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Punishing Rewards

How clamping down on credit card interchange fees can hurt the middle class

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True North in
Canadian public policy

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Executive Summary

Over the past 20 years, credit cards have become an increasingly popular means of paying for goods and services in Canada. Today nearly 90 percent of Canadian adults own a credit card and approximately 65 percent of all point of sale payments are made using credit cards.

The rise of credit cards has been driven by the benefits that accompany their use, including convenience, security, insurance, and warranties on purchases. But arguably the biggest driver has been the rewards that cards offer, such as cash back, Air Miles or Aeroplan rewards, or merchant-specific rewards. About 80 percent of Canadians with credit cards have at least one card that offers rewards for use, and owners of credit cards with rewards say that the rewards are the primary reason they use their rewards card for purchases.

The benefits provided by credit cards are paid for by the issuing bank through a combination of annual fees charged to cardholders and transaction fees charged to merchants. In closed-loop three-party card systems (primarily American Express, as well as international cards issued by Discover), the payment card provider charges both merchants and consumers directly. In four-party card systems (Visa and Mastercard), card issuers charge cardholders directly but the fees from merchants come via the acquirer (such as a merchant's bank), which charges merchants a service charge. The largest portion of the merchant service charge is the *interchange fee*, which is passed on to issuing banks.

In spite of the higher annual fees on cards with more benefits, the vast majority of consumers report that they receive more benefits from their cards than the cost of the fees they carry. Middle class consumers are the major beneficiaries of credit card rewards. A consumer or household earning $40k might expect annual rewards valued at $450, while paying fees of $75, providing a net benefit of $375. Meanwhile, a consumer or household earning $90k might expect benefits of about $1350 while paying $225 in fees, providing a net benefit of around $1125.

Merchants, however, are less happy with the higher interchange fees. Apparently assuming that all of the benefit of rewards cards accrues to users, while merchants bear the added interchange cost, these merchants say that the increase has negatively affected their profitability. Of note, however, the number of merchants who accept credit cards, after falling in the early 2000s, has increased in the past decade – and appears to have risen more rapidly following the introduction of more generous rewards cards, in spite of a rise in accompanying interchange fees.

> *"Middle class consumers are the major beneficiaries of credit card rewards."*

Some merchant groups have, in fact, called for the government to impose caps on interchange fees; in February 2016, a private member's bill was introduced in Parliament seeking to do just that.

Interchange fee caps, like other price controls, tend to have predictable effects: as a rule, they result in other prices increasing, leading to a redistribution, but not a reduction, in overall costs. Several other countries have introduced caps on interchange fees, including, of particular relevance, the caps introduced in Australia in 2003. These caps resulted in a significant increase in the annual fees charged to cardholders and a substantial reduction in the rate at which card use earned rewards.

Using data on and analysis of the effect of Australia's interchange fee caps, combined with publicly available and proprietary data on Canadian credit card use, household income and expenditure, and other economic variables, the authors of this report modelled the likely effects of introducing a cap on interchange fees in Canada. They estimate that, were an interchange fee cap imposed here, it would have significant negative consequences for Canadian consumers and the Canadian economy as a whole. Specifically, they estimate that if interchange fees were forcibly reduced by 40 percent:

1. On average, each adult Canadian would be worse off to the tune of between $89 and $250 per year due to a loss of rewards and increase in annual card fees:
   a For an individual or household earning $40,000, the net loss would be $66 to $187; and
   b for an individual or household earning $90,000, the net loss would be $199 to $562.
2. Spending at merchants in aggregate would decline by between $1.6 billion and $4.7 billion, resulting in a net loss to merchants of between $1.6 billion and $2.8 billion.
3. GDP would fall by between 0.12 percent and 0.19 percent per year.
4. Federal government revenue would fall by between 0.14 percent and 0.40 percent.

The authors estimate that a tighter cap on interchange fees would have a more dramatic negative effect on middle class households and the economy as a whole.

They also provide specific case studies for three typical middle class households, showing how a cap on interchange fees, along the lines of those imposed in Australia, would affect their household income and expenditure.

Sommaire

La popularité des cartes de crédit s'est accrue constamment depuis 20 ans comme moyen de paiement pour les biens et les services achetés au Canada. Près de 90 pour cent des adultes canadiens possèdent maintenant une carte de crédit et environ 65 pour cent de tous les points de vente les acceptent.

La popularité croissante des cartes de crédit s'explique par tous les avantages qu'elles procurent : elles sont pratiques et sûres, sont assorties d'assurances et fournissent des preuves d'achats. Mais le facteur sans doute le plus important est le programme de récompenses qu'elles comprennent : remises en argent, programme Air Miles ou récompenses Aéroplan et ristournes spécifiques à certains commerçants. Environ 80 pour cent des Canadiens qui possèdent une carte de crédit ont au moins une carte récompenses, et les titulaires de ces cartes récompenses soutiennent en général que leur attrait tient en particulier aux récompenses qu'elles leur offrent.

Les avantages offerts par les cartes de crédit sont assumés par l'intermédiaire de la banque émettrice qui facture des frais annuels au titulaire et des frais de transaction au commerçant. Dans le système fermé des cartes à trois parties (principalement American Express, mais aussi les cartes émises par Discover), l'émetteur de la carte facture le commerçant et le titulaire directement. Dans le système des cartes à quatre parties (Visa et MasterCard), l'émetteur de la carte facture le titulaire directement, mais les frais du commerçant lui sont imposés par l'acquéreur (par exemple, la banque du commerçant) par le biais de frais de service. Les *frais d'interchange*, qui constituent la plus grande partie des frais de service acquittés par le commerçant, sont recédés à la banque émettrice de la carte.

> *"Les consommateurs de la classe moyenne sont les principaux bénéficiaires des cartes récompenses."*

En dépit des frais annuels élevés facturés sur les cartes assorties de nombreux avantages, la grande majorité des consommateurs indiquent que les récompenses obtenues dépassent les frais facturés. Les consommateurs de la classe moyenne sont les principaux bénéficiaires des cartes récompenses. Un consommateur ou un ménage qui gagne 40 000 $ par année peut s'attendre à des frais de service de 75 $, mais à des récompenses à hauteur de 450 $, ce qui lui offre un bénéfice net de 375 $. Parallèlement, un consommateur ou un ménage qui gagne 90 000 $ par année peut s'attendre à des frais de service de 225 $, mais à des récompenses à hauteur de 1 350 $, ce qui lui offre un bénéfice net d'environ 1 125 $.

Les commerçants, cependant, sont moins enthousiastes à l'égard des frais d'interchange. Ils affirment que l'ajout des frais d'interchange a influé négativement sur leur rentabilité, en présumant que tous les avantages liés aux cartes récompenses reviennent aux utilisateurs et qu'ils supportent seuls le coût supplémentaire lié aux frais d'interchange. Il convient de noter, toutefois, que les commerçants ont été plus nombreux à accepter les cartes de crédit au fil de la décennie, après avoir été moins nombreux à le faire au début des années 2000 – et que la progression semble avoir été plus rapide après l'introduction de cartes récompenses plus généreuses, en dépit de la montée des frais d'interchange associés à ces cartes.

Certains groupements de commerçants ont, en fait, demandé au gouvernement d'imposer des plafonds sur les frais d'interchange; en février 2016, un projet de loi a été présenté au Parlement dans cette intention.

Le plafonnement des frais d'interchange, comme d'autres mesures de contrôle des prix, a tendance à avoir des effets prévisibles: en règle générale, il est contrebalancé par des hausses de prix ailleurs, ce qui les répartit différemment, mais ne les réduit pas globalement. De nombreux pays ont introduit des plafonds sur les frais d'interchange, notamment l'Australie en 2003, un exemple des plus pertinents. Ces plafonds ont engendré une hausse importante des frais annuels facturés aux titulaires de carte et ont réduit la fréquence des programmes de récompenses.

En se reportant à une analyse australienne conjuguée à un ensemble de données canadiennes publiques et exclusives sur l'utilisation des cartes de crédit, les revenus et les dépenses des ménages et d'autres variables économiques, les auteurs du rapport ont modélisé les effets probables de l'introduction d'un plafond sur les frais d'interchange au Canada. D'après leurs estimations, si un plafonnement des frais d'interchange est imposé au pays, les conséquences seront négatives pour les consommateurs et l'économie canadienne dans son ensemble. Plus précisément, les auteurs estiment que si les frais d'interchange diminuent de 40 pour cent dans le cadre d'un règlement :

1. En moyenne, chaque Canadien adulte devra débourser entre 89 $ et 250 $ de plus par année pour ses achats en raison de la réduction des remises et de l'augmentation des frais annuels.
   a. Pour une personne ou un ménage gagnant 40 000 $ par année, la perte nette sera de l'ordre de 66 $ à 187 $.
   b. Pour une personne ou un ménage gagnant 90 000 $ par année, la perte nette sera de l'ordre de 199 $ à 562 $.
2. Les achats effectués chez les commerçants diminueront de 1,6 milliard à 4,7 milliards de dollars, entraînant une perte nette pour ces derniers variant de 1,6 milliard à 2,8 milliards de dollars.
3. La baisse annuelle du PIB se situera entre 0,12 et 0,19 pour cent.
4. La baisse des recettes fédérales se situera entre 0,14 et 0,40 pour cent.

D'après les estimations des auteurs, un resserrement des plafonds désavantagera en particulier les ménages des classes moyennes et l'économie dans son ensemble.

Ces derniers proposent également ici, pour trois ménages typiques de classe moyenne, des études de cas qui décrivent l'incidence sur les revenus et les dépenses des ménages d'un plafond sur les frais d'interchange semblable à celui imposé en Australie.

Introduction

When asked how they prefer to pay for goods and services, the majority of Canadians answer: "With credit." And, for good reason, approximately 65 percent of all point of sale payments are made using credit cards.

Paying with a credit card is quick. Studies show that it takes as little as half the amount of time as paying with cash. For small items it can be even quicker when using the contactless terminals now available at about 40 percent of Canadian merchants (Broverman 2017).

Paying with a credit card is convenient. Unlike debit cards, credit cards don't require consumers to have the full amount of a transaction in their current account at the time they use their card, thereby avoiding the need to move money between accounts just before a purchase or continuously to hold a large balance. Credit cards also offer what is effectively an interest free loan from the time a purchase is made until the time the card's balance is paid off – as long as the balance is paid off in full, as the majority of Canadians do.[1] Finally, unlike Interac debit cards, credit cards may be used internationally and also more directly for online transactions.[2]

Paying with a credit card is secure. If a credit card is stolen, consumers are protected from theft and fraud, and can dispute any illegitimate charges before payment is due. Debit cards are also protected from fraud and money lost as a result can be reclaimed (Interac 2015a) – but having money disappear from one's bank account can be costly and worrying, even if it is eventually returned. If cash is stolen, it is gone. Many credit cards also offer purchase protection insurance, covering losses or damage to goods that occurs within 90 days of purchase. Many credit cards also offer extended warranties on purchases, providing consumers peace of mind for an additional year over the usual, manufacturer-provided, one-year warranty period.

For many consumers, however, the most important advantage of credit cards is the rewards they offer. Nearly 80 percent of credit cards held by Canadians provide their users with rewards (MarketSense Inc's 2016 *CardSense Wave XI Survey*, cited in Broverman 2017). For middle class Canadians, the figure is closer to 90 percent (RFi Consulting 2017). And half of consumers with such cards say that rewards are the main reason they use the card for purchases (Ipsos 2016; RFi Consulting 2017).

"About 65 percent of point of sale payments in Canada are made using credit cards."

Rewards on credit cards can take several forms. Cash back credit cards effectively reduce the cost of purchases by a certain amount (usually between 1 percent and 2 percent, but sometimes more). Air Miles and Aeroplan credit cards enable users to earn rewards on all purchases, in addition to the rewards they would usually earn at the hundreds of participating merchants; rewards may then be spent at those participating merchants. Merchant-specific credit card reward programs, such as those run by Walmart, Amazon, President's Choice, Costco, and Best Western, enable users to earn rewards on all purchases – and higher rewards at the merchant who has co-branded the card – and spend them at the associated merchant.

In spite of the popularity and manifest benefits of credit card rewards, they are under attack. For years, groups of merchants have been pushing to reduce the "interchange fees" that are used in part to fund rewards. In November 2014, the major card networks, Visa and Mastercard, agreed voluntarily to reduce these fees – and have been doing so since.[3] But merchants continue to demand lower fees. In February 2016, apparently in response to these demands, a private member's bill was introduced in Parliament that would impose mandatory caps on interchange fees (Bill C-236, *An Act to amend the Payment Card Networks Act (credit card acceptance fees)*).

Proponents of interchange fee price controls argue that interchange fees hurt merchants' profits. Similar arguments were made in Australia, where caps on interchange fees were introduced in 2003. As we document below, these caps have had significant negative effects, most notably reduced credit card use, increased cardholder fees, and reduced rewards.

In order to develop a reasoned assessment of the merits and drawbacks of imposing mandatory caps on interchange fees in Canada, it is important to understand the likely consequences of such an action. This study seeks to do that. It begins with a brief overview of the role, benefits, and functioning of credit cards. Part II discusses the history of reward programs from their origins in the late 18th century to the modern credit card rewards program and explains how they work, the benefits they provide to both consumers and merchants, and how they are funded. Part III discusses some of the criticisms of reward programs and describes various attempts to curtail them. And Part IV discusses the consequences of the regulation of interchange fees in Australia, which has pertinent parallels with Canada.

In Parts V and VI, we evaluate the likely effects of interchange fee caps in Canada. Part V focuses on the effect on middle class consumers, who are likely to be most affected by such caps. Part VI considers the wider effects of such caps on the Canadian economy.

PART I

The Rise of Credit Card Use: Benefits, Investments, Incentives, and Fees

Over the course of the past two decades, credit cards have become an increasingly popular means of paying for goods and services in Canada.

Over just the past decade, the number of credit card transactions has risen at a higher rate than the number of debit card transactions (although the latter remain more numerous), as chart 1a demonstrates. Meanwhile, the value of credit card transactions has risen at a much higher rate than the value of debit card transactions and by

Chart 1a: Point of sale transaction volume
(in millions of transactions)

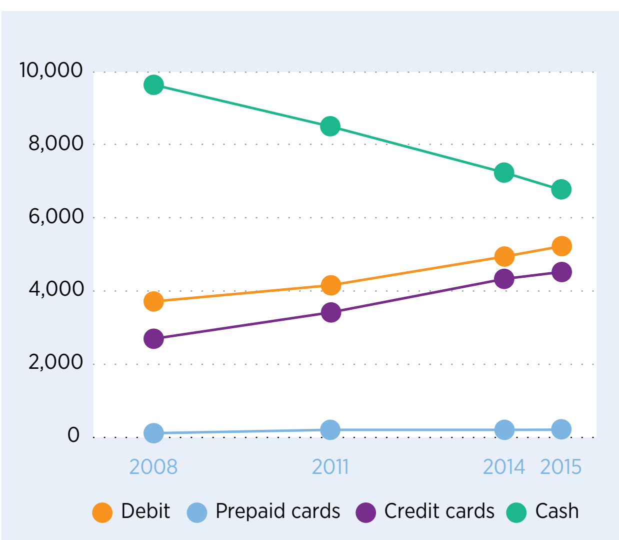
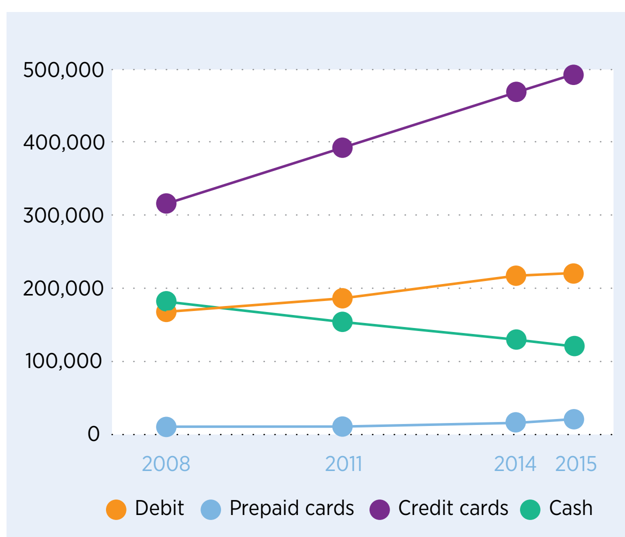


Chart 1b: Point of sale transaction value
(in millions of transactions)



Source: Tompkins and Galociova 2016, figures 7 and 8.

