

The Way We Pay

Transforming the Canadian
Payments System





Table of contents

Message from the Chair.....	2
Introduction	3
Chapter 1: Engaging dialogue.....	4
Chapter 2: Falling behind	8
Chapter 3: Fundamental challenges	12
Chapter 4: Principles-based approach	19
Chapter 5: Proposed Governance Framework	23
The way forward.....	31
Appendix A: About the scenarios	35
Appendix B: Glossary	38
Appendix C: References.....	40

Message from the Chair

When I was asked to chair the Task Force for the Payments System Review one year ago, my first consideration was not about the current payments system. After all, Canadians are well served by a secure payments system that supports a multi-billion dollar economy. Most of the time, I can make a payment using a variety of methods, and most of the time, the system works exactly the way it is supposed to.

Instead, I found myself considering what the future of payments might look like. I started noticing the hundreds of transactions people were making around me, using small change for a parking meter or a few banknotes for lunch. I asked myself: Is this the way we will always pay?

The obvious answer is no. Even now, coin-operated parking meters are being replaced by card-reading machines and, in some cities in Canada, you can pay with your mobile phone. But the watershed moment was the day my 14-year-old son asked permission to buy something online. At his fingertips is a massive and growing digital economy that is swiftly becoming the marketplace of the goods and services that we, as consumers, demand.

I realized that my understanding of payments at the time was driven by the physical exchange of funds—a model that hasn't changed much in the last 30 years. Our system does meet the challenges of the 20th century—but will it rise to the challenges of the digital 21st century?

The digital phenomenon is global. We are no longer on the edge of a technological revolution; we are in the thick of it. Advancing technologies are radically shaping the way people engage with the world around them, and that includes the way we pay. The question is not whether we should participate in this emerging digital world; the question is how best to move forward.

Continuing the dialogue

Dialogue has been the guiding principle of the Task Force for the Payments System Review. Payments affect everyone, and so everyone has a stake in this conversation. Dialogue has brought us this far, and it will continue to propel us to the end of 2011, when we submit our final recommendations to the Minister of Finance. This discussion paper is the next important step, and we hope it will serve as a platform for conversation about the payments challenges facing Canada.

This discussion paper describes the evolution of the Task Force's thinking, beginning with its creation in June 2010. It elaborates on the goal of becoming a world leader in payments by articulating the principles we feel must be respected going forward. It sets out the fundamental challenges as we see them. And it carves out the elements of a proposed Governance Framework that serves as an initial map that we will continue to refine.

In publishing our work to date, we invite stakeholders, including consumers, to participate in this dialogue through a variety of engagement tools available on the Task Force Internet site. Your feedback will be essential in developing actionable recommendations. By working together we can develop a shared understanding of the issues, find common ground, and define a clear way forward.



Pat Meredith

Chair of the Task Force for the Payments System Review

Introduction

Payments evolve. From iron bars in ancient Rome to paper money originating in China a thousand years ago, the way we pay has always reflected economic and technological change.

Today, payments include cash, cheques, credit and debit cards, electronic funds transfers (EFTs), reward points, gift cards, and virtual currencies used online. No matter what shape they take, payments are simply how we buy and sell things.

Payments are everywhere. From coffee purchased at a coin-operated machine to the daily exchange of billions of dollars among corporations, financial institutions and governments, the transfer of value keeps our economic engine running. Every year, Canadians make 24 billion payments worth more than 44 trillion dollars. These payments allow people to run households, make it possible for businesses to operate, and let governments fund essential programs.

The Canadian payments system is reliable and secure. But the payments business is undergoing a dramatic shift. Just as the industrial revolution brought about massive change in production and manufacturing, the information revolution will change our payments system.

A digital economy is emerging, and Canada's payments system must keep pace. Innovative players challenge the existing payments infrastructure. Smart phones bring the promise of instant digital transactions to our fingertips.

In countries much less affluent than our own, mobile payments are exploding. While Canadians are still reaching for change to feed parking meters, citizens elsewhere accomplish the same task with the tap of a cell phone or a text message.

Canadian businesses, especially small and medium-sized ones, continue to rely on paper-based payment and invoicing systems. In Europe, phasing out older, paper-based payments is yielding immediate economic benefits. The transition from paper to new alternatives promises to revitalize our own economy.

Although it is tempting to copy payments innovations taking place in other countries, change is driven by unique economic and cultural realities. The response to challenges facing our system must be specific to Canada.

This discussion paper represents one important step on the road to finding those answers. It is the result of months of research and collaboration.

Chapter 1 explains our mandate and reviews the work to date. Our assessment of the payments system begins in Chapter 2, and includes the industry and other stakeholder perspectives that we have heard. In Chapter 3, we identify four specific challenges that need to be addressed if Canada is to become a leader in payments.

Chapters 4 and 5 brings us to the heart of the matter. Here we discuss the goals and principles to which we subscribe. We also discuss the public policy dimensions of the issue, offering a proposed Governance Framework that can allow our payments industry to move forward.

This discussion paper is an invitation to all Canadians—consumers, businesses and governments—to work with us to transform the Canadian payments system to meet the needs of a new age. Only with the benefit of a wide range of perspectives will the Task Force for the Payments System Review feel confident that its final recommendations reflect Canadians' needs. Only together can we undertake the transformation required to change the way we pay.

CHAPTER 1

Engaging dialogue

“Today, Canadians can pay for things in a bewildering number of ways, even by tapping a cell phone against a scanner. It is important to ensure the payments system facilitates the introduction of new and exciting technologies to the benefit of users without compromising Canadian safety and efficiency or consumer protection.”

The Honourable Jim Flaherty, Minister of Finance

Our mandate

Formally announced by the Minister of Finance on June 18, 2010, the Task Force for the Payments System Review accepted the following mandate:

Mandate of the Task Force for the Payments System Review

The payments system refers to arrangements that allow consumers, businesses and other organizations to **transfer value** from one party to another. It includes the institutions, instruments and services that facilitate the **transfer of value** between parties in a transaction.

Given the importance of a safe and efficient payments system and the need to ensure that the framework supporting the payments system remains effective in light of new participants and innovations, the government is appointing this Task Force to conduct a review of the payments system. Specifically, the Task Force will:

- Identify public policy objectives to be pursued in the operation and regulation of the payments system;
- Identify and assess the regulatory and institutional structures best suited to achieving these public policy objectives;
- Assess and report on the safety and soundness of the Canadian payments system;
- Assess the competitive landscape by identifying any potential barriers for new entrants and mechanisms to improve the competitive landscape of the domestic payments system;
- Assess the degree of innovation in the domestic payments system and report on the challenges and opportunities to bring new and innovative products to market in Canada; and
- Assess and report on whether consumers and merchants are well served by the domestic payments system.

Through the above assessment, it is expected that the Task Force will provide concrete, actionable advice and recommendations to the Minister of Finance to help guide the evolution of the payments system in Canada.

The definition of payments is changing. Modern payments are no longer a straightforward exchange of money; each payment comes with an increasing amount of important information, both commercial and personal. As digital payments continue to evolve, this information is becoming as essential to a transaction as the money itself. This mandate treats this exchange of funds and information together, as a transfer of *value*.

The mandate covers a very broad range of payments, including more traditional ones like cash, cheques, debit and credit cards, as well as modern ones including gift cards, reward points, virtual currencies used online and automated funds transfers; basically anything used to buy and sell things.

We see this mandate as a platform for collaborative action, and are calling on consumers, industry, government and businesses to work together to build the payments system we need.

The work to date

Collaborative, inclusive dialogue is our guiding principle. Payments affect everyone, and so everyone has a stake in this conversation.

To begin this process, an online consultation was launched in the summer of 2010, asking Canadians to identify payments issues they found pressing. The process was made public through our Internet site so participants could interact with us and with each other. The open invitation resulted in 39 submissions from concerned citizens, banks, associations and new entrants to the payments system.

The Task Force also commissioned a comprehensive report, the *Canadian Payments Landscape*, prepared by Deloitte Canada. This report, too, was made available online for public comment.

Our research extends beyond our borders. We are speaking with experts and studying payments systems around the globe, including Australia, Brazil, Europe, New Zealand, South Africa, the United Kingdom (U.K.) and the United States (U.S.).

We are analyzing payment innovations, especially mobile and contactless payments, and integrated electronic invoicing and payments solutions. We are weighing the promise and challenge of digital identification and authentication. And we are assessing Canada's patchwork of laws and codes affecting payments, and comparing them to other governance models around the world.

Early in 2011, the Task Force sought the input of small and medium-sized businesses at consultations in Halifax, Montreal, Toronto, Winnipeg, Calgary and Vancouver. We met face-to-face with 75 groups and businesses. These discussions proved to be an invaluable opportunity for the Task Force to hear from primary users of the payments system, whose concerns were shared with passion.

