

PAYMENT SYSTEMS: THE CREDIT CARD MARKET IN CANADA

John Bulmer
International Affairs, Trade and Finance Division

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CONTENTS

	Page
INTRODUCTION	1
CREDIT CARD MODELS: TWO OPTIONS	1
A. The Four-Party Credit Card Model.....	1
B. Three-Party Credit Card Model	4
THE CREDIT CARD INDUSTRY	5
MERCHANT COST OF CREDIT CARD TRANSACTIONS.....	7
GLOSSARY	8



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PAYMENT SYSTEMS: THE CREDIT CARD MARKET IN CANADA

INTRODUCTION

This paper describes the structure of the credit card payment system in Canada,⁽¹⁾ with particular emphasis on the structure, cost and functioning of the four-party model for credit card transactions. It also outlines the recent history and structure of the credit card industry and explains the cost to merchants of credit card transactions. A glossary of relevant terms is provided.

CREDIT CARD MODELS: TWO OPTIONS

A. The Four-Party Credit Card Model

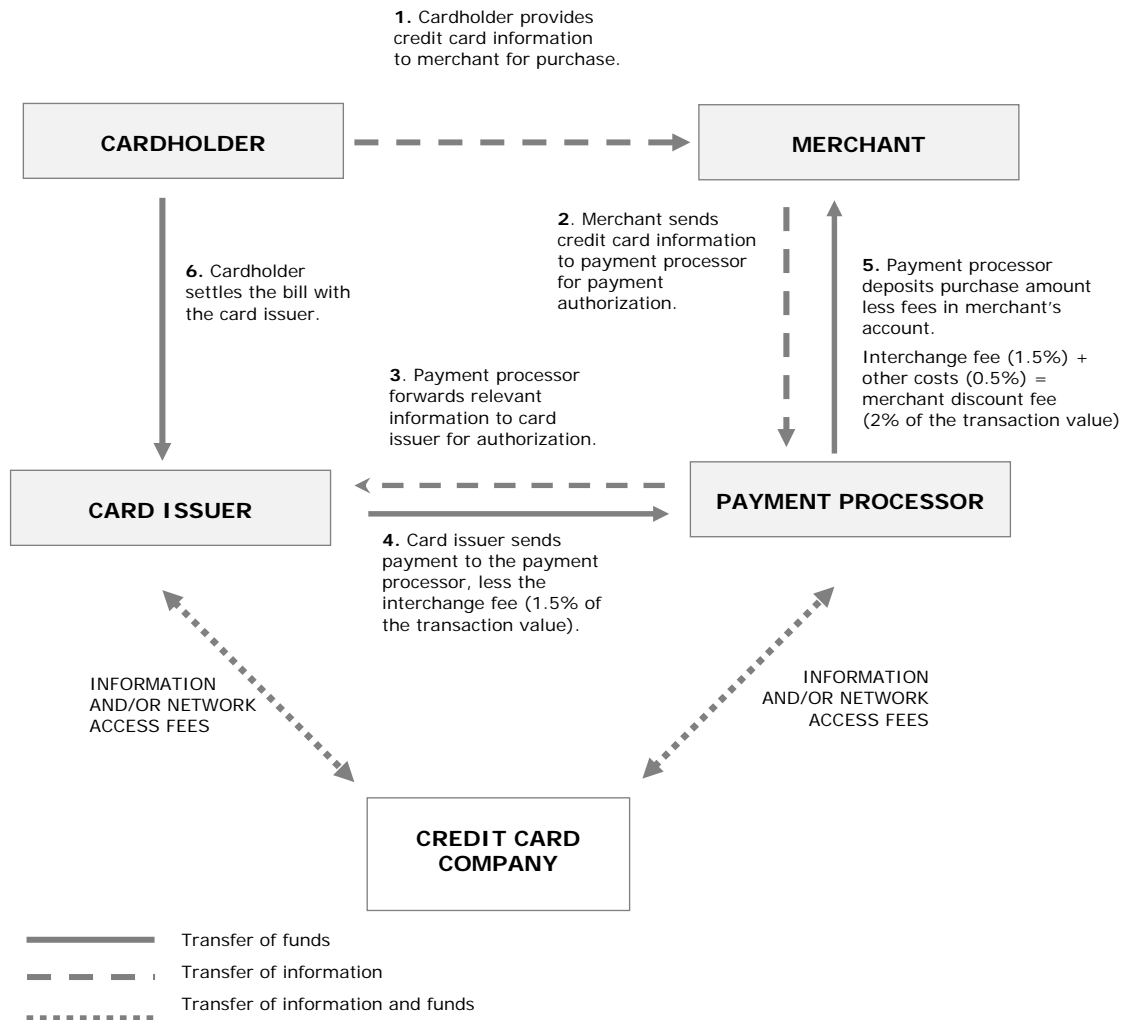
In Canada, the major credit card companies – notably, Visa and MasterCard – are structured in accordance with what is known as the four-party model,⁽²⁾ the parties being the *cardholder*, the *merchant* (or service provider), the *card issuer* and the *payment processor* (or acquirer). A fifth participant is the credit card company itself.⁽³⁾