2015 accounted for more than twice the value of debit card transactions, as chart 1b shows. Credit card use also seems to have contributed substantially to a dramatic decline in the use of cash in Canada. This has benefitted both consumers and merchants.

At their most basic, credit cards offer consumers a combination of convenience, security, and the ability to defer payment (including an interest free period between the time the card is charged and the time the monthly payment is due).[4] But increasingly, credit cards also offer consumers other benefits, including insurance on travel and purchases, and – for many, most importantly – the ability to earn rewards. Such rewards range from cash back to airline miles to various other specific goods and services.

> *"Merchants benefit from more consumers using credit cards in several ways."*

Currently, approximately 89 percent of adult Canadians have a credit card. Of those cards, approximately 78 percent carry rewards and about 65 percent of credit card holders have only cards with rewards (Broverman 2017). A 2016 survey by Ipsos found that for 82 percent of credit card holders, a card with rewards was their primary card. In the same survey, 50 percent of those who use a rewards card as their primary card said that their main reason for using the card as the payment method was that they would obtain rewards. In a recent survey of Canadians holding credit cards offering rewards, the largest number of respondents, 34 percent, gave "I can earn reward points/airline miles" as the most important reason for using a credit card (RFi Consulting 2017). Other top reasons given for using credit cards were: "Credit cards are a convenient means of payment" (17 percent); "I can pay online" (10 percent); "Credit cards are widely accepted" (8 percent); "I don't need to carry cash" (7 percent); "I can choose to pay for things I buy later (6 percent); and "Credit cards are a secure means of payment" (6 percent).

Merchants benefit from more consumers using credit cards in several ways. First, consumers with credit cards are able to spend more than they have in their pockets or bank accounts at the time of sale. This could, for example, allow a consumer the flexibility to take advantage of a temporary sale or make an impulse buy, both of which benefit merchants. Second, merchants benefit from more consumers using cards in general, which, for a majority of purchases, have lower total acceptance costs compared to alternatives (like cheques or cash) (see Layne-Farrar 2011, 14). Third, merchants benefit from valuable computational and logistical services that other payment systems (such as cash and cheques) can't replicate. For example, electronic records of transactions that are automatically created when a payment is made by card can simplify accounting. Fourth, the growth of credit card usage by consumers and the commensurate growth of the payment card industry have enabled more merchants to outsource their credit operations to banks – specialized and far more efficient providers. This has relieved merchants and consumers of the costs from risk, fraud, expense, delay, and potential customer ill will associated with operating in-house credit operations (see Zywicki 2000; Rochet and Wright 2010). Last but by no means least, credit card rewards programs and affiliate branding provide merchants with effective marketing tools, enabling them to generate consumer loyalty and increase spending on specific brands or merchants.

The beneficial expansion in credit card use has been facilitated by the operators of payment networks, notably Visa, Mastercard, and American Express, which have undertaken various actions that serve to improve the attractiveness of card use. Among other things, they have:

- expanded and improved the payments infrastructure, including by investing in network hardware and software. As a result, they are able better to detect and prevent fraud and offer more user-friendly systems for consumers and merchants to manage and report transactions;

- expanded and improved payment acceptance by merchants, for example by providing enhanced terminals (such contactless terminals) at reduced cost or offering lower interchange fees for specific merchant segments (see Govil 2016, 13); and
- worked with banks and merchants to develop marketing and incentives of various kinds, including co-branding and rewards programs.

These actions have necessitated considerable expenditures on the part of payment networks. In principle, the networks could have recouped these expenditures either by charging consumers or by charging merchants – the two "sides" of the market served by the networks. Some of the costs associated with marketing and rewards are borne by consumers through annual fees, late fees, penalty fees, and interest payments charged by the cardholder's bank (issuer). However, the investments made by payment networks, as well as the bulk of the marketing costs and incentives have been recouped from merchants through fees charged by the merchant's bank (acquirer).

The way these payments are recouped differs depending on the type of payment system. There are two types of payment systems: three-party and four-party. In a three-party system (primarily American Express in Canada, but also Discover cards issued internationally), the card network operator acts as both issuer and acquirer, and charges merchants a fee (typically a percentage of the transaction amount) directly. In four-party systems, like those operated over the Visa and Mastercard networks, the network operator charges the acquirer an "interchange fee" that is then incorporated into the fees those acquirers charge merchants. The schematics in chart 2 show how these different systems operate.

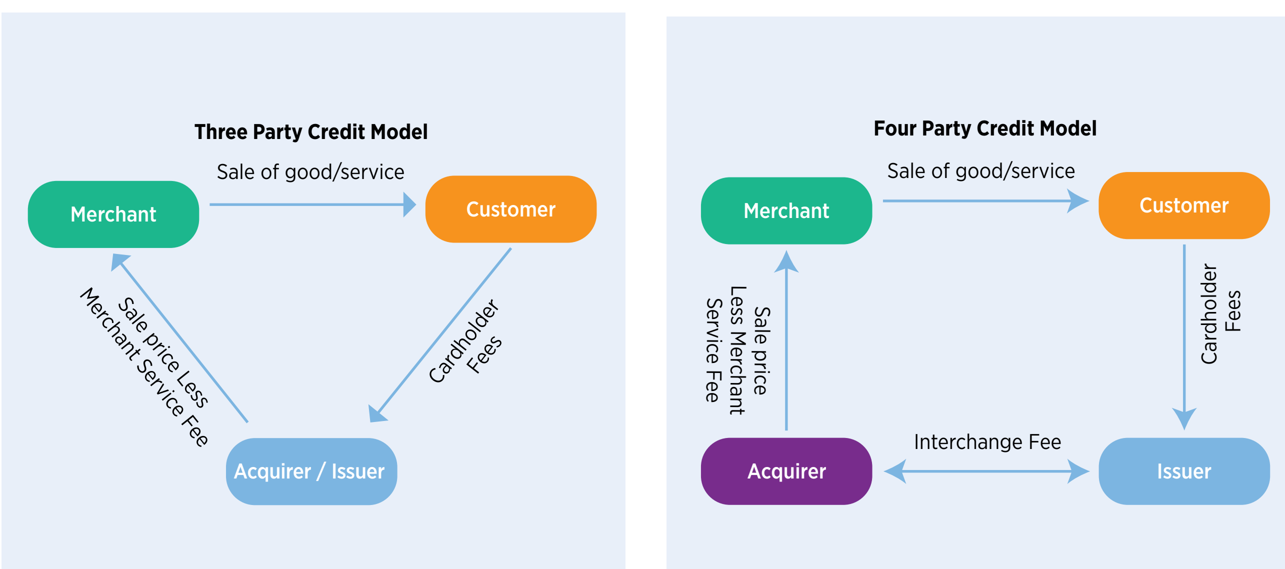
The interchange fees charged on four-party cards vary by location, type of merchant, type and size of transaction, and type of card. An important factor determining the size of interchange fee charged to a particular card is the extent of benefits associated with the card – and in particular any rewards that accrue to the cardholder.

PART II

The History and Development of Reward Programs

In Canada, reward programs have existed since at least the 19th century, when many tea merchants included premiums or coupons

Chart 2: Basic operation of three- and four-party credit card networks



redeemable by the merchant for other items (Bird 2002). Retail establishments subsequently began issuing coupons, redeemable for other merchandise, in proportion to the amount of money spent by a customer (Bird 2002).

Trading stamps were first introduced in Canada at the end of the 19th century. These were sold by third parties to retailers, who would give them to customers. Participating retailers and consumers undoubtedly benefitted from these trading stamp programs: retailers received additional business, generating additional revenue from which they could cover the cost of the stamps, and consumers obtained additional goods at no extra cost to them. However, non-participating retailers lobbied for laws that prohibited the distribution of these third-party stamps, and in 1905 Parliament passed the *Trading Stamps Act*, which effectively shut down all such programs for decades.[5]

Trading stamps re-emerged in Canada in 1959, when Loblaws grocery chain introduced Lucky Green trading stamps in its stores. Because these stamps were sold by the same retailer that redeemed them, the Supreme Court ruled that they did not violate the *Trading Stamps Act*.

Over time, numerous innovations have led to better reward programs. Of particular note was the development of card-based rewards, which enable participants to store rewards electronically rather than in books. Probably the best known loyalty rewards programs in Canada are Aeroplan, which has over five million active members (Aeroplan 2017), and Air Miles, which has over 10 million active members (Loyalty One, "Air Miles Reward Program").

Aeroplan was established by Air Canada in 1984. After initially exclusively seeking to reward loyal Air Canada travelers, Aeroplan subsequently established a number of partnerships, each offering and redeeming Aeroplan miles. In addition, in 1991 Aeroplan established a co-branded credit card, the CIBC Aerogold Visa. In 2015, Aeroplan expanded its partnerships to include retailers.

Air Miles was originally established by Loyalty Management Group in the UK in 1988. Air Miles Canada was started in 1992. Unlike Aeroplan, which only recently established partnerships with retailers, Air Miles was formed around a coalition of 13 merchant partners that included retailers and Bank of Montreal. The coalition subsequently expanded to include American Express and Mastercard, which offer co-branded cards. Air Miles currently has over 200 merchant partners (Air Miles 2017).

More recently, online and app-based rewards programs have been gaining popularity, especially for online retail. Currently, over 100 online retailers are members of the Air Miles program.

The purpose and function of reward programs

Rewards programs, first and foremost, are marketing tools intended to generate additional business. Program participants typically receive points towards rewards each time they make a purchase associated with the program, creating incentives to buy goods and services from merchants that are members of the program. These incentives are enhanced by structuring the programs in tiers and making them time-limited, so that participants who purchase more goods or services in a particular period receive higher levels of rewards. Airline and hotel reward programs are good examples: these typically offer inducements in the form of upgrades, waived baggage fees, "free" travel/nights, use of airport lounges, and the like to participants who reach certain usage requirements over the course of a year (McCall and Voorhees 2010).

Third-party reward program operators such as Air Miles and Aeroplan typically charge merchants a fee for each reward issued by the merchant and may also charge signup and ongoing (monthly) management fees (see, for example, Moneris 2016).

Reward programs that distribute specific goods or services in return for reward points, coupons, or stamps may also benefit from the ability to purchase goods or services at a bulk discount.[6]

Merchants often use rewards redemptions as a means of price discrimination, offering specific goods and services to reward program participants for reduced reward redemptions. For example, airlines and hotels typically offer seats/beds for fewer reward points during off-peak periods. Such discounts reduce the marginal cost of the rewards program, enabling merchants to make use of otherwise-unfilled capacity or to sell bulk-purchased goods, while simultaneously providing additional benefits to loyal customers.

Card-based and digital (app-based or online) reward programs also collect data on the purchasing habits of program participants. As a result, program operators and partners are able to target marketing at specific participants and more effectively build longer-term customer relationships with them.

> *"Credit-card-based reward programs increase the use of cards and enhance customer loyalty."*

Credit card reward programs

Credit card issuers have long offered rewards to cardholders both directly and through co-branding arrangements with various merchants and third-party reward program operators. A co-branded card enables merchants and third-party loyalty program operators to offer additional rewards for the use of the co-branded card, on top of any rewards offered through direct membership of the reward program. As noted, Bank of Montreal was an early participant in Air Miles; meanwhile, the CIBC Aerogold Visa and Bank of Montreal Air Miles Mastercard have long been popular co-branded rewards credit cards. Many other credit card issuers also offer their own and co-branded reward programs.

Current estimates suggest that approximately 78 percent of Canadian credit cards carry rewards (Broverman 2017). Meanwhile, the proportion of Canadians holding non-rewards credit cards has fallen steadily from 72 percent in 2006 to 35 percent in 2016 – implying that 65 percent of credit card holders in Canada only have cards that carry rewards (Broverman 2017). Among middle class households, the proportion holding rewards cards is even higher. Among consumers earning between $60,000 and $96,000, 90 percent of credit cards held carry rewards (RFi Consulting 2017). And among consumers earning between $96,000 and $174,000, 87 percent of credit cards held carry rewards. For consumers at higher and lower incomes, the proportion is around 75 percent (RFi Consulting 2017).

Credit card rewards programs are similar in many elements of their basic operation to other reward programs. Card users receive rewards either in the form of cash back or in the form of points (or "miles") that can be redeemed for various goods and services (the specific goods and services available vary depending on nature of the rewards program operator and any partners or affiliates). These rewards are purchased by the credit card issuer, either directly or according to terms agreed with third-party reward program operators. Credit card issuers in turn fund the programs in part by charging users an annual fee and in part by charging merchants via the interchange fee.

Credit-card-based reward programs can be a highly effective way both to increase the use of cards and to enhance customer loyalty. Merchants undoubtedly benefit from credit card reward programs both directly and indirectly. Direct benefits come from the ability to target marketing to members of reward programs by offering discounts, additional rewards, and other inducements.

As noted, card-based rewards programs enable merchants to customize marketing to specific individuals and groups based on information about purchasing habits acquired through card use. This can result in a substantial increase in spending per transaction (known as *ticket lift*). Research by Mastercard in the US, for example, found that international travellers to the US who were offered incentives to shop at certain merchants spent four times as much on their cards as cardholders not redeeming such offers (Geraghty and Asgeirsson 2013). Indirect benefits come from increased usage of credit cards in general, which as noted above, leads to increased spending due to reduced liquidity constraints, as well as reduced transaction costs and better transaction management.

Credit card issuers also benefit from credit card rewards programs, through additional card uptake and usage, as well as from fees charged to merchants and third-party reward card operators for transaction-related information that better enables them to target marketing efforts (see, for example, Ellis 2011).

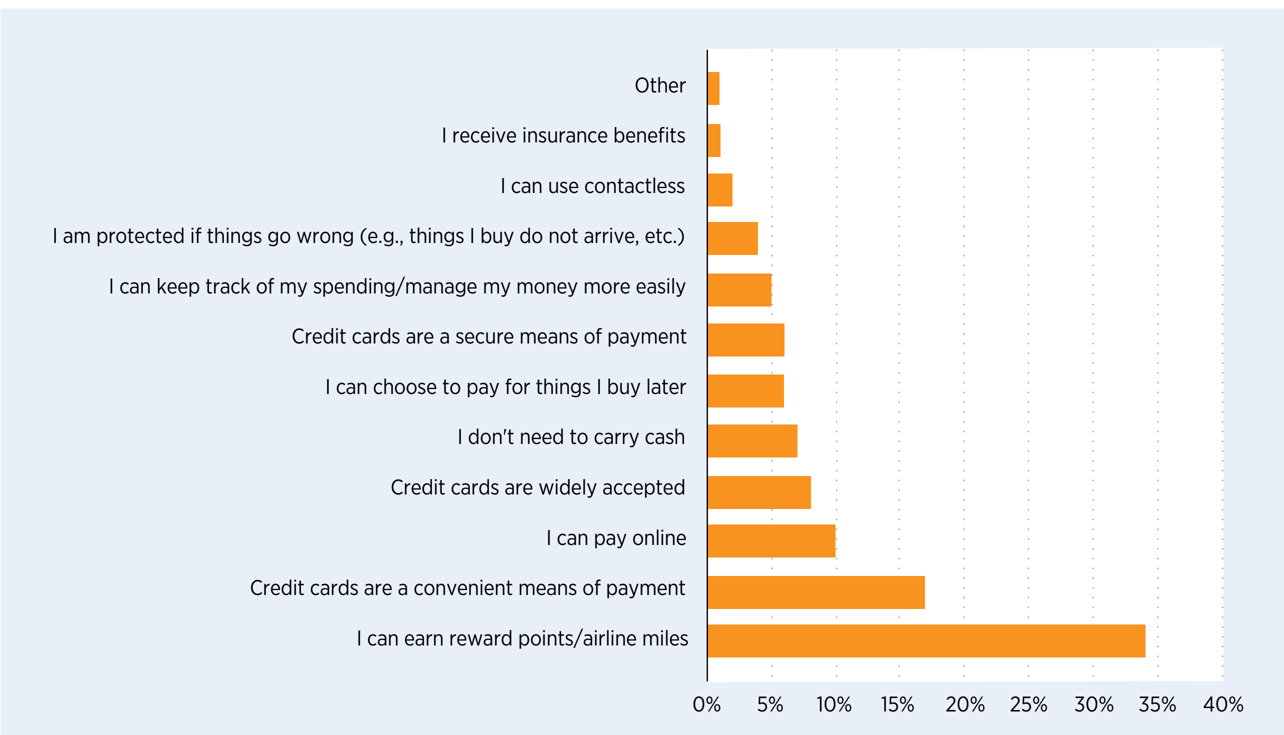
As we explore below, arguably the greatest beneficiaries of reward programs, however, are consumers with reward credit cards. Such consumers benefit directly both from the rewards themselves and from the various additional inducements offered as part of marketing efforts by merchants and card issuers. Moreover, due to the better targeting of these inducements made possible by the use of individual transaction data, owners of rewards credit cards likely receive offers that are more relevant than poorly differentiated mass marketing and advertising.