Since June 2010, the Task Force has held hundreds of meetings, each representing another opportunity to dig deeper and understand payment issues better. These meetings provided essential input to the development of the proposed Governance Framework presented in this discussion paper.

Scenarios for the future: collaborative dialogue

Given the complexity, rapid change and resulting uncertainties of the payments environment, the Task Force recognized the need to go beyond the usual analytical approach and to engage industry experts and key stakeholders in sustained dialogue.

To help build that dialogue, we participated in the Scenarios Roundtable. With the help of Viewpoint Learning, an organization specializing in designing and conducting dialogues for business and public policy, we gathered a wide range of payments industry leaders and stakeholders. This group of 40 persons then worked over several months to develop four distinct scenarios for the future of the Canadian payments system.

This was the first time many participants had met. Bankers sat alongside payment innovators, telecommunication executives, retailers and consumers. Later, a larger group of stakeholders from business, government, consumer organizations and more participated in a day-long session that reviewed preliminary drafts of the scenarios, and further developed and refined them.

The Scenarios Roundtable had a number of benefits. The four scenarios provide a vision of both desirable and undesirable futures, including the dangers of inaction. Perhaps more significantly, participants came to see their roles in the context of a redefined and more inclusive payments industry. This was an important shift which now provides a basis for ongoing collaboration.

The result of this process is a body of thoughtful research: *Scenarios for the Future of the Canadian Payments System*. Our participation in the Scenarios Roundtable helped us to consider the Canadian payments system from a variety of perspectives and to work through the implications of each one. That insight was basic to the development of our proposed Governance Framework and to shaping a vision of the best way forward for Canada that can be widely shared.



Scenarios for the Future of the Canadian Payments System is an essential companion to this discussion paper, and is available on the Task Force internet site. A summary of the scenarios is included in Appendix A.

CHAPTER 2

Falling behind

“Now more than ever, we need to break down the barriers that prevent us from working together so that innovation and efficiency can flourish. Canada needs to become a leader in payments so that its people can enjoy the benefits of a safer, more affordable and efficient payments system.”

Pat Meredith, Chair, Task Force for the Payments System Review

Most Canadians never contemplate the vast ecosystem through which payments flow. We are well served by a reliable system that has proven resilient to financial shocks. Retail and wholesale payments go where they are intended to go. International comparisons show that fraud is well contained.

Consumers, businesses and governments enjoy a choice of paper (cash and cheque) and electronic (debit, credit and Automated Funds Transfer (AFT)) payment methods. Canada has a world-class direct

debit system—Interac—and on a per-capita basis Canadians rank among the highest debit users in the world.

While Canadians trust their payments system, it remains basically unchanged since 1998, when the Department of Finance released the *Payments System Review Discussion Paper*, a formal response to the work of another independent body that conducted a similar review in 1997.

Excerpt: *Payments System Review Discussion Paper, 1998*

Canadians enjoy the benefits of a highly reliable and efficient payments system. In fact, the system works so well that it is largely taken for granted. The efficiency with which cheques and other paper-based payment items are cleared and settled, together with a high level of confidence in the system, allows payees, in most instances, to receive immediate provisional credit when they deposit a payment item at their financial institution. This is the case even though final settlement may not take place for some time thereafter.

A notable development in recent years has been the growth of electronic forms of payment, which offer new levels of convenience to consumers, lower processing costs for institutions, and new opportunities to monitor payment activities and control risks. Canadians have embraced these new payment methods, including direct debits to cardholders' accounts, credit transfers for such things as payroll deposits and monthly bill payments, and a range of transactions initiated at Automated Banking Machines (ABMs).

The Canadian payments system has proven resistant to change. As a result, Canada is falling behind, especially in mobile payments and electronic invoicing and payments (straight through processing).

Mobile payments

Developing countries, lacking our reliable bank infrastructure, have surged ahead in mobile payments, taking advantage of mobile texting services widely available across Africa and Asia. Empowered by mobile phones, citizens previously removed from the marketplace are being fast-tracked into the wider world of digital commerce.

In the developed world, including Belgium, France, Germany and the Netherlands, a mobile payments

revolution is taking place. Retail mobile and online payments are linked with bank accounts and credit products, bringing instant choice, empowered by the touch of a keypad or wave of a phone. Canada is not yet a player in this game.

At the same time, Canada is one of the world's fastest-growing smartphone nations. Over 70% of Canadians have mobile phones, and 35% of these are smartphones. In bringing the Internet to our fingertips, smartphones will reinforce a trend: Canadians are world Internet leaders, spending more time online than any other nation.

These statistics suggest that the near-absence of mobile payments in Canada is not due to consumer disinterest. A more likely explanation is the challenge of bank and telecommunications industries working together.

Going mobile: Every continent is part of the mobile revolution, but for different reasons

- In Kenya, Malaysia, the Philippines, India and Brazil, among others, the widespread use of mobile payments can be attributed to consumer distrust of banks.
- Technologically-advanced Japan and South Korea have enjoyed mobile payments for a decade, starting when telecommunications firms purchased controlling interest in financial institutions, a development that has more recently occurred in China.
- In rebuilding the economies of Afghanistan and Iraq, a first priority was the creation of a mobile payments system.
- In mid-2010, major U.S. telecommunications firms, covering more than 80% of the mobile phone market, abandoned attempts to collaborate with incumbent banks and created a joint venture with Discover and Barclay's Bank to establish a mobile payments network.
- In Austria, Belgium, Germany and the U.K., consumers have fed parking meters with mobile phones for years. In France and the Netherlands, banks and telecommunications firms have created joint ventures to bring banking and debit and credit payments to mobile phones and tablets.

Electronic invoicing and payments

Historically, cheques have met the needs of individuals, small businesses, corporations, public entities, clubs, schools and associations. Indeed, Canadians still rely heavily on paper payments. In 2009, 11.8% of consumer and business non-cash payments were made by cheque. Cheques accounted for 31.2% of the value of non-cash payments, demonstrating a lack of easy access to electronic alternatives.

The ongoing reliance on cheques is problematic. Cheques are a slow way to pay, leaving payors and payees uncertain when funds will be available. For governments and businesses, delays mean productivity lost and opportunities missed.

There is also the need to manually process invoices and reconcile cheques with accounts payable and accounts receivable, partly because the necessary information is not available electronically. This costly accounting function creates

a tremendous drag on productivity, driving up recordkeeping and payment processing costs. Automation of these functions could yield significant efficiency gains, benefiting all parties.

The Large Value Transfer System (LVTS), which transfers funds among financial institutions, handles on average 24,000 payments valued at \$150 billion each day. This wholesale clearing and settlement system is world-class, featuring real-time clearing and a legal guarantee of finality of payment. However, this system cannot carry sufficient information to take advantage of these real-time clearing and finality-of-payments characteristics.

Even online bill payments can be hindered by the legacy payments systems designed for paper. Although consumers are opting to pay their bills online, Canadian banks still support these payments with batch-based processing. Clearing a payment can take more than 24 hours. The only way to pay a bill instantly is to use Western Union, which issues a more expensive wire transfer.

Start the conversation

The Task Force for the Payments System Review believes that Canada is falling behind in mobile payments and electronic invoicing. If Canada is to reap the full benefits that electronic payments can provide, we need fully to leverage technologies that provide lower cost, higher efficiency, better protection, more remittance information, faster clearing and greater convenience.

1. Do you believe it is important for Canada to keep up with mobile payments? Why or why not?
2. Do you believe it is important for Canada to keep up with electronic invoicing and payments? Why or why not?

CHAPTER 3

Fundamental challenges

“Building on the issues raised by stakeholders and its own independent research, the Task Force identified four challenges we believe must be addressed for Canada to become a leader in payments.”

Building on the issues raised by stakeholders and its own independent research, the Task Force identified four challenges we believe must be addressed for Canada to become a leader in payments.

The fundamental challenges are:

1. Increasing fairness in credit and debit card networks;
2. Updating the regulatory and governance structure;
3. Improving online authentication, security and privacy; and
4. Transitioning to a digital economy.

While this discussion paper includes descriptions of all four challenges, it focuses primarily on the second challenge: updating the regulatory and governance structure. Chapter 5 elaborates on a proposed Governance Framework designed to address the regulatory and governance aspects of payments specifically.

The other three challenges will be addressed in the coming months in three separate papers, to be made available on the Task Force Internet site.

1. Increasing fairness in credit and debit card networks

Many payments today are not direct transfers of value involving two parties. Instead, payments rely on a series of accounts and connections that facilitate transactions.

Retail electronic debit and credit card services benefit two parties; merchants and consumers. Consumers enjoy payments choice and the ability to buy goods instantly through debit cards or credit lines. Merchants appreciate the fact that customers can conveniently purchase high-priced articles without carrying large sums of money. Since credit and debit offer better protection from fraud and theft than do cash or cheques, both sides enjoy safer transactions.