To begin a credit card transaction, the cardholder who wishes to purchase goods and/or services presents the merchant with his or her credit card. The merchant sends the cardholder's credit card information to the payment processor, which forwards it to the card issuer for payment authorization.⁽⁴⁾ Once the payment has been authorized, the merchant charges

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- (1) Regarding the debit card system of payment in Canada, see John Bulmer, *Payment Systems: The Debit Card Market in Canada*, PRB 09-09E, Parliamentary Information and Research Service, Library of Parliament, Ottawa, 24 September 2009.
 - (2) Visa, *About Visa Canada – Interchange: Understanding a Visa Transaction*, 2009, <http://www.visa.ca/en/aboutcan/mediacentre/interchange/understanding-visa-transactions/>.
 - (3) See the glossary for definitions of the fees and participants in the credit card market.
 - (4) Barbara Pacheco and Richard Sullivan, “Interchange Fees in Credit and Debit Card Markets: What Role for Public Authorities?” *Federal Reserve Bank of Kansas City Economic Review*, First Quarter, 2006, p. 92, <http://www.kc.frb.org/Publicat/Econrev/PDF/1q06pach.pdf>.

the purchase to the credit card and provides the goods and/or services to the cardholder. The card issuer pays the payment processor for the cardholder's purchase; the payment processor then transfers funds for the purchase to the merchant. At a later date, the cardholder is required to pay the full value of the purchase to the card issuer. These transfers of information and funds are illustrated in Figure 1.

Figure 1 – The Four-Party Credit Card Model



Source: Adapted by the author from Pacheco and Sullivan (2006), p. 93. Amounts given for fees are illustrative.

Fees and other costs are incurred at various points in the credit card transaction. An *interchange fee* is retained by the card issuer when it transfers funds for the purchase to the payment processor. This fee is typically a certain percentage of the total transaction value, as set by four-party credit card companies such as Visa or MasterCard.⁽⁵⁾ Interchange fees may help to finance the following card-issuer costs: the interest-free period; credit losses; fraud and fraud prevention; authorizing, receiving, verifying and reconciling transactions; and funding credit card loyalty (rewards) programs.⁽⁶⁾

In addition to receiving the purchase payment (less the interchange fee) from the card issuer, the payment processor charges the merchant an amount known as the *merchant discount fee*; this covers, among other things, the cost of the processing services it provides to merchants. The remainder of the cardholder's bill is deposited by the payment processor in the merchant's account.⁽⁷⁾ In the case of a credit card transaction, the merchant discount fee – much like the interchange fee – is typically a certain percentage of the transaction value and “may include [the cost of the] interchange [fee]; the cost of transaction processing, terminal rental and customer service; and the acquirer's or processor's margin, among other costs.”⁽⁸⁾ Additionally, the credit card company may charge a *network access fee* to the payment processor for each credit card transaction; if that is the case, the payment processor can pass on that cost to the merchant through the merchant discount fee.

The credit card company sets the interchange fee that is retained by the card issuer when it pays the payment processor for the credit card transaction. Currently, the interchange rates that Visa sets differ according to merchant sector, transaction volume for each merchant, and type of transaction.⁽⁹⁾ Visa's interchange fees range from 1.21% of the transaction value for gas stations and 1.36% of the transaction value for grocery stores with a Classic, Gold or

(5) Visa, *Visa Canada Interchange Reimbursement Fees*, n.d., p. 1, http://www.visa.ca/fr/aboutcan/mediacentre/interchange/pdf/interchange_brochure.pdf.

(6) Reserve Bank of Australia, *Reform of Credit Card Schemes in Australia IV: Final Reforms and Regulation Impact Statement*, August 2002, pp. 16–17, 26, http://www.rba.gov.au/Payments/System/Reforms/CCSchemes/FinalReforms/complete_statement.pdf.