Effectiveness of credit card reward programs

Survey data demonstrate the effectiveness of rewards programs as a means of encouraging loyalty. A 2014 survey of US shoppers by Technology Advice finds that over 80 percent of respondents were more likely to shop at stores that offered loyalty programs (Graham 2014). Canadian survey data show that credit card based rewards programs are highly valued by customers. A 2016 survey of adult Canadians by TD Bank found that 72 percent had at least one rewards credit card, that for 82 percent of respondents the availability of rewards is a priority when selecting a card, and that half (49 percent) said they sometimes changed where they shopped in order to obtain more rewards.

These findings are reinforced by the survey data collected by RFi on Canadian rewards credit card holders. As noted above, rewards are the single most important reason given for using rewards credit cards (see chart 3).

Chart 3: Reasons consumers choose rewards cards



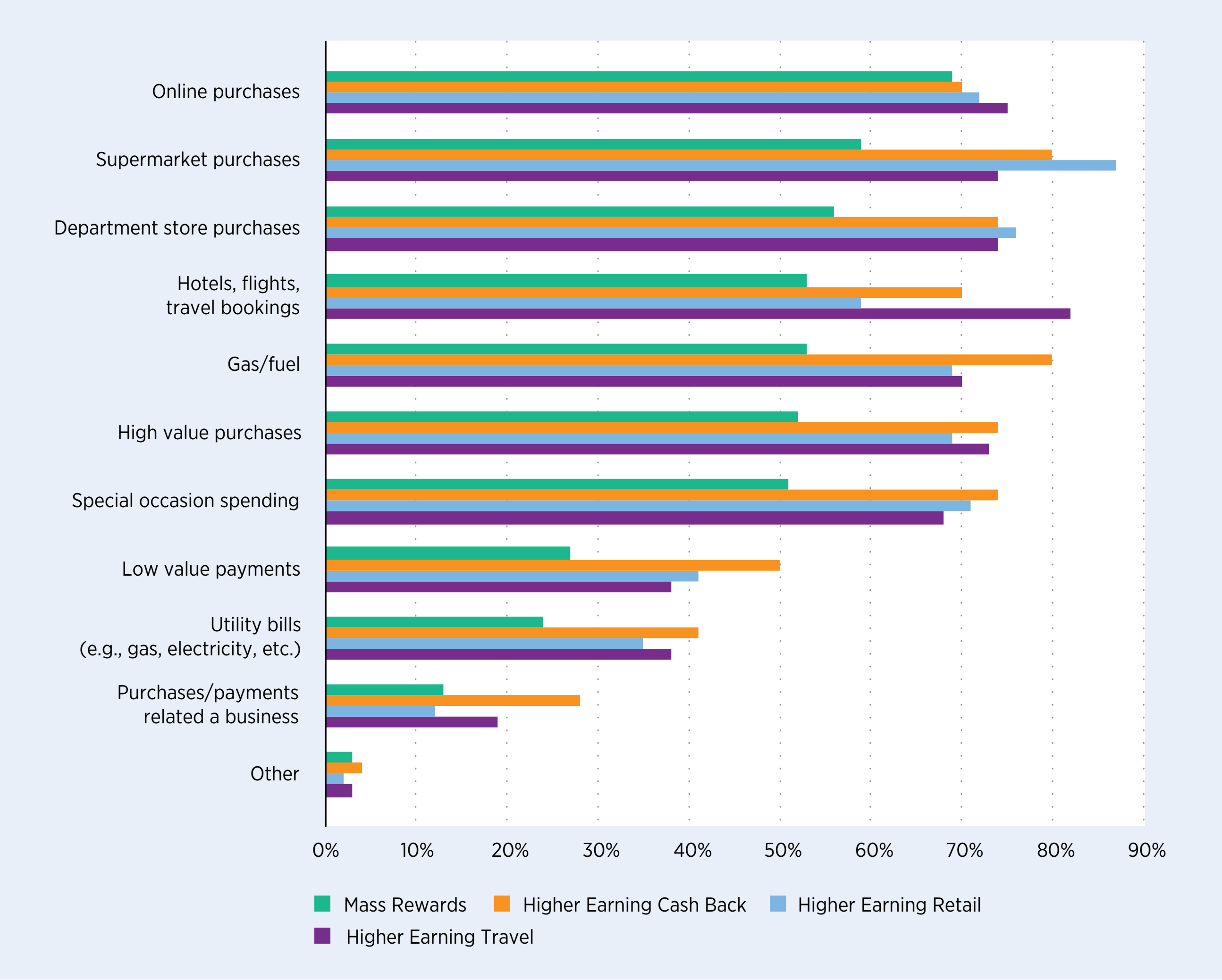
Source: RFi Consulting 2017.

The proportion was higher among those with higher earning rewards cards popular among middle class Canadians (43 percent of those with higher earning cash back cards, 45 percent of those with higher earning travel rewards cards, and 51 percent of those with higher earning retailer rewards cards) than for those with "mass rewards" cards (30 percent). These results are consistent with the findings of the 2017 TSYS survey, which finds that among respondents holding two or more credit cards, the largest number, 87 percent, said that "type of rewards" was a feature that caused them to use one card rather than another; the next most important feature, given by 57 percent of respondents, was the finance charge or interest rate (25).

The RFi (2017) survey results suggest that, on average, Canadians with rewards credit cards use their rewards card for half of all purchases. Among those with higher earning rewards cards, the proportion is higher – ranging from 56 percent for higher earning travel rewards cards to 63 percent for higher earning retail rewards cards. Chart 4 shows how these rewards are used.

On average, Canadians with rewards credit cards say they received goods or services worth over $750 in reward redemptions during the past year, according to the RFi (2017) survey. Perhaps unsurprisingly, 72 percent of respondents said that the value they received from their rewards credit card was greater than the annual fee, while

Chart 4: Reward usage by card type



Source: RFi Consulting 2017.

19 percent said the value was equal to the annual fee and only 9 percent said it was less.

Given that around 72 percent of Canadians have rewards credit cards, that around 78 percent of credit cards owned by Canadians have some kind of rewards program, that 91 percent of rewards cards holders say they receive as much or more value than the annual fee on the card, and that a significant proportion of users of rewards credit cards say that rewards were a primary motivating factor for their use of the card, it seems clear that middle class Canadians highly value their credit card rewards.

To understand better the benefits of rewards to middle class consumers, we reviewed estimates of the net value of some popular rewards cards produced by MoneySense.ca. Table 1 provides an overview of the annual net value of these rewards (which takes into account the annual fee), assuming a monthly spend on the card of $2000.

Table 2 provides an overview of the annual net value of rewards assuming a monthly spend of $500.[7]

PART III

Criticisms of and Challenges to Reward Programs

In spite of their evident benefits and popularity among consumers, merchants, and issuing banks, reward programs have, since their inception, faced opposition from some (non-participating) retailers. Almost as soon as trading stamps appeared in Canada, provincial governments introduced legislation enabling municipalities to ban their sale and distribution. First Nova Scotia did so in 1899, then Ontario in 1901, and Quebec in 1903. The legislation was challenged in the courts; at trial these challenges failed, but a case against the law passed by the City of Montreal succeeded at the Court of Appeal in April 1905 (Bird 2002, 5). In July 1905, however, Royal Assent was given to the federal *Trading*

Table 1: Annual net value of rewards cards assuming $2000 monthly spend

Card	Type of Rewards	Annual Net Value of Rewards
Scotiabank GM Visa Infinite	Savings on car purchases	$701
Westjet RBC World Elite Mastercard	Savings on travel	$560
Scotiabank Momentum Visa	Cash back	$405
MBNA World Elite Mastercard	Cash back	$429

Source: Brown 2016.

Table 2: Annual net value of rewards cards assuming $500 monthly spend

Card	Type of Rewards	Annual Net Value of Rewards
Scotiabank GM Visa	Savings on car purchases	$270
Westjet RBC Mastercard	Savings on travel	$281
Tangerine Mastercard	Cash back	$84
American Express Simply Cash	Cash back	$84

Source: Brown 2016.

Stamp Act, which made the issuance, distribution, or use of trading stamps a criminal offence (Criminal Code, *An Act in Amendment of the Criminal Code*, 1892 (1905), 4-5 Ed. VII, c.9 (Can.)). From the Parliamentary debate, it seems the main reason for the prohibition was a belief that trading stamps were fraudulent (Covex 2011).

The *Trading Stamp Act* applied only to reward programs run by third parties; those run by individual merchants remained legal. As such, the Act effectively harmed smaller merchants and their customers, who were put at a disadvantage relative to large retailers who were able to run their own programs. As Professor Richard Bird (2002) notes: "With a century of hindsight, the legislation appears to be little more than a successful attempt to lessen competition" (6–7).

Canada's formal prohibition on third-party trading stamps remains on the statute books, having been integrated into the *Criminal Code* (R.S.C., 1985, c. C-46, Part X, § 427 (Can.), *Trading Stamps*). As such, some modern day rewards programs might technically be illegal (Bird 2002, 20–22). To our knowledge, however, no legal actions have been taken against operators of rewards programs under the statute since the 1960s. A Bill introduced by the Minister of Justice and Attorney General of Canada on June 6, 2017 would repeal the relevant section (Sec. 427) of the *Criminal Code* (Bill C-51, *An Act to amend the Criminal Code and the Department of Justice Act and to make consequential amendments to another Act*, *First Reading*, (June 6, 2017)).

Putting the costs of credit card transactions in perspective

More recent opposition to rewards cards has also come from some merchants, who claim that the fees they pay to their bank for processing transactions on credit cards with rewards outweigh the benefits they receive. Some retailers in Canada have even decided to stop accepting certain cards, citing the fees on rewards cards as justification. In July 2016, Walmart stopped accepting all Visa cards at three of its stores in Manitoba citing the high fees charged on some of the Visa rewards cards (Posadzki 2017). In October, Walmart expanded the exclusion to 16 stores and threatened to expand it to all 400 stores nationwide. In response, Visa offered holders of its rewards cards inducements to shop at alternative grocery stores. However, the two companies came to an agreement in January 2017, resulting in Walmart reinstating Visa payments (Posadzki 2017).

> *"Increased use of payment cards reduces merchant costs".*

Some theoretical arguments have been offered in support of merchants' objections to rewards credit cards. Specifically, it has been claimed that, under certain circumstances, the fees on rewards credit cards might be higher than the "socially optimal" level (Hayashi 2008). Underlying these claims is an assumption that the benefits received by merchants from accepting cards with rewards are smaller than the card networks' costs of processing transactions on such cards (8).

These theoretical arguments acknowledge, but do not adequately address, two fundamental features of credit cards with rewards. First, rewards encourage consumers to use their credit cards in preference to alternative payment methods. Because payment cards reduce the cost of several aspects of transactions for merchants compared to alternatives such as cash and cheques, an increase in the use of payment cards reduces these merchant costs. Yet, bizarrely, the Retail Council of Canada ("Payments 101") claims that cash is a costless means of transacting. This is simply false, as many studies have shown. A recent study by the Bank of Canada, for example, found that a typical cash transaction of $20 costs a merchant $0.48, compared with $0.34 for a debit card transaction of the same amount (Kosse et al. 2017). The use of cash involves a risk of theft, or *shrinkage*, both at the checkout and in transit, requiring merchants to take costly precautions. A 2012 study by PricewaterhouseCoopers estimated total annual shrinkage in Canada to be $4 billion, with the largest amount due to employee theft. But cash imposes additional burdens not included in these estimates, including the need to double count all cash (to reduce shrinkage), the cost of bonding insurance against theft, and the cost of internal auditing to detect and prevent employee theft. Meanwhile, cheques can "bounce" if there are insufficient funds in the consumer's bank account and also involve a risk of fraud. In contrast, and in spite of a small number of high-profile instances of fraud, payment cards dramatically reduce the risk of theft and fraud to merchants.

> *"Increased use of payment cards has dramatically reduced the proportion of point of sale transactions involving cash."*

Cash and cheques also typically take more time to process than electronic payments. By 2002, payment cards already offered faster transaction processing than cheques and cash even for low-value transactions, with a typical payment card transaction taking 4 to 5 seconds compared to 8 to 10 seconds for cash (Layne-Farrar 2011). Newer contactless terminals reduce that transaction time even further. Because more than twice the proportion of credit cards (over 95 percent) held by Canadians support contactless payments compared to the proportion of debit cards (over 40 percent), this has particularly benefited merchants that accept contactless credit cards (Broverman 2017, citing data provided to Canada.CreditCards.com by Technology Strategies International Inc. as part of their 2016 *Canadian Payments Forecast*). By reducing the time it takes to serve a customer, these innovations in payment processing generate goodwill among customers and increase throughput. As charts 1a and 1b show, increased use of payment cards – and especially credit cards – has resulted in a dramatic reduction in the proportion of point of sale transactions involving cash.

Second, rewards induce additional consumption on the part of consumers. Cards that offer cash back or rewards redeemable for cash implicitly discount the price paid for goods, increasing demand for these implicitly discounted products and leaving consumers with additional funds with which to make purchases generally. Rewards redeemable for specific products also act as an implicit discount on the original purchase and result in specific additional consumption when redeemed. Furthermore, consumers may be enticed to make additional purchases through reward-card-related promotions. As a result, merchants sell more goods, enabling them to keep prices low by absorbing the additional fees associated with rewards cards transactions. While merchants' per-transaction net margins are undoubtedly reduced when they do this, their overall profits may remain the same or even increase due to the higher volume of transactions. Moreover, often the cost to merchants of goods and services redeemed through rewards, such as meals, movie tickets, electronics, hotel nights, flights, and "free" checked bags are considerably lower than the price consumers would have to pay, generating substantial net value to consumers relative to merchant costs. As a US federal court of appeals recently found (with respect to this dynamic in the United States):

> [I]ndustry-wide transaction volume has substantially *increased* and card services have significantly *improved* in quality…. Increased investment in cardholder rewards has accompanied a dramatic increase in transaction volume across the entire credit-card industry: in 2013, total combined transaction volume from all four major payment networks represented approximately $2.4 trillion, marking an eight-percent increase from 2012 and a thirty-percent increase from 2008. (*United States v. Am. Express Co.*, Docket No. 15-1672, 56-57 (2d Cir. Sep. 26, 2016))

One consequence of the increase in transaction volume resulting from rewards is that it helps to amortize the high fixed costs of these systems, generating savings that can be passed on to merchants and consumers.

The relationship between volume of transactions, margins, and profit was explored in a study of one of the most competitive markets for any good: retail gasoline. A 1997 study of the retail gasoline market in Canada by MJ Ervin and Associates, based on 1995 data from 481 outlets throughout the country, found that higher volumes were strongly correlated with lower margins, as chart 5 shows.

In spite of the lower margins in higher volume locations, profitability per outlet was similar. In part, retailers at higher volume locations made up for lower margins on gas sales through increased sales of ancillary goods and services.

