise prices does not depend on credit cards being close substitutes with cash or debit (or other payment methods). Even if the different methods of transacting are adopted by different sets of customers, who do not change their preferred payment method as price varies within a range, the sharing of upstream prices with consumers outside the credit card company's network will still leave the

credit card company with the incentive to increase prices. The mechanism is at work even with no competition between credit cards and other payment methods.[32]

To the Extent that Issuers Provide Consumers with Benefits from Higher Interchange Fees, the Upward-Influence Impact of the Merchant Rules is Even Stronger

94. When the Interchange Fee is increased, the additional revenue per transaction gives an Issuer a greater incentive to attract cardholders. To the extent that an Issuer attracts cardholders by offering greater benefits, the anticompetitive impact of the Merchant Rules is magnified.

95. A simple example illustrates this effect. The example is a benchmark that reveals most clearly the impact of the No-Surcharge Rule, but the impact illustrated is equally applicable in the present market, which is more complex.

96. For the purpose of this example, I set aside the first adverse competitive impact (suppression of competition between credit card companies) by supposing there is a monopoly in the supply of Credit Card Network Services.

97. Suppose a No-Surcharge Rule is in effect, and that a credit card company raises the Interchange Fee by 10 basis points. This is passed on by Acquirers in the form of a 10 basis point increase to Merchant Service Fees. Consider first the case where the merchants sell all of their products to customers using credit cards, with no cash or debit customers. Merchants operating, for the purposes of this example, in competitive markets where prices are closely related to costs, pass on all of the 10 basis point increase in the Merchant Service Fees in the form of higher retail prices.

98. Credit card users may receive benefits such as air miles, insurance for lost baggage and even cash-back discounts on their monthly bills. For simplicity, I take this aspect of the networks to the extreme, and assume that Issuers can freely change by any

---

32 Further adverse competitive effects result from the Merchant Rules, however, if the presence of a small or moderate degree of substitutability between credit cards and other methods of payment is assumed. When a credit card company imposes the Merchant Rules it not only externalizes the cost of credit card acceptance on cash and debit consumers, but with substitutability it also induces some of the consumers that would otherwise have used cash or debit to switch to credit cards. Cash customers no longer gain a cost advantage when surcharging is prohibited, and to the extent that credit cards are a (weak or moderate) substitute, some of these customers will switch to credit cards. This will *add* to the profitability of the credit card company, since the volume of credit card transactions has increased. Essentially, when cash and debit cards are weak or moderate "rivals" to credit cards, the cost externalization brought about by the Merchant Rules has the additional adverse competitive effect of raising rivals' costs to the extent that any degree of substitution occurs between credit cards and other payment methods. Note in addition that the effect of the Merchant Rules, in the case where some substitutability is assumed, is to distort the price system as an instrument to guide consumers to the efficient payment method. When merchants' costs cannot be passed through as surcharges, consumers face no difference in the costs of payment methods instead of facing a higher price for credit card transactions as reflecting the higher cost.

amount the cash-back discount on the monthly bill to cardholders. Moreover, I assume that Issuers, being competitive, pass on 100 percent of any change in Interchange Fee in the form of a cash-back discount to cardholders.

99. In this example, with all purchases occurring via credit cards, a 10 basis point increase in the Interchange Fee leads to:

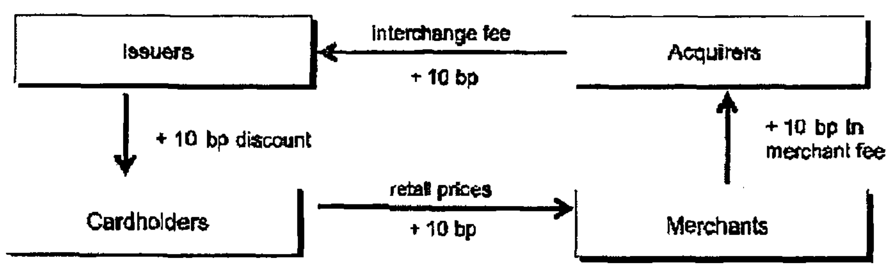
(a) a 10 basis point increase in the Merchant Service Fees paid by merchants;

(b) a 10 basis point increase in the price of retail goods; and

(c) a 10 basis point increase in the cash-back discount offered by Issuers to cardholders.

100. The effects of the 10 basis point increase in the Interchange Fee are illustrated in Figure 4A, below. In this "frictionless" example with perfect pass-through at all stages of the credit card network, the Interchange Fee is irrelevant. Each side of the market passes through the Interchange Fee completely, and from the point of view of cardholders the 10 basis point increase in retail prices is exactly offset by the 10 basis point increase in the cash-back discount on the monthly bill.[33]

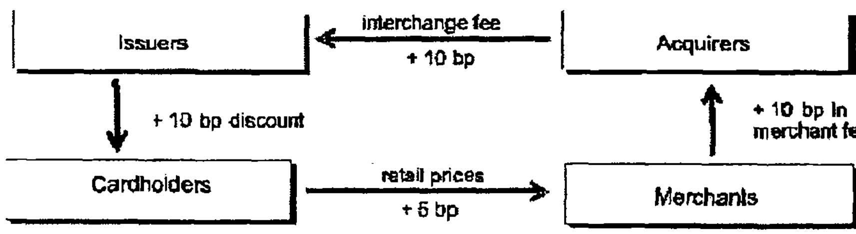
Figure 4A: Impact of a 10 Basis Point Increase in the Interchange Fee (No Cash or Debit Customers)



33 The irrelevance of the Interchange Fee in a frictionless, four-party credit card system is a standard result in the literature on the economics of credit card networks. It is developed or discussed, for example, in Dennis W. Carlton & Alan S. Frankel, "The Antitrust Economics of Credit Card Networks" (1995) 63: 2 Antitrust Law Journal 643; Joshua S. Gans & Stephen P. King, "The Neutrality of Interchange Fees in Payment Systems" (2003) 3:1 Topics in Economic Analysis and Policy, online: http://www.bepress.com/bejeapitopics/vol3/iss1/art1/; Jean-Charles Rochet & Jean Tirole, "Cooperation among Competitors: Some Economics of Payment Card Associations" (2002) 33:4 The RAND Journal of Economics 549; and Julian Wright, "Optimal Card Payment Systems"(2003) 47:4 European Economic Review 587.

