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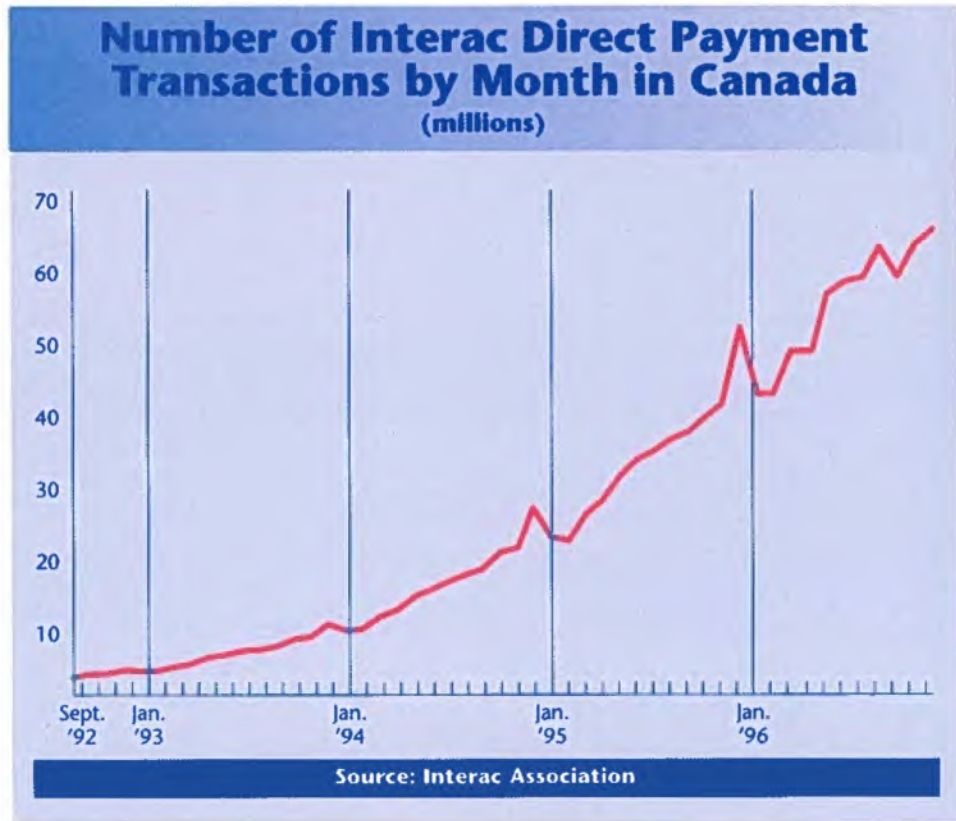
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## Electronic Banking

# Virtual Money and the Consumer

Canadian consumers have been quick to explore the world of electronic commerce. We are international leaders in the use of debit cards, and transaction volumes continue to grow rapidly. Now, financial institutions and others, such as retailers and insurance companies, have begun to look ahead to the next generation of electronic payment mechanisms, including smart cards and banking by computer. This edition of the *Consumer Quarterly* reviews some of these new banking technologies and discusses their impact on consumers.

The developments in electronic banking promise substantial benefits for financial institutions and retailers in the form of increased productivity and reduced costs. There are potential benefits for consumers too, including convenience, a wide choice of payment methods and a broad range of banking services. Yet, electronic banking also raises some important consumer concerns: the need for privacy; the potential for fraud; the requirement for full, plain-language explanations of the advantages, limits and costs of the new banking services; and the question of how much



consumers will see of the cost savings associated with the new technology. Another important issue is the impact of

this technology on low-income Canadians; it is, as yet, unclear and so needs careful monitoring.



## Interac — The Plastic Revolution

Canadians have embraced the idea of payment by plastic with enthusiasm. The current card of choice is the debit card, used at Automatic Teller Machines (ATMs) and retail outlets to make direct payments to merchants via the Interac network. Although debit cards have only been widely available since 1992, more

*Debit cards are hot on the trail of credit cards as the leading form of payment by plastic in terms of both the number of cards in circulation and transaction volumes.*

than 70% of Canadians now use them to make purchases. They are hot on the trail of credit cards as the leading form of payment by plastic in terms of both the number of cards in circulation and transaction volumes. In 1996, Canadians carried 27.5 million debit cards and used them for 530 million point-of-sale transactions, compared to 30.2 million Visa and MasterCard credit cards used for 896.6 million transactions.

Data from a 1996 survey suggest that an important reason consumers use debit cards is to avoid frequent trips to the bank or ATM. They find debit cards more convenient than cash or cheques, and safer than either cash or credit cards. Some people prefer debit cards to credit cards because they offer more spending control — debit card payments are deducted from an account instantly, not simply added to debt for payment later. Consumers also appreciate being able to use debit cards in grocery stores, where credit cards are not generally accepted.