Available evidence suggests that increased use of credit cards with rewards in Canada did not lead to reduced profitability at retailers. Following the introduction of credit cards with higher-earning rewards programs, which began with the introduction of the Visa Infinite card in 2008, followed by the Mastercard World Elite in 2010, retailers voiced concerns about the increased cost of processing transactions (OECD 2013, 10). However, according to data from Statistics Canada, between 2005 and 2012 gross margins at store-based retailers ranged from 25.7 percent to 27.4 percent; meanwhile, operating profit hovered between 4.9 percent and 5.6 percent (see table 3).

Table 3: Gross margin and net profit at Canadian retailers

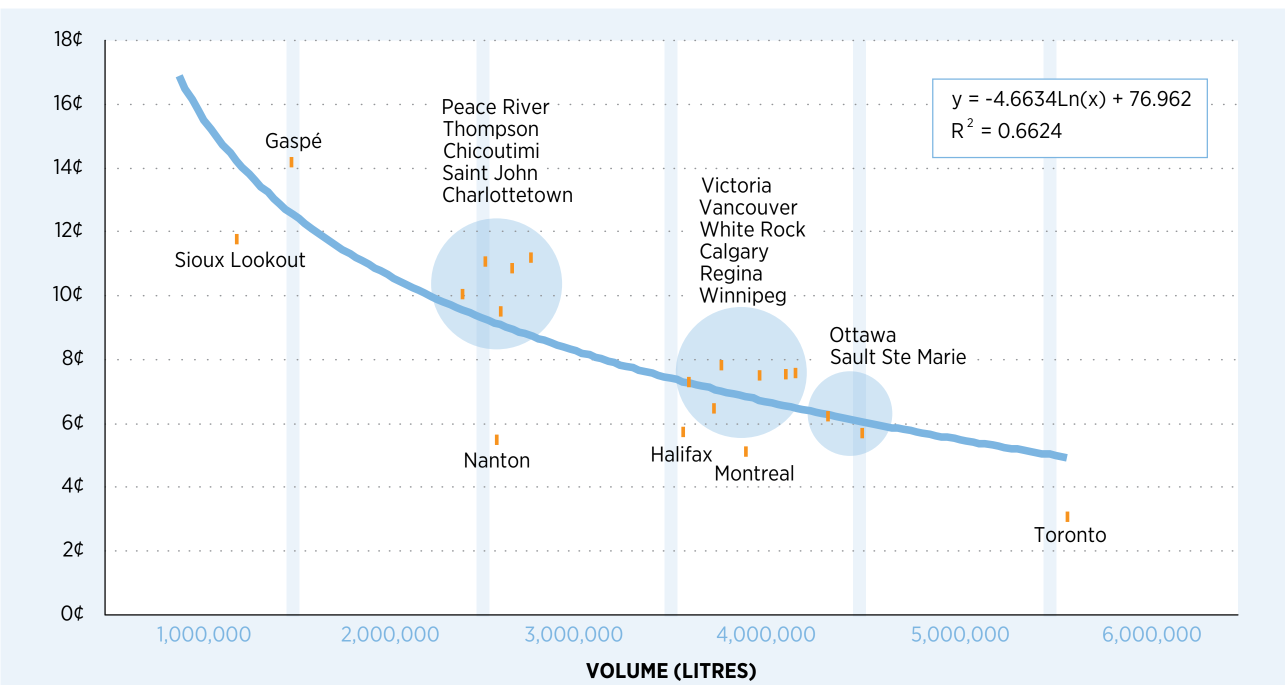
Year	Gross Margin	Net Profit
2005	25.70%	4.90%
2009	27.40%	4.90%
2010	27.30%	5.00%
2011	26.90%	5.60%
2012	27.20%	5.00%

Source: Retail Council of Canada, "The Structure of Retail in Canada." Data from Statistics Canada.

Note: Data not available after 2012.

If anything, operating profit was slightly higher after the introduction of higher-earning rewards cards than before. Nor do card-based reward programs seem to have reduced spending at store-based retailers: between 2006 and 2012 revenue at store-based retailers in Canada grew at an average rate of 14 percent per year, just slightly lower than the average growth in final consumption (15

Chart 5: Relationship of gross product margin to outlet throughput (1995)



Source: MJ Ervin & Associates 1997, figure 24.

percent per year) and average growth in GDP (16 percent per year) over the same period.

Merchants also benefit from the ability to generate loyalty through co-branded credit cards. In addition to the Aeroplan and Air Miles co-branded cards, which reward consumers for making purchases at any of the hundreds of affiliated merchants, individual merchants such as Walmart, Loblaws, Sobeys, Costco, Amazon, and Best Western offer their own individually co-branded cards that encourage cardholders to spend money with them.

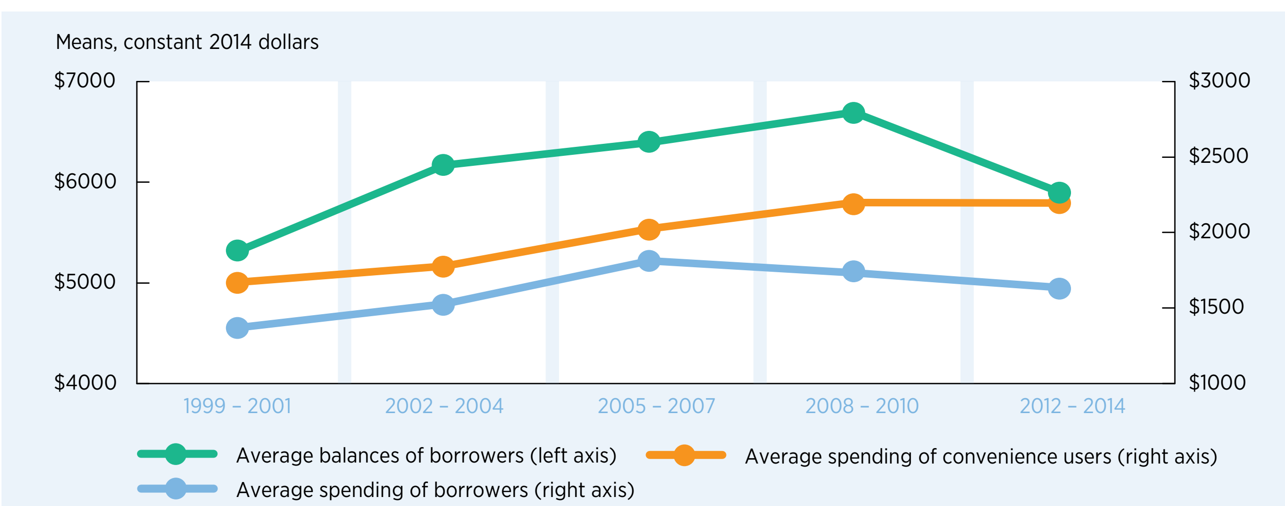
Furthermore, by encouraging consumers to switch away from using cash and by encouraging more merchants to accept credit cards, rewards generate significant social benefits.[8] Cash can be used without leaving a paper trail, making tax evasion and other illegal activities, such as the handling of stolen goods, far easier than with electronic payments.[9] As the Canadian government has noted, tax evasion particularly harms the middle class and it has announced that it is cracking down on this activity, spending an additional $523.9 million over five years "to prevent tax evasion and improve compliance" (Government of Canada 2017). Switching consumers to credit cards through rewards would seem to offer a potentially highly valuable complement to this enforcement activity at no additional cost to the taxpayer.

Do credit card rewards result in higher levels of debt?

More recently, concern has been raised that increased use of credit cards, driven by the incentive to earn rewards, may have resulted in an increase in credit-card debt. This concern was motivated by an observation that over the past 15 years, aggregate credit card balances have increased. But an increase in aggregate balances does not necessarily imply an increase in debt, as a majority of credit card holders pay off their balances each month. A 2015 analysis by researchers at the Bank of Canada found that "[t]he growth in credit card balances over the past 15 years reflects the increased use of credit cards for payment (*i.e.*, spending) rather than increased short-term borrowing" (Bilyk and Peterson).

Rather than encouraging increased credit card debt, the Bank of Canada analysis shows that rewards have led to an increase in the proportion of *convenience users* of credit cards, who pay off their credit card bills in full each month. As the researchers point out: "The majority of credit card owners in Canada do not carry any credit card debt. The share of such households grew from 48 percent in the early 2000s to 55 per cent in recent years." Indeed, as chart 6 shows, while convenience users increased their average monthly spend on credit cards consistently from 1999 to 2014, monthly spending by borrowers increased

Chart 6: Average balances and spending on credit cards by convenience users and borrowers



Source: Bilyk and Peterson 2015, chart 4. Data from Ipsos Reid.

until 2005–07 and then fell. Although the average balances of borrowers rose for longer, it fell dramatically after the end of the financial crisis.

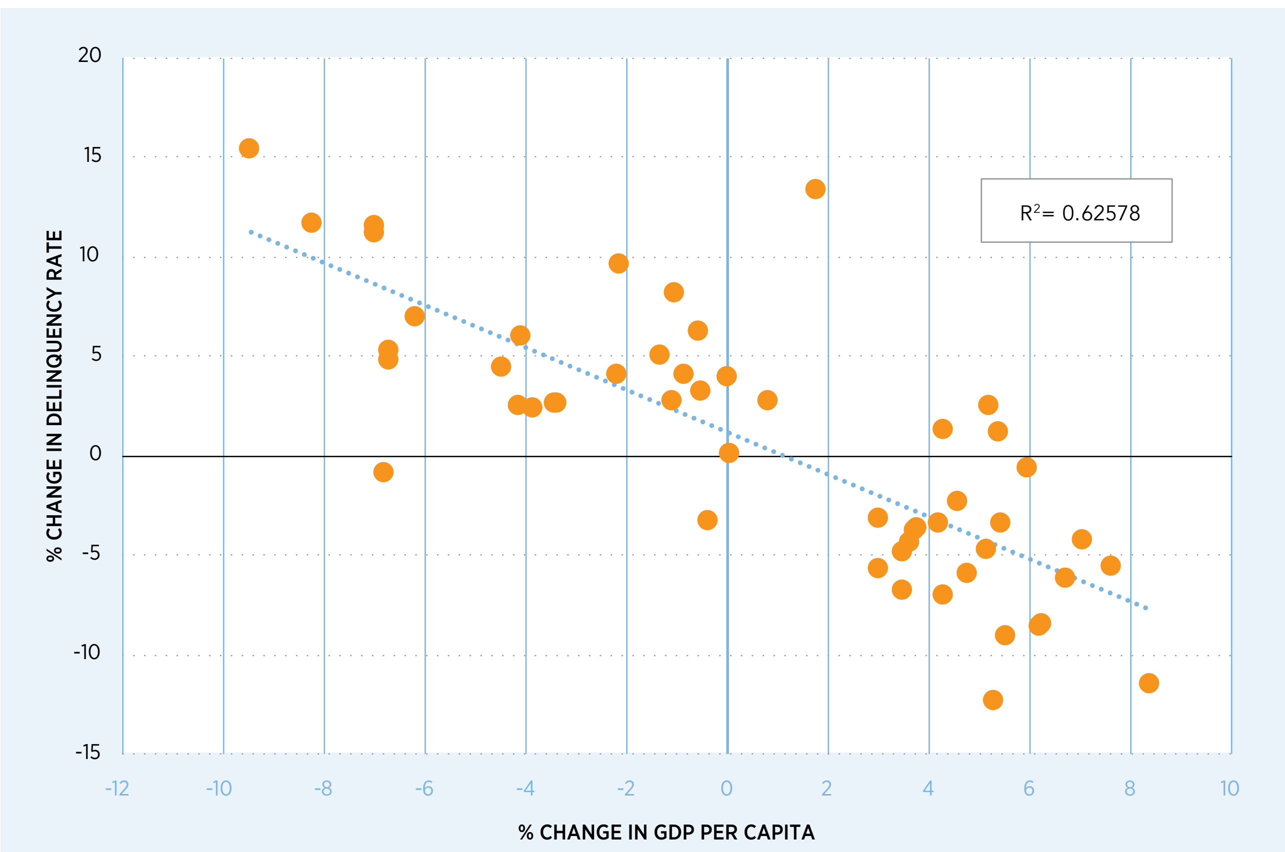
The Bank of Canada analysis indicates that the main driver of increased credit card debt is economic circumstance, not the availability of rewards for credit card spending. This is also supported by an analysis of the relationship between changes in rates of delinquency on credit card debt and changes in GDP per capita. Chart 7 shows these changes on a quarterly basis, unadjusted for seasonal variations in output, thereby providing a clearer picture of how short-term fluctuations in economic activity affect borrowers.

As can be seen, changes in rates of delinquency of 90 days or more on four-party credit cards are strongly negatively correlated with changes in GDP per capita. (The most significant outlier in the chart, a 13 percent rise in delinquency in the second quarter of 2009, occurred at the depth of the financial crisis, when GDP rose modestly for two quarters before dipping again.)

A recent uptick in the proportion of cardholders who are 90 days or more delinquent on payments in Saskatchewan and Alberta seems clearly to be related to the economic slowdown in those provinces (CBC News 2017).

Chart 6 (and the Bank of Canada study more generally) suggests that the increase in interchange fees that has accompanied the rise in rewards has enabled credit card issuers to diversify their revenue stream away from a reliance on "borrowers" with revolving balances. As chart 7 shows, relying on revolving balances is a risky strategy for issuing banks, since they are pro-cyclical and defaults rise when the economy declines. This is supported further by evidence from the US, where between 1990 and 2010 the proportion of revenues attributable to interchange increased from about 10 percent to 23 percent of credit card revenues

Chart 7: Change in rates of delinquency and GDP per capita, on a quarterly basis



Sources: Canadian Bankers Association 2017a; Statistics Canada, "Table 380-0063, Gross Domestic Product, quarterly, Income based, unadjusted"; Statistics Canada, "Table 051-0005, Quarterly population estimates."

and over the same time the proportion of revenues attributable to finance charges on revolving balances has fallen from about 80 percent to 67 percent (Durkin et al. 2014, 347). In short, by issuing rewards and charging higher interchange fees, card issuers have been able to capture a more reliable revenue stream from convenience users, whereas in the past they were far more dependent on revolvers.

It seems clear that credit card rewards have benefitted consumers, especially those in the middle class; do not appear to have resulted in increased consumer debt; and have not adversely affected merchants in general. Nevertheless, the Retail Council of Canada (2016) has been lobbying fiercely for mandatory caps on interchange fees. As noted in the introduction, this idea has been taken up in a private member's bill in the Canadian parliament (Bill C-236, *An Act to amend the Payment Card Networks Act (credit card acceptance fees)*). As we explore below, such caps would most likely result in a substantial reduction in rewards, to the detriment of consumers.

PART IV

The Potential Effects of Interchange Fee Caps on Rewards and Credit Card Fees: Lessons from Australia

Credit card rewards programs are funded by a combination of fees charged to card users and fees charged to merchants. The amount of fees charged to users varies depending on both the market and the type of card. In the US, annual cardholder fees tend to be relatively low: in the first quarter of 2015, the average fee was US$48 (CAN$59 at current rates) (Consumer Financial Protection Bureau 2015, 70). In Australia, by contrast, annual fees averaged AUS$137[10] in 2016, and AUS$191 on rewards cards (Fitzpatrick and White 2017, 37). In Canada, average fees on rewards cards were CAN$109 (RFi Consulting 2017).

Some of the difference in these "average" fees likely arises from the samples used, the way the averages are calculated, and variations in the nature of national markets. But it is likely that a considerable part is a consequence of differences in regulation.

In 2002, Australia's bank regulator, the Reserve Bank of Australia (RBA), introduced a series of regulations affecting the processing of credit card transactions. Of particular importance were new rules, which came into force in 2003, capping the interchange fees that four-party card networks (such as Visa and Mastercard) could charge. In addition, the RBA prohibited card networks from enforcing the restrictions on surcharges by merchants that had been a standard term in merchant and acquirer agreements.

