Discussion Paper 3

Access to Payment Networks in the Canadian Payments System

Background Paper for Discussion by the Payments System Advisory Committee
Prepared by
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Foreword

This paper is the third in a series of four background papers prepared by staff of the Bank of Canada and the Department of Finance for discussion by the Payments System Advisory Committee. The Advisory Committee is assisting the Department of Finance in its review of the payments system in Canada.

Building on the first two papers in the series (*The Payments System in Canada: An Overview of Concepts and Structures* and *The Canadian Payments System: Public Policy Objectives and Approaches*), this third paper considers some of the key issues regarding more direct access for non-deposit-taking institutions to different elements of the Canadian payments system. The paper begins with a review of access to the existing payments system networks in Canada and of the membership linkages among the networks offering acquisition, clearing, and settlement services. Some of the fundamental properties of access to the payments system are highlighted and the essential concerns of particular types of non-deposit-taking institutions with regard to access are outlined. The paper also examines the relationship between access to payments system networks, competition within and between networks for payment instruments, and the public policy objectives for the payments system - efficiency, safety and the consideration of consumer interests. Arguments for and against broader access to payment networks related to network externalities, competition and market power, and counterparty and network risks are described in the context of the achievement of the public policy objectives for the payments system. Taking account of the likelihood that there may be some trade-offs among the policy objectives, the paper also presents, for illustrative purposes, some options providing broader access to acquisition, clearing and settlement networks.

Accompanying this paper is a summary of the Advisory Committee's discussions regarding access to the Canadian payments system. The summary of discussions, in conjunction with this paper, provide the reader with an appreciation of the full context of the Committee's consideration of the access issues.

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1. Introduction

The establishment of the Canadian Payments Association (CPA) in 1980 reflected the growing importance of non-bank deposit-taking institutions in the provision of transferable deposit balances and the development of new payments processes in the form of automated cheque processing and electronic direct funds transfers. The CPA provided a framework for operating the payments system in Canada, and guiding its development, in a manner consistent with public policy objectives at the time. A key feature of this framework is that access to final clearing and settlement services for payments is through a directly clearing member of the CPA, where only federally and provincially regulated deposit-taking institutions are eligible for membership.

Since 1980, payment technologies related to the development of electronic payments instruments, such as debit cards and prepayment cards, and to the processing and management of payment information have continued to evolve. Moreover, there are a greater number and variety of financial service providers in Canada, related at least partly to government policy aimed at promoting competition in the provision of financial services. The resulting competition has helped spur financial innovation and create new opportunities in the financial services industry. As a result, different types of financial institutions have begun to provide, in competition with one another, similar sets of financial instruments and associated services, including transferable deposits, savings and term deposits, annuities, and mutual fund investments. In addition, the emergence of electronic payments has created business opportunities, and potential benefits for consumers, which institutions are eager to pursue in the current competitive environment. Many participants in the financial industry argue that the new competitive opportunities, and accompanying benefits for consumers, could be realized most fully only if they are able to have more direct involvement in the payments system. In many cases, this would involve direct access by non-deposit-taking institutions to some of the networks for the acquisition, clearing, and settlement of payments that comprise the payments system in Canada.

The notion of access considered in this paper relates to the ability to participate, either as a user or as a provider, in the market for a particular payment service.[1] Broader access to various parts of the payments system, through its effects on network competition and integrity, has implications for the achievement of the public policy objectives of efficiency, safety and the consideration of consumer interests. However, the ultimate effects of wider access to payments system networks on the balance among these objectives are not clear-cut. Indeed, there seem to be two opposing arguments that are made in this regard:

(i) broader access to payments system networks for qualified participants may, without any substantial increases in payments system risks, enhance efficiency in the payments system and promote consumer interests; and

(ii) broader access to payments system networks may increase risk in the payments system without much gain in efficiency and, under some circumstances, may even reduce efficiency in the system and threaten consumer interests.

The central elements to this dichotomy of views on access are the definitions of `qualified' participants and the articulation of circumstances under which access restrictions can and cannot promote a reasonable balance among the policy objectives. The latter element involves two distinct notions. The first relates to the empirical questions related to the efficiency, safety, and consumer interests in the payments system. Specifically, what are the expected effects of a proposed change in access on the policy objectives? The second notion relates to the acceptability of the possible trade-offs among objectives as a result of broader access to payment networks, which involves a normative, and possibly controversial, decision. For example, if a proposed change in access leading to greater efficiency also creates greater risk for participants, should it still be adopted?