But while consumers are free to choose payment methods, merchants must absorb differing costs. A 2010 Competition Bureau press release suggests that the purchase of \$400 worth of tires costs a merchant 12 cents if the customer uses a debit card, or \$12 if the customer uses a credit card that carries a 3% fee.

Rising costs for merchants of accepting credit cards

Recently there has been a dramatic increase in loyalty and reward programs. Stakeholders say that these popular programs are driving Canadians to use credit cards to pay for items they once bought with debit cards or cash. Perhaps as a result, credit card use is rising; although the number of credit card transactions in Canada is still 30% lower than the number of debit card transactions, it has recently been climbing twice as quickly.

For consumers, using credit cards with deferred payment and rewards can seem like a win-win opportunity. Consumers may assume that their benefits are borne by the credit card industry. Merchants, however, contend that these additional costs are borne by them in the form of interchange fees; the more “premium” the card, the higher the fee.

The number of interchange fees charged by Visa and MasterCard has multiplied in the last three years. In addition, merchant acquirers—the intermediaries that connect merchants to payments networks—have taken advantage of these complicated fee structures to increase the fees they levy on merchants.

As well, the introduction of new technology and standards has added costs for merchants. Chip and Personal Identification Number (chip and PIN) technology, which is expected to reduce fraud by using embedded microchips to facilitate authentication, required merchants to make expensive system changes. According to the Retail Council of Canada (RCC), the cost of implementation and integration borne by

merchants is in excess of \$1 billion. In addition, merchants have had to comply with the Payment Card Industry Data Security Standard (PCI DSS), thus incurring additional costs.

While this summary is a simplification of a complex scenario, one thing is certain: Canadian

consumers expect credit cards to be universally accepted. As a result, merchants are pressured to pay the cost of accepting credit card payments if they want to stay in business, and these costs have risen dramatically. Many people believe that higher merchant costs inevitably result in increased retail prices.

Who gains and who loses from credit card payments?

Members of the research staff at the Federal Reserve Bank of Boston recently authored a discussion paper on the pass through of costs from merchants to consumers in the U.S.

The authors sought to determine whether some consumers subsidize credit card use and rewards programs of others. Using a simplified representation of the U.S. payments market, they found that, on average, each cash using household transfers \$50 to card users, and each card using household receives a subsidy of \$240 from cash users every year. In terms of household income, the lowest income household (\$20,000 or less annually) pays \$63 and the highest income household (\$150,000 or more) receives \$823 every year.

The discussion paper suggests that reducing merchant fees and card rewards would increase social welfare, shifting the burden from the lowest income groups back to those who benefit from premium point cards.

Credit cards and interchange fees are the subject of considerable debate. For example, the Competition Bureau has charged that certain rules imposed on merchants by Visa and MasterCard are restrictive and anti-competitive, and has filed an application with the Competition Tribunal to present its case. This effort is a significant development in Canada, and one that has already played out elsewhere.

In Australia, interchange fees have been regulated and set by the Central Bank since 2003. In Europe, anti-trust and legislative action have reduced restrictions on merchants or encouraged the major credit card networks to lower interchange rates.

While merchants applaud these outcomes, the networks have argued that card issuers have sought to offset reduced interchange income by increasing or introducing new consumer fees, or by diluting rewards and benefits to cardholders. As

well, it has been hard to measure any direct effect of lower interchange fees on consumer prices.

In 2010, the Government of Canada introduced the *Code of Conduct for the Credit and Debit Card Industry*, aimed at providing transparency and choice in the payments industry. Some aspects of the Code have only recently come into force, so its impact on the current payments environment is yet to be fully understood.

Constraints on domestic debit card competition

Stakeholders argue that the Interac point-of-sale debit network affords Canadian consumers and businesses tremendous benefits and so must be preserved. Interac provides a low-cost, reliable and convenient card payment alternative for

merchants, while consumers enjoy instant, secure and reliable access to their funds.

To promote low costs and open access, in 1996, the Competition Tribunal imposed a consent order against Interac Association. Key elements of the consent order included opening membership in Interac to non-financial institutions, establishing a simplified pricing structure, and requiring Interac to continue to operate on a not-for-profit basis. These elements were intended to reduce restrictions on competition in the domestic debit market.

Nevertheless, stakeholders continue to believe that the network's founding financial institutions influence how it can be accessed by smaller payments service providers.

The ways in which the competitive nature of payments is affecting innovation are important considerations: Should point-of-sale debit be controlled so that prices stay low? Is the competition in the networks causing unintended consequences for other businesses like merchant acquirers and card-issuing bodies like banks? And are merchants ultimately disadvantaged as a result of the many different dimensions of credit and debit card practices?

2. Updating the regulatory and governance structure

Regulation

Payments in Canada are governed by a patchwork of legislation. Gaps in the application of rules create uncertainty, thus hampering innovation and competition.

Over the years, attempts to respond to the changing economy have led to piecemeal payment-related legislation. Regulation tends to focus on financial institutions, given their traditional role in payments, rather than on the function of payments. This situation has proven cumbersome, since payments are no longer the exclusive domain of financial institutions.

Inconsistent regulatory oversight affects the competitive position of payments players. Some

are bound to consult stakeholders and give the federal government an opportunity to review proposed changes in their services, while others are able to innovate without government review.

In Canada, payments networks are held to differing levels of scrutiny. Legislation gives the Bank of Canada oversight of clearing and settlement systems (such as the LVTS) designated as having the potential to create systemic risk. However, retail payments networks are unregulated, even if disruptions in these networks may affect the economy

In comparison, legislation passed in the U.K. in 2009 provided that a payments system may be designated for Bank of England oversight if "any deficiencies in the design of the system, or any disruption of its operation, would be likely to [...] have serious consequences for business or other interests throughout the United Kingdom".

Does this patchwork of regulation and oversight present a challenge to governments in protecting consumers and ensuring competition? If so, what is the best way to ensure that governments can continue championing consumers' rights, while letting the industry innovate and compete?

Governance

Governance of the payments system is an important issue. Currently, large traditional players control key system elements. The Canadian Payments Association (CPA), which is responsible for clearing and settlement infrastructure, is dominated by banks and credit unions. But payments in Canada are no longer limited to the services traditionally offered by banks and credit unions. Growth in new payment mechanisms, and even new currencies, is exponential.

It is also apparent that payments stakeholders, including merchants and consumer groups, do not have an effective forum in which to work together with payment service providers to resolve issues.

3. Improving online authentication, security and privacy

Online payments require digital identification and authentication. In the emerging digital environment, payments will be transformed into new products and services like mobile applications and Near-Field Communications (NFC)-empowered tap-to-pay cards.

Canadian commerce is moving online. Security and privacy issues are emerging. To address these challenges, we need a better way to identify and authenticate payors and payees over the internet.

Digital identification and authentication

One crucial aspect of the payment transaction is knowing the identities of the parties involved. This is increasingly difficult, especially for transactions conducted online.

A robust digital identification regime would ensure that a digitally authenticated transaction would be safer than a traditional transaction. As we move to online payments, we have an opportunity to reinforce security and privacy online in a manner that goes beyond existing provisions, making the digital space one in which Canadians feel confident and protected.

Fraud reduction

Although improved security features on plastic payment cards have meant that fraud has decreased, the situation is not the same online, where there are no chip and PIN features to protect users. As a result, fraud in “card not present” transactions has increased.

To guard against fraud, online merchants ask customers for personal information, often more information than might seem to be reasonably required. The result is a climate of uncertainty that discourages consumers who might want to make purchases online.

Two-factor authentication

Two-factor authentication is one in which two independent means of evidence are used to assert and confirm a person’s identity.

Two-factor authentication usually combines “something you have” (a card or phone token) and “something you know” (a PIN or password).

A third factor, “something you are” (fingerprint, voiceprint, iris scan or other biometric identification), is often cited as the next step in helping to secure transactions.

Canada’s anti-money laundering and anti-terrorist financing regime

Regulatory measures present a challenge to new payment services, especially those offered over the Internet or telephone. Under the *Proceeds of Crime (Money Laundering) and Terrorist Financing Act*, banks, credit unions, credit and debit card issuers are subject to customer identification, record-keeping and reporting requirements. These measures are designed to be consistent

with international standards and to provide a minimum standard for payments players.

These laws offer protection in a global economy. However, even established players in the payments industry have noted that these requirements constitute barriers to innovative payments services. As well, new entrants indicate that these requirements affects their willingness to invest. Greater clarity and transparency are needed in the application of customer identification requirements, particularly online.

Protection of personal information

Canadians properly take an interest in how private information is collected, and enjoy some of the strongest privacy legislation in the world.

Digitized payments carry personal and financial information along with the funds required in a transaction. This situation gives entities within the payments system opportunities to collect and use this information for commercial purposes. The governance of these transactions and the data within them will be an important issue going forward.

