

Task Force for the Payments System Review

Policy Paper D: Infrastructure

A Reinvented Canadian
Payments Association

December 2011

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Policy Paper D: Infrastructure

—A Reinvented Canadian Payments Association

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Executive summary

Canada's clearing and settlement infrastructure has met the country's needs in the past, but it now stands in the way of the transition to digital payments. The design, governance and operation of this infrastructure has created barriers to entry for new participants and hampered the innovation needed to create modern payments services. The system is at a crossroads.

Canada's payments infrastructure consists of the networks, processes and systems that facilitate the various forms of payments used by individuals and organizations. It is owned, managed and controlled by disparate interests, operating with little coordination or strategic oversight.

The infrastructure includes the two national clearing and settlement systems; shared cash-dispensing, debit and e-transfer systems (Interac/Acxsys); credit, debit and prepaid card networks; and the paper-cheque clearing system.

Core infrastructure

Core infrastructure is infrastructure that is so important to our payments system that it requires scrutiny to ensure that the public interest is protected. Much of the core infrastructure is owned and operated by the Canadian Payments Association (CPA). The CPA, which was created by the *Canadian Payments Act*, is overseen in some important respects by the Minister of Finance and chaired by a Bank of Canada appointee. Government involvement in core infrastructure is generally accepted as being fundamental to systemic safety and soundness and necessary to promote open access, competition and efficiency.

Growing disconnect

The Task Force considers that, under the current infrastructure regime, the fundamental principles of trust, access and good value are not being upheld. Key systems are aging, and no provisions have been made for their upgrade or replacement. Investments to develop the concept of immediate funds transfer (IFT), as is happening in other jurisdictions, are not being made at the CPA. New entrants, who could bring innovation to the system, face major barriers to access. Little consideration is being given to international interoperability.

Moreover, governance of core infrastructure is too narrowly focused and is unable to identify the appropriate next steps. This is in part because the principal participants, the banks, have not paid enough attention to the payments system, despite its being a major source of their revenues and profits, and have not participated at a senior enough level in the governance of the CPA.

As a result of all these problems, the transition to a digital economy is in jeopardy.

Objectives

The Task Force concluded that three new objectives must be added to the payments system's existing objectives of efficiency, safety and soundness, set out in the *Canadian Payments Act*:

1. **Access:** Clearing and exchange networks must be accessible at the same price to all participants who meet transparent and objective minimum criteria.

2. **Interoperability:** Canada's economic success depends on our payments systems being interoperable domestically and with the systems of our international trading partners.
3. **Supportive of government policy and operating objectives:** Infrastructure needs to be upgraded to support government leadership on electronic invoicing and payments, and to enable partnering with the industry to create a mobile payments ecosystem.

Rethinking the role of the CPA

The paper explores challenges in several areas and proposes the following:

- That the current ownership model of the CPA be maintained;
- That CPA governance be streamlined and better aligned with the public interest;
- That a full-cost recapture business model be pursued for core infrastructure, with debt funding permitted for substantial infrastructure investments;
- That the scope of the CPA core infrastructure be expanded to achieve scale efficiencies. Specifically, consideration should be given to including the Interac debit system and cheque processing;
- That a renewed CPA be created through amendments to the *Canadian Payments Act*.

Recommendations

The Task Force recommends amending the *Canadian Payments Act* to transform the CPA into a public core infrastructure entity having the following:

1. A small board of senior executives independent of membership;
2. The additional goals of access, interoperability and support for government policy and operating objectives;
3. Measurable objectives to ensure that the new CPA carries out its mandate;
4. Ability to access debt financing and to charge transaction fees based on full-cost recovery (but no monopoly over clearing systems, other than the Large Value Transfer System);
5. Flexibility to acquire and divest related businesses; and
6. Objective and transparent minimum criteria for new entrants and direct clearers.

Rather than waiting for the legislative process to be completed, the Task Force further recommends that the Minister of Finance request that the all of the principal players work together with the CPA to develop a plan by April 2012 to do the following:

- Facilitate electronic invoicing and payments and integrate the debit network and cheque processing into the technology platform,
- Replace the Automated Clearing Settlement System with a multilateral small payments clearing and settlement system, and
- Begin work on an immediate funds transfer (IFT) system to be in place by 2020.

The Task Force has laid out an ambitious plan for revamping the governance, ownership and business model of the CPA. The need to make the changes is urgent, given the challenges facing our payments system.

Introduction: Payments infrastructure at a crossroads

Payments in Canada are supported by clearing and settlement infrastructure that in the past has met users' needs. That infrastructure, however, is no longer adequate to support the evolution of the Canadian payments system and now stands in the way of achieving the transition to digital payments that Canada must make soon.

In addition, the design, governance and operation of the networks, processes and systems that support payments have created barriers to entry for many new participants, thereby hampering innovation and ultimately denying Canadians the benefit of payments services that will satisfy their emerging needs (see *Policy Paper A: Users and their Discontent*).

This policy paper reviews Canada's current payments infrastructure, defines new objectives that need to be pursued, explores a number of key issues that must be addressed and outlines the recommendations of the Task Force for bringing about the needed changes.

This work has benefitted from the insights of the Infrastructure Working Group—composed of representatives from the Bank of Canada, the payments industry and the Task Force. Their work in turn was made possible by the many valuable contributions of the participating managers, owners and other key stakeholders of the Canadian Payments Association, Interac/Acxsys and the cheque-processing firms.

Current infrastructure

When we refer to Canada's current payments infrastructure, we mean the collection of networks, processes and systems that facilitate the various forms of payments we use today. Canada's payments infrastructure includes the following:

- **The two national clearing and settlement systems:** The Automated Clearing Settlement System (ACSS) and the Large Value Transfer System (LVTS) are both owned and operated by the Canadian Payments Association.
- **Shared cash dispensing, debit and e-transfers (Interac/Acxsys):** The services of the Interac Inter-Member Network, operated by Interac Association Interac, allow Canadians to withdraw cash at automated banking machines (ABMs) not owned by their own financial institution and to use a debit card to pay merchants for purchases. E-transfers (EMT) and online debit payments (ODP) are provided by Acxsys, a for-profit entity associated with Interac.
- **Credit, debit and prepaid card networks:** These include Visa, MasterCard and American Express, as well as newer players like PayPal, Zoompass and Blackhawk Network.
- **Paper-cheque processing:** This function is performed by multiple entities including Symcor, INTRIA, and some financial institutions, which physically process the over 1.1 billion cheques that are exchanged annually between financial institutions, and between accounts within the same financial institution.

The payments infrastructure in Canada is owned, managed and controlled by a number of disparate interests, operating with limited coordination or strategic oversight. This decentralized system, while it has generally worked to meet the requirements of existing modes of payment, does not facilitate implementation of the major changes to our payments infrastructure that need to be made if Canada's payments system is to move to the forefront among our partners and competitors.

Box D1: Canada's clearing and settlement systems

The majority of payments clear through one of Canada's two national clearing and settlement systems: the Automated Clearing Settlement System (ACSS) and the Large Value Transfer System (LVTS). Both systems are owned and operated by the Canadian Payments Association (CPA).

The ACSS, which has been operating since 1984, facilitates the clearing and settlement of some 24 million payments per day—99% of the volume of paper-based and electronic retail payments processed through the CPA. That volume, although huge, accounts for only about 12% of the total value of payments. By contrast, the LVTS, a wholesale system, averages a much higher daily value even though it clears only about 24,000 transactions; the LVTS handles \$150 billion in payments daily compared with roughly \$20 billion for the ACSS. The LVTS, introduced in 1999, is used primarily for large and time-sensitive payments because it offers final and irrevocable payments in real time to financial institutions and large corporations. Together, these systems account for close to half of non-cash payments in terms of volume, and over three quarters of the value of all payments in Canada.