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[1]. The term `access to the payments system' is sometimes also used in reference to the ability to participate in decisions regarding the operations and ongoing development of the payments system. This concept of access will be discussed in the next paper on governance of the payment system.

The purposes of this paper in broad terms are:

(i) to review the various networks that comprise the Canadian payments system in the context of direct and indirect access, and competition;

(ii) to examine, in terms of the achievement of public policy objectives, the arguments for and against broader access to particular payments system networks providing acquisition, clearing, and settlement services; and

(iii) to set out, as possible options, some changes that have been suggested regarding access to the payments system and to examine their consistency with policy objectives.

The next section of the paper describes access conditions to the various types of payment networks that form the payments system in Canada. The description focuses on the vertical structure of the network relationships and the institutional and functional characteristics of the membership in the various payment networks. The dominant features of the network structure with respect to access are highlighted. The third section of the paper relates the access issue to the public policy objectives discussed in the previous paper in this series. Arguments for and against broader access to payment networks are considered in the context of the public policy objectives. The fourth section of the paper outlines some illustrative options for discussion that could allow broader direct access to the CPA and other networks, while satisfying public policy objectives. A detailed analysis of the counterparty risks of the options is presented in an appendix. The paper ends with a summary and some conclusions.

2. Access to the Canadian Payments System

2.1 A Review of Access to Payment System Networks in Canada

There are a variety of ways in which one could describe the structure of the payments system in Canada, but essentially it is a combination of networks that provide acquisition, clearing, and settlement services, linked together through communications networks. The services are complementary in nature, with a vertical relationship among the networks moving `upstream' from the acquisition of payments associated with the provision of payment instruments, through the clearing of these payments, to settlement of the obligation through the transfer of settlement balances at the Bank of Canada. The payment acquisition networks are often the proprietary service networks of individual financial service providers that offer payment instruments and services to users on a provider-client basis. They range from branch networks to telephone and Internet banking systems. However, some payment acquisition networks, such as those for credit card and debit card payments, are joint venture, or shared, networks that also provide some initial `downstream' clearing services, such as verification, authorization, and initial netting of payments. The `upstream' networks for clearing services, which provide the final multilateral netting of payments, and for settlement services are also joint venture networks organized to provide specific services to members only. In this sense, they are co-operative networks providing payment services that complement those offered by members in their payment acquisition networks. While there is competition among, and within, networks providing payment acquisition services and some downstream clearing services, upstream clearing services are provided only by networks, such as the Automated Clearing Settlement System (ACSS) and the imminent Large-Value Transfer System (LVTS), operated by members of the Canadian Payments Association.

Settlement Services

At the apex of the payments system pyramid, settlement services are provided solely by the Bank of Canada, partly because Bank of Canada liabilities are the only instruments that can easily provide finality of payment. Membership in the settlement network is presently limited to the Bank of Canada as settlement bank and the directly clearing members of the

CPA. This network settles both retail and wholesale payment obligations arising from transactions using both paper-based and electronic payment instruments. Messaging services regarding net settlement obligations among network members is provided to the Bank of Canada through the CPA's ACSS, and from the Bank of Canada to network members through an on-line connection. The network arrangement associated with the CPA's electronic Large-Value Transfer System, which is scheduled for introduction early next year, will include the Bank of Canada and all participating institutions. Under current proposals, these institutions will include only CPA members.[2] Messaging services between network members and the Bank of Canada will be provided by an on-line system and by SWIFT.

Clearing Services

The clearing services provided by the CPA are tiered. The CPA provides to its membership clearing standards and facilities for a full range of services - exchange, reconciliation, confirmation, netting, and messaging - for cheques and for electronic direct funds transfers related to both large-value (wholesale) and small-value (retail) payments. The clearing operations are carried out `downstream' by the regional networks of individual direct clearing members of the CPA and `upstream' by the national ACSS network. In addition to Direct Clearers in the CPA, which are members of the ACSS network, there are also indirect clearing members of the CPA, which clear payments for client accounts and their own accounts, in the regional networks, through a Direct Clearer. All 140 members of the CPA - Direct and Indirect Clearers - are required, by law, to be regulated deposit-taking institutions.[3]

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[2]. The Debt Clearing Service of CDS and Multinet, which are themselves joint venture organizations, may use the Bank of Canada as their settlement bank in LVTS.