The challenge (and the opportunity) is to ensure that new technology does not encroach on people's privacy, but instead is harnessed to protect consumers from unnecessary disclosure of their personal information.

4. Transitioning to a digital economy

Most payments will soon move online. The time has come for government and industry to prepare together for this eventuality.

Legacy systems

Legacy payments systems create drag on the Canadian economy. For businesses and governments, payments that rely on paper-based methods are time- and money-intensive, adding costs to back-office operations.

The LVTS cannot carry sufficient information to support automated processing of electronic invoices and payments. Likewise, the small batch-based transaction system, known as the Automated Clearing Settlement System (ACSS) has not kept pace with innovation. Significant upgrades may be required to Canada's payment infrastructure in order to support automated processing and the electronic integration of accounts payable and receivable.

Consumers will also gain from upgrading legacy payments systems. Monthly bill payments and

personal money transfers will be processed more quickly, an important recourse for anyone requiring urgent service, and helpful in planning and managing household finances.

In transition

Canada still relies on paper cheques designed for a pre-computer era. Cheques have served us well, meeting the payments needs of citizens, businesses, clubs, schools and associations.

Although proposed regulations would limit hold periods and provide timely access to funds, cheques are an inherently slow and costly means of transferring money for Canadians. Across governments and businesses, cash flow is critically important, and delays mean lost productivity and opportunities. It may be time for Canada to pursue alternatives to paper cheques, a decision made by a number of other countries recently.

If consumers and businesses adopt alternatives to cheques, the transition must accommodate those who depend on them for personal or business use. Alternatives must be readily available. Public outreach will be required to help everyone understand and accept new payment tools.

Governments have an opportunity to lead the way, as they are responsible for about 20% of Canadian cheques. Clear action by governments would demonstrate leadership to business and industry and thus provide greater certainty.

These decisions cannot be made in isolation, and a number of questions would first need to be answered: How will major issuers of cheques, including insurance companies and governments, undertake this transition? What time period is reasonable, and how can major players work together during the transition? How do we ensure that Canadians who still depend on cheques have access to alternative payments products? Finally, how do we balance the sometimes conflicting needs of issuers with the needs of individual Canadians?

Education and literacy

Financial literacy is critical to the prosperity of Canadians and the nation. Increasing the knowledge, skills and confidence of Canadians to make responsible financial decisions will help them meet their personal goals, enhance their quality of life and make Canada more competitive.

Task Force on Financial Literacy, *Final Report*, February 2011

The financial literacy of Canadians is an important consideration in the transition to a digital economy. This transition will affect all Canadians. Any future changes to our system must take into account people most vulnerable to them. The specific needs of the elderly, disabled and low income Canadians, as well as Canadians living in remote communities, must be considered.

Standards

A final consideration in the transition to the digital economy is the creation of standards for new payment technologies, especially for mobile

payments. That standards for mobile payments are still evolving isn't surprising: these payments are not yet widely used here. Canadians, however, are likely to be early adopters of advanced technology, and work must begin now to prepare to offer those products and services.

It may be time for financial institutions, together with telecommunications firms and other new players and stakeholders, to consider developing a common framework to allow for the introduction of integrated mobile payments in a way that benefits consumers and offers all players a chance to compete.

Start the conversation

Chapter 3, on Fundamental Challenges, reflects first hand accounts from stakeholders as well as our own research. The Task Force for the Payments System Review invites all interested parties to tell us if we have accurately captured the issues, and whether there are other issues as pressing as the ones we have chosen to focus on.

- 1) How would you respond to each of the four fundamental challenges we have raised?
 - a) Increasing fairness in credit and debit cards
 - b) Updating the regulatory and governance structure
 - c) Improving online authentication
 - d) Transitioning to a digital economy
- 2) Are there other significant challenges to the future of Canada's payments system that should be addressed? What are they and why are they important?

CHAPTER 4

Principles-based approach

“Following extensive consultation with stakeholder groups, the Task Force developed 12 principles to provide guidance in addressing the challenges. We believe these principles are fundamental to the sound stewardship of payments.”

Goals

Early in its work, the Task Force set a number of goals intended to help us fulfill its mandate. We agree that our aim should be to develop a strategy and actionable recommendations that will help Canada to become a world payments leader by 2020. To succeed we must:

1. Define an inclusive payments industry;
2. Ensure that Canadians have an accessible, low-cost domestic online payments network;
3. Help create an easy-to-use system that provides real-time information;
4. Find cost-efficient solutions to offline and online security and privacy concerns;

5. Help Canadians embrace new payments technology;
6. Provide a transition from existing legacy systems to digital payments; and
7. Ensure that stakeholders feel their concerns are addressed.

Principles-based approach

Following extensive consultation with stakeholder groups, the Task Force developed 12 principles to provide guidance in addressing the challenges described in Chapters 2 and 3. We believe these principles are fundamental to the sound stewardship of payments.

Table 1:

Principles benefiting participants		
The first six principles relate to the values and needs of users of the payments system:		
1	Competition and innovation	<ul style="list-style-type: none"> • The payments industry is open and competitive. • Participants have the ability to innovate.
2	User access and efficiency	<ul style="list-style-type: none"> • All consumers, including merchants, business, and governments, have access to effective, affordable payment options.
3	Transparency and choice	<ul style="list-style-type: none"> • Rules, responsibilities, risks and costs are clear. • Participants have necessary information and tools. • Payors and payees can choose among a variety of payment forms without undue penalties.
4	Fairness and accountability	<ul style="list-style-type: none"> • Costs accrue to market participants who receive the associated benefits, unless another party chooses to bear those costs. • All sides understand the associated risks.
5	Security	<ul style="list-style-type: none"> • All vital technologies and processes are secure and reliable. • Payors and payees have confidence in the payments system.
6	Privacy	<ul style="list-style-type: none"> • Payors own their personal (or organizational) information, and can determine how it is used. • Payors need only disclose information necessary for a given payment.

Table 2:

<h2>Principles driving the proposed Governance Framework</h2> <p>The following six principles apply to oversight and administration of the payments system, a task shared by industry and government:</p>		
7	Consistent standards	<ul style="list-style-type: none"> • Rules for domestic payments are consistent to ensure efficiency. • Domestic standards facilitate global interoperability.
8	Minimal regulation	<ul style="list-style-type: none"> • Regulation occurs only when the open market and industry standards fail to deliver on market-related principles.
9	Neutrality by function	<ul style="list-style-type: none"> • Standards and rules are based on the activity performed, not the institution performing the activity. • Rules apply consistently across function.
10	Proportionality	<ul style="list-style-type: none"> • Protection takes into account risk involved (transaction type and dollar value).
11	Independent and inclusive	<ul style="list-style-type: none"> • Governance of the payments system is not controlled by a minority of stakeholders.
12	Framework adaptability	<ul style="list-style-type: none"> • Industry governance is robust, yet flexible enough to remain relevant over time.

These principles guide the Task Force and provide a basis for the proposed Governance Framework, presented in Chapter 5. How these principles

have been incorporated into the different elements of the Governance Framework is summarized in Table 3 on page 29.

Start the conversation

Our aim is to create a framework that allows Canada to become a world payments leader by 2020. The goals and principles listed in this chapter are intended to help us fulfill our mandate and to guide the development of the proposed Governance Framework that responds to the fundamental challenges identified in Chapters 2 and 3.

- 1) Are these the right principles?
 - a) Are any important principles missing that should be added?
 - b) Should any of these principles be dropped?
 - c) What else would you change in these principles?

CHAPTER 5

A proposed Governance Framework

“The Governance Framework is our initial response to the regulatory and governance challenges. This discussion paper provides an opportunity for stakeholders to consider and comment on the proposed Governance Framework. Over the coming months, we want to elaborate on the Governance Framework, adding substance and detail, while providing the best possible foundation for future action.”

The Governance Framework is our initial response to the regulatory and governance challenges identified in Chapters 2 and 3. The Governance Framework has been developed on the basis of the principles presented in Chapter 4. This discussion paper provides an opportunity for stakeholders to consider and comment on the proposed Governance Framework.

Over the coming months, we want to elaborate on the Governance Framework, adding substance and detail, while providing the best possible foundation for future action.

The other three challenges—online authentication, credit and debit networks, and moving to the digital economy—will be addressed in three separate papers to be made available on the Internet site of the Task Force between now and September.

From September to the end of our mandate in December, we will continue working through these important issues to develop a strategy and actionable recommendations that will transform the way we pay.

If implemented, this strategy will ensure that Canada is ready for the emerging digital economy

by bringing our 20th-century payments system into line with the needs of the 21st century.