Critical role of core infrastructure

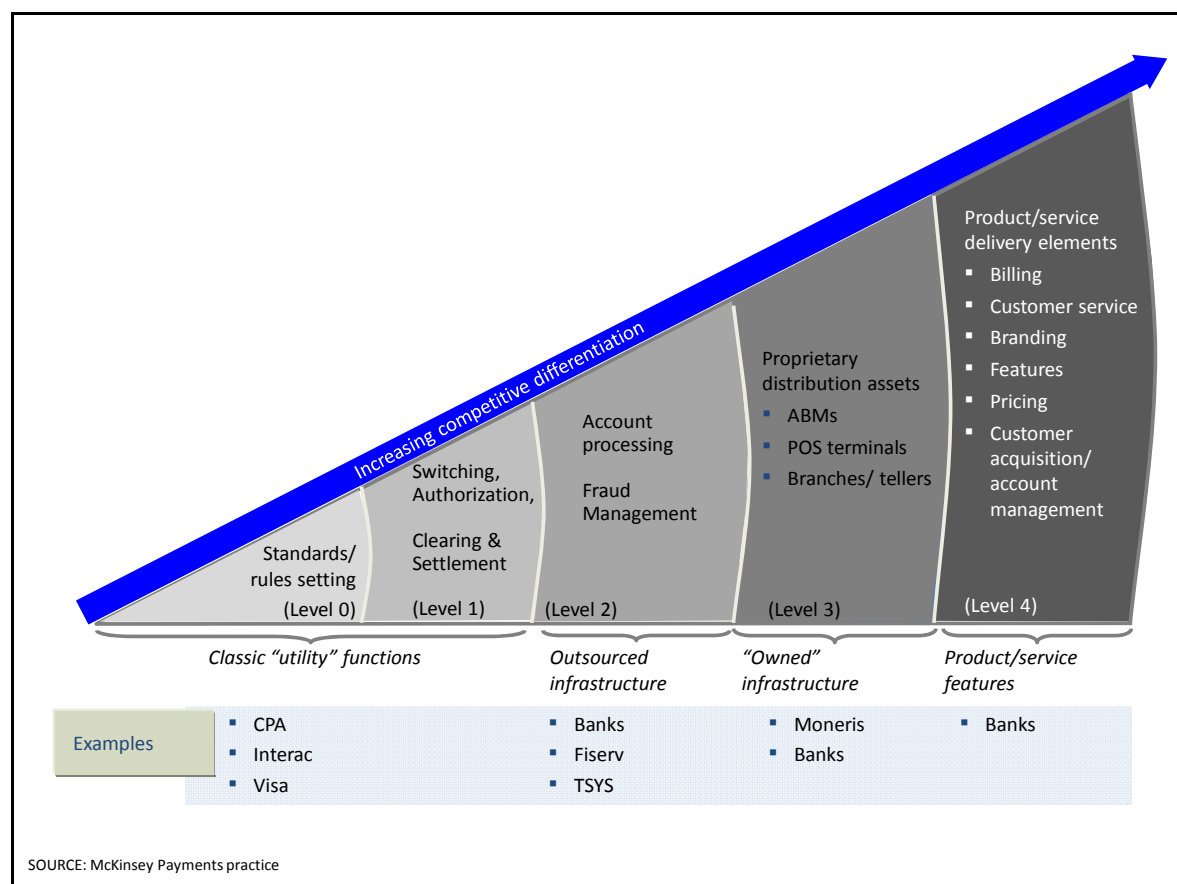
As individuals, businesses and governments in Canada shift away from cash and cheques as the principal means of payment, we become increasingly reliant on electronic payments in our daily lives and business affairs. As individuals, having access to our funds through debit cards, credit cards and online payment systems is something we take for granted. We assume that our salaries, pensions, income tax refunds and other income will arrive safely in our accounts. We expect to pay expenses and make contributions. We take for granted the flow of money between businesses and governments that is the lifeblood of the economy. Behind the scenes, the ability of our large banks and other financial institutions to clear and settle large volumes of daily payments is critical to all these transactions. All of this depends on our core payments infrastructure.

Core infrastructure refers to the parts of our payments infrastructure that are so central and fundamental to our overall payments system that they warrant specific oversight from a public interest standpoint.¹ There is no precise definition of what constitutes core infrastructure, and the understanding of what is included has evolved over time. Some of the factors that help determine what should be considered core infrastructure include the extent to which a system:

- Operates in a utility fashion (i.e., the service offered is such that the scope for competitive differentiation is very limited) (see figure D1);
- Serves as a natural monopoly (e.g., LVTS is designated as the principal point for settlement in Canada);

- Is critical to our payments behaviour and, as such, has drawn intervention from a public interest standpoint, particularly with respect to competition;² and
- Is in decline and its orderly phase-out calls for a strategic and coordinated plan (e.g., the declining use of paper cheques).

Figure D1: Competitive differentiation



Successive Canadian governments since the 1970s have recognized the need to pay special attention to core infrastructure. An important step was the creation in 1980 of the Canadian Payments Association (CPA), a public-purpose organization that owns and operates what might be considered the most core parts of our payments infrastructure.

The legislation that created the CPA also mandated government involvement through the appointment of a chair and the approval of bylaws.³ This basic model remains in place today, although amendments in 2001 strengthened the government's oversight function.

Box D2: Canadian Payments Association submission (August 15, 2011)

“The Canadian Payments Association, which operates pursuant to the *Canadian Payments Act*, brings together financial institutions, businesses, governments and consumers to establish the rules of the payments highway. Moreover, the CPA operates critical infrastructure that enables the movement of billions of dollars across the country each day. The CPA is the owner and operator of Canada’s Large Value Transfer System (LVTS) which is designated as systemically important by the Bank of Canada. Canada is unique compared to most other countries since the large value payment system is operated by a non-central bank entity (i.e., the CPA) and the roles and responsibilities to ensure the safety and soundness of LVTS are shared between the CPA and the Bank of Canada.”

Separating the operations of core payments infrastructure from the central bank in this manner was considered a unique approach at the time, and Canada was seen as a model for other countries. But what it underlines is that Canadians and their governments have endorsed government involvement in, and oversight of, the most important elements of Canada’s payments system. Moreover, the *Payment Clearing and Settlement Act* allows the Governor of the Bank of Canada to designate other payment systems for similar oversight—in other words, as core infrastructure—if the Minister of Finance is of the opinion that it is in the public interest to do so.

In this regard, Canada is no different from most other developed countries, where government plays a prominent role in core infrastructure, often through central banks (either as operators of the core systems or as close supervisors).⁴ Indeed, through measures as diverse as regulating, overseeing and operating, government involvement in core infrastructure is generally accepted as fundamental to the safety and security of domestic payment systems, in parallel with the need to promote open access, competition and efficiency.

Systems owned by the CPA are not the only elements of core infrastructure. As is discussed later, the Interac/Acxsys debit, e-transfer and ABM systems and Canada’s cheque processing capacity are other critical elements of the payments system that must be taken into account.

We believe that the Government of Canada plays an essential role in overseeing the core infrastructure and protecting the public interest. At a minimum, this role stems from the critical position that the payments infrastructure plays in Canada’s economy.

It is through this lens that the Task Force has sought to understand the challenges facing our core infrastructure.

The growing disconnect

In the view of the Task Force, under the current regime, the principles of trust, access and good value, which the Task Force regards as vital to the future of the Canadian payments system, are not being adequately served. Moreover, little consideration is being given to the critical issue of interoperability with the payments systems of other countries.

Box D3: Role of the Bank of Canada 5

Unlike central banks in many other countries, the Bank of Canada neither owns nor operates any of Canada's major payments systems. The Large Value Transfer System (LVTS) does, however, operate over the Bank of Canada's books. Under the *Payment Clearing and Settlement Act* (PCSA), the Bank of Canada is responsible for the oversight of payments and other clearing and settlement systems in Canada for the purpose of controlling systemic risk. Currently the LVTS, CDSX and CLS Bank have been designated as systems subject to the PCSA. The Bank has a keen interest and involvement in these payment systems, for several reasons:

- The safety and stability of payment systems contribute to the Bank's broader objective of promoting a safe and sound financial system in Canada.
- Unsafe or unsound payment systems could impair the Bank's ability to implement monetary policy effectively.
- As the ultimate source of liquidity for the financial system, the Bank is naturally concerned about the safety and soundness of Canada's payment systems. Poorly designed systems could generate significant liquidity and credit risks for their participants.
- Final settlement of payment obligations among the participants in the systems takes place through the transfer of funds held in their settlement accounts at the Bank.
- The Bank is a participant in the LVTS and the ACSS, settling amounts owing to or from itself and to or from the Government of Canada.
- The Bank has strong links to the Canadian Payments Association, which operates Canada's national payment systems.
- The Bank participates in international groups—particularly the Group of Ten (G-10) countries—that attempt to identify risks in payment systems, and to establish best practices for the management and control of these risks.

The Need for Innovation

Our small value clearing and settlement system (the ACSS) is almost 30 years old and our large value transfer system (the LVTS) was launched over 10 years ago. The upgrades these systems require to facilitate electronic invoicing and payments and online real-time payments have not yet been undertaken. If Canada's infrastructure is to meet the changing needs of Canadians, it must adapt to ensure domestic and international interoperability, while building capacity for forms of digital payment which require radically different infrastructure than payments today.⁶

Immediate funds transfer (IFT) is a convenient, certain, secure and low-cost means of electronically transferring money between accounts with no or minimal delay in receipt and use of funds. Dramatic innovations in information processing and communication technology have made IFT not only feasible, but expected. People now carry around with them their own personal connections to universal communications networks that deliver many services instantly, yet IFT is still not widely available in Canada.

Other countries have already begun this important work. Mexico, the United Kingdom and Switzerland, for example, have been actively pursuing development of an IFT system that would render retail

payments virtually instantaneous, much like sending a text message or an email. This capability is required not only to meet user expectations for timely transactions, but also to realize the full potential of mobile payments applications.

But immediacy of payment is not the only important requirement of modern payments infrastructure. In fact, IFT might only be realistic as the end result of a phased-in longer-term approach to updating and redefining our core payments infrastructure. The transfer of information, including remittance information for the automated processing of accounts payable and receivable, is equally critical if we are to realize the substantial productivity gains offered by electronic invoicing and payment. In *Going Digital*, we identified addressing the information requirement as the more urgent step.

The need for access to core infrastructure

There is also the question of fostering competition. The lack of innovation in Canada's payments system stems primarily from the difficulty new entrants face in accessing core infrastructure. Direct-clearer access to the ACSS is only granted to regulated financial institutions with a settlement account at the Bank of Canada that have at least 0.5% of the total volume of all transactions. For non-financial institutions and for financial institutions with lesser volumes, the only means of accessing the ACSS is as an indirect clearer, using as the clearing agent an existing financial institution that has direct access (involving cost and terms that have to be negotiated with a competitor).

Innovative companies like PayPal, Zoompass, TelPay and PayMePayYou experience difficulties and added expense to access their customers' bank accounts. The rules, design and ownership of core infrastructure, including both the small payment system and Interac, restrict entry and innovation in the Canadian payments system.