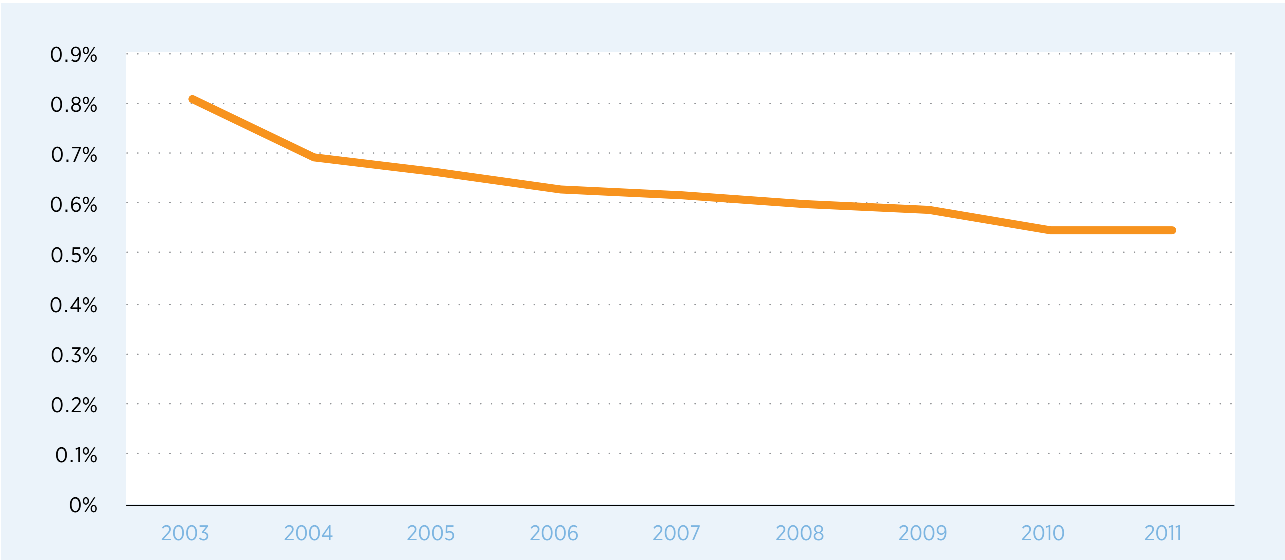
The RBA claimed that these regulations were necessary to correct a "market failure" caused by credit card companies. Specifically, it claimed that the use of credit cards was being made too attractive and consumers were using credit cards instead of the allegedly more "socially efficient" EFTPOS debit system. The explicit aim of the RBA's regulations was to switch consumers away from using credit cards and towards using the debit system.

The rationale given by the RBA for switching consumers from paying with credit to paying with debit is that this would generate savings for merchants that would be passed on to consumers. Because the credit card system was, in the eyes of the RBA, inefficient and wasteful, this would – it was hoped – result in net benefits to consumers.

By capping the interchange fee, the RBA intentionally sought to reduce the rewards available from using credit cards. The data show that it was successful in this endeavour. Following the introduction of the regulation, interchange fees in Australia fell by about 50 percent. And due to the reduction in interchange fee revenue, card issuers were forced to reduce reward offerings. Between 2003 and 2011, the average spend required to obtain a $100 shopping voucher through use of a credit card issued by the four largest banks in Australia went from $12,400 to $18,400 (Chan, Chong, and Mitchell 2012, 58). Put another way, the benefit to the cardholder

rewards card more to achieve specific additional benefits, Australian credit card issuers now incentivize rewards card holders to switch cards

Chart 8: Value of credit card rewards as a proportion of amount spent (Australia)



Source: Chan, Chong, and Mitchell 2012.

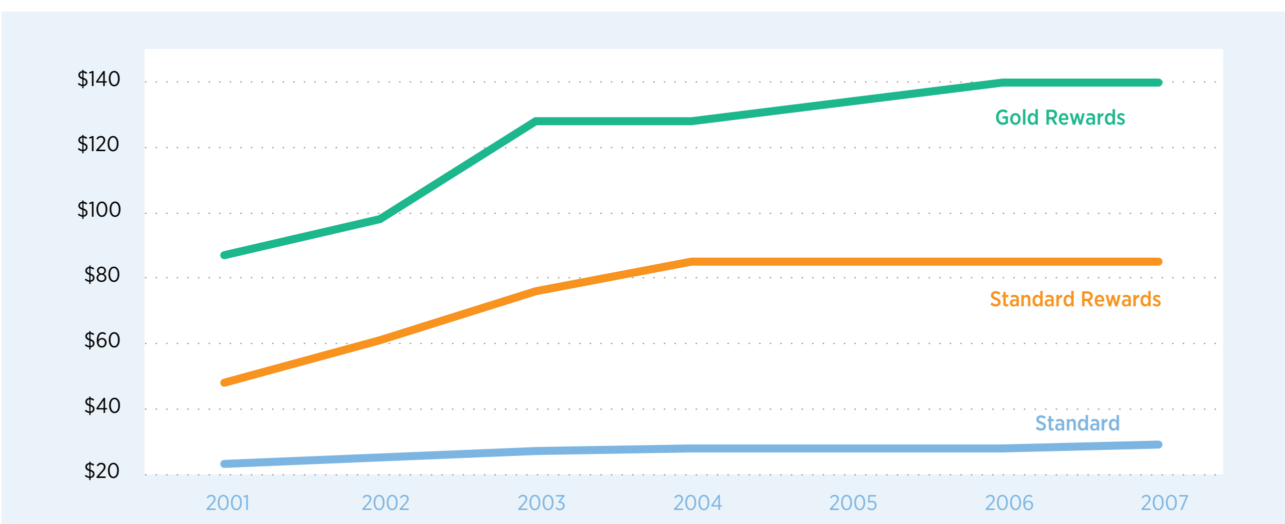
fell from 0.81 percent to 0.54 percent – a fall of one third – as shown in chart 8.

In addition, issuers introduced caps on the total number of rewards that could be earned in a given period (see Stillman et al. 2008, 16). This turns the conventional rewards card model on its head: instead of creating incentives to use the

when they reach the cap.

Meanwhile, between 2002 (the year before the regulation came into effect) and 2004, the annual fee on a "standard" rewards credit card went from $61 to $85 (an increase of about 40 percent) (see chart 9).

Chart 9: Increase in annual card fees (Australia)



Source: Stillman et al. 2008.

Over the same period, the fee on a "gold" rewards card rose from $98 to $128 (a 30 percent increase). Since then, although the structure of rewards cards programs has changed somewhat, the average fee on rewards cards (of various kinds) has risen to $191 – significantly higher, even taking inflation into account, than the fee on a gold card in 2002.

In other words, middle class consumers in Australia now pay vastly more for their rewards credit cards and receive considerably fewer rewards for each dollar they spend. By all accounts, the RBA has been successful in its effort to make transactions with four-party credit cards less attractive to consumers, who have been switching from using credit cards to using debit cards. As chart 10a shows, the volume of debit transactions has increased at a much faster rate than the volume of credit card transactions. Meanwhile, as chart 10b shows, the value of debit card transactions

Chart 10a: Purchases made using credit and charge cards versus debit cards, Australia ($ millions, monthly)

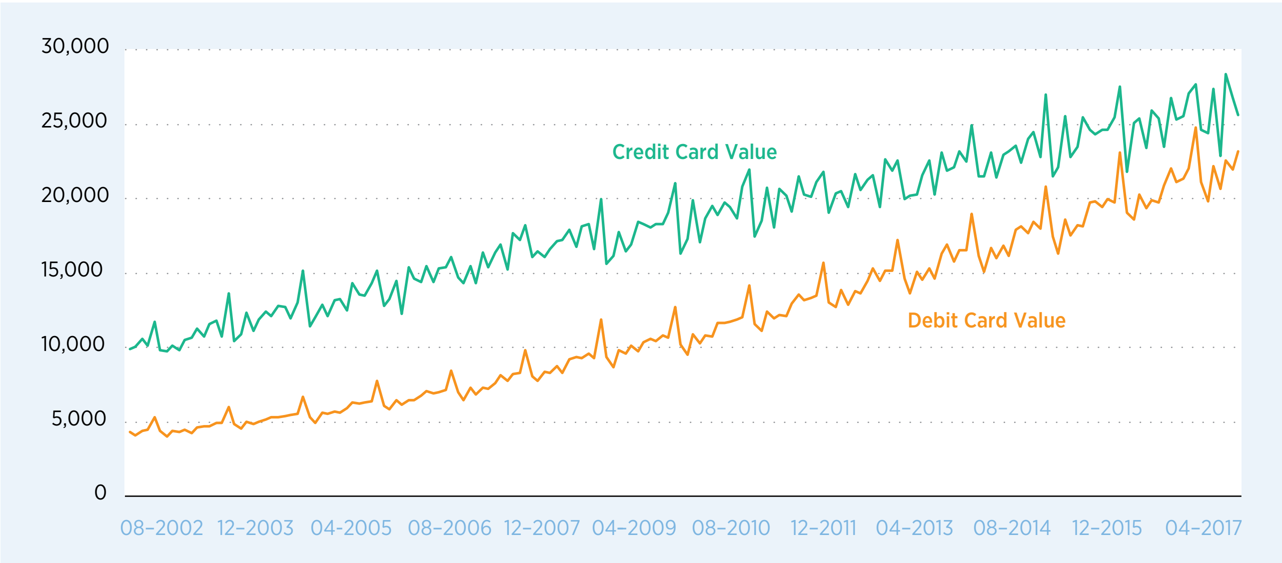
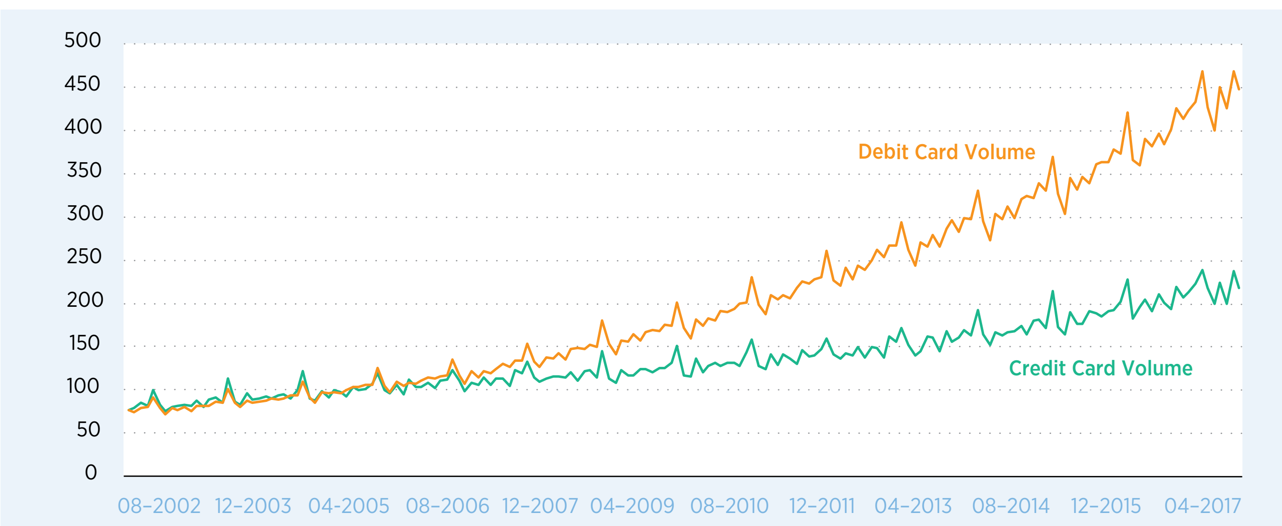


Chart 10b: Value of purchases made using credit and charge cards versus debit cards, Australia ($ millions, monthly)



Source: Reserve Bank of Australia, "Payments Data, Series C1 (Credit and Charge Card Statistics) and C5 (Debit Card Statistics)."

has gradually been catching up to the value of credit card transactions.

Unfortunately, the RBA's hope that its regulations would save consumers money does not seem to have materialized. In the 14 years since the regulations went into effect, there has been no substantive evidence that merchants have passed savings onto consumers. Even assuming that some savings have been passed on, it is very unlikely that the savings for the average middle class consumer have been anywhere close to the costs imposed on them by the regulation through increased fees on, and reduced benefit from, rewards cards.

"Fee caps in Australia have not led to discernibly lower prices for consumers."

The average merchant service charge on four-party cards has fallen from about 1.4 percent prior to the interchange fee cap to around 0.8 percent – a reduction of 0.6 percentage points, or 43 percent in relative terms. Since Mastercard and Visa credit card transactions make up about a quarter of retail transactions, the overall effect on a typical merchant would have been a reduction in per transaction costs of about 0.15 percent. Thus, even if this saving had been fully passed through, the average consumer would have seen prices fall by less than 0.2 percent – but because the consumer price index in Australia has risen, on average, by 2.6 percent per year since 2002, it would be difficult to discern such an effect.

Following the 2002 regulations, merchants have also been able to impose surcharges on payments made with credit cards in Australia. However, most merchants have not introduced surcharges.

A survey conducted by the RBA in 2013 found that just under 7 percent of Mastercard and Visa credit card payments were subject to surcharges (Ossolinski, Lam, and Emery 2014). Merchants who have introduced surcharging have done so as a form of price discrimination in instances where consumers have an inelastic demand for using cards (such as online purchases, airline tickets, or hotel rooms) or where merchants are not constrained by repeat purchasers (such as on travel and restaurants). So while surcharging is not uniform at all, it is highly prevalent in areas where price discrimination and rent-seeking are profitable.

Moreover, merchants almost ubiquitously imposed surcharges at rates that were considerably higher than the cost of acceptance: the RBA survey found that average surcharges in 2013 were 1.5 percent of payment value, but because average merchant service fees were 0.8 percent, this represents a nearly 90 percent markup over the MSC (see also Stillman et al. 2008, 25–26, citing survey evidence from 2004–07 indicating that surcharges ranged from 15 to 81 basis points higher than the merchant service charge).

Clearly, merchants have been using surcharging as a means of price discrimination against consumers who use credit cards. As a result, consumers making purchases with credit cards at those merchants were hit with a triple whammy: higher annual fees, fewer rewards, and higher prices. (Since new regulations came into force in July 2017 capping surcharge rates, merchants have reduced their surcharges, but still very few charge differential rates (Rolfe 2017).)

By contrast with the middle class, high income earners in Australia have likely been less adversely affected because they have been able to switch from four-party cards to three-party cards (such as American Express and Diners Club) that were not subject to the interchange fee regulation because they do not charge an interchange fee (they charge merchants directly rather than though acquirers). Indeed, shortly after the regulation came into force, two credit card issuers introduced three-party cards with an annual fee and rewards similar to those that existed on pre-regulation cards. As a 2008 report by CRA International points out, "This is notable because, prior to 2003, none of the four major issuers had ever offered an American Express or Diners Club card to the consumer segment" (Stillman et al. 2008, 16).

The differential effect of this regulation remains evident. After the interchange fee caps were imposed, several issuers introduced (and at least two still currently offer) packages to consumers of two similar premium rewards cards, one that operates on a four-party network and one that operates on a three-party network. Westpac's "Altitude Black," for example, has one card that operates over the Mastercard network, the other over the American Express network; the Mastercard version earns exactly half the number of rewards for each dollar spent as the Amex version. NAB's "Velocity Rewards Premium" is a similar offering, with a Visa card and an Amex card, and ANZ also had a similar offering, which it scrapped earlier this year in advance of changes to the interchange fee caps.[11] The reason these "companion cards" exist is that far fewer merchants accept three-party cards than four-party cards; with both cards, consumers can use the higher earning three-party card where it is accepted and the lower earning four-party card elsewhere.

> *"The costs imposed on consumers have almost certainly been greater than the benefits to merchants."*

Unsurprisingly, the market share of three-party cards, while still relatively small, has increased considerably following the 2003 regulations. By volume of transactions, three-party cards increased from about 10 percent in 2002 to about 13 percent in 2017 (a 30 percent rise). By value of transactions, they have increased their market share from about 15 percent in 2002 to about 19 percent in 2017 (a 25 percent rise).[12]

In sum, the evidence suggests that capping interchange fees in Australia has had a net negative effect on consumers – and middle class consumers especially. This calls into question the original contention of the RBA that there was a "market failure." Prior to the regulation, issuing banks and credit card networks had worked to establish fees that sought to balance the two sides of the market – consumers and merchants. The regulation had the effect of generating benefits to one side of the market, merchants, at the cost of the other side, consumers. But the costs imposed on consumers have almost certainly been greater than the benefits to merchants. A putative "market failure" has thus been replaced with a certain government failure.