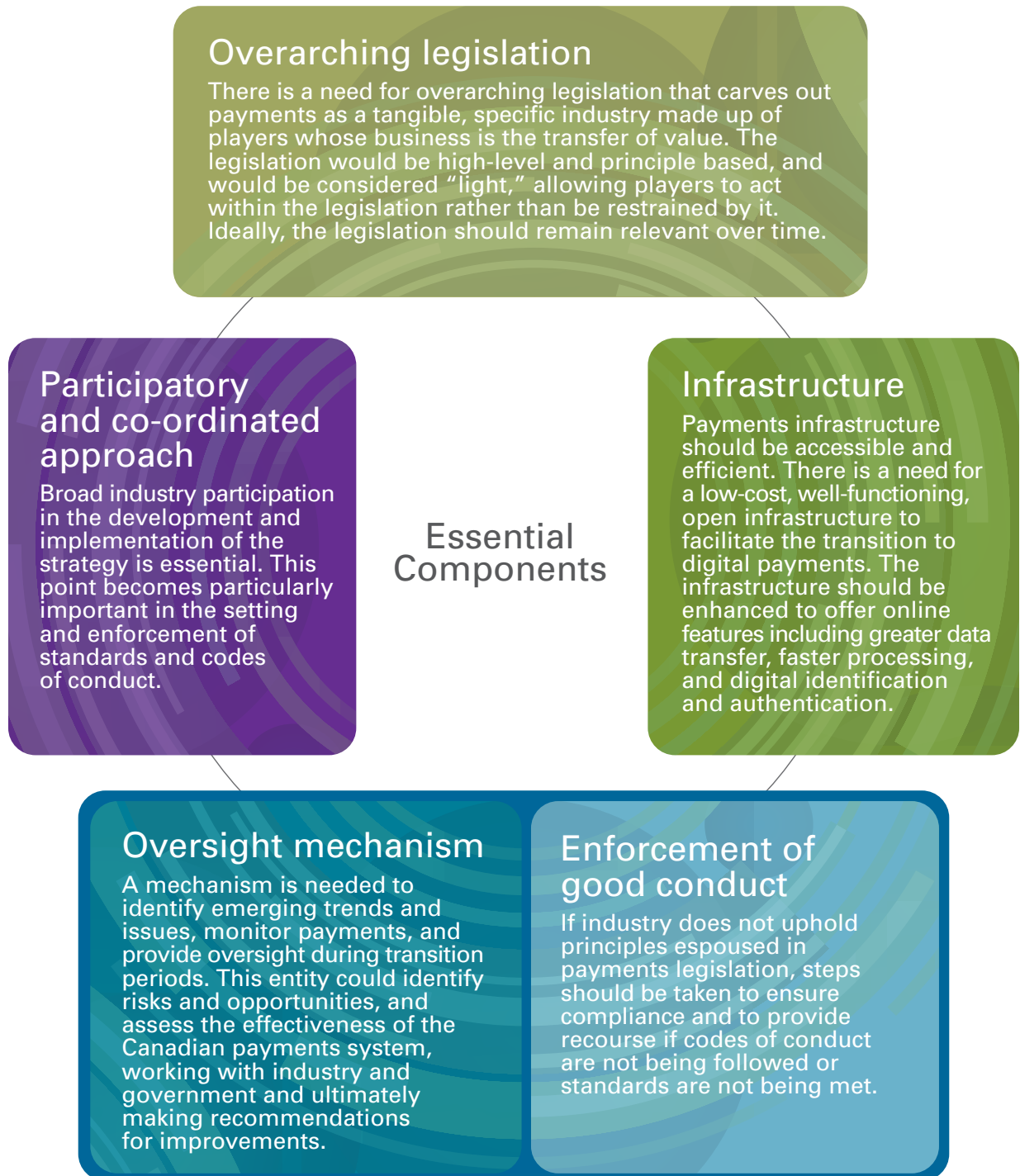
Rising to the regulatory challenge

In order to develop a response to the regulatory challenges, the Task Force asked itself what essential components must be present in the Governance Framework for the payments system of the future. These components are the stepping stones that will help us carve out an appropriate, modern regulatory and governance structure.

The five essential components that have been identified to date are summarized in the following figure.

As our work continues to evolve, we expect new components to be uncovered that are equally fundamental to achieving our goal.

Figure 1:

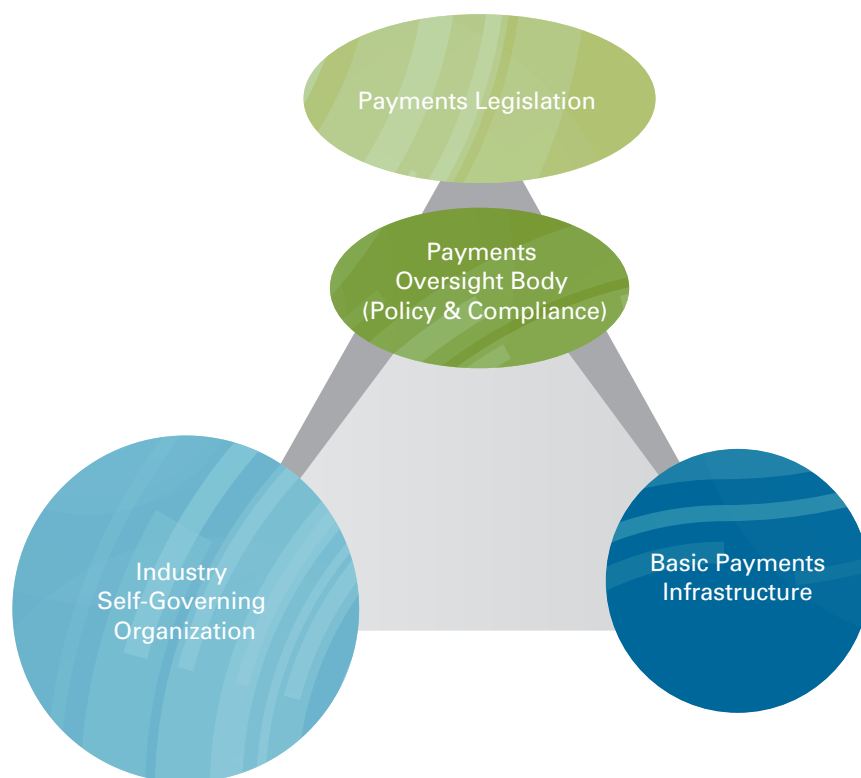


The proposed Governance Framework

The Task Force believes we need to create an inclusive, principles-based Governance Framework focused on user protection, open competition and minimal risk. Each of the five essential components outlined above is embedded in this proposed Governance Framework.

The Governance Framework would bring together governments, industry, users, infrastructure and legislation within an interconnected regime that is mutually reinforcing and representative of all stakeholders:

Figure 2:

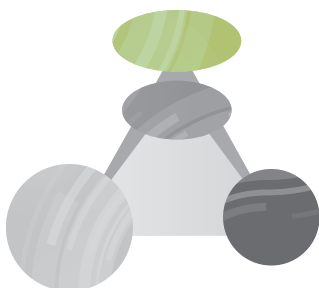


The components are:

1. Payments Legislation
2. Industry Self-Governing Organization (SGO)
3. Basic Payments Infrastructure
4. Payments Oversight Body (POB)
 - a. Policy
 - b. Compliance

We look to Canadians for their views to improve this initial proposal.

1. Payments Legislation



Until now, payments have been governed by a patchwork of legislation, regulations and bylaws. Within the Governance Framework proposed by the Task Force this would no longer be the case.

The introduction of payment-specific legislation would define and validate the importance of payments as an industry.

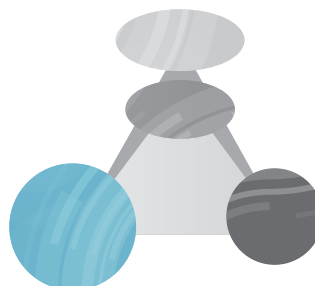
The new legislation would be specific, exercising a light touch by setting minimum industry standards. It would be inclusive and functional, recognizing the specific roles of players within the payments system. It would also be proportional, applying varying degrees of intervention consistent with players' levels of risk. Mandatory membership in the new SGO for all players would be part of this payments legislation.

The Payments Legislation would have three objectives:

1. Open competition, ensuring network rules do not serve to limit innovation or efficiency;
2. User protection, extending basic, universal rights and responsibilities, regardless of form of payment, to users; and
3. Minimal systemic risks, requiring the oversight of clearing and settlement systems deemed systemically important.

Table 3 on page 29 summarizes how the proposed payments legislation would embody the principles presented in Chapter 4.

2. Industry SGO



At the heart of the Governance Framework lies the assumption that most problems in the payments system can be addressed by participants. For this to happen, players need a collaborative forum to work together to make the system more efficient, as well as provision for collective action to resolve divisive issues.

To this end, the Governance Framework encourages the creation of an SGO to include all payment players, who would work to develop and enforce codes of conduct and manage the integration of new technologies.