Obviously, access to core infrastructure by new entrants, must not compromise the policy objectives of efficiency, safety and soundness that have characterized the system to date.⁷ But enforcing those objectives should not be allowed to hinder innovation and competition. Without access to core infrastructure, new payments instruments will not make it to market, and the gap between users' expectations and payments products and services will continue to grow.

Many would argue that the objectives of the CPA have been too narrowly focused on efficiency at the expense of innovation. While we have a very low-cost small payment system, it does not support innovative products or new entrants. This trade-off may not be optimal. During the 1997 review of payments legislation, policy-makers recognized that some compromises might be necessary to open up access. They were prepared to accept a marginally higher level of risk in the small payments system, where values are low and little systemic risk exists, if doing so would encourage new service offerings, players and processes.

The Task Force believes that the narrow focus on safety, soundness and efficiency has kept the cost of Canada's clearing and settlement systems artificially low, not only discouraging the investment in infrastructure that is needed to meet current and future requirements but also restricting competition and innovation. Although eliminating the incentive for banks to emphasize cost-efficiency above all will increase the average transaction cost of clearing and settlement, a broader approach to payments objectives will enhance the efficiency of the overall purchase-to-pay and order-to-pay value chains and

will more than offset the increased transaction cost and will open the way to the development of a far more capable payments system for Canada.

At the present time, the Bank of Canada relies on the Office of the Superintendent of Financial Institutions (OSFI) to provide the prudential oversight necessary to satisfy itself that the payments system is not subject to operational and financial risk. Consequently, direct access to the clearing system is available only to regulated financial institutions. It would be possible to work around this requirement, while still respecting the OSFI's risk-appropriate approach to supervision, by creating a "payments bank" that stores value for the purpose of making payments and invests the funds in risk-free assets. This bank could be regulated in a manner appropriate to the underlying risk and require capital mainly to support operational risk. As soon as possible, the small payments system needs to be replaced with a multilateral clearing and settlement system, while the Department of Finance, the Bank of Canada and the CPA develop objective and transparent minimum criteria for direct access. In the interim, however, this "payments bank" approach would suffice to give new entrants reasonable direct access to core infrastructure.

Objectives of a modern payments infrastructure

It was in the context of such concerns about innovation, competition and access to payments systems that the Task Force set out to identify the key objectives to be pursued in updating the core payments infrastructure, and to explore their important implications for governance, ownership, business models and scope.

In the current rapidly changing environment, the Task Force concluded that the existing objectives of *efficiency*, *safety* and *soundness* set out for the CPA in the *Canadian Payments Act*, while essential, are no longer sufficient. Three additional objectives are needed to drive the effort to improve the payments infrastructure: *access*, *interoperability* and *support for government policy and operating objectives*.

1. Access

Access to core infrastructure must be open at the same price to all participants who meet objective and transparent minimum criteria to safeguard systemic stability, minimize operational risks, foster good conduct and ensure user protection.

Current minimum volume and eligibility requirements for participants, as well as the challenging design of the small value payments system (the ACCS) and Interac, block direct access to core infrastructure for many potential participants. Those requirements are clearly a barrier to innovation and competition in the Canadian payments arena that must be dismantled.

2. Interoperability

Interoperability within the Canadian payments systems and with the systems of Canada's trading partners is essential. As more and more countries adopt global standards, our clearing and exchange infrastructure must be able to carry the information that Canadians need to do business with those countries.

As an exporting nation, our economic success depends fundamentally on our ability to trade. And as other countries strengthen their payments systems, ours must keep pace. We must have a system that is

interoperable and open for business. The Task Force applauds an important move in this direction—the recent efforts of the CPA to adopt ISO20022 for messaging of remittance information with payments.

3. Support for government policy and operating objectives

The payments infrastructure must support government leadership by example in key areas of payment system development such as electronic invoicing and payments and mobile payments. It must also reinforce government efforts to ensure that the payments system contributes fully to Canada's economic development while achieving other goals such as the protection of privacy.

We have already, in *Going Digital*, made the case for government leadership on electronic invoicing and payments, as well as for a government role in partnering with the payments industry to create a mobile payments ecosystem that can deliver both private and public sector services. This would give a massive boost to development in these areas. But achieving that goal will require major upgrades to the infrastructure in order to handle securely the data requirements of end-to-end automation and, later, of mobile services, including payments. If the government is to champion electronic payments by example, the infrastructure must first be built.

Likewise, in its role as steward of the economy and of the financial system, the government performs essential oversight and risk management functions with respect to the payments system and its infrastructure. It must be able to continue performing these functions, no matter what form of infrastructure evolves in the future.

Benefits of infrastructure investment

Canada can pave the way for innovative products and solutions that will enable us to move toward a fully digital payments system. The goal of information-rich IFT is well within our reach. Investing in infrastructure today will have both immediate and long-term benefits that align with the needs of stakeholders from across the payments system. These benefits include the following:

- **Enhanced payments and message standards:** As we noted in *Going Digital*, our clearing and settlement systems (LVTS and ACSS) lack the ability to offer critical remittance information with payments. Not only does this reinforce our reliance on paper cheques—a much less efficient mode of payment—but it prevents us from benefitting from electronic invoicing and payments and from the automation of accounts payable and receivable processing.
- **Improved access to payments systems:** Payments systems in other jurisdictions provide easier and more direct access to core payments infrastructure by alternative payments service providers without compromising the integrity of their small value payments systems. One example is the hub-and-spoke model of the U.S. Automated Clearing House, which allows large enterprises to eliminate redundant procedures, with the support of financial institutions. Another is direct access for large retailers to the Australian payments system through bank sponsorship.⁸
- **Immediate funds transfer (IFT):** As technology improves, the trend is away from batch processing of payments and toward immediate recognition and, ultimately, settlement of payments.⁹ Customers expect online and mobile payments to transfer funds instantaneously and irrevocably. Other countries are beginning to build the systems to accommodate these expectations.¹⁰

- **Better credit-push payment functionality:** As payments go online and mobile, demand will grow for payers to be able to initiate payments (as in sending an email) rather than the recipient of the payment being required to initiate the request (as retailers must do today with a debit card).
- **Intra-industry risk management regimes:** We have the opportunity to take full advantage of risk detection and management systems that look across payments networks. These will allow for more efficient fraud detection, anti-money laundering and anti-terrorist financing reporting, settlement and trend analysis. Improved data quality and integrity will also reduce or eliminate the need for costly manual corrections.

Canada's clearing and settlement infrastructure is now at a crossroads, requiring substantial investment and innovation to support the transition to digital payments, and to deliver on the needs identified by stakeholders. At this critical juncture, Canada must take a close look at the governance, ownership and business models of our existing infrastructure and determine how best to move forward in delivering the infrastructure the country needs.

Rethinking the CPA

Bringing Canada's payments infrastructure into line with the needs of the digital economy appears to require decision-making and funding models that give consumers, and business and government users, as well as potential new system participants and existing service providers, the tools they need to define new requirements and guide infrastructure evolution. This will necessitate a careful review of trade-offs and incentives, with the broad goals of improving performance system-wide, meeting policy objectives and accommodating digital payments.

Our examination of these critical issues focuses primarily on core infrastructure, particularly on the ownership options, governance models, business models and scope of the organization at the centre of most of Canada's payments infrastructure, the Canadian Payments Association (see box D2). These issues will ultimately need to be resolved for all core infrastructure entities if significant improvement in their ability to support digital payments is to be achieved.

By far, the most significant challenge is overhauling the governance of the key institutions that manage the core infrastructure. The current governance model is too narrowly focused and is unable to identify the appropriate next steps in the evolution of the system. As a result, opportunities are being missed to develop a modern payments system that would support Canada's transition to a truly digital economy.

In the following pages, we outline the key changes required to create what we are calling, for working purposes, the *new* Canadian Payments Association.

Ownership options

There is a range of possible ownership models for payment infrastructure entities. At one end of the spectrum is the government-controlled or -owned entity (e.g., a Crown corporation or government agency). That model is used for the core infrastructure in many countries. At the other end is a privately owned infrastructure company with a for-profit motive. Visa and MasterCard are examples of this

model, with networks that are privately owned by publicly traded corporations. In both these models, ownership is clearly separated from the customers of the networks.

Between these two extremes are a number of other ownership options. One possibility is for customers of the network to also be its owners. This member-owned model applied to the Canadian Visa and MasterCard associations before they became publicly traded companies. It applies to the Interac Association today (see box D4).

Box D4: The special case of Interac

The Interac group of companies presents contrasting ownership models:

- **Interac Association** provides automated bank machine and point-of-sale debit services on a not-for-profit basis, pursuant to a Competition Tribunal Consent Order. The Association's assets are owned by its members, currently, 58 regulated financial institutions.
- **Interac, Inc.**, a privately held company owned by the original eight founding shareholders, owns the Interac trademarks.
- **Acxsys Corporation**, a for-profit entity also owned by the eight founding shareholders, operates the e-transfer, online and international debit businesses.

Interac has asked the Competition Bureau to amend the Consent Order under which it operates to allow it to restructure its corporate bodies, ownership and governance. To date, the Bureau has not agreed to this amendment.

Further detail is provided in Annex D1 and in the Task Force discussion paper *Credit and Debit Card Markets*.

In contrast, the Canadian Payments Association has no owners. The *Canadian Payments Act* does not spell out ownership, but it defines the CPA as a public-purpose organization, the equivalent of a non-share capital corporation. The CPA exists to serve the objectives set out in the Act: to provide efficient, safe and sound infrastructure for the payments system. In this respect, the CPA is similar to NAV CANADA, which is discussed in the next section in relation to governance models.