[3]. Members of the CPA must be federally or provincially regulated deposit-taking institutions. Moreover, unless eligible to opt out of the Canadian Deposit Insurance Corporation (CDIC) as a bank accepting only wholesale deposits, the deposit-taking institution must be either a member of CDIC or an equivalent provincial agency, or a credit union central registered under the Canadian Cooperative Associations Act with membership in the Credit Union Central of Canada. A Direct Clearer must account for at least 0.5 percent of the volume of payments and hold a settlement account at the Bank of Canada. In addition to the Bank of Canada, there are twelve Direct Clearers in the CPA, two of which are Group Clearers for the caisse populaire and credit union systems, respectively.

The CPA also provides upstream clearing services for other clearing networks that provide some initial clearing services for their members but access settlement services through direct clearers in the CPA. The International Interbank Payments System (IIPS), operated by the Canadian Bankers Association, is a wholesale payments clearing facility that matches, confirms and bilaterally nets, between members, large-value Canadian dollar payments related primarily to interbank and foreign exchange transactions. Payment messaging among members within the IIPS network is through SWIFT. IIPS is a joint venture network with a tiered membership of almost 70 deposit-taking institutions, only about 20 of which are classified in the Direct Participants Group. Not only are all members of IIPS also members of the CPA, some of the members of the Direct Participants Group in IIPS are also Direct Clearers in the CPA. The latter provide other IIPS members with access to final multilateral netting services and ACSS messaging services for settlement at the Bank of Canada.[4] Similarly, large-value payments related to the settlement of securities transactions in CDS and to the settlement of mutual funds transactions in the Mutual Funds Clearing and Settlement Service (MFCS) are entered into the ACSS through Direct Clearers in the CPA for final payment clearing and settlement.[5]

Retail, or small-value, networks for credit cards and debit cards also access upstream clearing services and settlement services through Direct Clearers in the CPA and its ACSS. Visa Canada, through Visa International, and MasterCard International (Canada) provide their member institutions with authorization, confirmation, netting and messaging services for credit card transactions in Canada. The credit card networks enter these net payment obligations into ACSS, for settlement at the Bank of Canada, through a direct clearing member of the CPA acting as their banker.

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[4]. In the future, the vast majority of large-value payments are expected to clear and settle through LVTS rather than through ACSS. IIPS is expected to cease operations following the advent of LVTS.

[5]. Membership in CDS and MFCS is open to a broad range of financial institutions. MFCS, while providing clearing services to members, uses CDS to process its payments. Also, like most other wholesale payment networks, payment in CDS's Debt Clearing Service is completed through a subset of members, all of which are CPA members. Settlement Agents and the Federated Participant in CDS settle payments only for their own accounts, while other members settle payments through an Extender of Credit.

Membership in Visa Canada is restricted to regulated deposit-taking institutions. While only a `General Member' can issue cards, Visa Canada also accepts a `Sponsored Member' - a deposit-taking organization sponsored by a General Member that guarantees its payment liabilities. Under this arrangement, the sponsoring General Member issues the Visa card, extends credit to the cardholder, and processes the payments, while the Sponsored Member distributes the card, which is `co-branded' with the name and logo of the sponsored member on the front and the name of the sponsoring issuer on the back. MasterCard's membership is open to a broader range of financial institutions. While a `Principal Member' must be a regulated deposit-taking institution, `Affiliate Members', which are sponsored by Principal Members, can be regulated non-deposit-taking financial institutions. Affiliate Members can issue cards that are not co-branded by their sponsoring Principal Member and extend credit to their cardholders. An Affiliate Member typically has some form of financial relationship with a sponsoring Principal Member, such as a settlement account, in addition to the guarantee of its network payment liabilities by the sponsoring Principal Member required by MasterCard. For example, in July 1995, Canadian Tire Acceptance - a financial subsidiary of Canadian Tire Corporation - became an Affiliate Member of MasterCard International (Canada) through sponsorship by Bank of Montreal.[6] In Canada, members of both Visa and MasterCard are prohibited by their membership agreement from issuing credit cards of competitors, thereby preserving a separate membership for the rival networks.