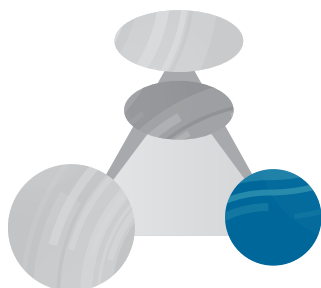
The SGO would involve mandatory membership for industry participants, while allowing for voluntary membership for consumers and merchants. The SGO would be self-funded and self-governed.

The SGO's mandate might include development of standards in emerging technologies (mobile payments, digital identification and authentication), as well as establishing codes of conduct for business practices.

Industry members should show leadership in this endeavour. For that reason, decisions about the SGO's organization, agenda and operation should be left to the SGO, and have been omitted from the Governance Framework.

Table 3 on page 29 summarizes how the proposed SGO would embody the principles presented in Chapter 4.

3. Basic Payments Infrastructure



Payments infrastructure should be efficient, low-cost and open to all players. Our existing infrastructure needs to be upgraded to handle digital payments, including online features that allow greater data transfer and digital identification and authentication.

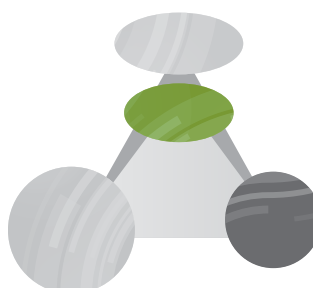
For the payment infrastructure to support a modern digital economy in Canada, we need a vehicle to:

- Reduce concentration of ownership and control of payments networks;
- Provide open access and a platform offering secure clearing and settlement of payments and competition among payment service providers;
- Facilitate the funding of investment in infrastructure; and
- Develop a fair user-pay model to sustain and promote the infrastructure.

Such an infrastructure should encourage innovation and inspire confidence.

Table 3 on page 29 summarizes how the proposed payments infrastructure would embody the principles presented in Chapter 4.

4. Payments Oversight Body (POB) (combining policy and compliance)



A) Policy

The proposed introduction of new legislation and the formation of an SGO will require oversight and guidance, as will Canada's transition to a digital payments system, a necessary step in making Canada a global payment leader by 2020.

To this end, an independent public POB would be formed to monitor evolutions in payments while providing advice during transition periods. It would identify risks and opportunities, working with industry and government to refine and improve the system.

The new POB would monitor the proposed Governance Framework, as it evolves and would report to the Minister of Finance. It would advise both the Minister and the SGO on policy developments, while evaluating the work of the SGO, thus allowing for increased accountability and oversight.

The POB would consist of a small cross-section of independent experts. It would operate on a cost-recovery basis through fees charged to payments system participants.

B) Compliance

If any participant is unable to adhere to the principles set out in the payment legislation or if codes of conduct are not observed, regulations should ensure compliance and provide recourse.

Regulatory responsibility would be given to the POB, which would reinforce good conduct and

address non-compliance. Participation in the POB, and to whom the POB would be accountable, will be important considerations.

Table 3 on page 29 summarizes how the proposed POB would reflect the principles presented in Chapter 4.

Table 3:

Mapping the Principles to the proposed Governance Framework					
	Payments Legislation	Industry Self-Governing Organization	Basic Payments Infrastructure	Payments Oversight Body (Policy)	Payments Oversight body (Compliance)
1. Competition and Innovation	X	X	X	X	X
2. User Access and Efficiency	X	X	X	X	X
3. Transparency and Choice	X	X	X	X	X
4. Fairness and Accountability	X	X	X	X	X
5. Security	X	X	X	X	X
6. Privacy	X	X	X	X	X
7. Consistent Standards		X	X		
8. Minimal Regulation	X	X			X
9. Neutrality By Function	X				
10. Proportionality	X				X
11. Independent and Inclusive		X	X		X
12. Framework Adaptability	X		X	X	X

The Table summarizes how the principles discussed in Chapter 4 would be embodied in the proposed Governance Framework.

Start the conversation

Building on the five essential components, the proposed Governance Framework outlines an approach to address the regulatory challenges to Canada's payments system described in Chapters 2 and 3.

1. What other essential components, if any, need to be present in the payments system of the future?
2. What would you like to see added to the proposed Governance Framework? Why?
3. What would you like to see deleted from the proposed Governance Framework? Why?
4. Are there other changes to the proposed Governance Framework you would recommend?

The way forward

“What comes next will be shaped by the calibre of conversation we provoke. The strategy to create a dynamic online payments system remains largely unscripted. There is much to be done.”

This paper reflects months of research, engagement, and collaboration. It is an important step in Canada's journey to become a world payments leader by 2020.

One clear lesson we have learned is the importance of effective dialogue with a wide range of Canadians in order to create sustainable change. We hope that you will reflect on the ideas in this discussion paper, and we look forward to your input and engagement in these questions. We also invite stakeholders to help us identify economic, legal and social hurdles and to propose their own views. That feedback will be essential if this work is to be a true reflection of Canada's needs.

What comes next will be shaped by the calibre of conversation we provoke. The strategy to create a dynamic online payments system remains largely unscripted. Over the coming months, additional content will be drawn from the contributions of stakeholders and all Canadians. There is much to be done.

Next steps

This discussion paper and the *Scenarios for the Future of the Canadian Payments System* report are now available online, and the Task Force will accept and post all responses to its work.

At the end of each chapter are a number of questions to which participants are welcome to respond. But responses may address any aspect of our work. Participants may wish to make use of our Internet site featuring submissions from the first round of consultations and much of our research, as well as social media tools offering a choice of ways in which to become engaged in these issues.

Working Groups and Advisory Groups

A number of Working Groups and Advisory Groups have been formed to advance specific elements of our work. The purpose of these Groups, which represent a unique approach to

public policy development, is to provide greater perspective to the Task Force for the Payments System Review.

The Groups will help develop research that addresses the remaining fundamental challenges of online authentication, credit and debit networks, and moving to the digital economy. These papers will be available on the Task Force Internet site between now and September.

Periodic newsletters on the Working Groups will be published online so that all Canadians can stay abreast of their work.

Digital Identification and Authentication (DIA) Working Group

Chair: Brad Badeau

- The DIA Working Group, comprised of expert individuals and private and public organizations, is developing an effective approach for digital identification and authentication that suits the needs, priorities and privacy values of Canadian citizens, businesses, and governments.

Electronic Invoicing and Payments Working Group

Chair: Lili de Grandpré

- The Electronic Invoicing and Payments Working Group is identifying and evaluating efficient and secure electronic invoicing and payment alternatives for Canadian businesses and governments, taking advantage of new technology to:
 1. Increase information flow from users to suppliers and vice-versa;
 2. Reduce paper-based transactions to minimize costs and manual intervention;
 3. Focus on moving 80% of business and government transactions to electronic payment mechanisms; and
 4. Extend solutions to business-to-individual and government-to-individual where possible.

Infrastructure Working Group

Chair: Stéphane Le Bouyonnec

- The Infrastructure Working Group is working with the CPA and other stakeholders on preliminary steps to identify alternative funding and operating models for Canada's payments infrastructure, as well as the costs, barriers and requirements for implementation.

Consumer Advisory Group

Chair: Laura Gillham

- The Consumer Advisory Group is assessing the core principles identified by the Task Force for the Payments System Review. It is also examining education and accessibility issues, including increasing consumer awareness and understanding of digital payments and of digital identification and authentication.

Governance Advisory Group

Chair: Terry Wright

- The Governance Advisory Group is taking a holistic view of the Task Force's proposed Governance Framework for the Canadian payments system. Its work will include examining the potential mandate and form of the proposed POB and its relationship with the SGO, the payments infrastructure entity, the Department of Finance and the Bank of Canada.

Regulatory Advisory Group

Chair: John Chant

- The Regulatory Advisory Group is working with the Task Force for the Payments System Review on recommendations pertaining to regulatory and legal issues. This Group will address the definition of the payments industry and minimum standards for the

industry, as well as legal and regulatory issues raised by other Working Groups, including:

1. Defining the potential scope and nature of the payments legislation;
2. Exploring options for potential amendments to payments legislation; and
3. Assessing the competitive structure in payments markets and the implications of that structure.

SGO Start-up Group

Chair: Barbara Stymiest

- Although is not a formal working group of the Task Force for the Payments System Review, the SGO Start-up Group is considering the potential mandate, governance and operational structure of the proposed SGO.

Conclusion

Today our payments system is reliable and secure. But the system was designed to meet the needs of the 20th century, not the emerging technological and digital challenges of the 21st century.

As our world changes fundamentally and forever, the opportunities of rising to the challenge far outweigh the risks of falling behind. The time has come to take a longer-term view of how stakeholders, including consumers, can work to achieve a secure, innovative online payments system that serves the needs of a digital world.