After reviewing the alternatives, the Task Force concluded that the current ownership model is the right one for the new CPA. The Task Force rejected government ownership, because this has not proved to be an efficient operating model and because the Task Force does not believe that the CPA should be funded with taxpayers' money. The Task Force also rejected private ownership, because it would not serve the public policy goal of ensuring that the core infrastructure not be dominated by special interests.

Governance models

Governance models for organizations, whether privately held companies or government-owned entities, are in most cases largely dictated by the nature of the ownership model. As pointed out above, in a non-share capital corporation such as the CPA, there are no owners. This presents the opportunity for

policy-makers to spell out a governance model best suited to the unique situation of the organization and to articulate the relevant public policy goals, including attention to users' needs.

However, in the case of the CPA, the current structure of voting and membership dues basically treats the members as though they were owners. Annual operating and capital budgets are presented to members for approval. The voting structure established for this in the *Canadian Payments Act* is one vote for each dollar the member contributes in dues, as dictated by the bylaws. Dues are, in turn, calculated on the basis of each member's volume of business with the CPA.

Although the board votes on a one-director, one-vote basis, the influence of members on major expenditures is roughly proportional to their size as customers of the CPA. Hence, the largest users of CPA services tend to dominate discussions on changes to core infrastructure, even though the members do not own CPA assets. This is a problem in that it promotes the interests of the larger existing members and favours longer amortization periods for investments.

The Task Force also observed a number of challenges related to board conduct and to the lack of a forum for constructive dialogue with players other than paying and voting members. These challenges include the following:

- The board membership is too large and is composed of directors who are not senior enough within their respective organizations to effect change.¹¹
- While there is a stakeholder advisory committee tasked with accepting formal and informal submissions from users, this mechanism does not seem to be an effective influence in shaping the CPA's long-term strategy.
- Despite a public interest component to the governance design of the CPA (e.g., Bank of Canada appointment of chair, ministerial approval of bylaws), the governance structure has in recent years failed to ensure that the infrastructure continues to meet the needs of the payments system and its users.

These observations do not mean to suggest complicity, though they do reflect a lack of commitment on the part of the banks to invest in the very payments system that is responsible for a major part of their revenues and profits. This inattention is further demonstrated by the lack of a senior position within each bank dedicated to payments business and by the relatively junior level of their representatives on the CPA board.¹²

Consequently, the CPA's governance has gradually become an obstacle to pursuing the changes needed to the core infrastructure that will facilitate the next essential steps toward fully digital payments: electronic invoicing and payments and online real-time payments (immediate funds transfer). Despite the development of its long-term strategic plan *Vision 2020*, there are no clear signs so far that the CPA is planning to meet the identified needs.

To address these issues, the Task Force believes that the governance structure of the CPA must be reformed. This requires changes in board membership, size, veto power, expertise and fiduciary responsibility. Arriving at the exact model of governance will require careful consideration, but we think that the broad outlines of what is needed are clear.

Alternative governance models have greatly informed the Task Force's thinking in this regard. In particular, we have been impressed by the approach of NAV CANADA, which operates Canada's civil air

navigation service and provides a number of other services for its customers, including air traffic control, flight information and weather briefings. The unique NAV CANADA governance structure was intended to ensure that no set of stakeholders in the airline industry had control or undue influence over decision making. To achieve this, it relies on a board of directors proven to be free of any conflict of interest (see Annex D2 for details on the NAV CANADA model).

NAV CANADA's mission is also instructive, as it sets out measurable objectives for the organization. For example, one objective requires that it achieve a safety record in the top 10% of major air navigation service providers worldwide. Other objectives require NAV CANADA to maintain the air navigation service in the bottom quartile of all such systems in the world with respect to charges and in the top quartile with respect to operating a modern cost-efficient system. These objectives create a healthy tension between keeping costs down and investing in modern technology, helping ensure that the system does not become obsolete. Adopting such an approach for the payments system would highlight the weaknesses of short-term trade-offs that have been made in the past.

In aligning objectives with the public interest, the mission helps set parameters for decision making. To ensure that it can demonstrate that it is meeting its objectives, NAV CANADA helped create a worldwide organization of air navigation service providers against which to benchmark performance.

The Task Force endorses this model and believes that it is well suited to the CPA and to pursuing the objectives outlined earlier in this paper. Although adopting such a model would effectively remove the voting option from financial institutions on the board of the new CPA, their important voices would not be lost. Like every other business, the new CPA would continue to serve the needs of its financial institution customers, who still dominate the payments system. It is through the customer relationship that financial institutions would engage with the new CPA in a manner specific to their needs as users. At the same time, the model would open the way for other users to express their needs and to influence the development of core infrastructure.

Business models

Profit-maximization for a business is a powerful unifying force when it comes to determining what decisions are in the best short-term interests of its investors. In the case of a not-for-profit organization, the strategic decisions regarding investments needed to develop the organization are more complicated and depend on factors such as whether members are expected to fund the changes, where each stakeholder is in its own funding cycle, and how the investment affects its competitive position in the market and its internal investment decisions.

An alternative business model, currently used by the Federal Reserve Board, is full-cost recapture, which requires that aggregate revenues match costs in the long run.¹³ Under this model, revenues for each service line must cover all relevant operating costs (including the governance costs discussed in *Policy Paper B*), as well as float costs and certain imputed costs such as interest on short- and long-term debt. In addition, the organization must create a reserve for changes in technology or industry structure that require additional investment. This model establishes a more “true” market rate, potentially enabling competing entities, and allows the entity to fund future innovation and ongoing investment. It requires effective governance to monitor investment and overhead levels.

The NAV CANADA model is similar to full-cost recovery. The corporation takes a total cost approach to pricing, based on both operating costs and debt servicing costs. Since there are no shareholders and the organization is not-for-profit, excess revenue, if any, must be either reinvested or used to reduce user fees.

A key challenge for the CPA has been to raise capital from its members to fund changes. Although the CPA does have the capacity to borrow, it has historically funded its activities through membership dues. As noted above, dues and hence voting rights on budgetary matters are calculated on the basis of the member's payment volumes through the CPA. In order for the CPA to gain approval for a strategic capital investment, it must obtain the approval of members whose volumes together represent more than half the total business of the CPA.¹⁴

The Task Force supports the full-cost recapture business model for core infrastructure services, including those provided by the CPA and Interac. The creation of carefully monitored reserves for future innovation and ongoing investment is necessary in today's dynamic payments environment to ensure that the core infrastructure has the resources to keep up with user needs and with systems in other countries. Today, as discussed earlier in this paper, both the small payment system and the online debit system are falling short of users' expectations for information-rich, timely transactions. And the large value system (the LVTS) is unable to carry the information necessary to support electronic processing of accounts receivable and payable.

The Task Force also supports the use of debt funding for substantial infrastructure investments. Under the *Canadian Payments Act*, the CPA is permitted to borrow money and to issue security interests against its assets. Since most of the CPA's activities operate with natural monopolies, a government guarantee should not be required to ensure appropriate access to the debt markets.¹⁵ However, should it prove necessary to expedite the upgrading of core infrastructure to support electronic invoicing and payments, the financial institutions that use the CPA's core infrastructure should be ready to offer pledges of financial support.

Expanding the scope of CPA core infrastructure

As the CPA explained in its submission to the Task Force,¹⁶ much of the infrastructure that the organization manages can be considered core and therefore subject to important public policy considerations. But other systems outside of the CPA that could also fall within our definition of core infrastructure. Specifically, we have in mind debit (Interac/Acxsys) and cheque processing.

To better understand these issues, the Task Force asked the Infrastructure Working Group to examine the circumstances under which it would make sense to include within the scope of the CPA the infrastructure that underpins certain other payments activities. Disregarding ownership considerations for the time being, the Working Group found that the combination made sense for those activities where there was limited opportunity for competitive differentiation.

Academic research supports this assertion:

Effective competition guarantees that prices are set at such a level that efficiency is promoted, but in markets characterized by large returns to scale and strong network effects, it may be too costly to have more than one firm operating. In such markets, known as natural monopolies, technical efficiency is best achieved by a single firm. More generally, a given market may be too small to support enough firms to guarantee efficient competition.¹⁷

The Task Force believes that realizing scale efficiencies by combining commodity services will generally create greater overall economic benefits than maintaining existing separate services or creating new ones. Small payments clearing and settlement (through the ACSS), debit (through Interac/Acxsys) and cheque processing fit in this category.

The Task Force recognized that the entities that carry out these functions (notably, Interac, Symcor, INTRIA, Central 1, and the Desjardins Group) are privately owned. Consequently, the questions raised here about the possibilities and merits of coordinating or consolidating the functions are directed not at government but at industry. Our advice to the government is that it take the necessary legislative action to permit the new CPA to expand its scope in this way. Our advice to the industry is that it take advantage of such a change to consolidate the core infrastructure it will need to develop the digital payments system of the future, thereby benefiting consumers, businesses and governments, as well as the payments industry itself.

The two candidates for incorporation into an expanded new CPA—debit (Interac/Acxsys) and cheque processing—are very different in some respects.

Debit (Interac/Acxsys)

Most Canadians are familiar with their domestic low-cost debit system, Interac. The service, which facilitates payments directly from our bank accounts, is envied around the world and is considered a national asset by many international experts. As cash and cheques become less important in the payments landscape, it is reassuring to know that Canadians still enjoy access to low-cost debit payments.