Other governments have also imposed caps on interchange fees of four-party cards (debit and/or credit), with largely negative consequences for consumers. Perhaps most notably, in 2015, the EU imposed a cap on all interchange fees. The effects differed markedly across the EU, largely due to significant differences in the structure of local markets and payment systems, as well as existing regulations. But it is noteworthy that credit card issuers in the UK, which is perhaps most similar to Canada of all the EU markets, dramatically scaled back their reward card offerings (Murray 2016).

However, the Australian experience is particularly relevant to Canada for several reasons. First, Australia's experiment with interchange fee regulation has been ongoing for more than a decade, so the dynamic response by banks, merchants, and consumers is clear. Second, the RBA's rationale for interchange fee regulation is in many respects similar to that put forward by the Retail Council of Canada (whereas the EU justification was that high fees were increasing consumer prices and reducing merchant acceptance of payment cards). Third, Canada's payment infrastructure is in some respects similar to that of Australia prior to regulation; for example, the EFTPOS debit system shares features with Canada's Interac debit system: both were established by the major banks; both are highly dominant in debit transactions; both have low interchange fees (EFTPOS actually has a negative interchange fee: issuing banks pay acquiring banks); and both are geographically limited, with no interconnectivity outside their respective countries. Fourth, average credit card interchange fees charged by four-party card networks in Canada are similar (1.5 percent), following the voluntary reductions introduced in 2015, to the average interchange fees on four-party credit cards in Australia prior to regulation (1.4 percent). Fifth, and by no means least, Canada's culture, legal system, and market structure share numerous commonalities with Australia: both countries are predominantly "Anglo-Saxon" but have substantial minorities; they are both federal systems with a considerable degree of autonomy at the provincial/state level; they share a similar English common law at the federal level (and in all Canadian provinces except Quebec); they are both highly natural-resource based economies; and they have extremely similar levels of mean household income and consumption (see OECD 2017).

PART V

The Effect of Interchange Fee Regulation on the Middle Class in Canada

The experience with interchange fee regulation in Australia does not portend well for Canadian consumers – especially those in the "middle class."[13] Were Canada to introduce a cap on interchange fees, card issuers would experience a loss of revenue. The experience in Australia suggests that card issuers would respond by reducing the rate of rewards earnings on cards, by imposing a cap on the rewards of at least some cards, and by raising annual fees on cards. Card issuers would also likely expand the range of interchange fees, to the extent permitted, so merchants would still face high fees on some cards.

The RFi (2017) survey discussed above found that a reduction in rewards or imposition of a cap on maximum rewards would adversely affect all consumers, but especially those with household income of $60,000–$100,000: Among that group, 52 percent said they would use their card less and 31 percent said they would stop using the card altogether if the rate of rewards earning were reduced;[14] meanwhile, if a cap on rewards were imposed, 54 percent said they would use their card less; and 24 percent said they would stop using the card altogether.

Were interchange fee caps imposed on credit cards in Canada, middle class consumers would likely face a choice similar to that faced by Australians. They could: (1) accept the reduced benefits and higher costs of their rewards credit cards; (2) switch to rewards cards with similar rewards benefits but higher annual fees; or (3) switch to even less rewarding cards with annual fees similar to those they had been paying.

At the same time, and contrary to claims made by the Retail Council of Canada, it seems unlikely that merchants would pass on much if any of the savings they make as a result of reduced interchange fees. There are several reasons for this. First, merchants could right now offer discounts for transactions made using debit cards if they wanted – on the grounds that debit processing is less expensive. Doing so would pass on those savings to consumers. If merchants felt competitive pressure to offer such discounts, they would do so. But they don't. So, there seems little reason to believe that they would pass through similar savings made through a mandatory reduction in interchange fees.

Second, the reduction in cost resulting from an interchange fee cap would be small relative to fluctuations in many other input prices, so consumers would be unlikely to notice much difference in the total cost of their purchases – and unlikely to switch merchants simply on the basis of a 0.15 percent difference in price.

Third, as noted above, merchants would likely experience a reduction in total sales, as consumers who switch from rewards credit cards to non-rewards credit cards (which are associated with lower spending rates) or to debit cards, cheques, or cash (each of which lack the deferred payment element of credit cards) reduce their spending. On the one hand, some merchants may reduce prices in order to induce additional spending. Some might introduce or expand their own rewards programs in order to offer rebates, discounts, or other benefits to loyal customers. On the other hand, some merchants may seek to keep prices constant or even increase them in order to maintain profits on the lower volume of transactions.

> *"Even if merchants passed through all of their savings from reduced merchant service charges, Alex and Emily would still be $120 worse off."*

Case studies of the effects of interchange fee caps on middle class households

To understand better the likely effects of interchange fee caps, we have constructed case studies of three typical middle class households. In each case, income is given on a pre-tax basis. Net income was calculated using a tax calculator, and expenditures are extrapolated from data produced by Statistics Canada from the most recent Census.

Alex and Emily earn $120,000 per year, of which their household current consumption expenditures are $80,000.[15] The couple, who have two children, seek to maximize the rewards from their spending, so they use their rewards-based credit card wherever possible and find that they are able to use it for 60 percent of household spending – $48,000 per year. Like the majority of Canadians, they pay off their credit card bill in full every month (Canadian Bankers Association 2017b).

They currently have an MBNA World Elite Mastercard, which earns rewards equivalent to cash back at a rate of 2 percent on all transactions and has an annual fee of $89. On their $48,000 spend, they earn $960 in rewards. The couple also benefits from travel and accident insurance, as well as purchase protection insurance and an extended warranty on purchases made on the card, which saves them an additional $300. On net, taking into account the annual fee, Alex and Emily save $1171 per year by using their credit card. (They also benefit from the interest free period between the time they make their purchases on the card and the time they pay their bill, which helps them manage their liquidity and ensures that they don't have to pay overdraft fees).

Now, let's see what might happen if the Canadian government were to introduce a cap on interchange fees similar to the regulation imposed in Australia in 2003. Currently, about 65 percent of retail payments by value are made using credit cards in Canada (Moneris, "Canadian Consumer Spending Up"). We may assume (conservatively) that acquirers pass through 75 percent of the reduction in interchange fees to merchants and that merchants pass through half the reduction in merchant service charges to consumers. If, as in Australia, the interchange fee were to fall by 0.6 percent, merchants would be expected to reduce prices by 0.15 percent. (In reality, it is unlikely that merchants would pass on even 50 percent of their savings; there is little evidence that they did so in Australia. Thus, this should be seen as a best case scenario from the perspective of consumers.)

The good news for Alex and Emily is that their card-based household expenditure would fall by $72 per year, from $48,000 to $47,928.[16] However, it is almost certain that MBNA would cut the rewards on the card and would likely also raise the annual fee. As a conservative estimate, we assume that the reward-earning rate falls by 25 percent and the fee rises by 25 percent. As a result, from Alex and Emily's annual spend of $47,928, they would receive $719 in rewards but would pay a fee of $111.[17] Thus, Alex and Emily would, on net, be $191 worse off each year. (And even if merchants passed through all of their savings from reduced merchant service charges, Alex and Emily would still be $120 worse off.)

Sarah and Nicolas earn $100,000, of which their current consumption expenditures are $70,000. They have two rewards credit cards and use them for 57 percent of their household expenditures, or $40,000. They pay off their credit card bills in full every month, thereby avoiding any interest charges or late payment fees. Sarah, the primary breadwinner, typically flies about once per month on business and the couple also flies for pleasure about four times a year.

Sarah's rewards cards is a BMO World Elite Air Miles Mastercard, which earns one Air Mile for every $10 spent. While the card has an annual fee of $120, it comes with a 25 percent discount on Air Miles flight rebates, provides travel insurance, an additional one year warranty on purchases, and enables Sarah (and Nicolas when he is travelling with her) to use Priority Pass lounges. (The card also gave Sarah a rebate on a companion flight in the first year – but we don't include that or other introductory benefits in the analysis below.) Sarah uses the Air Miles card for $25,000 of household expenditures.

"Sarah and Nicolas would, on net, be $289 worse off as a result of interchange fee caps."

The couple's second credit card is a Scotiabank (2017) Momentum Infinite Visa card, which has a $99 annual fee on the first card and $30 fee for the second card, but earns 4 percent cash back on all gas station, grocery store, and drug store purchases – and the couple uses this card for all those purchases (a total of $15,000 per year).

While Sarah and Nicolas's credit cards carry combined annual fees of $249, they earn $600 in cash back from the Scotiabank card and 3500 Air Miles on the BMO card, which they use partly for travel (a return trip for both from Toronto to Montreal, at a cost of 975 Air Miles each) and partly to redeem at stores at a rate of 9.5 Air Miles per dollar. The total value of their rewards redemptions from the BMO card are about $500. In addition, the BMO card's insurance policy saves Sarah $150 per year, and the Priority Pass lounge access saves her an additional $150 per year, while the extended warranty plan saves the couple $100 per year. In total, Sarah and Nicolas obtain benefits from their cards to the tune of $1500. The net annual benefit from their cards is thus $1251.

Now let's see what would happen if the Canadian government were to introduce interchange fee caps along the lines introduced in Australia in 2003. We will make the same assumptions about the reduction in merchant service fee and pass through as for Alex and Emily, as well as the decline in the rewards earning rate. (We will also assume that the other card benefits, such as travel insurance and access to Priority Pass lounges, remain the same, although in practice they might also be restricted.) As a result, Sarah and Nicolas's total household consumption expenditures would fall by $60, their combined annual credit card fees would rise by $62 and their reward benefits would fall by $287, leaving them on net $289 worse off each year.

David typically earns $60,000, of which his current consumption expenditures are $45,000. As a consultant, David's income is sporadic and he occasionally incurs a business expense that is not reimbursed in time to make the full payment, so he finds using a credit card a convenient way to pay for such expenses. As a result, David has two credit cards, one for business, and the other for personal (consumption) expenditures. He pays off his personal card in full each month. He also generally pays off in full the card he uses for business expenses, but when he has a large unreimbursed expense, he pays what he can and then pays the outstanding balance as soon as his expenses are reimbursed (usually within three months).

David's personal card is an RBC (2017) Cash Back Mastercard, which earns 2 percent cash back on grocery purchases up to $6000 and 1 percent on other purchases, as well as offering purchase protection insurance and an extended warranty. David's business card is the MBNA True Line Mastercard, which does not offer any rewards but has a low interest rate for use when he expects he will not be able to pay of the balance in full.

David uses his RBC Cash Back card for 60 percent of his current consumption expenditures ($27,000). As a result, he earns $330 cash back. The value of the payment protection and extended warranty is $120, bringing the total benefits from his card to $450 (not including the benefits that come from the interest free period between purchases and making payment on the card).

Now let's see what would happen if the Canadian government were to introduce interchange fee caps along the lines introduced in Australia in 2003. We will make the same assumptions about the reduction in merchant service fees and pass through as for Alex and Emily, as well as the decline in the rewards earning rate. In addition, we will assume that the RBC Cash Back card now charges an annual fee of $50. If David did not change his spending patterns, he would be $70 per year worse off than he was before the introduction of the fee cap. (Even with 100 percent pass through, David would be $30 per year worse off.) However, if David were to reduce his credit card spending by $2000 due to the reduced reward earnings (a likely outcome based on responses given to the RFi survey), he would be $84 per year worse off.

The differential effect of interchange fee caps on middle class, higher income, and lower income consumers

The RFi survey finds that, on average, consumers carrying credit cards with rewards earn $751 per year in rewards, while the average annual fee is $109, implying that the average consumer realizes a net value of $642. Since the RFi survey was not fully representative, this average may skew slightly high. Using data from the Canadian Bankers Association and Statistics Canada, we calculate that average credit card spending per capita was around $14,400 in 2016, while total per capita spending was around $40,000.[18] Based on the figures in table 1, it seems reasonable to assume that on average Canadians who use credit cards with rewards obtain rewards of $600, while paying card fees averaging around $100, providing net benefits of $500.

By extrapolation, we calculate that for a consumer with income of $40,000 and expenditure of $30,000, the net value of rewards would be around $375. Meanwhile for a median "couple family" household, with income of approximately $90,000, the net benefits would be about $1125.[19]

If an interchange fee cap were imposed in Canada along the same lines as that imposed in Australia in 2003, the effect on a typical consumer with income of $40,000 would be to reduce the net value of rewards by between $131 and $187.[20] Even if merchants passed on all their savings in reduced interchange fees (which is very unlikely), a Canadian earning $40,000 would be worse off by $66 per year.

Meanwhile, for a household with income of $90,000, the effect would be to reduce the net value of rewards by between $394 and $562.[21] Even with full merchant pass-through, such a household would be worse off by $199 per year.

In RFi's (2017) survey, affluent consumers also indicated that they would reduce or discontinue their use of the reward cards if rewards were reduced or removed. However, despite the apparent correlation of rewards with spending, affluent consumers will likely be less affected by a reduction in rewards for several reasons. First, to the extent that rewards effectively lower prices for low-elasticity products such as food, the loss of those rewards affects products that constitute a larger percentage of middle-class consumers' budgets (RFi's survey shows that lower and middle class consumers are much more likely to use rewards to cover everyday purchases and other items they would have bought anyway).

Second, even when correlated with spending, any rewards are less beneficial at the margin to higher-income consumers, and thus their reduction or loss results in less welfare loss.

Third, higher-income consumers will likely be relatively less affected by a reduction in rewards on four-party cards. Not only are they better able to pay higher annual fees or other costs in order to maintain rewards, they are similarly better able to switch to three-party cards. In the RFi survey, the probability of switching cards as a result of reduced rewards rises with income and is significantly higher among those with household incomes over $150,000 compared with the middle class and lower income households.

Lower income consumers, meanwhile, might be less affected directly because of their already relatively low access to/use of cards that offer rewards. While such consumers might benefit from a very small reduction in outlays at some merchants, these would likely be offset by increases in prices at other merchants, especially convenience stores and fast-food restaurants that currently benefit from lower interchange fees on small-ticket items (see, for example, CardFellow 2017). A cap on interchange fees would also likely increase the cost of low-interest rate credit cards, as fees on such cards would rise or interest rates would rise – or both. This would reduce the availability of an important source of credit to low-income consumers, some of whom would likely switch to alternative providers of credit, such as payday lenders and pawn shops, which tend to charge much higher rates (see Zywicki, Manne, and Morris 2017).

PART VI

The Economic Effects of Interchange Fee Regulation in Canada

The above case studies highlight the potential effects of the imposition of interchange fee caps on specific individuals. We now look at the aggregate effect on the economy.

We start with household expenditure. As above, we assume that on average, consumers obtain $600 per year in rewards from their credit cards, while paying $100 in fees, providing them with $500 in net benefits.

We then modelled the effects if an interchange fee cap were imposed at a similar level to the one imposed in Australia in 2003. We evaluated three scenarios: optimistic, conservative, and pessimistic.

Under the optimistic scenario, we assumed that merchant banks and merchants passed through 100 percent of the reduction in interchange fees, that card fees rose by 25 percent and that the value of rewards fell by 25 percent.

Under the conservative scenario, we assumed that merchant banks passed through 75 percent of the interchange fee reduction to merchants and that merchants passed through 50 percent of the reduction in merchant discount rate to consumers,[22] while making the same assumptions regarding card fees and reward value as for the optimistic scenario.

In the pessimistic scenario, we assumed that merchant banks passed through 75 percent of the interchange fee reduction and merchants passed through none of the reduction in merchant discount rate to consumers; we further assumed that card fees would rise by 50 percent and reward value would fall by one third.