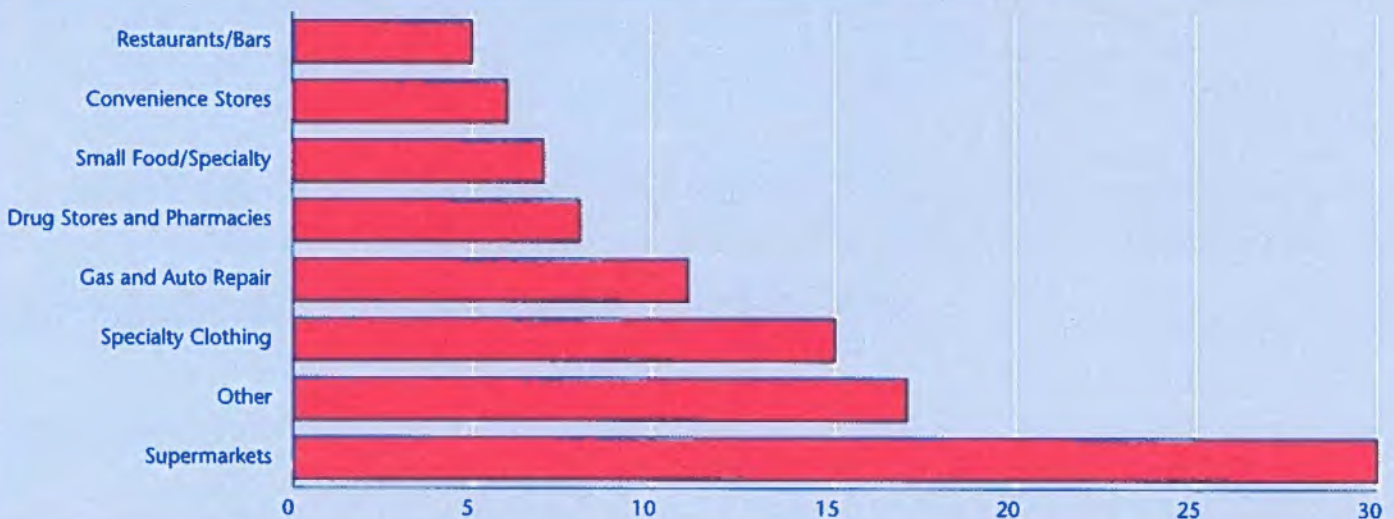
## Canadians and Americans Use Debit Cards Differently

Canadian and American debit card use differs significantly. In Canada, the number of transactions per card in 1995 was 15.2, compared to 3.5 in the United States. The total number of transactions increased by 111% in Canada between 1994 and 1995, but by only 25% in the U.S.

Americans may be attracted to the same debit card features and conveniences as Canadians, but one interesting difference is that in the United States credit cards are accepted almost anywhere a debit card is. By contrast, grocery stores in some Canadian provinces do not accept credit cards.

This may explain, in part, why debit cards are used more frequently overall in Canada than in the U.S. It may also be that Canadians are averse to paying for household staples on credit, but are comfortable using their debit cards to do so (see chart, below).

### Percentage of Debit Card Transactions Made at Various Merchants in Canada, 1996



Source: Interac Association

## From Plastic Cards to Plastic Cash?

In 1996, Visa and MasterCard transactions accounted for \$67 billion or 29% of the dollar volume of retail sales in Canada. Debit card purchases accounted for a further \$30 billion. Card issuers now have their sights firmly set on the estimated \$75 billion in annual Canadian sales accounted for by cash transactions of \$10 or less, and they will use a new type of plastic card to enter this market — the “smart card.”

Rather than using the now-familiar magnetic stripe, smart payment cards store information on a computer chip. The chip's increased data capacity enables card issuers to make smart cards more resistant to fraud; and the cards can perform more functions than their predecessors.

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In its simplest form, a smart card is loaded with “cash value” from an issuer and is used to pay for goods and services until its value is exhausted. A good example of this type of smart card is Bell Canada's Quickchange card (Telecarte La Puce in Quebec). Introduced in 1995, the Quickchange card replaces change in pay phones. Bell pay phones equipped with a yellow card reader can be fed these cards and the charge for the call is taken from

the card's current cash value, which is recorded on the computer chip.

More sophisticated cards can be reloaded by bank tellers or at ATMs. In one system that will be tested in Canada this summer the cardholder can transfer value to and from the card using the public telephone system. Card issuers expect to develop versions that will work with home computers.

## Banking from the Comfort of Home

Customers of many of Canada's financial institutions can now bank by telephone or computer. Home-banking services include most routine transactions such as bill payments, transfers between accounts, balance enquiries, and applications for loans and credit cards, but not, as yet, cash withdrawals. Consumers can gain access to the bank's system either directly or through its World Wide Web site.

These services are usually not free, and there are differences in how the various financial institutions price them. Some institutions include the fee in their general packages, while others do not. However, pricing options may change as the financial institutions compete for customers. The CEO of one U.S. virtual bank has suggested that overhead for this type of operation is about one-third that of its conventional counterparts. Nine of the top 10 leading American providers of electronic financial services now offer computer banking transactions for free. Will Canadian bank customers benefit similarly?