A key reason for the efficiency of Interac debit is the effect of a Consent Order issued by the Competition Tribunal that made Interac's core point-of-sale and shared ABM services a not-for-profit business. However, the current definition of "non-profit" under the Consent Order, which has in part kept this payment service low-cost, has also, in the view of Interac, restricted its ability to develop new products and services. Interac has argued that the order has contributed to governance, ownership and investment challenges that have stood in the way of progress and has therefore sought to have the order lifted. The view of the Task Force is that if debit is a service deemed fundamental to Canadians, then a better approach would be to include it as part of the core infrastructure managed by the new CPA.

One reason for this concerns the issue of competition. The Consent Order seeks to impose constraints on Interac because of its dominance in point-of-sale debit and cash-dispensing services. If competition issues were the only concern about Interac, then it might suffice to leave constraints up to competition law. However, experience in other jurisdictions (see *Credit and Debit Card Markets*) suggests that

competition from private networks can, in such special cases, dramatically and paradoxically *increase* the cost to merchants, likely eroding the advantage that Canadians enjoy in debit today. The reason is that debit service providers may compete among themselves to attract customers through loyalty schemes and premiums, paid for through charges to the merchant.

Competition is not the only concern. In fact, the Task Force believes that ensuring a low-cost payment alternative for Canadians should be a policy priority. In this way, the core infrastructure entity would be more likely to meet the policy objectives of trust, access and good value, as set out in *Policy Paper A: Users and their Discontent*. Since many of the new entrants into the payments industry are global technology companies, none of which is based in Canada, it is important from a public policy perspective to preserve a low-cost, *domestic* payments option.

A new CPA would be a suitable vehicle for providing low-cost account-to-account debit payments both for individual Canadians and for businesses. Not only would it address competition issues by essentially maintaining the not-for-profit element that keeps the operation cost-effective, but also the public policy objectives would resolve the governance challenges currently faced by the organization.

Other benefits are equally compelling. For example, by including debit—a service used by millions of Canadians every day—as part of a unified approach to core infrastructure, the payments industry could begin developing a single small payments platform, rather than operating separate services potentially at cross-purposes. Product development could be managed across delivery channels, and the evolution of services over time would be done with a specific goal in mind, such as enabling immediate funds transfer.

This kind of evolution is impossible under the current regime because it implies the demise of our existing system and its provider, something that no organization would welcome. The migration to an IFT system, however, would include an account-to-account debit system that is fully online and that features automated reporting and risk mitigation processes. If the debit system became part of a broader infrastructure entity—the new CPA—the necessary vision to pursue these changes would be far more attainable.

Any such idea that involves privately owned assets cannot be taken easily or lightly. Absorbing an existing entity, even one that is, by definition, not for profit, would impact its operational capacity. Difficult decisions would need to be taken regarding whether the associated for-profit entity should be included in any transfer and regarding what would constitute fair compensation for the acquisition of assets. However, the public policy imperative is paramount in this case. Canada is critically dependent on the continued availability of a modern and efficient debit function that is integrated into the payments system.

Cheque processing

Cheque processing in Canada is not very efficient. There are still 30 cheque-processing centres in Canada compared with two (soon to be one) in the United States. Cheque imaging has not been fully implemented in this country, meaning that cheque clearing still requires the physical movement of paper. Not only is this expensive, but it can also affect the acceptance of our payments by some of our trading partners, who no longer have the ability to process paper cheques. This is already becoming a problem for some Canadian businesses in their financial dealings with U.S. firms.

Also, as Canada implements electronic invoicing and payments (see *Going Digital*, Chapter 3) the volume of cheques will decline dramatically, likely to a threshold below which processing would become prohibitively expensive. It may seem counterintuitive that a report that has consistently welcomed the decline of cheques as being in the public interest would now propose that cheques be included within the scope of core infrastructure, but it is our view that doing so would hasten the decline of cheques and ease the transition to new payments systems.

Even a natural decline of cheques requires careful examination of the needs of consumers. The transition must be managed; alternatives must be readily available; and no segment of Canadian society should be unduly disadvantaged as digital systems replace the paper cheques that are still relied upon by many segments, especially small and medium enterprises.

Including cheque processing within the core infrastructure services managed by the new CPA implies combining the cheque-processing activities of Symcor, INTRIA, the Desjardins Group and Central 1 into a single service that would perform the role of a utility. The economic rationale for this is compelling. By using cheque-replacement documents (images of cheques),¹⁸ consolidating cheque-processing sites and eliminating redundant networks, the industry estimates that it could reduce costs by more than \$1 billion between now and 2020.

Including cheques within core infrastructure will allow for a coordinated approach to the transition to digital payments. It will foster the creation of industry standards and encourage optimal infrastructure deployment so that the tools that will replace cheques will be in place long before the last cheque is written.

The required investments to that end would be shared, rather than be solely the responsibility of a few. Any benefits from efficiencies gained as a result of cheque reduction could be shared or redirected to new product development, making it possible to ensure that alternatives to cheques are at least as easy to use, convenient and popular as the paper they replace.

Although it would increase the challenges of managing the new CPA substantially, the inclusion of cheque processing, like the integration of the debit function, would minimize the “self-preservation” dynamic and allow for a consistent (and potentially rapid) implementation of a transformation scenario. The merger within a single entity, the new CPA, of clearing and settlement functions with cheque exchange and the debit network would facilitate faster clearing and settlement of transactions and help bring about the relatively seamless transformation of Canada’s lagging small payments infrastructure.

Reinventing the CPA

Based on our discussions with management and payments system suppliers, the Task Force believes that good governance, proactive strategy and effective execution would allow Canada to make its small payments infrastructure one of the best in the world in less than two years. This time frame is necessary for the federal and provincial governments to take advantage of the attrition stemming from the retirement of baby boomers by automating service delivery through electronic invoicing and payments and related initiatives. Meeting this target is something the Task Force considers impossible under current arrangements for the provision of core infrastructure.

The time has come to recognize that Canada can only support one core infrastructure entity. The various current players are performing what is essentially the same function—putting payments tools into the hands of users—but they are doing so with no common purpose or vision.

Whatever specific option ultimately emerges, a single vision will be required to bring Canada’s payments infrastructure into the digital payments age. The aim must be to create a coordinated and coherent payments system that avoids much of the friction that exists today as a result of the misalignment of ownership, governance, business models and scope.

Accordingly, to support the potential movement of assets to core infrastructure going forward, the new CPA should be given explicit authority to acquire payments systems and networks in order to manage those entities as part of a coherent overall strategy for the operation and development of Canada’s core payments infrastructure.¹⁹

Recommendations

To achieve the results outlined above, the Task Force recommends that the government proceed on two tracks in parallel: launching the process of legislative change for the longer term, while taking immediate action to begin the work of planning and development.

A. Legislative change

We recommend that the government launch the necessary actions to amend the *Canadian Payments Act* in the following ways:

1. Strengthen the governance of the CPA in accordance with generally accepted best practices by:
 - Creating a small (nine-person), independent board made up of senior executives with the ability to set and implement a holistic strategy;
 - Making the CPA subject to oversight by the new public oversight body (POB) for payment systems, but enabling the POB to delegate its authority to the board (see *Policy Paper C*); and
 - Removing the requirement for ministerial approval/disapproval of the bylaws and rules of the CPA.
2. Amend the objects of the CPA to include, in addition to efficiency, safety and soundness, the following:
 - **Access:** To ensure that systems are accessible to those meeting objective and transparent minimum criteria;
 - **Interoperability:** To ensure that Canadian payments systems can interact domestically and globally; and
 - **Support for government policy and operating objectives:** To support government initiatives in areas such as electronic invoicing and mobile payments and to reinforce its economic and financial stewardship.

3. Require the CPA to establish and implement measurable objectives to ensure that the organization is fulfilling its mandate and meeting its objectives. These objectives would not be specified in the legislation, but they could include criteria such as the following:
 - Maintain reliable clearing and settlement systems with availability above 99.5%;
 - Maintain clearing and settlement charges, on average, in the bottom quartile of major clearing and settlement systems worldwide;
 - Implement and maintain a modern, cost-efficient clearing and settlement technology platform in the top quartile of such systems in the world;
 - Ensure that growth in costs does not exceed growth in volume, thereby achieving a decline in per-payment charges over the long term; and
 - Create a productive and fulfilling workplace environment that places the CPA among the best employers in Canada.
4. Ensure that the scope of allowable activities of the new CPA is broadly defined and gives the CPA flexibility to acquire and divest related businesses such as debit/credit card networks and cheque-processing services to enable it to play an effective role in managing the transition from paper to digital payments.
5. Allow the new CPA to charge transaction fees based on full-cost recovery, including all operating and float costs, funding costs and a reserve for system maintenance and research and development. Transaction fees would replace membership dues.
 - The CPA would not necessarily have a monopoly over clearing systems, other than its natural monopoly, the Large Value Transfer system (LVTS). On those services with competitors, the transaction fees would also include imputed taxes and return on invested capital.²⁰
6. Remove the 0.5% volume and other eligibility requirements for becoming a direct clearer and give corporations access to the small value transaction system (ACSS or its replacements) to send payments through the sponsorship of a direct clearer.
 - The new CPA should be encouraged to replace the ACSS as soon as possible with a multilateral (hub-and-spoke) small value transaction system (SVTS) to reduce the cost and complexity for companies seeking direct connectivity. In addition, the CPA should work with the Department of Finance and the Bank of Canada to establish transparent and objective minimum criteria for new entrants to become direct clearers.