101. Suppose, however, that instead of all purchases being undertaken with credit cards, only half are undertaken with credit cards, with the remainder using cash. The effect of an increase of 10 basis points in the Interchange Fee, and therefore a 10 basis point increase in the Merchant Service Fee, is an increase in merchant prices of only 5 basis points. Merchants experience an increase in their costs of only 5 basis points per unit of product sold, because they pay higher Merchant Service Fees on only half of the purchases made from them by their customers. Consequently, merchants increase their prices by only 5 basis points. The higher Interchange Fee, however, continues to be passed on to cardholders as a 10 basis point increase in the cash-back discount on their monthly bill.

Figure 4B: Impact of a 10 basis point increase in the Interchange Fee (with cash customers)



102. In this simple example, cardholders are better off (by 5 basis points on each purchase) as a result of the increase in the Interchange Fee. This effect, illustrated in Figure 4B, is entirely the result of the transfer implemented between cash customers and credit card customers. Note that the credit card company need not leave the 5 basis point benefit with its customers. It could alternatively adjust Network Fees (to Issuers, Acquirers or both) so as to collect the transfer itself, rather than leave it with its customers. Thus the credit card company, under the No-Surcharge Rule, is able to extract a transfer from consumers using other methods of payments, who are outside its network.[34] The cost of a higher price is not merely *shared* with customers outside of the credit card network (i.e., those paying with other payment methods), it is

[34] The ability of a monopolist to earn higher than the basic monopoly profits by entering contracts that transfer costs to parties outside those contracts is a principle that has been part of the economic foundations of competition policy since the article "Contracts as a Barrier to Entry," by Philippe Aghion & Patrick Bolton, (1987) 77:3 American Economic Review 388.

imposed *entirely* on those customers outside of the credit card network. Credit card companies are disciplined in this exercise by the possibility that some merchants will drop their cards and sell only to customers using other payment methods or through credit cards with lower fees, but this source of discipline is, at current fee levels for Visa and MasterCard, relatively weak. Few (if any) merchants have dropped the cards even with, for example, the recent increase in Merchant Service Fees in the MasterCard network.

103. Because the mechanics of price effects in credit card networks are complex, I have used a simple example to illustrate the effects. However, the basic forces at work in this example are also applicable in the real-world market, which is more complex. Cash and debit customers bear higher prices as a result of the Merchant Rules, at any given level of Interchange and Network Fees. These higher prices implement a transfer to parties inside the credit card network by subsidizing the cost of credit card transactions at the expense of parties outside of the credit card network. And the credit card company, as owner and operator of the network, is free to reallocate the transfer among the various parties in the network, including itself.

104. To link the incentives for a credit card company to raise prices under the cost-externalization effect to the application of section 76 in this matter, we must consider both the upwards-influence condition and the adverse-competitive-impact condition. Consider first the upwards-influence condition. This condition is met because the combination of the No-Surcharge Rule and the presence of cash customers creates an incentive for the credit card company to raise the Acquirer Fee, which in turn is passed on to merchants in the form of an increased Merchant Service Fee. The higher Merchant Service Fee is a price at which the Acquirer, a "customer" of Visa or MasterCard, supplies a product to its own customers, the merchants.

105. The adverse-competitive-impact condition is also met under this mechanism. The inability of merchants to compete for cash and debit customers by effectively differentiating payment methods on the basis of transactions costs is an adverse competitive impact of the Merchant Rules. Cash and debit customers would benefit from competition among merchants based on prices reflecting the actual transactions costs to the merchants, instead of prices reflecting, in addition, a share of the costs of credit card transactions. Competition among merchants for cash and debit customers is adversely affected, to the detriment of these customers.

106. [redacted]

[redacted]

Summary

107. The competitive impact of the Merchant Rules can be summarized as follows.

(a) First, the Merchant Rules suppress competition between Visa and MasterCard by constraining the ability and incentive of either firm to undercut high prices set by the other. Price undercutting by MasterCard, for example, will not allow it to capture a substantially higher market share. A consumer, in making the choice of which credit card to use, does not face the costs of their credit cards because the merchant is prohibited by the Merchant Rules from passing on these costs to consumers in the form of surcharges. The Merchant Rules therefore reduce the incentives for a credit card company to keep its prices low. Competition among credit card companies is adversely affected. The immediate effects of the adverse competitive impact are felt in higher fees for Acquirers, which are passed on to merchants in the form of higher Merchant Service Fees.

(b) Second, the Merchant Rules implement a transfer, through higher prices, from cash and debit consumers to the credit card network. The credit card companies, facing consumers who bear only part of the cost of higher Merchant Service Fees, have an incentive to set higher fees under the Merchant Rules. The effect is stronger to the extent that higher Interchange Fees benefit cardholders at the point of sale.

Under both mechanisms, the upwards-influence condition and the adverse-competitive impact condition are met.

VII. Cash and Debit Discounts versus Credit Card Surcharges

108. Merchants are currently free to offer discounts for different payment methods and different credit card brands. Visa states in its Response, at paragraph 4, that "the Visa Rules do not impede or constrain the ability of merchants who accept Visa Cards to encourage their customers, by a variety of means including the provision of a discount, to use other forms of payment to complete their purchases, including different types or brands of credit cards, debit, cheques or cash. Merchants can, and do, advertise and charge different prices depending on the method of payment."

---

35 [redacted]

109. In an ideal, frictionless market, unconstrained discounting and surcharging would be perfect substitutes. A firm setting prices could either impose a surcharge, or raise the basic price of the product and offer a discount. The effective prices under either strategy would be the same. Since discounts are allowed in the market currently (under element 5 of the Department of Finance's voluntary Code of Conduct for the Credit and Debit Card Industry in Canada), restrictions on surcharging would have no impact in a frictionless market. The Merchant Rules would have no impact.

110. Actual markets are not ideal or frictionless, however, and the strategy of discounting is not a perfect substitute for surcharging for most markets. Consider, for example, a large merchant attempting to set different prices for the same product depending on the method of payment or credit card used. Because of the limited capacity of advertising to convey the full dimensionality of pricing, merchants are generally constrained to advertising a single price for each product that they carry. Whether in Australia, where surcharging is adopted, or in the rare instances in Canada where cash discounts are adopted, we do not generally see prices listed by payment method.[36]

111. In real-world markets, merchants are limited, for practical purposes, in their ability to *advertise* differential discounts based on payment method. Merchants typically advertise one price even when prices differ by payment method. Consequently, if the only differential pricing methods available is discounting for payment methods (such as cash and debit), merchants' strategies to implement such pricing would have to take the form of setting the merchant's advertised price equal to the desired price level for the highest-cost payment method (typically the most expensive credit card), along with discounts from that higher price. The merchant would advertise the price applicable only to its highest-cost customers. Advertising the price applicable to its lowest-cost customers – typically customers paying with Interac debit cards, along with a surcharge for customers paying with higher-cost credit cards – would violate the Merchant Rules. Being forced to advertise the highest price paid by customers places the discounting merchant at a disadvantage in attracting customers to its outlets. No such problem arises from credit card surcharges, since a merchant is free to advertise the cash or debit-card price.