## Smart Card, Smart Money?

Issuers of electronic cash substitutes such as smart cards hope that consumers will appreciate no longer having to dig for change for morning coffee, bus fare or a pay phone. Since smart card terminals operate off line, they can be easily installed in buses, taxis, pay phones and other convenient locations. As well, because users do not need to have a Personal Identification Number (PIN) to use their cards and no on-line authorization is required, transaction times are reduced to seconds — as fast or faster than paying with cash.

Card issuers envisage fee structures that could include a per-transaction charge, a

“reloading” charge, or a flat fee. However, it is not yet clear whether convenience alone will induce large numbers of consumers to pay for yet another form of plastic. Furthermore, any gains in convenience must be balanced against the risk that these cards could be used in ways that impinge on personal privacy. Smart cards, like credit cards, could be used by marketers to track an individual's purchasing patterns without the consumer ever becoming aware of it.

Initially at least, the gains seem most substantial for merchants and card issuers. For example, the cost to retailers of handling cash is estimated to be between 4%

and 7% of sales. This figure may run as high as 15% for merchants, such as transit authorities, that routinely deal with large numbers of small-value payments. For these organizations, smart cards could offer significant savings. For card issuers such as banks, having cash value registered on cards rather than actual cash leaving the vaults in customers' pockets means funds can earn interest for the institution longer. With small-value transactions, at an estimated \$75 billion per year in Canada, the potential amount of interest that could be earned on this smart-card “float” is very large.

# Protecting Debit Card Users

In 1992, before paying by debit card was possible in most of Canada, a working group of card issuers, retailers and government and consumer organizations developed a voluntary code of practice to protect consumers. The code requires issuers to provide consumers with information, establishes card issuer and consumer responsibilities for security, attributes liability in the event of transaction problems or unauthorized use, and allows for complaint-handling and dispute resolution.

Last year, Industry Canada, in cooperation with the working group, commissioned a Toronto research firm to evaluate industry adherence to the code. The researchers looked at industry policies and procedures, cardholder agreements and customer information documents, conducted a telephone survey of cardholders, and reviewed consumer complaints to federal and provincial government agencies.

Investigators also posed as customers at financial institution branches, and tested ATMs and retail point-of-sale terminals.

The study found that financial institutions' policies generally adhere to the code of practice. However, it noted a number of areas for improvement, both in industry practices and in the clarity of the code itself. One of the more significant problems was that financial institutions were not always providing enough information on PIN security at their branches. In some cases, branches did not meet the standards established in their own policies.

The researchers also noted a lack of privacy at point-of-sale terminals. In some retail outlets, customers could be observed entering their PINs, which provided opportunity for thieves and the potential for losses by unwary consumers.

The working group will meet shortly to plan rapid action to upgrade consumer PIN security information and to improve privacy at point-of-sale terminals. They will also begin work on eliminating ambiguity from the code's wording.

## What Price Access?

When it comes to access to the payment lanes of the electronic highway, there are hazards for financial institutions and consumers alike.

In 1996, the federal Competition Tribunal ruled that insurers and investment dealers, among others, should have more access to Interac, which is run co-operatively by Canada's deposit-taking institutions. The Tribunal hearing dealt with opening arguments in the debate about the future of Canada's payments system, which is rapidly changing from cash and paper to electronic transactions. On one side of the debate are financial service providers, such as insurers and investment dealers, arguing for direct access to the payments system, in part so their customers can make payments directly from accounts held with the service providers themselves. On the other side are existing deposit-taking institutions arguing that the security of the payments system depends on any new entrants meeting the existing regulatory standards.

The consumer interest lies somewhere in between these two positions. New participants, and the competition they bring, should save consumers money because the new technology is cheaper to operate, and because competition forces firms to function efficiently. Equally, new players

must meet regulatory standards to safeguard the integrity of the system. But, the standards should be commensurate with the risk such participants pose. They need not necessarily be identical to those required of deposit-taking institutions, which offer a far greater variety of products and services than insurers, for example.

The problems of low-income Canadians, particularly social assistance recipients, might worsen if banking becomes increasingly geared to those with access to computers, and society as a whole moves away from the use of cash. A coalition of public interest organizations led by the ACEF du centre de Montréal has highlighted the existing difficulties low-income Canadians have cashing government cheques and opening bank accounts. The Department of Finance White Paper on the 1997 review of financial institutions legislation recognized a need for action on this issue.

However, this is just one possible scenario. It is also possible the new technology will make access to banking cheaper and easier for all consumers. The cost of providing each individual transaction may decline and bank service charges may fall and become more affordable. Pricing and access will clearly be issues of concern to consumers, who will expect to share in the cost savings financial institutions and others reap from this technology.

## For further information

- ▶ about electronic banking, contact David Waite, Senior Analyst.  
Internet: waite.david@ic.gc.ca  
Tel.: (613) 952-8019
- ▶ about the *Consumer Quarterly*, contact Bernard A. Keating, Senior Economist.  
Internet: keating.bernard@ic.gc.ca  
Tel.: (613) 952-8883

Or write to

Office of Consumer Affairs  
Industry Canada  
9th Floor, East Tower  
235 Queen Street  
Ottawa, Ontario  
K1A 0H5

Fax: (613) 952-6927

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