B. Immediate action

Recognizing that legislative changes take a considerable amount of time to complete, the Task Force proposes that action be launched immediately to begin working toward the development and implementation of a modern payments system for Canada. Specifically, we recommend that:

The Minister of Finance request the six large banks, together with Central 1 and the Desjardins Group, to work together with the CPA, Interac/Acxsys, Symcor and INTRIA to develop, by April 2012, a plan to do the following:

- Upgrade the LVTS technology to capture the necessary remittance information to facilitate electronic invoicing and payments, and integrate the debit network and cheque processing into the technology platform;
- Replace the ACSS with a multilateral (hub-and-spoke) small value transaction system (SVTS) that can be accessed through a single application using a hub-and-spoke model. This system must provide sufficient remittance information for electronic invoicing and payments, facilitate credit push, be open and easily accessible to payments providers (including corporations) that meet objective and transparent minimum criteria; and
- Create a unified small payments platform that includes the CPA's small payments system; Interac Inc.; and the cheque-processing activities of Symcor, INTRIA, Central 1 and the Desjardins Group.

This plan would constitute the first draft of a technology and implementation roadmap, the ultimate goal of which would be to convert the entire the SVTS and LVTS into an information-rich IFT system by 2020. Once amendments to the Act have been completed and the new CPA governance framework is in place, there should be a smooth transition to the new regime allowing the work to continue on a firmer foundation with the engagement of a broader range of stakeholders.

This timely action is required to support the implementation of electronic invoicing and payments on the timeline discussed with the federal government's working group composed of the Office of the Comptroller General, the Chief Information Officer and the Assistant Deputy Minister of Public Works and Government Services.

Conclusion

The Task Force has laid out an ambitious plan for revamping the governance, powers, business and funding model of the CPA in view of its role in managing the core infrastructure of Canada's payments system. The need to make the changes is urgent, given the challenges facing our payments system.

These changes include filling the gaps in our payments offerings, such as the lack of information-rich remittance functionality relating to payments; removing barriers to accessing the payments infrastructure faced by new entrants; and laying the foundation for IFT in the future. The faster these changes are undertaken, the sooner Canadians will benefit from the transformation of our payments infrastructure to support digital payments.

The Task Force is by no means suggesting that government control should supersede the judgment and the collective strengths of industry in relation to the payments system's evolution. Rather, it remains incumbent upon governments to act in the interests of all Canadians when the system does not meet the key objectives of trust, access and good value.

Core infrastructure relates to the critical role that payments play in our economy. Having the fate of our critical infrastructure driven by the interests of a narrow set of stakeholders creates the potential for our payments system as a whole to fall short of meeting our broader public interest objectives. As the Task Force has pointed out repeatedly in its papers, the implications of such an outcome are profound.

Annex D1: The payments infrastructure

Canada's payments system operates on infrastructure that is owned and operated by various entities. The principal functions include clearing and settlement and paper-cheque processing.

Clearing and settlement

Clearing and settlement are crucial to how consumers, merchants, businesses and governments pay each other, because these functions determine how funds in forms other than cash flow between financial institutions (cash payments are obviously instantaneous and do not need them).

In the case of non-cash payments, the mechanism is fairly complex. First, the paying entity must choose the payment instrument (direct debit, credit card, cheque, online bill payment, etc.). Second, the paying entity must provide proof of authority to use the payment instrument (PIN, signature or photo ID).²¹ Third, there must be confirmation that sufficient funds are available to make the payment (for cheques, there must be trust that funds are available or that the writer can be found if the cheque is denied). Fourth, the account of the payer must be debited, and the account of the payee credited.

The time required for the first three steps is fairly short (in most cases seconds or, for cheques, days), but the actual transfer of funds may take substantially longer.

To complete the process, clearing and settlement are required for the funds to move from the institution that issued the payment instrument to the institution that accepted it. Ultimately, there must be confirmation that the transfer has indeed taken place.

Clearing

The Bank for International Settlements defines *clearing* as follows:

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.

There are currently a number of proprietary clearing systems in Canada (e.g., Visa, MasterCard) and one national system, the Automated Clearing Settlement System (ACSS).²² These systems process millions of payment items every day and establish the financial position of the institutions that participate.

The ACSS clears a number of different types of payment instruments daily including the following:

- Paper-based payment instruments such as cheques, travellers' cheques and paper bill payments; and
- Non-paper-based payment instruments such as pre-authorized debits, direct deposits, point-of-sale direct debits, and online debits.

The ACSS is a tiered system in which direct clearers access the system on their own behalf and on behalf of indirect clearers. It is a batch system in that direct clearers enter aggregate bilateral volume and the value of payment instruments and the system settles net multilateral positions the next day, with each direct clearer settlement position being netted and settled the following morning.

In order to gain direct access to the ACSS, direct clearers must have established and maintain a settlement account, as well as a loan facility, with the Bank of Canada. They must also have a payment items volume of no less than 0.5% of the total national volume, and they must meet certain technical and financial requirements.

The ACSS was first introduced in 1984 to replace the previous non-computerized system for bilateral clearing and manual calculation of multilateral positions. Since then, the system has undergone many minor changes to adapt to new payment instruments, such as point-of-sale direct debit. Technological investments, however, have been limited. The introduction of the Canadian Payments Association Services Network (CSN) as a means to transfer ACSS payments data allowed for discontinuation of the use of tapes for data transfer.

The ACSS is eligible for review by the Bank of Canada under the *Payment Clearing and Settlement Act* but has not been designated as subject to the Act.

Settlement

The Bank for International Settlements defines a *settlement* as follows:

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

Although clearing can be done by proprietary networks, settlement can only be accomplished in Canada through the Large Value Transfer System (LVTS) or by adjusting the balances of involved parties. The latter can be done by a financial institution adjusting the settlement accounts of involved parties or through settlement accounts at the Bank of Canada. For instance, systems that have been designated by the Bank of Canada and that are therefore subject to the *Payment Clearing and Settlement Act* must settle through the LVTS.²³ The settlement of LVTS positions is done by adjusting the settlement balances of the direct participants' settlement accounts held at the Bank of Canada.²⁴

Likewise, settlement of ACSS positions is done by adjusting the balances in the direct clearers' settlement accounts at the Bank of Canada. Overnight ACSS settlement balances are repaid (principal and interest) through the LVTS. Indirect clearers settle with the direct clearer they use to access the ACSS.

The LVTS was launched in February 1999 and is the large value system used by financial institutions to settle their financial obligations, as well as those of their clients. The LVTS is a multilateral net settlement system that offers intraday finality through the collateralization and legal settlement guarantee provided by the Bank of Canada.

The LVTS was developed to deal with large value and/or time-sensitive payments. This requires that it not only be reliable and have robust, built-in risk-management, but also that it provide immediate finality and irrevocability. The Bank of Canada, the International Monetary Fund and the Canadian Payments Association (CPA) have all assessed the LVTS against the core principles of the Committee on Payment and Settlement Systems²⁵ and found it to be in full compliance with (and even exceeding) the requirements for all ten core principles.

The LVTS can only be accessed by direct participants or by the Bank of Canada. Indirect participants settle their position through a direct participant.

Direct participants must maintain a settlement account with the Bank of Canada. They must abide by any agreements with the Bank of Canada governing the settlement of the multilateral net position, the provision by the Bank of Canada of advances for LVTS, and the pledging of collateral to secure those advances, as well as any other requirements of the Bank of Canada. The direct participants must also meet the technical requirements of the CPA and pay an admission fee. In addition, they may have to pay a share of the system development and operating costs.

Processing of paper cheques

When a cheque is deposited, it must go through a series of steps to be cleared and settled. A deposited cheque is sent to the regional processing centre of the accepting financial institution, where it is associated with the financial institution on which it was drawn—this is often referred to as the clearing stage. Once cleared, the cheque is sent to the branch holding the account from which the funds are drawn; this is to confirm that there are sufficient funds to cover the amount of the cheque.

Over the years, changes have been made in cheque processing in other countries, such as the U.S. Cheque imaging, for example, uses a digital image rather than the paper cheque itself, allowing the transmission to take place electronically rather than physically. Cheque imaging, however, is not expected to be implemented in Canada for two years or more.

Many financial institutions have outsourced cheque processing to payment service providers, while others have opted to keep the function in-house. The industry has responded to the declining reliance on cheques by consolidating and diversifying services and by rationalizing paper processing. For instance, in addition to cheque clearing, paper processing companies may also offer bill presentment services, automated banking machine envelope processing, etc. As cheque volumes decrease, and especially as the transition to electronic invoices and payments proceeds, the business model used for cheque processing will require changes and may ultimately disappear.

Owners and operators of infrastructure

Different parts of the infrastructure are owned and operated by different entities. The national clearing and settlement systems (ACSS, CSN and LVTS) are owned and operated by the CPA. The CPA was created by an Act of Parliament, which also set its governance framework. The CPA board's decision-making process is controlled by the incumbent financial institutions. Those institutions and the other members also bear the initial and ongoing financial burden of any upgrades to the systems' infrastructure.

Box D5: Canadian Payments Association members and their voices

Certain financial institutions are required, under the *Canadian Payments Act*, to be members of the Canadian Payments Association (CPA): the Bank of Canada, domestic banks and authorized foreign banks.

Others eligible for membership include credit union centrals, caisses populaires, trust companies, loan companies, other deposit-taking financial institutions and life insurance companies, as well as investment dealers and money market mutual funds that meet pre-established requirements.