112. The following example is representative. [redacted] For Visa, [redacted] of total purchases were made using its most expensive

[36] An exception to this rule is retail gasoline markets. One does sometimes observe a cash discounted price and a credit card price posted for gasoline. However, separate prices are not listed in most other markets, such as those for hotel accommodation, travel, and entertainment.

[37] [redacted]

consumer card (the Visa Infinite Card).[38] The strategy of using discounts to implement differential pricing would therefore involve setting the posted and advertised price equal to the highest price – a price paid by only [redacted] percent of customers (Visa Infinite) or [redacted]

113. Moreover, evidence from behavioural economics suggests strongly that discounts and surcharges would not be viewed symmetrically by consumers, even where completely rational consumers would recognize the equivalence. Suppose that in the same retail market, one retailer used a cash discount to price cash transactions and credit card transactions differently, while another retailer used credit card surcharges for the same purpose. Suppose further that the effective transactions prices were identical between the two retailers. The *posted* prices in the store would then be higher for the retailer offering cash discounts. Recent evidence suggests that higher posted prices reduce demand by consumers, even when fully rational consumers would be aware that there is no change in the prices actually paid.[39]

114. More direct evidence on the frequency of cash discounting and credit card surcharging provides further support for the asymmetry between discounts and surcharges. If discounting offered a means of setting different prices across transacting methods that was as flexible and effective as surcharging, then we would expect to observe discounting and surcharging, with approximately the same frequency, in jurisdictions where both practices are permitted. [redacted] However, since the regulatory reforms implemented in Australia in 2003 to allow surcharging on credit cards, a significant number of merchants were either surcharging on credit cards or planning to surcharge on credit cards. [redacted] In Canada, where Interchange Fees are much higher than in Australia (because of regulatory limits placed on the Interchange Fee in Australia), Merchant Service Fees are higher and the

---

38 See Visa, "Visa Canada – Strategy and Interchange – Visa Canada Interchange Reimbursement by Product", May 22, 2009 (VISA00131980). Data is for April 2009.

39 See Raj Chetty, Adam Looney & Kory Kroft, "Salience and Taxation: Theory and Evidence" (2009) 99:4 American Economic Review 1145. These authors found that posted prices inclusive of taxes, with no change in actual transaction prices, reduced demand significantly at retail outlets. While the context of the study was taxation, not surcharging versus discounting, the essential finding was that higher posted prices dampened demand even when transactions prices were unaffected and when fully rational consumers would be aware of this.

40 [redacted]

41 [redacted]

incentives to surcharge in Canada would therefore be even higher than in Australia. While I am unaware of specific empirical studies on the extent of cash discounting, which compare the frequency of discounting with the frequency of surcharging in jurisdictions where both are feasible, my understanding is that cash discounting is nowhere near as frequent as this in most sectors. In short, the empirical evidence indicates that cash discounting is a poor substitute for credit card surcharging.

115. If cash discounts were a perfect substitute for credit card surcharges in all markets then the restriction against surcharging would be irrelevant. The resources being devoted by the Respondents to defending the restriction would be a waste. Both theory and evidence, however, suggest that (in most markets) cash discounts are a poor substitute for surcharging.

VIII. Conclusion

116. Visa and MasterCard compete in the Canadian market for the supply of Credit Card Network Services, which is the relevant market for assessing the market power of the Respondents and the competitive impact of the Merchant Rules. With a combined market share of approximately 92 percent, Visa and MasterCard are essentially duopolists and the evidence demonstrates that the Respondents can exercise market power.

117. The Merchant Rules meet both the upward-influence condition and the adverse-competitive impact condition of section 76 of the *Competition Act*. Two mechanisms lead to an adverse competitive impact from the Merchant Rules in the relevant market. First, the main sources of competition – the incentive to undercut a high price within the market – are suppressed by the Merchant Rules. A lower price in the relevant market would, in the absence of the Merchant Rules, attract greater demand from existing cardholders and from new cardholders as the low price would be translated to lower (or no) surcharging by merchants downstream. This cannot happen when surcharging is prevented. The Honour-All-Cards Rule further suppresses the weak remaining source of competition, the ability of merchants to decline to accept credit cards.

118. The second adverse effect mechanism is a cost-externalization effect. Through the No-Surcharge Rule, merchants are required to spread the costs of Merchant Service Fees equally across all methods of payment, including debit and cash. Visa and MasterCard face less competitive discipline when their downstream customers bear only a portion of any price increase.

119. The adverse competitive impacts of the Merchant Rules in the relevant market lead to higher prices to Acquirers, which are then passed on by the Acquirers in the form of higher Merchant Service Fees. Thus, the Merchant Rules influence upwards the prices charged by Acquirers, which are the customers of Visa and MasterCard. The cost-externalization effect also means that consumers purchasing with cash and debit cards pay higher prices as a result of the Merchant Rules.

120. If discounts for cash and debit cards were as effective as credit card surcharges in implementing differential pricing across payment methods, the Merchant Rules would have no impact at all. Theory and evidence show that discounts are inadequate substitutes for credit card surcharges.

Date: March 12, 2012

RALPH A. WINTER

APPENDIX A: Tables

Table 1: Issuers and Acquirers for Visa and MasterCard

VISA	MASTERCARD
ISSUERS: CIBC Chase Canada Citizens Bank Home Trust Company Laurentian Bank Le Mouvement Desjardins People's Trust Royal Bank of Canada Scotia Bank TD Canada Trust US Bank Canada Vancouver City Savings Credit Union	**ISSUERS:** ATB Financial BMO Bank of Montreal Bridgewater Bank Canadian Tire Bank Capital One Canada CIBC Citibank Canada Comerica Credit Union Electronic Transaction Services (CUETS) DirectCash Bank HSBC Bank Canada JPMorgan Chase MBNA Canada National Bank of Canada People's Trust Company President's Choice Bank RBC Royal Bank Walmart Canada Financial Services Wells Fargo
ACQUIRERS: Chase Paymentech Solutions Desjardins Elavon First Data Global Payments Moneris Solutions Peoples Trust PSiGate Merchant Services TD Merchant Services	**ACQUIRERS:** ATB Financial Chase Paymentech Solutions Desjardins Elavon First Data Global Payments Moneris Solutions Peoples Payment Solutions TD Merchant Services