(7) Pacheco and Sullivan (2006), p. 92.

(8) Visa, *About Visa Canada – Interchange: Facts About Interchange*, 2009, <http://www.visa.ca/en/aboutcan/mediacentre/interchange/facts-about-interchange/>.

(9) The interchange fee can be higher if the card is not present for the transaction, as in a telephone or Internet transaction. Additionally, the Visa Infinite card incurs an interchange fee that is 20 basis points higher than Visa's other credit cards. See Visa, “Visa Canada Interchange Reimbursement Fees,” p. 3, http://www.visa.ca/en/aboutcan/mediacentre/interchange/pdf/interchange_brochure.pdf.

Platinum Visa card to 2% of the transaction value for some transactions that take place online or otherwise without the physical presence of the credit card.⁽¹⁰⁾ In Canada, Visa's average effective interchange fee is currently 1.6% of the transaction value.⁽¹¹⁾ MasterCard does not disclose its interchange fee in Canada.

For its part, the credit card company (usually, Visa or MasterCard) generates revenue primarily from *network access fees* that are linked to payment volume and/or the number of transactions processed using its branded cards.⁽¹²⁾ These fees are paid by the card issuer and/or the payment processor. Neither Visa nor MasterCard discloses the network access fees charged to card issuers and/or payment processors for credit card transactions. However, Visa stated that in Canada its revenue from a credit card transaction is typically less than 10% of the interchange fee, approximately 16 basis points on the transaction value.⁽¹³⁾ Visa did not indicate how much of this revenue is received from the card issuer or the payment processor.

Finally, the cardholder is charged *interest* by the card issuer on his or her monthly credit card bill on any amounts that remain unpaid after the interest-free period. Several credit cards also require the cardholder to pay an *annual fee* to the card issuer.

B. Three-Party Credit Card Model

Some credit card transactions, such as those involving American Express or Diners Club, follow what is known as the *three-party* or *closed-loop model*.⁽¹⁴⁾ In this model the credit card company issues credit cards to its cardholders and processes payments for merchants that accept these cards as payment.⁽¹⁵⁾ The credit card company may charge its cardholders interest on credit card debt and/or an annual fee for its credit card services and it may also charge merchants a fixed fee and a fee for transactions.

(10) Ibid.

(11) House of Commons, Standing Committee on Finance [FINA], *Evidence*, 14 May 2009 [revised transcript] (Bill Sheedy, Regional President, North America and Head of Interchange Strategy, Visa Canada Inc.), <http://www2.parl.gc.ca/HousePublications/Publication.aspx?DocId=3907136&Language=E&Mode=1&Parl=40&Ses=2>.

(12) Visa, *Corporate Overview*, n.d., p. 1, <http://www.corporate.visa.com/media/visa-corporate-overview.pdf>.

(13) FINA (14 May 2009), Bill Sheedy.

(14) Pacheco and Sullivan (2006), p. 93.

(15) Ibid.

Because in the three-party model the credit card company assumes the role of both card issuer and payment processor, these transactions do not involve an interchange fee.⁽¹⁶⁾ However, it should be noted that American Express does not always act as the payment processor or the card issuer, and can utilize elements of the four-party credit card model⁽¹⁷⁾ for credit card transactions by working in cooperation with a payment processor and/or a card issuer.⁽¹⁸⁾

THE CREDIT CARD INDUSTRY

The Canadian credit card market is highly concentrated. In 2006, Visa and MasterCard together participated in approximately 94% of the value of credit card transactions in Canada, with a 64% and 30% share respectively.⁽¹⁹⁾ The US credit card market is also highly concentrated: Visa and MasterCard accounted for approximately 75% of the market value in 2008, with a 44% and 31% share respectively.⁽²⁰⁾

Until relatively recently, both Visa and MasterCard were organized as non-stock membership corporations (or associations) in the United States.⁽²¹⁾ Following a 1998 antitrust lawsuit filed by the US Department of Justice, which challenged “the joint control of both networks by the same group of banks,”⁽²²⁾ both Visa and MasterCard changed their legal structure. MasterCard was the first to do so, by converting in 2002 to a private-share corporation;

(16) Ibid.

(17) In a case where American Express utilizes elements of the four-party credit card model, card issuers may retain an interchange fee.

(18) American Express Company, *Form 10-K*, Fiscal Year ending 31 December 2007, pp. 3–4, <http://library.corporate-ir.net/library/64/644/64467/items/282370/2007AXP10K.pdf>.