With respect to debit card payments, the Interac Association provides authorization, confirmation and messaging services for large national networks of shared automated banking machines (ABMs) and electronic funds transfer point-of-sale (EFTPOS) terminals. Until late 1996, membership in Interac had been restricted to deposit-taking institutions that were CPA members. However, following an agreement between Interac and the Bureau of Competition Policy in December 1995, membership was opened in late 1996 to both financial and non-financial institutions, but with some tiering and functional restrictions. Members are classified as Direct Connectors (institutions that are directly connected to one another through

[6]. In July 1995, Canadian Tire Acceptance Ltd. was subject to the federal Investment Companies Act. This Act was repealed in July 1996.

the network systems) or Indirect Connectors (institutions linked to the system through direct connectors). Direct Connectors (also termed connection service providers) are subclassified into Direct Connector Financial Institutions (which include only deposit-taking institutions) and Direct Connector Non-financial Institutions (which may include non-deposit-taking financial institutions). In terms of function, card issuers must be deposit-taking institutions, and settlement agents for network members must be Direct (or Group) Clearers in the CPA. However, payment acquirers can be any corporate entity that operates ABM or EFTPOS terminals, or processes payment information.

Although proprietary ABM networks provide a range of transaction options to users, the Interac network of shared ABMs presently provides only cash withdrawal services on deposit accounts. Interac's EFTPOS network allows real-time direct debits to deposit accounts. Since Interac provides no netting facility for its EFTPOS and ABM networks, upstream clearing and settlement services for individual transactions through these networks are provided by direct clearing members of the CPA through on-line batch entry into ACSS.

Acquisition Services

Acquisition services include the issuance of various payment instruments, and the provision of associated services to market the instruments and initiate the payments. These services are provided to users by the member institutions of the clearing and settlement service networks for retail and wholesale payments described above. In addition, some specific payment acquisition services, such as the processing of direct credit transfers, wire payment services, and chequing services based on sweep accounts and payable-through arrangements, are provided to users by other financial enterprises that access the services of the payment networks indirectly through a contractual arrangement with a network member. Furthermore, contractual arrangements between credit card issuers and other financial and non-financial institutions involved in direct sales to the general public designed to broaden the payment acquisition base of the card issuer and enhance its competitiveness are now common. Affinity cards display the logo and trademark of the credit card association, the name of the sponsoring member, which issues the cards and processes the payments, and the name of the sponsored institution, which distributes the card to its customer base.

Access to acquisition services for users, on reasonable terms, is a concern for policy-makers. The reasonableness of the terms of user access to payments systems is defined by the availability and convenience, the overall cost, and the specific risks associated with the use of particular payment instruments. The terms of access for users of payment acquisition services may be correlated with the degree of direct access that the service providers have to existing payment networks and to the size of these networks. For example, restrictions on the eligibility for clearing of certain types of payment instruments, which might otherwise be provided by financial institutions excluded from the CPA's clearing networks, could add to costs for clients using the financial services of the excluded institutions. Payment processing charges passed onto the consumer of related financial services may, depending on the contractual arrangement, be higher because the financial institution must obtain payment services from a CPA member. It is also possible, however, that effective competition among CPA members in the provision of payment acquisition services, and in the provision of `gateway' services to the clearing network to non-CPA members providing acquisition services, would help minimize consumer charges.[7]

Payment options for users in terms of particular payment instruments may be constrained not only by supply conditions, but by the acceptability of the instrument to the other party in the transaction as well. Various retail payment instruments may individually involve different costs and risks for consumers, as well as for merchants. Consumers may find that some merchants are unwilling to accept particular instruments. Limitations on payment options may be less serious for customers that have access to a broad range of alternative payment instruments than for those, such as low-income consumers, that may have

[7]. Gateway services refer to the access services offered, on a contractual basis, by a member of a particular clearing or settlement network to a non-member of the network.

access to a much narrower range of payment instruments.[8] Rejection of an instrument by a merchant could restrict the consumption choices of low-income consumers beyond those imposed by income constraints. Competition for customer business would generally encourage merchants to accept a broad range of payment instruments. However, in the absence of strong local competition, a particular payment instrument may be rejected by a vendor because of handling costs or payment risks associated with the instrument.