Sources:
[a] "Becoming a Visa Merchant," accessed February 17, 2012 from http://www.visa.ca/en/merchant/acceptingvisa/becoming-a-visa-merchant/index.jsp
[b] "VISA Canada Interchange Summary by Card Product Type," accessed February 17, 2012 from http://www.visa.ca/en/aboutcan/mediacentre/interchange/pdf/interchange-summary-communication-en.pdf
[c] "Becoming a MasterCard Merchant," accessed February 17, 2012 from http://www.mastercard.com/ca/merchant/en/getstarted/become.html
[d] "MasterCard Canada Press Section – Issuers," accessed February 17, 2012 from http://www.mastercard.com/ca/company/en/corp_issuers.html

Table 2: Acquirer Market Shares for General Purpose Credit and Debit Cards
(% of Purchase Volume)

[redacted]

Notes:
[redacted]

Sources:
[a] [redacted]
[b]
[c]
[d]
[e]

[f]
[g]
[h]

Table 3A: Current Domestic Interchange Rates for Visa (as of 2011)

Fee Program	Classic/ Gold/ Platinum	Infinite	All Other Commercial Credit	Prepaid	Debit
Industry Program - Grocery	1.36%	1.56%	1.85%	1.25%	0.15%+$0.05
Industry Program - Gas	1.21%	1.41%	1.80%	1.25%	0.15%+$0.05
Performance Program - Tier 1	1.40%	1.60%	1.80%	1.25%	0.15%+$0.05
Performance Program - Tier 2	1.45%	1.65%	1.85%	1.25%	0.15%+$0.05
Recurring Payments	1.40%	1.60%	1.85%	1.25%	0.60%
Emerging Segments	1.00%	1.20%	1.80%	1.25%	0.30%
Electronic	1.54%	1.74%	1.90%	1.25%	0.25%+$0.05
Standard	1.65%	1.85%	2.00%	1.25%	1.15%

Source: "Visa Canada Interchange Reimbursement Fees", last modified July 28, 2011. Accessed from: http://www.visa.ca/en/aboutcan/mediacentre/interchange/pdf/visa-interchange-rates-current.pdf

Table 3B: Current Domestic Interchange Rates for MasterCard (as of 2011)

Fee Program	Consumer Core	Consumer High Spend	Consumer Premium High Spend	Commercial Core	Commercial Premium High Spend
Merchants with Annual MasterCard dollar volume in Canada in excess of $1 billion	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Merchants with Annual MasterCard dollar volume in Canada in excess of $400 million	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Petroleum merchants with Annual MasterCard dollar volume in Canada in excess of $400 million	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Supermarket merchants with Annual MasterCard dollar volume in Canada in excess of $400 million	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
All other electronically-captured MasterCard card present tractions	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
All other MasterCard transactions	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Sources:
[redacted]

Table 4: Selection of Fees to MasterCard Members, December 2010

Type of Fee	Issuer	Acquirer
Licensing Fees		
Membership Fees – New Members	[redacted] per account projected at 5th year anniversary	
Application Fees	[redacted]	[redacted]
Transfer of Membership Fees	[redacted]	[redacted]
Change of Sponsorship Fee	[redacted]	[redacted]
Member Service Provider Fees – initial registration	[redacted]	[redacted]
Member Service Provider Fees – MasterCard renewal	[redacted]	[redacted]
Member Service Provider Fees – Maestro and/or Cirrus renewal	[redacted]	[redacted]
Assessments		
Fixed Quarterly Assessment	[redacted]	--
Issuer Volume Assessment	[redacted]	--
Issuer High Spend Program Assessment	[redacted]	--
Issuer Premium High Spend Program Assessment	[redacted]	--
Acquirer Domestic Volume Assessment	[redacted]	[redacted]
Issuer Currency Conversion Assessment	[redacted]	[redacted]
Acquirer Cross-Border Assessment	–	[redacted]
Acquirer Cross-Border Assessment – transaction submitted in CAD	–	[redacted]
Authorization Fees (per transaction)		
Issuer Intracountry Authorization Fee (varies based on weekly transaction volumes)	[redacted]	--
Intercountry Authorization Processing Fee	[redacted]	--
Issuer Stand-In Service Fee	[redacted]	--
Issuer Intracountry Stand-In Access & Processing Fees	[redacted]	--
Issuer Intercountry Stand-In Access & Processing Fees	[redacted]	–
IPM Clearing Fees	[redacted]	
Issuer Domestic IPM Fee (varies based on weekly transaction volumes)	[redacted]	--
International IPM Fee	[redacted]	[redacted]
Issuer Settlement Fees		
Settlement Advisement Fee Fax/Email	[redacted]	--
Settlement Service Fee – International	[redacted]	--
Local Currency Net Settlement Fee	[redacted]	--
Network Connectivity and Data Transmission Fees		
Network Access and Connectivity Fee	[redacted]	[redacted]
Issuer Access Fee – Domestic	[redacted]	–
Issuer Access Fee – International	[redacted]	–
Banknet Connectivity Fee (based on combined issuer and acquirer trans. volume)	[redacted]	[redacted]
Fixed Monthly Acquirer Access Fee (varies based on annual trans. volume)	–	[redacted]
Bank Identification Number (BIN) and ICA Fees		
Additional ICA Fee	[redacted]	[redacted]
Additional BIN Fee	[redacted]	[redacted]
Cirrus and Maestro Fees	[redacted]	[redacted]
Cirrus/MasterCard ATM Fee (varies based on daily trans. volume)	[redacted]	[redacted]
Maestro Transaction Fees	[redacted]	[redacted]
ATM Program Support Fee – Domestic	[redacted]	[redacted]
ATM Program Support Fee – International	[redacted]	[redacted]
Cirrus and Maestro Membership Fee	[redacted]	[redacted]

Source: [redacted]

Table 5: Selection of Fees to Visa Members, January 2010

Fee	Issuer	Acquirer
Admission fees		
Admission fee	Determined at the time of the initial customer contract	
Quarterly Card Service Fees		
Service Fee	[redacted]	
Visa TravelMoney	[redacted]	
Base I Fees		
BASE I Authorization Transactions	[redacted]	
BASE I Switching Transactions		[redacted]
Exception File Changes	[redacted]	
Activity File Checks	[redacted]	
Advice Creation (advice of approval/nonapproval)	[redacted]	
International Automated Referral Service (IARS)	[redacted]	[redacted]
Base II Fees		
Transaction fees (VisaNet Clearing and Settlement)	[redacted]	
Reversal transactions	[redacted]	
Single Message Processing		
Single Message Service Processing	[redacted]	
Visanet Access Charges		
Monthly Access Charge (varies based on tier of service)	[redacted]	
Clearing and Settlement System Monthly Access Charge (standalone VisaNet Enpoint Access Service system)	[redacted]	
Test Endpoint Access Service Monthly Access Charge	[redacted]	
International Service Assessment		
International Service Assessment	[redacted]	
Rebate on International Service Assessment for cross-currency cross-border transactions	[redacted]	
Rebate on International Service Assessment for single-currency cross-border transactions	[redacted]	
Other VisaNet Services		
Visa Resolve Online (document exchange)	[redacted]	
Visa Exceptions (exception transaction management)	[redacted]	
Other Fees		
BIN Licensing Fees	[redacted]	
[redacted]		

Source: Visa, "Visa Canada Fee Guide" (VISA00064495).