(19) Euromonitor International, “Credit Cards – Canada,” *Euromonitor International: Country Sector Briefing*, May 2008, p. 2.

(20) Walter W. Eubanks, “Payment Card Interchange Fees: An Economic Assessment,” *Congressional Research Service*, 3 September 2008, p. 2, https://www.policyarchive.org/bitstream/handle/10207/19114/RL34647_20080903.pdf?sequence=2.

(21) Department of Justice, *United States of America v. Visa U.S.A. Inc., Visa International Corp., and MasterCard International Incorporated*, 98 Civ. 7076 (BSJ), 16 May 2000, p. 16, <http://www.usdoj.gov/atr/cases/f4900/4936.pdf>.

(22) Department of Justice, “Justice Department Files Antitrust Suit Against Visa and MasterCard for Limiting Competition in Credit Card Network Market,” News release, 7 October 1998, http://www.usdoj.gov/atr/public/press_releases/1998/1974.htm.

in 2006, it was renamed MasterCard Worldwide⁽²³⁾ and became a publicly traded company with an initial public offering worth approximately \$2.4 billion.⁽²⁴⁾ In 2007, Visa incorporated as a company.⁽²⁵⁾ Additionally, the US parent company, Visa U.S.A., stated that in 2007 its foreign subsidiaries had begun “the transition to a business model seeking to increase profitability and made competitive increases in their pricing structure.”⁽²⁶⁾ In 2008, it too became a publicly traded company, with an initial public offering worth approximately \$19.1 billion, the largest in US history.⁽²⁷⁾

Since 2000, a number of Canadian banks have transferred their payment processing operations to other institutions. In December 2000, the Royal Bank of Canada and the Bank of Montreal created Moneris Solutions under joint investment; as a payment processor, Moneris Solutions exists “to provide North American merchants with card-based transaction processing services.”⁽²⁸⁾ In 2000, CIBC sold its payment processor operations and purchased 26.25% of the payment processor Global Payments.⁽²⁹⁾ In 2002, Scotiabank sold its payment processor business to Chase Paymentech.⁽³⁰⁾ At present, TD Canada Trust and Desjardins Group still operate their own payment processor businesses.⁽³¹⁾

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- (23) MasterCard Worldwide, *Corporate Overview*, n.d., p. 2, <http://www.mastercard.com/us/company/en/docs/120408CorporateOverview.pdf>.
- (24) MasterCard Worldwide, *Financial News: MasterCard Incorporated Prices Initial Public Offering Company to List on New York Stock Exchange Under Symbol: MA*, 24 May 2006, <http://investorrelations.mastercardintl.com/phoenix.zhtml?c=148835&p=irol-newsArticle&ID=860963&highlight=>.
- (25) Visa, *Annual Report 2008*, 2008, p. 5, http://media.corporate-ir.net/media_files/irol/21/215693/2008ARHighRes.pdf.
- (26) Visa, *Final Prospectus*, 18 March 2008, p. 64, <http://www.sec.gov/Archives/edgar/data/1403161/000119312508060989/d424b4.htm>.
- (27) Visa, *Annual Report 2008* (2008), p. 47.
- (28) Royal Bank of Canada, *2000 Annual Report*, 12 December 2000, p. 8, http://rbc.com/investorrelations/pdf/ar_2000_e.pdf, and Moneris Solutions, *About Moneris*, 2009, <http://www.moneris.com/AboutUs.aspx>.
- (29) CIBC, *2000 Annual Report*, 2000, p. 21, <http://www.cibc.com/ca/pdf/investor/00-anl-rpt.pdf>.
- (30) Chase Paymentech, *About Chase Paymentech*, 2007, http://en.chasepaymentech.ca/portal/community/chase_paymentech/public/canada/canada_-_english/about_us/company_information.
- (31) Visa Canada, *Merchant Resource Center: Becoming a Visa Merchant*, 2009, <http://visa.ca/en/merchant/acceptingvisa/becoming-a-visa-merchant/index.jsp>.