The primary goal of the Task Force for the Payments System Review is to help Canada become a world payments leader by 2020. If Canada is to reap the benefits of online payments, we need to leverage technologies that offer lower cost, more remittance information, better security and greater convenience.

This discussion paper and the *Scenarios for the Future of the Canadian Payments System* report are now available online, and the Task Force will accept and post all responses to our work. These responses will be reviewed in detail, and incorporated into our analysis going forward.

We will also make concerted efforts to reach out to groups not yet engaged, with special attention to Canadians who may not realize how our work affects them.

This Governance Framework is our starting point. Payments affect everyone, and so everyone has a stake in this conversation. We hope that Canadians everywhere will respond to this discussion paper and share with us their thoughts and ideas. Only with the benefit of a wide range of perspectives will the Task Force for the Payments System Review feel confident that its final recommendations reflect Canadians' needs. Only together can we undertake the transformation required to change the way we pay.

Appendix A: About the Scenarios*

Scenarios are not predictions and they are not preferences. They are alternative plausible futures, each based on different assumptions. Because scenarios use multiple perspectives to explore problems, rather than just extended and deeper analysis of a single viewpoint, they can help reveal the significance of issues and events that otherwise might be dismissed as unimportant, or overlooked altogether.

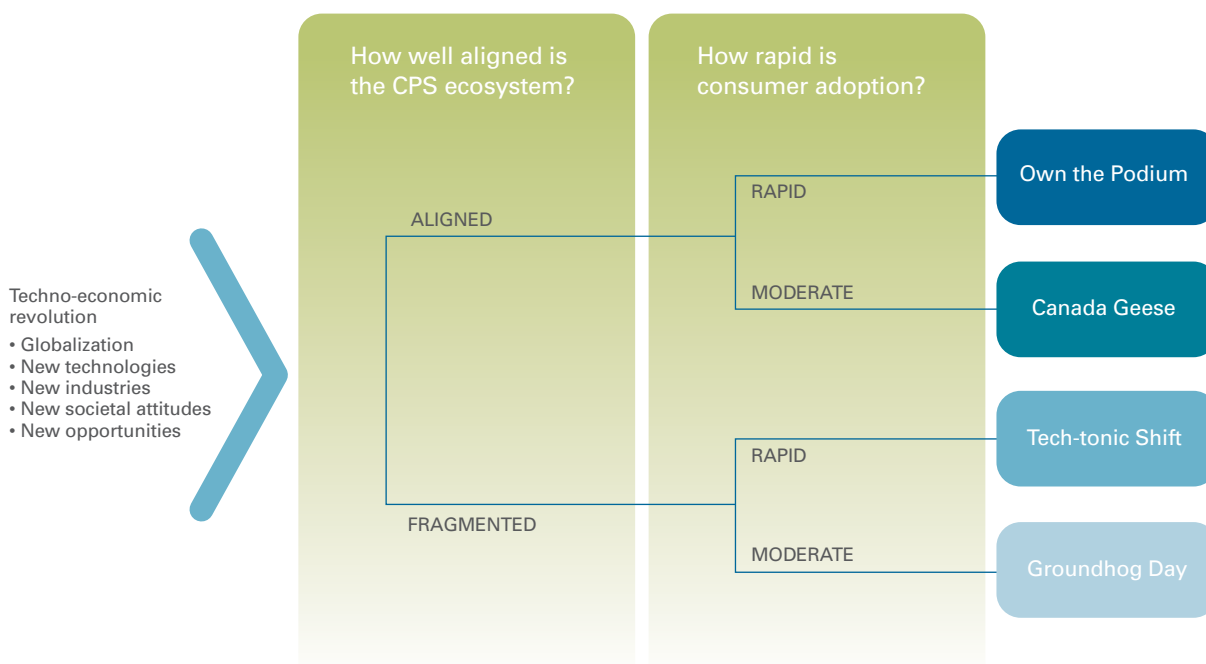
The scenarios developed by the Scenarios Roundtable aimed to stretch thinking about both opportunities and obstacles that the future might hold. As a whole, the scenario set captures a range of future possibilities, good and bad, expected and surprising.

The four scenarios were primarily defined and differentiated by a set of key uncertainties: eventualities that will turn out one way in one scenario, and a different way in another. The Scenarios Roundtable identified many potential uncertainties and ultimately selected what its members saw as the two most significant critical uncertainties that would shape the future of the CPS:

- How well aligned is the CPS ecosystem?
- How rapid is consumer and user adoption?

These two branching points—the degree of alignment of the CPS ecosystem (aligned or fragmented) and the extent of consumer adoption (rapid or moderate)—were used to create a set of four future scenarios for the CPS that are divergent, challenging, internally consistent, and plausible.

Canadian Payments System Scenarios: Branching Points



* This appendix is an excerpt from *Scenarios for the Future of the Canadian Payments System*, an essential companion report to this discussion paper that is available on the Internet site of the Task Force for the Payments System Review.

GROUNDHOG DAY – Fragmented ecosystem and moderate consumer adoption

Like the movie *Groundhog Day*, this scenario replays the recent past. Canada's payments system moves forward as it has in the past. Not much changes in the infrastructure of the payments system. The ecosystem is not strongly aligned: government, financial institutions (FIs), businesses and telcos are all charting their own courses and protecting their own interests, with few or no universal standards.

The regulatory environment responds slowly and as a rule offers only basic protection, except when specific crises force a more significant response. At the same time, consumers and businesses are slow to adopt new technology, mobile payments move slowly, concerns about authentication, privacy and security remain high, and no clear product winners drive consumers to embrace a new technology strongly. Meanwhile, much of the rest of the world moves ahead, adopting new technologies and creating a more robust regulatory framework.

TECH-TONIC SHIFT – Fragmented ecosystem and rapid consumer adoption

Technology companies such as Google, Apple and social networking sites develop alternative payments platforms and become major players. Government is slow to regulate and competition is fierce. Several factors aid the success of these companies including high consumer adoption and cheap new technological platforms. New entrants take advantage of cloud computing and collaborative networks to create low-cost scalable businesses. The proliferation of new financial services and applications to address specific needs is phenomenal.

The first half of the decade sees increasing fragmentation in the marketplace, with a wide range of different user systems, each with different interfaces and authentication methods. The traditional FIs find themselves under great pressure. Although consumers and businesses benefit from convenient new products, at the same time fraud rises and security breaches become more widespread, as do legal cases involving liability. Responding to growing pressure from businesses and consumers, and following a major security breach at an alternative FI, the government moves to regulate the new entrants more actively. In the latter part of the decade, alternative FIs come to terms with new government regulation and there is consolidation in this market. Many consumers and businesses enjoy the new and convenient payment options, but some are left behind. In the space of a decade, innovative new technologies and market forces have fuelled a tectonic shift in the way Canadians transact.

CANADA GEESE – Aligned ecosystem and moderate consumer adoption

Like a flock of Canada geese, the payments system is strongly aligned and co-operative. All parties—federal and provincial governments, FIs, telcos, networks, merchants, and other players—operate on a level playing field. Over the course of the decade, this high level of collaboration reduces friction in the system: the framework of the CPS is expanded to include all players who work together to agree on the rules and standards, spurred by the understanding that, if they don't, government will act with a heavier regulatory hand.

Because the system is reasonably efficient and the major players are happy enough, there is limited push toward new technology, and the cost of meeting standards and regulatory requirements slows innovation. Instead, the payments system prioritizes gradual, thoughtful, evidence-based reform that embraces the best of technologies being road-tested in other systems. This allows Canada to benefit from innovations while avoiding the risk and disruption of working on the bleeding edge.

OWN THE PODIUM – Aligned ecosystem and rapid consumer adoption

There is growing awareness of the magnitude and speed of changes being fuelled by the convergence of computing and connectivity into the smart phone, disrupting existing business models and ways of working while creating huge new opportunities. Nowhere are both the threat and the opportunity clearer than in Canada's payments system. Responding to this challenge, industry comes together to facilitate the rapid development of a set of standards in key areas of payment, especially privacy, security, digital identification and authentication, and mobile payments that will encourage competition and innovation and allow Canada to lead developments elsewhere in the world. This effort is reminiscent of the "Own the Podium" campaign at the 2010 Olympics, when Canada moved away from traditional approaches to win the most gold medals ever for a Winter Olympics host country.

Canada sees remarkable shifts to new ways of processing payments and other transactions. The principle that Canadians "own their own data", and the accompanying robust digital identification and authentication systems that are developed, are crucial in encouraging rapid consumer adoption and allowing Canada to capitalize on the massive changes under way. Companies use cloud computing and collaborative networks to set up payments businesses quickly in response to consumer needs. Lessons learned in payments quickly flow to other sectors, such as health. In FIs and other industries, there is much disruption and considerable job loss but also the creation of new industries and new jobs. By 2020 Canada is a global leader in this new online world, and is exporting its expertise and systems to the global community.