Table 6: Total Credit Card Transactions

Year	Visa*	MasterCard**
2005	[redacted]	[redacted]
2006		
2007		
2008		
2009		
2010		

Notes:
* Canada Issued Data, Visa Canada Operating Certificates, VisaNet (Excludes Debit and Prepaid).
** Gross Transactions (Dataset supplied by MasterCard includes Debit, Prepaid and purchasing cards).

Sources: Visa, "Canada Issued Data", March 29, 2011 (VISA00459310) and [redacted]

Table 7: Visa Sales Volume by Industry, 2007-2008

Industry	Total Volume	% of Visa's Total Sales Volume

[redacted]

Note: Issuer volumes above represent domestically acquired volume for the 12 month period ended April 2008. Volumes distributed across industries using issuer-specific industry data for the 11 month period ended April 2008.

Source: Visa Canada, "Visa v MasterCard – Interchange Rate Comparison Tool", May 13, 2008 (VISA00191221).

Table 8: Visa Network Fee Rates*

Year**	Issuer Service Fees	Acquirer Service Fees
2006	[redacted]	[redacted]
2007		
2008		
2009		
2010		
2011		

Note:
* This table does not include the variety of fixed 'switch' fees applicable to information sent over the Visa network.
**Fiscal Year Ended September.

Source: Answers to undertakings, advisements and refusals given by Michael Bradley on behalf of Visa Canada Corporation on December 8, 2011 at Q. 2969, Tab 32 - VISASUPP00007306.

Table 9: MasterCard Network Fee Rates*

Year	Issuer Volume Assessment	Acquirer Domestic Volume Assessment
2006	[redacted]	[redacted]
2007	[redacted]	[redacted]
2008	[redacted]	[redacted]
2009	[redacted]	[redacted]
2010	[redacted]	[redacted]
2011	[redacted]	[redacted]

Notes:

* Note that this table does not include the variety of fixed 'switch' fees applicable to information sent over the MasterCard network.

**Effective April 1, 2008.

*** Issuer High Spend Program Assessment rate per approved portfolio purchase volume.

**** Issuer Premium High Spend Program Assessment rate per approved portfolio purchase volume.

Sources: Summaries of Costs for Prospective Canada Region Members and MasterCard Consolidated Billing Systems, Canada Region, (Schedule 2190 to MasterCard Answers to Follow-up Examination Questions).

APPENDIX B: *Curriculum Vitae* of Ralph A. Winter

Date: February, 2012

1. SURNAME: Winter

FIRST NAME: Ralph

MIDDLE NAME(S): Albert

2. DEPARTMENT/SCHOOL: Strategy and Business Economics / Sauder School of Business

3. FACULTY: Commerce and Business Administration

4. PRESENT RANK: Professor

SINCE: July 2002

5. POST-SECONDARY EDUCATION

University or Institution	Degree	Subject Area	Date
University of California, Berkeley	PhD	Economics	1979
University of California, Berkeley	MA	Statistics	1978
University of British Columbia	BSc (hon)	Mathematics, Economics	1974

6. EMPLOYMENT RECORD

(a) non-UBC Employment

University, Company or Organization	Rank or Title	Dates
University of Toronto	Professor	1988 - 2002
Yale Law School, Yale University	Senior Olin Fellow	1988
University of Toronto	Associate Professor	1985 - 1988
Hoover Institution, Stanford University	National Fellow	1986 - 1987
University of Toronto	Assistant Professor	1979 - 1985

(b) UBC Employment

University of British Columbia	Canada Research Chair in Business Economics and Public Policy	2003
University of British Columbia	Professor	2002

Graduate Students Supervised and/or Co-Supervised at U.B.C.

Student Name	Program	Start Year	Finish Year	Role	Other Supervisors/ Committee Members
Jeffrey Colpitts	PhD		2007	Principal supervisor/committee chair	
Minlei Ye	PhD	2006	2010	Principal supervisor/committee chair	
Mati Dubrovinsky	PhD	2006	2010	Principal supervisor/committee chair	

7. SCHOLARLY AND PROFESSIONAL ACTIVITIES

(a) Areas of special interest and accomplishments

Applied Microeconomics

Competition Policy

Industrial Organization

Law and Economics

(b) Research or equivalent grants

Granting Agency	Subject	$ Per Year	Year	Principal Investigator	Co-Investigator
SSHRC	Competition Policy and Resale Price Maintenance	$14,333	Apr 2009 - Apr 2011		Winter, Ralph
Social Sciences and Humanities Research Council of Canada (SSHRC)	The Economic Foundations of Supply Chain Management	$15,000	2006 - 2009	Winter, Ralph	Krishnan, Harish
Social Sciences and Humanities Research Council of Canada (SSHRC)	The Organization of Markets with Imperfect Information	$13,750	2002 - 2005	Winter, Ralph	
HSS	The Paradox of Uninsurable Risk	—	2003 - 2004	Winter, Ralph	

Hampton, small grant	The Insurance Industry	—	2002 - 2004	Winter, Ralph	
SSHRC	The Economic Foundations of Competition Policy and Supply Chain Management	$62,000	2009-2012	Winter, Ralph	

8. SERVICE TO THE COMMUNITY

(a) Memberships on scholarly societies, including offices held and dates

Role	Society Name	Dates
President	Canadian Economics Association	2008 - 2009
President	Canadian Law and Economics Association	2004 - 2006
President-elect	Canadian Economics Association	2007 - 2008
Vice-President	Canadian Economics Association	2006

(b) Memberships on other societies, including offices held and dates

Role	Society Name	Dates
Member	American Finance Association	
Member	American Economics Association	
Member	Canadian Economics Association	