The current active members of the CPA include the following:

- 58 banks (including the Bank of Canada),
- 13 centrals and cooperative credit associations,
- 26 trust and loan companies,
- 1 securities dealer, and
- 12 other financial institutions.

The board of the CPA has 16 members. The chair is an official appointed by the Bank of Canada, and the Minister of Finance appoints three members.

The remaining seats are elected by the banks (six members), the centrals (two members) and the other membership classes (four members). Most of the current elected members are at the vice-president or senior vice-president level except for those from smaller organizations, who are generally chief executive officers.

The Interac Association owns and operates the infrastructure used to connect accounts held at different deposit-taking financial institutions. It processes various products of both the Interac Association and the related Acxsys Corporation. As discussed in the next section, the Interac Association operates as a non-profit entity on a cost-recovery basis, while Acxsys provides management services to the Interac Association and operates as a for-profit entity.

Cheque processing may be done in-house or it may be outsourced to firms such as Symcor or INTRIA, which are also owned by large Canadian financial institutions (see details at end of this annex). Since most cheques are cleared and settled through the ACSS, however, work on changes to the rules and procedures for cheque processing takes place under the CPA umbrella.

In 2003, the CPA launched the Truncation and Electronic Cheque Presentment (TECP) project. The aim of the project was to allow financial institutions to transmit images of cheques and other paper items rather than transporting physical copies. The TECP achieved significant progress, including obtaining changes to the *Bills of Exchange Act* that gave official images the same status as the paper items themselves. However, in 2008, the board of the CPA cancelled the project as “. . . it became clear that the enhancements to efficiency that had been originally anticipated would not be fully realized due to implementation delays and the ongoing evolution of the marketplace towards electronic payments.”²⁶

The CPA, however, continued to implement standards for “image-friendly” cheques. In 2010 a new Rule and Standard was issued to support provisions in the *Bills of Exchange Act* and to leverage recent investments in image technology by CPA member financial institutions.²⁷

Today, financial institutions offer cheque imaging services to their clients through online banking, but clearing of cheques and other paper items continues to be done through the exchange of physical cheques.

Interac

Interac is a payment system that is operated by two entities, the Interac Association, an unincorporated not-for-profit association, and Acxsys, a for-profit organization. A third entity, Interac Inc., owns the Interac trademarks.

Interac originated in 1984, when five major Visa-issuing financial institutions formed a cooperative venture to link together their automated banking machine (ABM) networks.²⁸ By the end of 1985, the four largest MasterCard-issuing financial institutions had also joined the association. In the early 1990s, Interac launched Interac Debit as a pilot project, allowing customers to use their bank or convenience card for point-of-sale purchases. By 1994, Interac Debit was available nationwide.

The Competition Bureau began its examination of the Interac Association and Interac Inc. in 1990. This was followed by an inquiry in July 1992 into allegations that Interac had engaged in anti-competitive acts, specifically, restricting access to the network, creating barriers to product innovation, and controlling access and service pricing. In 1996, after an extensive public hearing, the Competition Tribunal approved a Consent Order that remains in force today with only minor changes.²⁹ Among other things, the Consent Order did the following:

- Expanded the list of eligible Interac Association members. The bylaws were amended to allow any commercial entity to become a member, as long as it was capable of providing services related to Interac’s debit networks. This resulted in the Interac membership expanding from 27 at the time of the Consent Order to 56 at present. As of 2002, it was required that a card issuer be a regulated financial institution.
- Implemented a new governance structure for the Interac Association. Prior to the Consent Order, only the charter members, the large financial institutions that are directly connected to Interac’s network, could vote on matters of significance. The Consent Order transferred some decision-making power to other Interac members. It established a board with no fewer than 14 members, with a minimum of 2 appointed by non-financial institutions that are directly connected to Interac’s network and 3 by members that are not directly connected. Decisions involving fundamental change require a two-thirds majority. Decisions related to network enhancements, new services and interchange fees are subject to a simple majority vote.
- Required the Interac Association to set its prices on a cost-recovery basis. The Consent Order mandates that all Interac Association revenues be derived from a switch fee, a fee charged on a per-message basis to users of Interac’s network which reflects the cost of delivering the service and developing the network. The Consent Order also requires Interac Inc. to continue to operate on a not-for-profit basis. However, the Consent Order did not restrict the ability of the Interac Association to set the level of the interchange fee. That fee is currently set at zero.

- Allowed merchants to impose a surcharge on Interac debit transactions. Prior to the Consent Order, surcharging was prohibited.

According to the Competition Bureau, the purpose of the Consent Order was “to open access to the network to create an environment that [is] conducive to the introduction of new services.”

As a result of the restrictions in the Consent Order, in 1996 the nine charter members of the Interac Association, who were also the shareholders of Interac Inc., founded Acxsys Corporation, a for-profit organization, to provide management services for the Interac Association and to specialize in the development and operation of new payment service opportunities. The President and CEO of Acxsys is also the President and CEO of the Interac Association. Acxsys’s current businesses include the operation of the Interac e-Transfer service, the Interac Online service, and Cross Border Debit. The latter is offered through a partnership with NYCE Corporation, one of the leading debit networks in the United States. Interac Association’s businesses have been limited to those it had prior to the Consent Order: Interac Cash service, the network that links the members’ ABMs; and Interac Debit, which handles point-of-sale debit transactions.

In early 2009, concerned about the entry of MasterCard and Visa into the debit card market, the Interac Association applied to the Competition Bureau for support to convert itself from a not-for-profit association to a for-profit organization.

In its presentation to the Senate Standing Committee on Banking, Trade and Commerce, Interac management indicated that it was a proponent of competition in a free market, but only if Interac were allowed to compete on a level playing field. This, they said, required changing the Interac Association to a for-profit company. Interac management described the governance structure as dysfunctional, shackling the organization’s ability to make the kind of investments and pricing decisions that were needed to compete effectively with well-financed and experienced competitors such as Visa and MasterCard. They said that if the Interac Association became a for-profit entity, it would compete with Visa and MasterCard by taking advantage of its wide merchant acceptance and by promoting itself as a low-cost provider with flat fee-based pricing.

Merchants expressed concern, however, that a for-profit Interac Association would charge higher fees and be vulnerable to takeover by the international credit card networks.

In February 2010, the Competition Bureau denied the Interac Association’s application. It indicated that “based on currently available information, including Interac’s current dominant position in the market, the Bureau cannot support changing or removing the safeguards in the Consent Order, which are effective in protecting consumers from potentially anti-competitive activity.” However, the Bureau indicated that it was prepared to accept some changes to the board structure, such as independent directors.

Processing service organizations

Symcor³⁰

Symcor was created in 1996 as a privately held joint venture between TD Bank Financial Group, RBC Financial Group, and BMO financial group. It is one of Canada's leading financial processing services providers, supporting major banks, retail and telecommunications companies in Canada. It provides the following services:

- Item processing services, including cheque processing, exceptions and returns services and image delivery services;
- Cash management services, including lockboxes; and
- Integrated statement services, including print and electronic solutions.

Symcor processes over 1.4 billion cheques per year³¹ (over 70% of Canada's cheque processing business).

INTRIA³²

INTRIA was created in 1996 as a joint venture between CIBC and Fiserv. Since 2005, it has been a wholly owned subsidiary of CIBC. It is a Canadian leader in payment and business information processing. INTRIA serves a wide range of clients in the financial, utility and retail sectors. Its main business lines are as follows:

- Currency and treasury-management services, including processing of ABM envelopes and commercial deposits, treasury processing, and ABM cash forecasting and reconciliation;
- Remittance services; and
- Cheque services.

INTRIA annually processes approximately 472 million cheques, 52 million payments, 6 billion bank notes and 104 million ABM deposit envelopes.

Annex D2: NAV CANADA³³

NAVCANADA was created in 1995 under Part II of the *Canada Corporations Act* as a private sector, non-share capital corporation financed through publicly traded debt.

In 1996, ownership and operation of Canada's air navigation service (ANS) was transferred to NAV CANADA from Transport Canada. NAV CANADA also provides other services for its customers: air traffic control, flight information, weather briefings, airport advisory services, aeronautical information services and electronic aids to navigation. The creation of NAV CANADA represented the first time that the responsibility for civil air navigation had been shifted from government to the private sector.

In 1999, NAV CANADA issued marketable bonds to repay the bank loans it had taken to finance the purchase of assets from the federal government. NAV CANADA is now 100% debt financed and has an AA credit rating. Its debt is secured through the value of its revenue stream, given its monopoly over the ANS, rather than through its assets.

The *Civil Air Navigation Services Commercialization Act* (ANS Act) outlines the roles and responsibilities of NAV CANADA. Under the ANS Act, NAV CANADA:

- Can charge for availability or provisions of services;
- Can set charges upon approval by its board of directors, provided such charges are in accordance with the charging principles set out in the *ANS Act* (see below);
- Can implement charges that cover all costs, fund reserves and ensure credit quality;
- Can collect user charges from the owner and/or operator of an aircraft;
- Can seize an aircraft, upon application to court, for overdue user charges;
- Must provide the same services at the same charges in both the densely populated southern and the sparsely populated northern regions of the country.

NAV CANADA has a legislated but non-regulated monopoly over the ANS. Its not-for-profit status means that it takes a total-cost approach to pricing, based on both operating costs and debt servicing costs. A rate stabilization account is used as a buffer to variations in costs and revenues. Since there are no shareholders, excess revenue, if any, must be either reinvested or used to reduce user fees.