Appendix B: Glossary[‡]

Acquirer: Acquirers connect merchants to payments networks. In addition to providing point-of-sale terminals, online payments and telecommunications services, acquirers may also provide integration with merchant cash registers and computer systems.

Authentication: The methods used to verify the origin of a message or to verify the identity of a participant connected to a system and to confirm that a message has not been modified or replaced in transit

Automated Banking Machine (ABM): A computerized telecommunications device that provides clients of a financial institution with access to funds in their accounts in a public space without the need for a human cashier, clerk or bank teller. Also known as Automated Teller Machine (ATM).

Automated Clearing Settlement System (ACSS): A Canadian Payments Association (CPA) system through which the values of paper-based and electronic payment items are exchanged and the amounts “due to” and “due from” are calculated

Automated Funds Transfer (AFT): Pre-authorized payments, which can take the form of credit funds transfers (direct deposits) or debit funds transfers (mortgage and other bill payments, funds transfers, and corporate cash management payments)

Business-to-business payments (B2B payments): Payments between businesses, for example, payments between a manufacturer and a supplier of parts or raw materials, or between a wholesaler and a retailer. In Canada, most B2B payments are carried out by means of paper cheques.

Batch: A group of payment orders or securities transfer instructions transmitted or processed as a set, at a discrete time interval

Chip and PIN: A technology for credit and debit cards, in which card information is stored on an embedded microchip as well as on a magnetic stripe that is currently common in Canada and the United States. The chip is protected by high-level encryption and is almost impossible to copy, which makes these cards more secure than magnetic-stripe cards when used with point-of-sale terminals that accept chip and PIN. When using chip and PIN cards, cardholders authenticate their information using a Personal Identification Number (PIN).

Clearing: The process of transmitting, reconciling and, in some cases, confirming payment orders or security transfer instructions prior to settlement, possibly including the netting of instructions and the establishment of final positions for settlement

Cloud computing: A model allowing for available, convenient, on-demand network access to a shared pool of configurable computing resources (for example, networks, servers, data storage, applications, services) that can be rapidly provisioned and released with minimal management effort or service-provider interaction

Digital identification: Instances in which digital data are used to grant access or privileges to a particular individual. Many technology applications are developed with secure frontlines. For example, username and password combinations must be presented when accessing a resource or conducting a transaction such as modifying data.

Interchange fee: A fee paid by the acquirer to the credit card issuer when payment is made using a credit card network (MasterCard, Visa or AMEX).

[‡] This glossary is based on definitions taken from the Bank of Canada, the Bank for International Settlements (BIS), the CPA, the European Commission, the PCI DSS, CEVA, the *Scenarios for the Future of the Canadian Payments System* by Viewpoint Learning, and the *Canadian Payments Landscape* by Deloitte, in addition to definitions drafted in-house by the Task Force for the Payments System Review.

Issuers: The entity that issues payment cards to individuals and businesses, extends credit to them, and collects payments from them

Large Value Transfer System (LVTS): A CPA electronic system for the transfer of large-value or time-critical payments

Mobile payments: Any payment (ecash, debit, credit) made using a smart phone or portable computing device. Can include transactions made using wireless networks, the internet or Near-Field Communication (NFC) technology.

Payments networks: Payments networks provide validation of transactions and systems for the transfer of money. They include not-for-profit payments networks such as Interac, and for-profit networks such as Visa and MasterCard.

Payment Card Industry Data Security Standard (PCI DSS): A common set of industry tools and measurements created to help ensure the safe handling of sensitive information

Payment Service Providers (PSPs): Outsourcing partners of financial (banking, wealth management, brokerage, insurance), retail, utility and telecommunications organizations. PSPs are financial processing companies providing infrastructure services for transactions involving currency (ABM and commercial deposits, treasury management), cheques, remittances (retail and wholesale lockboxes), information management and delivery (statement production services), and credit cards.

Settlement: An act that discharges obligations in respect of funds or securities transfers between two or more parties

Smart phone A telephone that provides additional information accessing features. Any mobile telephone that combines voice services with email, fax, pager or Internet access is called a smart phone.

Straight-Through Processing (STP): A process through which transaction information is provided electronically, usually with the payment. This eliminates the need for re-keying or manual entering of data, thus reducing the possibility of errors and improving the efficiency of the process. STP settlement is completed in hours, minutes or even seconds: far faster than the time currently required for traditional paper-based clearing.

Appendix C: References

- Association française du sans contact mobile (AFSCM). 2010. *About the AFSCM*. Available from <http://www.afscm.org/en/afscm-overview/about-the-afscm/index.php?rubrique=2&srub=9>.
- Bank for International Settlements. 2010. *Statistics on Payments and Settlement Systems in the CPSS [Committee on Payment and Settlement Systems] Countries – Figures for 2009 – Preliminary Release*. December 2010. Available from <http://www.bis.org/publ/cpss93.htm>.
- Bank of Montreal et al. v. Commissioner of Competition*, 2005 Comp. Trib. 22, No. CT-1995-002 (Interac). Available from <http://www.ct-tc.gc.ca/CasesAffaires/CasesDetails-eng.asp?CaseID=160>.
- Brisebois, D. 2011. Retail Council of Canada.
- Canadian Payments Association. 2010. *Annual LVTS Payment Information Report*. Available from http://www.cdnpay.ca/imis15/eng/res/lvts_stats.aspx.
- Canadian Wireless Telecommunication Association. 2010. *Subscriber Statistics 2010 Q3*. Available from http://www.cwta.ca/CWTASite/english/facts_figures_downloads/SubscribersStats_en_2010_Q3.pdf.
- Competition Bureau. 2010. *Competition Bureau Challenges Visa and MasterCard's Anti-Competitive Rules*. December 15, 2011. Available from <http://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/03325.html>.
- ComScore. 2010. *The 2010 Canada Digital Year in Review*. Available from http://www.comscore.com/Press_Events/Presentations_Whitepapers/2011/2010_Canada_Digital_Year_in_Review.
- Deloitte. 2010. *The Canadian Payments Landscape*. September 2010. Report Prepared for the Task Force on the Payments System Review. Available from <http://paymentsystemreview.ca/index.php/learn/the-canadian-payment-system>.
- Finance Canada. 2010a. *Code of Conduct for the Credit and Debit Card Industry*. May 18, 2010. Available from http://www.fin.gc.ca/n10/data/10-049_1-eng.asp.
- . 2010b. *Minister of Finance Announces Task Force to Review Payments System*. June 18, 2010. Available from <http://www.fin.gc.ca/n10/10-057-eng.asp>.
- Gartner. 2010. *Gartner Says Number of Worldwide Mobile Payment Users to Reach 108.6 Million in 2010*. Available from <http://www.gartner.com/it/page.jsp?id=1388914>.
- Great Britain. 2009. *Banking Act 2009*. London: HMSO, February 12, 2009. Available from www.opsi.gov.uk/acts/acts2009/pdf/ukpga_20090001_en.pdf.
- Khan, M. 2010. *Building Peace: One Mobile at a Time*. GSMA [Global System Mobile Association] Mobile Money for the Unbanked. Available from <http://mmublog.org/blog/building-peace-one-mobile-at-a-time-2>.
- Mobile Money Africa. 2011. *Mobile Payments Try to Take Root in Afghanistan*. Available from <http://mobilemoneyafrica.com/?p=3129>.
- Mobile Payment Magazine. 2011. *M-PESA wins "Mobile Money for the Unbanked" Award*. Available from <http://mobilepaymentmagazine.com/m-pesa-mobile-money-unbanked-award>.
- NFC Times. 2010. *Dutch Banks and Telcos Announce Plans for NFC Mobile Payment JV*. Available from <http://www.nfctimes.com/news/dutch-banks-and-telcos-announce-nfc-mobile-payment>.
- . 2011. *NTT DoCoMo*. Available from <http://nfctimes.com/company/ntt-docomo>.
- Payment System Advisory Committee. 1998. *Payments System Review Discussion Paper*. July 1998.
- Rogers Wireless. 2011. Internal (unpublished) information.
- Schuh, S., O. Shy, and J. Stavins. 2010. *Who Gains and Who Loses from Credit Card Payments? Theory and Calibrations*. Federal Reserve Bank of Boston. August 2010.
- Task Force on Financial Literacy. 2011. *Canadians and Their Money: Building a Brighter Financial Future*. February 9, 2011. Available from <http://www.financialliteracyincanada.com/report/report-toc-eng.html>.
- T-Mobile. 2010. *AT&T, T-Mobile and Verizon Wireless Announce Joint Venture to Build National Mobile Commerce Network*. Available from <http://newsroom.t-mobile.com/articles/Isis-joint-venture-mobile-commerce-network>.
- Viewpoint Learning. 2011. *Scenarios for the Future of the Canadian Payments System*. April 2011.