(c) Memberships on scholarly committees, including offices held and dates

Role	Committee Name	Institution	Dates
Member	Rae Prize Committee	Canadian Economics Association	2010
Chair	Harry Johnson Prize Committee	Canadian Economics Association	2004 - 2006
Member	Doug Purvis Prize Committee	Canadian Economics Association	2004 - 2005

(d) Memberships on other committees, including offices held and dates

Role	Committee Name	Institution	Dates
Chair	Robert Mundell Prize Committee	Canadian Economics Association	2004 - 2006

(e) Editorships (list journal and dates)

Journal	Role	Dates
International Editorial Board, Assurances		
Advisory Board: Canadian Law Abstracting Journal, SSRN		
RAND Journal of Economics	Associate Editor	January 2012 - present

(f) Reviewer (journal, agency, etc. including dates)

Journal/Agency	Role	Dates
15 -25 submissions per year, various journals	Referee	

(g) External examiner (indicate universities and dates)

Institution	Role	Dates
Undergraduate Commerce Program, University of Toronto	Examiner	2006
Department of Economics, University of Calgary	External Examiner	2004

(h) Consultant (indicate organization and dates)

Organization	Dates
US Department of Justice , various dates	2006 – 2011
Competition Bureau , various dates	2004 - 2011

(i) Other service to the community

Institution	Role	Dates
Working Group for Input into Section 76 of the Competition Act, Canadian Bar Association	Member	2009-2010
Bureau of Competition's External Working Group on Amendment of Section 45 of the Competition Act	Member	2006 - 2008
Human Resources, Safety and Environment Committee, BC Transmission Corporation Board of Directors	Chair	2006 - 2010
Board of Directors, Wurldtech Security Technologies Inc.	Director	2006 -
British Columbia Transmission Corporation	Director	2003 - 2010

9. AWARDS AND DISTINCTIONS

Name	Awarded By	Date
Senior Olin Fellow	Yale Law School	1988
National Fellow	Hoover Institution, Stanford University	1986
Doug Purvis Memorial Prize	CEA - outstanding contribution to Canadian Economic Policy	2003
Harry Johnson Prize	Canadian Economics Association	1983
Senior Research Award	Sauder School of Business	2008
Killam Research Award	UBC	2010

Publications Record

1. REFEREED PUBLICATIONS

(a) Journals

Krishnan, Harish and **Winter, R.A.**, "On the Role of Revenue-sharing Contracts in Supply Chains," *Operations Research Letters* (2010).

Iacobucci, Edward and **Winter, R.A.** (2010), "Abuse of Joint Dominance in Canadian Competition Policy," University of Toronto Law Journal

Krishnan, H., **Winter, R.A** (2010), "Inventory Dynamics and Supply Chain Coordination," Management Science Vol. 56, No. 1 January: 141-147

Winter, R.A. (2009) Antitrust Restrictions on Single-Firm Strategies. *Canadian Journal of Economics*, November. (Presidential Address, Canadian Economics Association)

Buettner, T., Coscelli, A., Verge, T., **Winter, R.A.** (2009) An Economic Analysis of the Use of Selective Distribution by Luxury Goods Suppliers. *European Competition Journal*

Buettner, T., Verge, T., Coscelli, A. **Winter, R.A.**, (2009). The Economics of Selective Distribution Agreements: A Reply to Kinsela et al. *European Competition Journal*

Krishnan, H., **Winter, R.A.** (2007). Vertical Control of Price and Inventory . *American Economic Review*, 97(5), 1840 - 1857.

Winter, R.A. (2006). Rebuttal to Cooper Froeb, O'Brien, and Vita on Vertical Restraints and Competition Policy . *Competition Policy International*, 2(1), 195 - 197.

Iacobucci, E., Trebilcock, M., **Winter, R.A.**, (2006). The Canadian Experience with Deregulation . *University of Toronto Law Journal*, 56, 1 - 74.

Winter, R.A. (2006). Vertical Restraints and Antitrust Policy: A Reaction to Cooper, Froeb, O'Brien, and Vita . *Competition Policy International*, 1(2), 74 - 89.

Winter, R.A. (2006). Liability Insurance, Joint Tortfeasors and Limited Wealth. *International Review of Law and Economics*, 26(1), 1 - 14.

Moorthy, S. (2006), **Winter, R.A.**, Price Matching Guarantees . *Rand Journal of Economics*, 37(2), 449 - 466.

Ross, T.W., **Winter, R.A.** (2005). The Efficiency Defense in Merger Law: Economic Foundations and Recent Canadian Developments . *Antitrust Law Journal*, 72, 471 - 504.

Iacobucci, E., **Winter, R.A.**, (2005). Asset Securitization and Asymmetric Information . *Journal of Legal Studies*, 34(1), 161 - 207.

Ross, T.W., **Winter, R.A.** (2003). Canadian Merger Policy Following Superior Propane . *Canadian Competition Record*, 21, 7 - 23.

Mathewson, G.F., **Winter, R.A.**, (2002). Profits versus Rents in Antitrust Analysis . *Antitrust Law Journal*, 70(2), 485 - 513.

Mathewson, G.F. **Winter, R.A.**, (1998). The Law and Economics of Resale Price Maintenance . *Review of Industrial Organization*, 13(1-2), 57 - 84.

Trebilcock, M. **Winter, R.A.**, (1997). The Economics of Liability for Nuclear Accidents . *International Review of Law and Economics*, 17, 215 - 215.

Winter, R.A. (1997). Colluding on Relative Prices . *Rand Journal of Economics*, 28(2), 359 - 372.

Mathewson, G.F. **Winter, R.A.**, (1997). Buyers Groups . *International Journal Of Industrial Organization*, 15(2), 137 - 164.

Mathewson, G.F. **Winter, R.A.**, (1997). Tying as a Response to Demand Uncertainty . *Rand Journal of Economics*, 28(3), 566 - 583.

Neary, H. **Winter, R.A.**, (1995). Output Shares in Bilateral Agency Contracts . *Journal of Economic Theory*, 66(2), 609 - 614.

Mathewson, G.F. **Winter, R.A.**, (1994). Territorial Rights in Franchise Contracts . *Economic Inquiry32*, 2(181), 192.

Winter, R.A. (1994). The Dynamics of Competitive Insurance Markets . *Journal of Financial Intermediation*, 3, 379 - 415.

Winter, R.A. (1993). Vertical Control and Price versus Non-Price Competition . *Quarterly Journal of Economics*, 108(1), 61 - 78.

Winter, R.A. (1991). Solvency Regulation and the Insurance Cycle . *Economic Inquiry*, 29(3), 458 - 472.

Winter, R.A. (1991). The Liability Insurance Market . *Journal of Economics Perspectives*, 115 - 136.