In 2016, average spending per adult in Canada was just under $40,000.[23] Data from the Canadian Bankers Association shows that $421 billion was spent using four-party credit cards in 2015. Assuming a similar amount was spent in 2016, that implies an average of around $14,400 spent on four-party credit cards per adult, or about 36 percent of all spending.[24] We assume further that the interchange fee is reduced by 40 percent (similar to the reduction in Australia).

PART VII

Estimates

Under the optimistic scenario, in aggregate, Canadian consumers would lose $2.1 billion as a result of the cap on interchange fees.[25] Assuming consumers would respond by reducing their spending by a proportional amount, or 80 percent of the loss,[26] aggregate consumption would fall by $1.6 billion. At the same time, Canadian merchants would save nothing (since they are passing on all the reduction in fees). Meanwhile, we assume that consumers with credit cards carrying rewards would reduce their saving by the remaining 20 percent of the loss they incur, an aggregate of $414 million. Thus, in total GDP would fall by $2.1 billion. Based on Canada's 2016 GDP of $2067 billion, this equates to a reduction of 0.1 percent.

Under the conservative scenario, Canadian consumers would lose $3.3 billion as a result of the cap on interchange fees. That would mean an aggregate reduction in consumption of $2.7 billion. At the same time, Canadian merchants would save only approximately $0.95 billion,[27] implying a net reduction in income to merchants of $1.7 billion.[28] In addition, we assume aggregate saving would be reduced by an amount equal to the remaining net losses (20 percent) incurred by adults carrying credit cards with rewards, which in aggregate is $666 million. In total, GDP would be reduced by about $2.4 billion, or about 0.12 percent.

"An interchange fee reduction is likely to particularly impact smaller merchants."

Under the pessimistic scenario, Canadian consumers would lose $5.8 billion as a result of the cap on interchange fees. That would mean an aggregate reduction in consumption of $4.7 billion. Meanwhile, merchants would save $1.9 billion, implying a net reduction in income to merchants of $2.8 billion. Since saving would fall by $1.2 billion, GDP would fall on net by $3.9 billion, or 0.19 percent.

Yet even this does not take into account other likely effects of the cap on interchange fees, such as increases in interest rates and/or fees on low-interest cards. Such changes might particularly affect small business owners who currently rely on credit cards with low interest rates to cover large expenses over the short term. (It is difficult to calculate the aggregate effects of these changes on such people and businesses because there is a paucity of data on the amount of credit used for this purpose.)

The interchange fee reduction would likely *particularly* affect smaller merchants for two reasons. First, as we have documented in previous reports (Lee et al. 2013; Zywicki, Manne, and Morris 2014), smaller merchants, especially those selling smaller-ticket items, currently benefit from lower interchange fees intended to encourage such smaller merchants to accept credit cards. Regulation of interchange fees is likely to reduce the ability of card networks to offer such discounts, so small merchants could see a rise in interchange fees on small-ticket items (or at the very least less of a reduction than larger merchants). Second, as consumer purchases fall, the average size of merchants' purchases will fall, leading to a reduction in bulk discounts and consequent increase in average cost of goods, reducing their gross margins and profits. For some merchants this could lead to a death spiral: unable to reduce prices to compete with larger merchants, they lose custom and their costs rise further.

Reduced spending would also affect government revenue. The goods and services tax (GST) accounted for 11.2 percent of the federal government's revenue of $295.5 billion in 2015/16, or $33 billion (Department of Finance 2017). If reduced spending resulting from the interchange fee cap is spread proportionately across all final consumption, this implies a reduction in federal government revenue from reduced GST of $46 million (0.14 percent) under the optimistic scenario, $75 million (0.23 percent) under the conservative scenario, and $132 million (0.4 per-

Table 4: Estimated effects of interchange fee caps under different scenarios

Scenario	Average Loss to Consumers	Reduction in GDP	Reduction in Federal Government Revenue
Optimistic	$89	0.10 percent	0.14 percent
Conservative	$143	0.12 percent	0.23 percent
Pessimistic	$250	0.19 percent	0.40 percent

Source: Stillman et al. 2008.

cent) under the pessimistic scenario. Provinces with their own sales taxes would also face potentially considerable revenue losses, and governments would also experience revenue losses due to reductions in corporate income tax receipts.

These potential effects of the introduction of an interchange fee cap are summarized in table 4.

We also modelled the potential effect of a tighter cap on interchange fees and the effects were, perhaps unsurprisingly, even more dramatic. If interchange fees were capped at 0.5 percent, annual net losses to consumers could range from $156 per adult for the optimistic scenario to $450 for the pessimistic scenario, while GDP could fall by 0.18 percent to 0.42 percent per year, and federal government revenue could fall by 0.25 percent to 0.72 percent.

> *"If the Canadian government were to cap interchange fees, rewards would fall and the cost of cards with rewards would rise."*

Conclusions

Credit cards with rewards are a win-win for consumers and merchants. Consumers obtain various benefits, from cash back to lower-priced goods and services they want. Merchants make additional sales both in general and from customers who are incentivized by merchant-specific rewards.

The proliferation of higher-earning credit card rewards programs has almost certainly contributed to the rise in spending on credit cards in Canada over the past decade, to the benefit of merchants and consumers alike.

While practically everyone has won from the rise in credit cards with rewards, members of the middle class have been the biggest winners. The typical middle class household obtains hundreds of dollars in net benefits from credit card rewards programs.

If the Canadian government were to cap interchange fees, rewards would fall and the cost of cards with rewards would rise. Meanwhile, any fall in prices would not make up for the losses. If the cap were similar to that imposed in Australia, middle class households would effectively lose hundreds of dollars each year. If it were tighter, the losses would be greater.

The only beneficiaries of such a regulation would be big box retailers selling price inelastic goods in relatively uncompetitive markets, who would likely see costs fall while passing on little if any of these savings to consumers. Interchange fee price controls thus represent a direct welfare transfer from middle class consumers to the shareholders of these big box retailers.

The benefits of loyalty rewards issued by third parties now seems to be acknowledged by the Government of Canada, which has proposed to repeal the law, passed in 1905, criminalizing their issuance (Bill C-51, *An Act to amend the Criminal Code and the Department of Justice Act and to make consequential amendments to another Act*).[29] That law was, as Professor Richard Bird (2002) notes, "little more than a successful attempt to lessen competition" (6–7). It would be ironic if in the same year that the 1905 law is repealed, a new law with a broadly similar intent and effect were to be passed.

Attempts to impose interchange fee caps may be motivated by good intentions but they ignore fundamental realities of the function of interchange fees, which is to balance two sides of a complex and dynamic market. Attempting to set a cap on such fees interferes with this balancing process and forces costs to be reallocated in ways that are not in the public interest.

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References

Aeroplan. 2017. "Aeroplan Facts." Aeroplan, June. Available at https://www.aimia.com/content/dam/aimiawebsite/media_center/fs/Aeroplan_FactSheetEN.pdf.

Air Miles. 2017. "About Us." *Airmiles.ca.* Available at https://www.airmiles.ca/arrow/AboutUs.

Bank of Montreal. n.d. "BMO AIR MILES World Elite Mastercard." *bmo.com.* Available at https://www.bmo.com/main/personal/credit-cards/bmo-air-miles-world-elite-mastercard/.

Beatty, Katie. 2016. "Statement by the Minister of Finance on Visa's and Mastercard's Voluntary Commitments." NAPCP, September 15. Available at http://www.napcp.org/news/317138/.

Beeby, Dean. 2011. "Taxman Finds Rampant Restaurant Fraud." *Globe and Mail*, August 1. Available at: https://beta.theglobeandmail.com/news/national/taxman-finds-rampant-restaurant-fraud/article588983.

Bilyk, Olga, and Brian Peterson. 2015. *Credit Cards: Disentangling the Dual Use of Borrowing and Spending*. Bank of Canada Staff Analytical Note 2015-3. Available at http://www.bankofcanada.ca/wp-content/uploads/2015/12/san2015-3.pdf.

Bird, Richard. 2002. "The Legality of Frequent Buyer Plans." *Canadian Bar Review* 81 (1).

Broverman, Aaron. 2017. "Canadian Credit Card, Debit Card and Debt Statistics." *CreditCards.com Canada,* March 2. Available at http://canada.creditcards.com/credit-card-news/canada-credit-card-debit-card-stats-international-1276/.

Brown, Mark. 2016. "Canada's Best Credit Cards 2016." *MoneySense*, August 24. Available at http://www.moneysense.ca/spend/credit-cards/canadas-best-credit-cards-2016/.

Canadian Bankers Association. 2017a. "Credit Card Deliquency – VISA and MasterCard." Canadian Bankers Association, September 12. Available at https://cba.ca/Assets/CBA/Files/Article%20Category/PDF/stat_creditcarddelinquency_en.pdf.

———. 2017b. "Credit Cards: Statistics and Facts." Canadian Bankers Association, May 16. Avaible at https://www.cba.ca/credit-cards.

CardFellow. 2017. "Visa CPS/Small Ticket." *cardfellow.com*. Available at https://www.cardfellow.com/visa-interchange-fees/cps-small-ticket/.

CBC News. 2017. "Canadians Carrying Fewer Credit Cards, but Higher Balances." *CBC News*, March 8. Available at http://www.cbc.ca/news/business/canada-credit-cards-transunion-1.4015250.

Chamberlin, Chris. 2017. "Aussie Banks Rethink Credit Card Points, Fees Ahead of RBA Reform." *Australian Business Traveller,* January 25. Available at https://www.ausbt.com.au/aussie-banks-rethink-credit-card-points-fees-ahead-of-rba-reform.

Chan, Iris, Sophia Chong, and Stephen Mitchell. 2012. "The Personal Credit Card Market in Australia: Pricing over the Past Decade." *Reserve Bank of Australia Bulletin,* March Quarter. Available at https://www.rba.gov.au/publications/bulletin/2012/mar/pdf/bu-0312-7.pdf.

Choice. 2010. *Choice Report: Credit card surcharging in Australia.* Prepared on behalf of NSW Fair Trading. Choice. Available at http://www.fairtrading.nsw.gov.au/biz_res/ftweb/pdfs/About_us/Credit_card_surcharges_part1.pdf.

Consumer Financial Protection Bureau. 2015. *The Consumer Credit Market*. Consumer Financial Protection Bureau. Available at http://files.consumerfinance.gov/f/201512_cfpb_report-the-consumer-credit-card-market.pdf.

Covex, Phil. 2011. "Lucky Green Stamps." *Postal History Corner,* April 6. Available at http://postalhistorycorner.blogspot.com/2011/04/lucky-green-stamps-cover-below-mailed.html.

Criminal Code, *An Act in Amendment of the Criminal Code*, 1892 (1905), 4-5 Ed. VII, c.9 (Can.).

Department of Finance. 2017. *Annual Financial Report of the Government of Canada Fiscal Year 2015 – 2016.* Department of Finance, Canada. Available at https://www.fin.gc.ca/afr-rfa/2016/report-rapport-eng.asp.

Durkin, Thomas A, Gregory Elliehausen, Michael E. Staten, and Todd J. Zywicki. 2014. *Consumer Credit and the American Economy.* Oxford: Oxford University Press.

Ellis, Blake. 2011. The Banks' Billion-Dollar Idea." *CNN Money*, July 8. Available at http://money.cnn.com/2011/07/06/pf/banks_sell_shopping_data/index.htm.

Fitzpatrick, Rachael, and Graham White. 2017. "Banking Fees in Australia." *Reserve Bank of Australia Bulletin*, June Quarter. Available at https://www.rba.gov.au/publications/bulletin/2017/jun/pdf/bu-0617-4-banking-fees-in-australia.pdf.

Geraghty, Michelle, and Trisha Asgeirsson. 2013. *Relationship Rewards: A Game Changer for Financial Institutions*. Mastercard.

Government of Canada. 2017. *2017 Budget, Budget Plan, Chapter 4 – Tax Fairness and the Middle Class*. Government of Canada. Available at: http://www.budget.gc.ca/2017/docs/plan/chap-04-en.html?=undefined&wbdisable=true.

Govil, Sameer. 2016. *Perspectives on Accelerating Global Payments Acceptance*. Visa Inc. Available at https://usa.visa.com/content/dam/VCOM/download/visa-everywhere/global-impact/perspectives-on-accelerating-global-payment-acceptance.pdf.

Graham, Cameron. 2014. *Study: Why Customers Participate in Loyalty Programs*, *TechnologyAdvice.com*, July 23. Available at http://technologyadvice.com/blog/marketing/why-customers-participate-loyalty-programs/.

Hayashi, Fumiko. 2008. "The Economics of Payment Card Fee Structure: What Drives Payment Card Rewards?" Federal Reserve Bank of Kansas City Research Working Paper 08-07.

House of Commons of Canada, Bill C-51, *An Act to amend the Criminal Code and the Department of Justice Act and to make consequential amendments to another Act*, *First Reading*, (June 6, 2017), http://www.parl.ca/DocumentViewer/en/42-1/bill/C-51/first-reading.

House of Commons of Canada, Bill C-236, *An Act to amend the Payment Card Networks Act (credit card acceptance fees)*, *First Reading*, (Feb. 25, 2016), *available at* http://www.parl.ca/DocumentViewer/en/42-1/bill/C-236/first-reading.

Interac. 2015a. "Fraud Prevention." *Interac.ca.* Available at http://www.interac.ca/en/fraud-prevention-for-consumers.html.

———. 2015b. "Frequently Asked Questions: Why does the consumer have to leave my website? What if they don't come back?" *Interac.ca.* Available at http://interac.ca/en/interac-online-faq.html#faq_147.

Ipsos. 2016. *2015 Personal Cardholder Syndicated Study*. Ipsos. Personal communication.

Kosse, Anneke, Heng Chen, Marie-Hélène Felt, Valéry Dongmo Jiongo, Kerry Nield, and Angelika Welte. 2017. *The Costs of Point-of-Sale Payments in Canada.* Bank of Canada Staff Discussion Paper 2017-4, March.

Layne-Farrar, Anne. 2011. *Are Debit Cards Really More Costly for Merchants? Assessing Retailers' Costs and Benefits of Payment Instrument Acceptance*. Working paper, September 9. Available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1924925.

Lee, Ian, Geoffrey A. Manne, Julian Morris, and Todd J. Zywicki. 2013. *Credit Where It's Due: How Payment Cards Benefit Canadian Merchants and Consumers, and How Regulation Can Harm Them*. Macdonald-Laurier Institute, October. Available at http://www.macdonaldlaurier.ca/files/pdf/MLIPaymentCardRegulation10.

Loyalty One. n.d. "Loyalty One Air Miles Reward Program." *loyalty.com.* Available at https://www.loyalty.com/loyalty-programs/air-miles/.

Mason, Keith. 2017. "ANZ Removes American Express Companion Cards: Moves to Visa only with increases to Visa earn rates & addition of points caps." *Point Hacks*, March 1. Available at https://www.pointhacks.com.au/anz-changes-2017/.

MBNA. n.d. "MBNA Rewards World Elite Mastercard Credit Card." *rewards.mbna.ca.* Available at https://rewards.mbna.ca/worldelite?src=DAAU81.

McCall, Michael, and Clay Voorhees. 2010. The Drivers of Loyalty Program Success: An organizing framework and research agenda. 51 Cornell Hospitality Quarterly 51 (1): 35–52.

MJ Ervin & Associates. 1997. *A Review of Competitiveness in the Canadian Refined Petroleum Marketing Industry.* Prepared for: Industry Canada, Natural Resources Canada, Canadian Petroleum Products Institute. Available at http://www.kentgroupltd.com/wp-content/uploads/2014/06/ITCStudy.pdf.

Moneris. n.d. "Canadian Consumer Spending up 4.77 Per cent in the Third Quarter of 2016." *moneris.com.* Available at https://www.moneris.com/en/About-Moneris/News/Canadian-Consumer-Spending-2016-Q3.

———. 2016. *Moneris Air Miles Reward Miles Program Schedule – Terms and Conditions.* Moneris. Available at https://www.moneris.com/-/media/Moneris/Files/EN/Terms-and-Conditions/Moneris%20Air%20Miles%20Reward%20Miles%20Program%20Schedule.pdf.