The *ANS Act* provides principles with respect to the levying of fees. These principles are based upon International Civil Aviation Organization guidelines and must be met by NAV CANADA. Specifically, under the *ANS Act*, user charges must:

- Be in accordance with an established and published methodology;
- Not encourage unsafe practices;
- Not differentiate between domestic and international flights;
- Not differentiate between Canadian air carriers or among foreign air carriers;
- Differentiate between terminal services (i.e., landing/take-offs) and enroute services;

- Reflect a reasonable allocation of costs between terminal and enroute services;
- Not be unreasonable or undue for recreational aircraft;
- Not be higher for services provided in Northern Canada as opposed to Southern Canada;
- Be consistent with international obligations of the Government of Canada;
- Not be higher than what is required to meet the company's current and future financial requirements, including an allowance for prudent reserves and maintenance of strong credit ratings.

NAV CANADA is governed by a 15-member board; 10 of the members are appointed by the four stakeholder groups: commercial air carriers (4 directors); general aviation (1 director); federal government (3 directors); and unions (2 directors). These directors then elect 4 directors independent from the aviation industry. Finally, the 14 directors appoint the president and CEO, who serves as the 15th member of the board.

This structure ensures that the interests of individual stakeholders do not predominate and that no member group can exert undue influence over the board.

NAV CAN has earned three International Air Transport Association Eagle Awards for the world's best air navigation service provider.

Box D2: NAV CANADA's mission

NAV CANADA facilitates the safe movement of aircraft efficiently and cost-effectively, through the provision of air navigation services (ANS) on a long-term, sustainable basis. The Company will achieve this mission by:

- Maintaining a safety record in the top decile of major ANS providers worldwide;
- Maintaining ANS customer service charges, on average, in the bottom quartile (lowest charges) of major air navigation service providers worldwide;
- Implementing and maintaining a modern, cost-efficient ANS technology platform in the top quartile of major ANS providers worldwide;
- Ensuring that the growth in costs of providing air navigation services does not exceed the growth in charging units, thereby resulting in a decline in customer service charges over the long term;
- Creating a productive and fulfilling workplace environment which places NAV CANADA amongst the best employers in Canada; and
- Identifying and, where feasible, introducing measurable benefits which contribute to the reduction of the environmental footprint of the aviation industry.

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Notes

¹ Central bankers distinguish “systemically important infrastructure” from “critical infrastructure.” With systemically important infrastructure, they are concerned narrowly about the impact that the failure of a payments system would have on the financial system as a whole. With critical infrastructure, they are concerned about the disruption that the failure of a critically important system would cause to the overall economy. The Task Force believes that both systemically important and critical infrastructure should be included in core infrastructure.

² Interac is a prime example of a critical system. The issuance of the Consent Order by the Competition Bureau in 1996 and the restriction on co-badging under the *Code of Conduct for the Credit and Debit Card Industry in Canada*, issued by the Minister of Finance in 2010, are discussed in more detail in the Task Force discussion paper *Credit and Debit Card Markets*.

³ James F. Dingle, *Planning an Evolution: The Story of the Canadian Payments Association, 1980-2002*.

⁴ Two of many examples worldwide:

- 1) The Reserve Bank of Australia (RBA) has explicit responsibility for regulating payments systems in Australia. The RBA owns and operates Australia’s real-time gross settlement system known as RITS, the Reserve Bank Information and Transfer System. Australia’s clearing systems are administered by the Australian Payments Clearing Association, a limited liability company. (Source: Bank for International Settlements, Committee on Payment and Settlement Systems. 2011. *Payment, Clearing and Settlement Systems in the CPSS Countries*, Volume 1. CPSS Publication No. 97. September. Available at: <http://www.bis.org/publ/cpss97.pdf>.)
- 2) The U.S. Federal Reserve Banks also operate a number of systems, including an automated clearing house and a real-time gross settlement system; they also offer cheque-collection services to deposit-taking institutions. The Federal Reserve is the prudential supervisor of a number of payments, clearing and settlement arrangements.

⁵ Bank of Canada website: <http://www.bankofcanada.ca/financial-system/payments/general-information>.

⁶ The Task Force paper *Going Digital* describes in detail the hurdles Canada faces in making headway in electronic invoicing and payments, mobile payments, and digital identification and authentication.

⁷ *Canadian Payments Act*, subsection 5(2): “In pursuing its objects, the Association shall promote the efficiency, safety and soundness of its clearing and settlement systems and take into account the interests of users.”

⁸ Two large retailers in Australia self-acquire a large portion of their electronic funds transfer (EFT) and point-of-sale (POS) transactions and also have direct access to the Consumer Electronic Clearing System, the system that clears automated banking machine and EFT/POS transactions in Australia. (Source: Bank for International Settlements, Committee on Payment and Settlement Systems. 2011. *Payment, Clearing and Settlement Systems in the CPSS Countries*, Volume 1. CPSS Publication No. 97. September. Available at: <http://www.bis.org/publ/cpss97.pdf>.) This access is typically sponsored by a regulated financial institution, but direct connectivity ensures a more efficient processing of payment items by retailers. Current legislation, including membership restrictions for the CPA, would not permit this in Canada.

⁹ See Katy Jacob and Kirstin E. Wells, “Evaluating the Potential of Immediate Funds Transfer for General-Purpose Payments in the United States,” *Chicago Fed Letter*, November 2011.

¹⁰ Some countries have already begun this important work. Mexico, the United Kingdom and Switzerland have been actively pursuing an IFT system for retail payments that would render payments virtually instantaneous, much like sending a text message or an email.

¹¹ The CPA currently has 16 board members and 13 alternates, far in excess of the number generally recommended for corporate governance best practices. Until very recently, most of the board members were at the vice-president level in the large banks and therefore several layers down from the chief executive officer, who is currently the only person who can speak on behalf of a bank for its entire payments business, given the way most banks are structured.

¹² In the United States, the board of The Clearing House is made up of the CEOs of the 20 largest banks.

¹³ Board of Governors of the Federal Reserve System, *Federal Reserve's Key Policies for the Provision of Financial Services*. Issued 1984, revised 1990.

¹⁴ As discussed in *Policy Paper B: Governance—Stakeholders and their Disconnect*, the CPA's share of the governance costs for the payments system, both the public oversight body and the self-governing organization, would be included in its operating costs.

¹⁵ See the NAV CANADA model, as described in Annex D2.

¹⁶ Canadian Payments Association submission, Summer 2011

¹⁷ Bergman, Mats A. 2003. "Payment System Efficiency and Pro-Competitive Regulation." *Economic Review*, Issue 4.

¹⁸ The Task Force supports the use of cheque-replacement documents to achieve efficiencies in cheque processing without entrenching cheques as a digital payment alternative.

¹⁹ This restructuring could also benefit financial institutions, because they would be able to invest the compensation from these assets in new products and services and be relieved of the burden of managing disparate impeded entities.

²⁰ Without a mandated monopoly, it might be challenging for the CPA to fund the up-front investments (currently estimated at \$200 million to \$500 million) necessary to replace the small value payments system, upgrade the large value payments system and begin building an immediate funds transfer system for the future. Should it be unable to provide the necessary funding, the CPA should seek volume commitments from the industry to support its request for funding from the capital markets.

²¹ Some payment instruments (e.g., prepaid cards) do not require proof of identity.

²² The CPA Services Network is used by the ACSS to transmit payments information.

²³ Specifically, through the CDSX system of the Canadian Depository for Securities (CDS) and the Continuous Linked Settlement (CLS) Bank, an initiative of the international banking industry for settlement of foreign exchange transactions.

²⁴ Direct participants with a net long position in LVTS will have an overnight deposit at the Bank of Canada. Direct participants with a net short position in LVTS will take an overnight loan from the Bank of Canada.

²⁵ The Committee on Payment and Settlement Systems is a committee of the Bank for International Settlements. For more details, see Goodlet C., "Core Principles for Systemically Important Payments Systems and Their Application in Canada," *Bank of Canada Review* (Spring 2001); and International Monetary Fund, *Report on the Observance of Standards and Codes (ROSC) Canada* (June 2000) and Canadian Payments Association, *Compliance of the CPA's LVTS With the Core Principles for Systemically Important Payment Systems* (2008).

²⁶ Canadian Payments Association, *Annual Review* (2008).

²⁷ "CPA Implements New Images of Cheques Rule and Image Security Standard," June 1, 2010.

http://www.cdnpay.ca/imis15/eng/res/ns/image_rule_security_standard.aspx

²⁸ The only other ABM network in Canada is The Exchange. A much smaller network, it connects some 2,300 ABMS compared with almost 60,000 for Interac. Some of the smaller banks and almost all credit unions are members of The Exchange. There is no interchange fee on The Exchange but on Interac, the issuer pays the ABM operator (or acquirer) \$0.75 for each transaction.

²⁹ A Consent Order in this instance refers to a remedy to abuse of dominance negotiated between the Competition Bureau and nine charter members of the Interac Association and Interac Inc. and subsequently approved by the Competition Tribunal. The Consent Order was replaced with a Consent Agreement in 2002.

³⁰ Based on information found on Symcor's website: www.symcor.com.

³¹ The industry recognizes both the receipt and the exchange of a cheque as a transaction, so there are twice as many processes as cheques in the system.

³² Based on information found on INTRIA's website: www.intriatitemsinc.com

³³ NAV CANADA website: <http://www.navcanada.ca/>