Mathewson, G.F. **Winter, R.A.**, (1989). The Economic Effects of Automobile Dealer Regulation . *Annales d'Economie et de Statistique*, 15/16, 409 - 426.

Mathewson, G.F. **Winter, R.A.**, (1988). Vertical Restraints and the Law: A Reply . *Rand Journal of Economics*, 19(2), 298 - 301.

Ware, R. **Winter, R.A.**, (1988). Currency Options, Forward Markets and the Hedging of Foreign Exchange Risk . *Journal of International Economics*, 25, 291 - 302.

Winter, R.A. (1988). The Liability Crisis and the Dynamics of Competitive Insurance Markets . *Yale Journal on Regulation*, 455 - 500.

Mathewson, G.F. **Winter, R.A.**, (1987). The Competitive Effects of Vertical Agreements: Comment . *American Economic Review*, 1057 - 1062.

Peters, M. **Winter, R.A.**, (1986). R&D with Observable Outcomes . *Journal of Economic Theory,* 1336 - 1251.

Farmer, R. **Winter, R.A.**, (1986). The Role of Options in the Resolution of Agency Problems: Comment . *Journal of Finance*, 1157 - 1174.

Ware, R. **Winter, R.A.**, (1986). Public Pricing Under Imperfect Competition . *International Journal of Industrial Organization*, 4(1), 87 - 100.

Gallini, N. **Winter, R.A.**, (1985). Licensing in the Theory of Innovation . *Rand Journal of Economics*, 237 - 253.

Mathewson, G.F. **Winter, R.A.**, (1985). The Economics of Franchise Contracts . *Journal of Law and Economics,* 503 - 526.

Mathewson, G.F. **Winter, R.A.**, (1984). An Economic Theory of Vertical Restraints . *Rand Journal of Economics*, 1(1), 27 - 38.

Mathewson, G.F. **Winter, R.A.**, (1983). Vertical Integration by Contractual Restraints in Spatial Markets . *Journal of Business*, 56(4), 497 - 519.

Peters, M. **Winter, R.A.**, (1983). Market Equilibrium and the Resolution of Uncertainty . *Canadian Journal of Economics*, 16(3), 381 - 390.

Mathewson, G.F. **Winter, R.A.**, (1983). The Incentives for Resale Price Maintenance under Imperfect Information . *Economic Inquiry,* 21(3), 337 - 348.

Gallini, N. **Winter, R.A.**, (1983). Vertical Control in Monopolistic Competition . *International Journal of Industrial Organization*, 1(3), 275 - 286.

Turnbull, S. **Winter, R.A.**, (1982). An Alternative Test of the Capital Asset Pricing Model: Comment . *American Economic Review*, 72(5), 1194 - 1196.

Winter, R.A. (1982). On the Choice of an Index for Disclosure in the Life Insurance Market: An Axiomatic Approach . *Journal of Risk and Insurance*, 49(4), 513 - 549.

Winter, R.A. (1981). On the Rate Structure of the American Life Insurance Industry . *Journal of Finance*, 36(1), 81 - 97.

Winter, R.A. (1981). Majority Voting and the Objective Function of the Firm under Uncertainty: Note . *Bell Journal of Economics*, 12(1), 335 - 337.

(b) Conference Proceedings

Krishnan, H., **Winter, R.A.** . (2006). Vertical Control, Dynamics, and the Strategic Role of Inventories. Proceedings of the *Manufacturing and Service Operations Management Conference*, Atlanta, GA, 2006.

2. NON-REFEREED PUBLICATIONS

(a) Journals

Winter, R.A. (2004). Review of Competition Policy for Small Market Economies . *Canadian Competition Record*

Sanderson, M. **Winter, R.A.**, (2002). Geographic Market Definition in Canadian Waste Services (1b). *Canadian Competition Record*, 21(1), 112 - 125.

Mathewson, G.F. **Winter, R.A.**, (2002). The Analysis of Efficiencies in Superior Propane: Correct Criterion Incorrectly Applied . *Canadian Competition Record*, 20(2), 88 - 97.

Trebilcock, M. **Winter, R.A.**, (2000). The State of Efficiencies in Canadian Competition Policy . *Canadian Competition Record*, 106 - 114.

Winter, R.A. (2000). Optimal Insurance under Moral Hazard . *Handbook of Insurance*, 155 - 186.

Mathewson, G.F. **Winter, R.A.**, (1990). Resale Price Maintenance Under Review: A Response to J.W. Morrow . *Canadian Competition Policy Record*, 11(1), 45 - 49.

Winter, R.A. (1986). Review of Blair and Kaserman's " Law and Economics of Vertical Control" . *Journal of Economic Literature*

(b) Conference Proceedings

Winter, R.A. . (2005). Discussion, Brookings Papers on Economic Activity (2b). Proceedings of the *Insurance Industry Dynamics*, 2005.

Winter, R.A. . (2002). Efficiency as a Goal of Competition Policy (2b). Proceedings of the *Canadian Competition Policy: Preparing for the Future*, 2002.

Winter, R.A. . (2000). Remarks on Recent Developments in Canadian Competition Policy (2b). Proceedings of the *Critical Issues in Mergers and Acquisitions, Queen's Annual Business Law Symposium*, 2000.

Winter, R.A. . (1998). Substantial Lessening of Competition in Canadian Competition Law (2b). Proceedings of the *Competition Law for the 21st Century, Canadian Bar Association*, 1998.

Winter, R.A. . (1998). Discussion of 'The Law and Economics of Tying Arrangements' (2b). Proceedings of the *Competition Policy and Intellectual Policy*, 1998.

3. BOOKS

(a) Authored

Trebilcock, M., Iacobucci, E., Collins, P. **Winter, R.A.**,. (2002). *The Law and Economics of Canadian Competition Policy.*

Mathewson, G.F. **Winter, R.A.** (1986). *Competition Policy and the Economics of Vertical Exchange.*

(b) Chapters

Winter, R.A. . (2009). Entry Deterrence via Contracts,. *Industrial Organization, Trade, and Social Interaction: Essays in Honour of B. Curtis Eaton.* Toronto: University of Toronto Press.