MERCHANT COST OF CREDIT CARD TRANSACTIONS

According to a 2006 Bank of Canada survey of 500 merchants, credit cards are, overall, the most expensive method of payment in Canada.⁽³²⁾ In the fiscal year ending 31 October 2006, the median⁽³³⁾ merchant discount fee on credit card transactions for the survey sample was 2% of the transaction value.⁽³⁴⁾ In that year, about \$214.7 billion⁽³⁵⁾ in purchases were made with Visa and MasterCard credit cards.⁽³⁶⁾ Using these figures, and making certain assumptions, the total estimated merchant cost for all Visa and MasterCard credit card transactions in the fiscal year ending 31 October 2006 can be estimated at about \$4.3 billion,⁽³⁷⁾ a large proportion of this amount being transferred to card issuers through the interchange fee. As a basis for comparison, and again subject to certain assumptions, the merchant cost of debit card point-of-sale transactions can be estimated at \$395 million in 2006.⁽³⁸⁾

(32) Carlos Arango and Varya Taylor, “Merchants’ Costs of Accepting Means of Payment: Is Cash the Least Costly?” *Bank of Canada Review*, Winter 2008–2009, p. 20, http://www.bank-banque-canada.ca/en/review/winter08-09/arango_taylor.pdf.

(33) According to the Bank of Canada, “[t]he results reported for credit card rates are based on an average credit card discount rate calculated for each merchant, judging by the credit cards they accept at their stores.” *Ibid.*, p. 19.

(34) *Ibid.*

(35) Canadian Bankers Association, *Credit Card Statistics – VISA and MasterCard*, 9 January 2009, http://www.cba.ca/contents/files/statistics/stat_20081031_cc_db038_en.pdf.

(36) The fiscal year for Visa and MasterCard transactions lasted from 1 November 2005 to 31 October 2006.

(37) This figure was obtained by multiplying the median merchant discount fee (2% of the transaction value) by the total dollar amount of Visa and MasterCard transactions (\$214.7 billion). The average merchant discount fee for all credit card transactions for all merchants in Canada is unknown. The estimated \$4.3 billion total merchant cost for credit card transactions is, therefore, an approximation. If the actual average merchant discount fee were higher, or lower, than 2% of the transaction value, then the total merchant cost would have exceeded, or been less than, \$4.3 billion, accordingly. This calculation is for the fiscal year ending on 31 October 2006, rather than for the 2006 calendar year, which is the time frame for the debit card transaction calculation (footnote 38).

(38) Interac, *Interac 2008 Statistics*, <http://www.interac.ca/media/stats.php>; Arango and Taylor (Winter 2008–2009), p. 19.

This figure was obtained by multiplying the median merchant discount fee (\$0.12 per transaction) by the total number of Interac transactions (3.29 billion). The average merchant discount fee for all debit transactions for all merchants in Canada is unknown. The estimated total merchant cost of \$395 million for debit card transactions is, therefore, an approximation. If the actual average merchant discount fee was higher, or lower, than \$0.12 per transaction, then the total merchant cost for debit transactions would have exceeded, or been less than, \$395 million, accordingly. This calculation is for the 2006 calendar year, rather than for the fiscal year ending on 31 October 2006, which is the time frame for the credit card transaction calculations (footnote 37).

GLOSSARY

Cardholder	Uses the credit card to make purchases and pays his/her card issuer to cover those purchases.
Card Issuer	Issues credit cards to cardholders, collects payments from them, and settles credit card transactions with the payment processor used by the merchant. It also sets the terms and conditions associated with the credit card and collects the interchange fee from the payment processor. The card issuer is generally a bank or credit union.
Credit Card Company	Sets the interchange fee paid by the payment processor to the card issuer and, in addition, charges network access fees.
Four-Party Credit Card Model	Consists of a cardholder, a card issuer, a payment processor and a merchant as well as the credit card company.
Interchange Fee	The portion of the credit card transaction retained by the card issuer when it pays the payment processor. It is set by the credit card company under the four-party credit card model.
Merchant	Accepts credit cards as payment from the cardholder and receives credit card processing services from the payment processor. It pays the merchant discount fee to the payment processor.
Merchant Discount Fee	The portion of a credit card purchase that is retained by the payment processor from the merchant to finance its costs, including the interchange fee.
Network Access Fee	The portion of a credit card purchase that the credit card company retains from the card issuer and/or payment processor.
Payment Processor	Transmits information between the card issuer and the merchant to which it provides credit card processing services. It pays the interchange fee to the card issuer and collects the merchant discount fee from merchants. Payment processors include Chase Paymentech, Desjardins Group, First Data, Global Payments, Moneris Solutions, Peoples Trust, and TD Merchant Services.
Three-Party (or Closed-Loop) Credit Card Model	Consists of a cardholder, a merchant and a credit card company. The credit card company issues the credit card and/or provides credit card processing services to the merchant. Since the credit card company issues its cards and provides processing services to its merchants, there is no need for a formal interchange fee.