Murray, Amelia. 2016. "EU Rules Mean You're Getting Less Cashback from Credit Cards: These are the best deals left…" *Daily Telegraph*, April 25. Available at http://www.telegraph.co.uk/personal-banking/credit-cards/why-new-eu-rules-mean-youre-getting-less-cashback-and-rewards-fr/.

NAB. n.d. "NAB Velocity Rewards Premium Card." *nab.com.au.* Available at https://www.nab.com.au/personal/banking/credit-cards/nab-velocity-rewards-premium-card.

Organisation for Economic Co-Operation and Development [OECD]. 2013. *Competition and Payment Systems*. Directorate for Financial and Enterprise Affairs Competition Committee, Organisation for Economic Co-Operation and Development. Available at http://www.oecd.org/competition/PaymentSystems2012.pdf.

———. 2017. "National Accounts at a Glance." OECD. Available at http://www.oecd-ilibrary.org/economics/data/oecd-national-accounts-statistics/national-accounts-at-a-glance_data-00369-en.

Ossolinski, Crystal, Tai Lam, and David Emery. 2014. *The Changing Way We Pay: Trends in Consumer Payments*. Reserve Bank of Australia Discussion Research Paper 2014-05.

Posadzki, Alexandra. 2017. "Wal-Mart Canada, Visa Declare Truce in Credit Card Fee Dispute." *Globe and Mail,* January 5. Available at https://beta.theglobeandmail.com/report-on-business/international-business/us-business/wal-mart-visa-declare-truce-in-credit-card-fee-dispute/article33520763.

PricewaterhouseCoopers. 2012. Securing the Bottom Line: Canadian Retail Security Survey 2012. PricewaterhouseCoopers. Available at http://www.pwc.com/en_CA/ca/retail-consumer/publications/pwcsecurity-survey-2012-10-29-en.pdf.

RBC Royal Bank. 2017. "RBC Cash Back Mastercard." *rbcroyalbank.com.* Available at http://www.rbcroyalbank.com/credit-cards/cash-back-credit-cards/cash-back-mastercard/index.html.

Reserve Bank of Australia. N.d. "Payments Data, Series C1 (Credit and Charge Card Statistics) and C5 (Debit Card Statistics)." Reserve Bank of Australia. Available at https://www.rba.gov.au/payments-and-infrastructure/resources/statistics/payments-data.html.

Retail Council of Canada. n.d. "Payments 101." *Retailcouncil.org.* Available at https://www.retailcouncil.org/advocacy/reducing-credit-card-fees/payments101.

———. n.d. "The Structure of Retail in Canada." *retailcouncil.org.*

———. 2016. "Retail Council of Canada Encouraged by Minister of Finance Commitment, Holds Back Applause for Credit Card Networks Clearing Modest 'Two-foot Bar'." *retailcouncil.org,* September 14. Available at https://www.retailcouncil.org/creditanddebit.

RFi Consulting. 2017. *Mastercard Canada – Consumer Benefits and Rewards Research*. RFi Consulting, June 28. Personal communication containing proprietary research, 10/16/17.

Rochet, Jean-Charles, and Julian Wright. 2010. "Credit Card Interchange Fees." *Journal of Banking and Finance* 34 (8): 1788–1797.

Rogoff, Kenneth S. 2015. "Costs and Benefits to Phasing Out Paper Currency." Chapter in *NBER Macroeconomics Annual 2014*, Volume 29, edited by Jonathan A. Parker and Michael Woodford, 445–456. Chicago: University of Chicago Press.

Rolfe, John. 2017. "Merchants Exposed for Charging Up to 4.95 Per cent for Payment by American Express Credit Card." *Daily Telegraph,* July 15. Available at http://www.dailytelegraph.com.au/business/merchants-exposed-for-charging-up-to-495-per-cent-for-payment-by-american-express-credit-card/news-story/5c4f70737699b430ef514e4271c8ed73?nk=fd01e2f905e3c73173393dde3a5cafa4-1505214221.

Schwarcz, Myron, and David Woynerowski. 2015. "A Closer Look at Visa's and Mastercard's Voluntary Agreement to Interchange Limits in Canada." First Annapolis, January. Available at http://www.firstannapolis.com/news/a-closer-look-at-visas-and-mastercards-voluntary-agreement-to-interchange-limits-in-canada.

Scotiabank. 2017. "Scotia Momentum Visa Infinite Card." *Scotiabank.com.* Available at http://www.scotiabank.com/ca/en/0,,86,00.html.

Statistics Canada. 2017. "Median Total Income, by Family Type, by Census Metropolitan Area (Couple Families), from CANSIM table 111-0009." Statistics Canada. Available at http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/famil107b-eng.htm.

———. 2017. "Population by Sex and Age Group, CANSIM table 051-0001." Statistics Canada. Available at http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/demo10a-eng.htm.

Stillman, Robert, William Bishop, Kyla Malcolm, and Nicole Hildebrandt. 2008. *Regulatory Intervention in the Payment Card Industry by the Reserve Bank of Australia: Analysis of the Evidence*. CRA International.

TD Bank Group. 2016. "Rack up the Rewards: Canadians are loyal to Loyalty Rewards Programs." TD Bank ress release, April 28. Available at http://td.mediaroom.com/2016-04-28-Rack-up-the-Rewards-Canadians-are-loyal-to-Loyalty-Rewards-Programs.

Tompkins, Michael, and Viktoria Galociova. 2016. *Canadian Payment Methods and Trends: 2016.* Payments Canada Discussion Paper No. 7, November. Available at https://www.payments.ca/sites/default/files/cpmt_report_english_0.pdf.

TSYS. 2017. *2017 Canadian Consumer Payment Study.* TSYS.

United States v. Am. Express Co., Docket No. 15-1672, 56-57 (2d Cir. Sep. 26, 2016).

Westpac. n.d. "The Altitude Black Credit Card." *westpac.com.au.* Available at https://www.westpac.com.au/personal-banking/credit-cards/reward/altitude-black/affiliate/.

XE. n.d. "Currency Converter: CAD to AUD." *xe.com.* Available at http://www.xe.com/currencyconverter/convert/?Amount=1&From=CAD&To=AUD.

Zywicki, Todd J. 2000. "The Economics of Credit Cards." *Chapman Law Review* 3(1).

Zywicki, Todd J., Geoffrey A. Manne, and Julian Morris. 2014. "Price Controls on Payment Card Interchange Fees: The U.S. Experience." George Mason University Law and Economics Research Paper Series 14-18/ICLE Financial Regulatory Research Program Paper Series 2014-2. Available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2446080.

———. 2017. *Unreasonable and Disproportionate: How the Durbin Amendment Harms Poorer Americans and Small Businesses*." ICLE Research Paper, April 25. Available at http://laweconcenter.org/component/content/article/138-unreasonable-and-disproportionate-durbin-amendment.html.

Endnotes

1 According to the Canadian Bankers Association (2017), a 2016 survey by Abacus Data found that 58 percent of credit card holders in Canada pay off their balance in full each month; of those who do not pay off the balance every month, 15 percent pay it off most months and 47 percent pay off much more than the minimum due.

2 Online payments are possible with Interac but online through Interac's online payment system. See Interac, 2015, "Frequently Asked Questions."

3 Visa and Mastercard announced their fee changes January 2015: beginning in April 2015, they would reduce average interchange fees to 1.5 percent of the transaction amount, a reduction of about 10 percent (Schwarcz and Woynerowski 2015). In September 2016, the Minister of Finance announced the result of an independent audit confirming that the payment card networks had met their commitments (Beatty 2016).

4 For a more detailed explanation of the benefits of credit cards to merchants, consumers, and society, see Ian Lee, Geoffrey A. Manne, Julian Morris, and Todd J. Zywicki, 2013, *Credit Where It's Due: How Payment Cards Benefit Canadian Merchants and Consumers, and How Regulation Can Harm Them*, at page 23.

5 For a more detailed discussion, see section III of this paper.

6 This seems to have been an essential part of the business model of trading stamps programs and may also apply to current third-party loyalty rewards program operators such as Air Miles and Aeroplan. See Bird 2002.

7 In addition to rewards, all these cards provide purchase protection and all except the American Express card provide an extended warranty on purchases, while all but the Tangerine Mastercard provide car rental insurance.

8 On the benefits (and costs) of switching away from cash more generally, see, e.g., Kenneth S. Rogoff, 2015, "Costs and Benefits to Phasing Out Paper Currency."

9 For example, a multi-year investigation by the Canadian Revenue Agency found hundreds of instances of fraud at 484 restaurants, using sophisticated techniques to suppress reported sales by at least $141 million. A heavily redacted interim report obtained under a freedom of information request by the Canadian press in 2011 notes that "In some cases, taxpayers are suppressing sales and paying employees and suppliers in cash while not claiming the expense. This allows taxpayers to remain under the radar." See Beeby 2011.

10 The Australian dollar and Canadian dollar have been trading at close to parity for the past few months, so when we give figures in Australian dollars, readers can assume that the amounts are almost identical to Canadian dollars. See XE, "Currency Converter: CAD to AUD."

11 The RBA recently changed the rules regarding bank-issued cards operating over three-party networks, which since July 1, 2017, have been subject to the same new interchange fee cap that applies to four-party cards (a maximum of 0.8 percent). As a result, issuers were expected either to withdraw such cards or raise the annual cardholder fees. See Chris Chamberlin, 2017, "Aussie Banks Rethink Credit Card Points, Fees Ahead of RBA Reform." On ANZ's decision to scrap its American Express companion cards, see Keith Mason, 2017, "ANZ Removes American Express Companion Cards: Moves to Visa only with increases to Visa earn rates & addition of points caps."

12 Three-party cards are not affected by the new interchange fee caps that have applied since July 2017, so this trend may accelerate, albeit tempered by the reduction in offerings of bank-issued companion cards operating over three-party networks.

13 In the 2015 census, approximately 22 percent of households had income below $35,000 and 22 percent had income above $125,000. So the range $35,000 to $125,000 corresponds to the 66 percent in the middle. See Statistics Canada, 2017, "Population by Sex and Age Group, CANSIM table 051-0001."

14 Consumers responded similarly to a question asking about the effect of a reduction in the rate at which rewards are earned (RFi Consulting 2017).

15 Per the definition used by Statistics Canada, current consumption expenditures include: food expenditures, shelter, household operations, household furnishings and equipment, clothing and accessories, transportation, health care, personal care, recreation, education, reading materials and other printed matter, tobacco products and alcoholic beverages, games of chance, and "miscellaneous expenditures".

16 In this and the other case studies, we assume that the reduction in consumer costs applies only to those purchases made using credit cards on the premise that other payments are made to merchants who generally do not accept payment cards (e.g., payment of rent, mortgages, utilities).

17 Reward savings are rounded down to the nearest dollar.

18 Average expenditure is calculated by dividing total expenditure (about $1.17 trillion) by the adult population (about 29 million).

19 Median income for "couple family" households in Canada was $88,600 in 2015 (Statistics Canada, 2017, "Median Total Income, by Family Type, by Census Metropolitan Area (Couple Families), from CANSIM table 111-0009."). Given continued growth in GDP, it seems reasonable to assume that in 2016 it had risen to $90,000.

20 The range is based on different assumptions regarding the increase in card fees (range 25 percent to 50 percent) and reduction in rewards earnings (range 25 percent to 33 percent).

21 Using the same assumptions as above.

22 We assume that some proportion of the merchant service charge will not be passed on due to fixed costs incurred by acquirers, as well as price rigidity. Over time, this proportion might fall, but 25 percent seems reasonable in the short to medium term.

23 Total spending in 2016 was C$1167 billion and there were 29.21 million Canadians 18 years and older (data from Statistics Canada; number of people aged 18 and 19 interpolated from number aged 15-19).

24 Some of the amount spent on four-party credit cards was likely business consumption. So this might overstate the proportion spent by consumers. However, since the aim is to estimate the extent to which merchants might reduce prices by passing through reductions in the interchange fee, an overestimate of the proportion of spending on cards would serve to increase the net savings to consumers in our model – i.e., reducing the estimated costs to consumers of the interchange fee cap. It is therefore a conservative estimate.

25 Assumes 80 percent of Canadian adults have credit cards with rewards, consistent with survey data.

26 The median household in Canada spends 80 percent of income on current expenditure according to Statistics Canada.

27 This is the 50 percent of reduction in merchant service charges not passed on to consumers.

28 The total reduction in consumption ($3.4 billion) less the savings ($1.7 billion).

29 See also Criminal Code, *An Act in Amendment of the Criminal Code*, 1892 (1905), 4-5 Ed. VII, c.9 (Can.).

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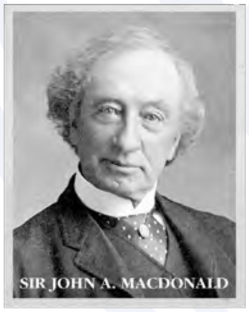

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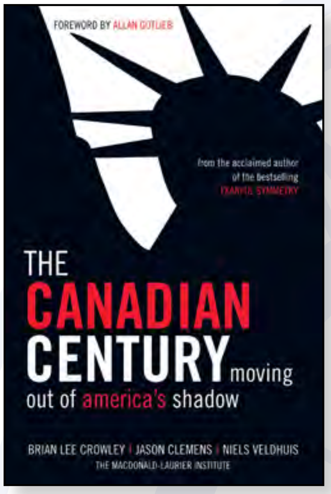

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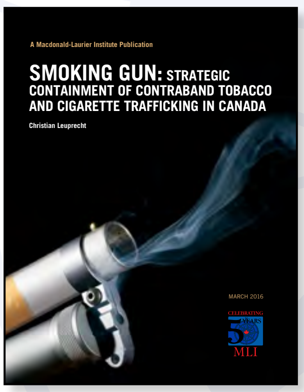

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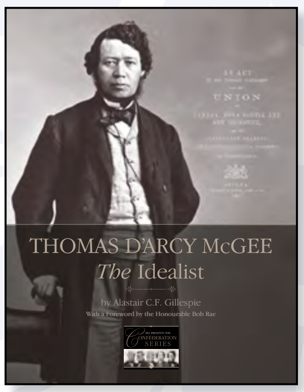

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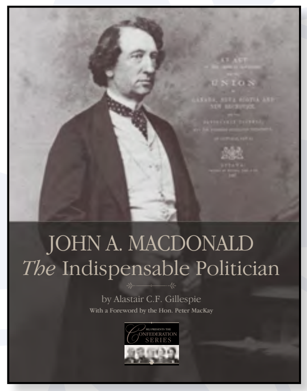

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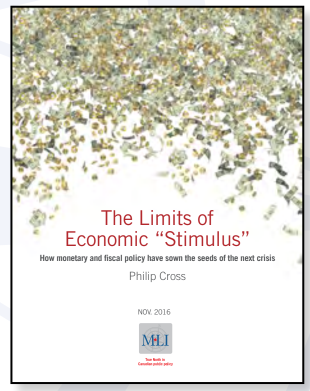

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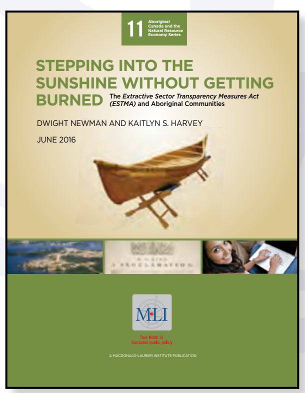

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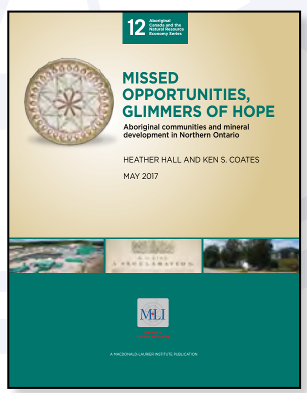

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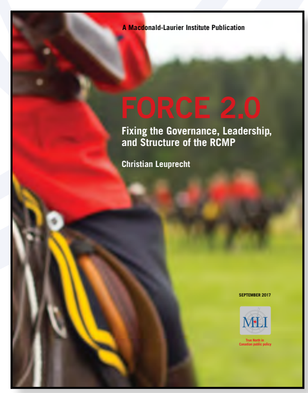

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