Iacobucci, E., **Winter, R.A.** . (2009). Tying and Intellectual Property. *Competition Policy and Intellectual Property,* Irwin Press

Winter, R.A. .(2008) Price Matching Guarantees and Meeting Competition Clauses. In W. Collins (Ed.), . *American Bar Association Volume: Issues in Competition Law and Policy.*

Trebilcock, M., Iacobucci, E. **Winter, R.A.**,. (2006). The Political Economy of Deregulation in Canada. In M. Landy, M. Levin, M. Shapiro (Eds.), . *Creating Competitive Markets: The Politics and Economics of Regulatory Reform.*

Winter, R.A. . (2000). Optimal Insurance under Moral Hazard. In G.F. Dionne (Ed.), . *Handbook of Insurance.*

Rey, P. **Winter, R.A. 1998.** Exclusivity Restrictions and Intellectual Property.*in.* Competition Policy and Intellectual Property Rights in the Knowledge-Based Economy, Robert D. Anderson et Nancy T. Gallini, general editors

Winter, R.A. . (1992). Moral Hazard in Insurance Contracts. In G.F. Dionne (Ed.), . *Contributions to Insurance Economics.*

Mathewson, G.F. **Winter, R.A.**,. (1990). The Law and Economics of Vertical Restraints. In G.F. Mathewson, M. Trebilcock, M. Walker (Eds.), . *The Law and Economics of Competition Policy.* Vancouver: The Fraser Institute.

Mathewson, G.F. **Winter, R.A.**,. (1986). The Economics of Life Insurance Regulation: Valuation Constraints. In J. Finsinger, M. Pauley (Eds.), . *The Economics of Insurance Regulation.*

Mathewson, G.F. **Winter, R.A.**,. (1985). The Economics of Vertical Restraints on Distribution. In G.F. Mathewson, J. Stiglitz (Eds.), . *New Developments in the Analysis of Market Structure.*

Mathewson, **Winter, R.A.**, G., Gussman, T., Campbell, C. . (1984). *Regulation of Canadian Markets for Life Insurance, Consumer and Corporate Affairs.*

APPENDIX C: ACKNOWLEDGEMENT OF EXPERT WITNESS

I, Ralph A. Winter, acknowledge that I will comply with the Competition Tribunal's code of conduct for expert witnesses which is described below:

1. An expert witness who provides a report for use as evidence has a duty to assist the Tribunal impartially on matters relevant to his or her area of expertise.

2. This duty overrides any duty to a party to the proceeding, including the person retaining the expert witness. An expert is to be independent and objective. An expert is not an advocate for a party.

Date: March 12, 2012

RALPH A. WINTER

APPENDIX D: SOURCES AND DOCUMENTS RELIED UPON IN REPORT

Bruce McElhinney, "Visa Global Acceptance Strategy", May 26, 2010 (VISA00165420).

Commissioner of Competition v. Superior Propane Inc. (2000), 7 C.P.R. (4th) 385 (Comp. Trib.).

Competition Act, R.S.C. 1985, c. C-34, as amended.

Dennis W. Carlton & Alan S. Frankel, "The Antitrust Economics of Credit Card Networks" (1995) 63: 2 Antitrust Law Journal 643.

Eric Emch and T. Scott Thompson, "Market Definition and Market Power in Payment Card Networks", Review of Network Economics, Vol. 5 (2006), Issue 1, pp. 45.

[redacted]

[redacted]

Examination for Discovery of Michael Bradley on behalf of Visa Canada Corporation, and answers to undertakings, advisements and refusals (December 5 to 9, 2011).

Interac web site, "Merchants Fees", accessed February 25, 2012 at http://www.interac.ca/merchants/fees.php.

James William Morrow, "Resale Price Maintenance under Review", (1990) 11:1 Canadian Competition Record 39.

Jean-Charles Rochet & Jean Tirole, "Cooperation among Competitors: Some Economics of Payment Card Associations" (2002) 33:4 The RAND Journal of Economics 549.

Joshua S. Gans & Stephen P. King, "The Neutrality of Interchange Fees in Payment Systems", Antitrust Law Journal 643 (2003) 3:1 Topics in Economic Analysis and Policy, online at: http://www.bepress.com/bejeapitopics/vol3/iss1/art1.

Julian Wright, "Optimal Card Payment Systems"(2003) 47:4 European Economic Review 587.

Benjamin Klein, Andres Lerner, Kevin Murphy and Lacey Plache, "Competition in Two-Sided Markets: The Antitrust Economics of Payment Card Interchange Fees" (2006) 73 Antitrust Law Journal 571

Leegin Creative Leather Products, Inc. v. PSKS, Inc., 551 U.S. 877 (2007).

[redacted]

Philippe Aghion & Patrick Bolton, "Contracts as a Barrier to Entry" (1987) 77: American Economic Review 388.

Raj Chetty, Adam Looney & Kory Kroft, "Salience and Taxation: Theory and Evidence" (2009) 99:4 American Economic Review 1145.

Robert Dorfman and Peter O. Steiner, "Optimal Advertising and Optimal Quality" (1954) 44:5 American Economic Review 826.

State Oil Co. v. Khan, 522 U.S. 3 (1997).

[redacted]

The Nilson Report - Issue #967 (March 2011) (GSSS5389_00002602).

Visa, "Canada Issued Data – Excludes Debit and Prepaid", March 29, 2011 (VISA00459310).

Visa, "Visa Canada – Strategy and Interchange – Visa Canada Interchange Reimbursement by Product", May 22, 2009 (VISA00131980).

PUBLIC

CT-2010-010

THE COMPETITION TRIBUNAL

IN THE MATTER OF the *Competition Act*, R.S.C. 1985, c. C-34, as amended;

AND IN THE MATTER OF an application by the Commissioner of Competition pursuant to section 76 of the *Competition Act*;

AND IN THE MATTER OF certain agreements or arrangements implemented or enforced by Visa Canada Corporation and MasterCard International Incorporated.

BETWEEN:

THE COMMISSIONER OF COMPETITION

Applicant

- and -

VISA CANADA CORPORATION and MASTERCARD INTERNATIONAL INCORPORATED

Respondents

- and -

THE TORONTO-DOMINION BANK
THE CANADIAN BANKERS ASSOCIATION

Intervenors

EXPERT REPORT OF RALPH A. WINTER
MARCH 12, 2012

Davies Ward Phillips & Vineberg LLP
Suite 4400, 1 First Canadian Place
Toronto, Ontario M5X 1B1

Kent E. Thomson (LSUC #24264J)
Adam Fanaki (LSUC #38208L)
Davit D. Akman (LSUC #44274R)
Tel: 416.863.0900/Fax: 416.863.0871

Department of Justice Canada
Competition Bureau Legal Services
Place du Portage, Phase I
50 Victoria Street, 22nd Floor
Gatineau QC K1A 0C9

William Miller (LSUC #14443V)
Tel: 819.953.3903/Fax: 819.953.9267

Counsel to the Commissioner of Competition