2.2 Some General Access Properties of the Canadian System

Tiered Access

There are some general characteristics of access to payment service networks that bear directly on the question of broader access to the Canadian payments system. For example, access to a payment service network is `direct' if the user is a member of the network providing the service. Access is `indirect' if the user is not a network member and must obtain the service through a contractual arrangement with a member. Payment service networks, with the exception of some proprietary payment acquisition networks, are joint ventures of financial institutions with a tiered, or restricted, membership structure.[9] Typically, the membership includes a subset of settlement agents that have direct access to clearing and settlement services provided by the CPA. Other members of networks outside the CPA settle payments indirectly through these settlement agents.[10] Moreover, the CPA membership is tiered, with Direct Clearers in the ACSS providing clearing services and access to settlement services for members that are Indirect Clearers in the organization.

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[8]. Low-income users without deposit accounts are particularly limited in their choice of payment instruments, most of which are designed to transfer value between deposit accounts of transactors.

[9]. The corporate structures for some networks are often more complex than simple joint-venture partnerships. Interac, for example, has a tiered corporate structure under which the software and trademarks for the networks are privately held by a partnership group of financial firms (Acxsys Corporation and Interac Inc.) and licensed to the Interac Association, which operates the ABM and EFTPOS networks. The enterprises in the private partnership group also participate as network members.

[10]. In fact, the settlement agents for these outside networks, such as IIPS, CDS, Visa, and MasterCard, may themselves, in principle, only have indirect access to upstream clearing services and settlement services through Direct (or Group) Clearers in the CPA.

In addition to being tiered, membership in some payment networks also have functional class restrictions. As noted, the MasterCard and Visa credit card networks have dual membership classes with Principal or Affiliate Members and General or Sponsored Members, respectively. Sponsored and Affiliate Members, which clear their net payment positions with the credit card association indirectly through their sponsor, broaden the credit card network through the creation of a sub-network centred on the sponsoring institution.

Membership in Interac is also organized into classes of members that perform as card issuers, settlement agents, payment acquirers, or service connection providers. There is a strong degree of complementarity among the functions and substantial scope for members of the Direct Connector Financial Institutions group, which includes only regulated deposit-taking institutions, to perform more than one of these functions. A deposit-taking institution that is a Direct Clearer in the CPA can be a card issuer, an acquirer, a service connector and a settlement agent in Interac. An Indirect Clearer in the CPA can perform all functions except settlement agent. A non-CPA member can only be an acquirer and a service connector. With substantial incentives to combine these complementary services into a package, and the potential competitive advantage of doing so within the network, CPA members still have relatively strong positions within the Interac networks even with the recently broadened membership. Indeed, the admission of non-CPA members into Interac to perform acquirer and service connector functions could have a positive effect for CPA members in terms of market penetration similar to the co-branding of credit cards.

The Role of Large Deposit-Taking Institutions

For most types of retail and wholesale payments, the subset of member institutions directly linking the co-operative networks providing initial clearing services to upstream clearing and settlement services provided through the CPA are large deposit-taking institutions. Examples are settlement agents in Interac and extenders of credit in CDS. Large deposit-taking institutions in Canada are generally members of all types of payments service networks. Also, large deposit-taking institutions - those with at least one-half of one percent of the clearing volume - are the Direct Clearers in the CPA and only Direct Clearers can provide access to settlement services at the Bank of Canada. Consequently, a large deposit-taking institution can act as a gateway between downstream and upstream clearing and settlement networks in a way that a smaller institution cannot.

Aside from the CPA's volume requirement for direct clearing membership, there are more fundamental conditions that may have supported the dominant role of large deposit-taking institutions in the provision of gateway services between payment acquisition networks and those networks providing clearing and settlement services. The members of a network that perform these gateway functions are generally selected because of their membership in other networks, the high volume of activity they generate within the system, and their financial integrity. Moreover, they generally have the capacity to provide intraday credit to other members in the network. Large deposit-taking institutions meet all these criteria and may have an advantage over smaller institutions in some. Economies-of-scale-and-scope are available to them that would be unachievable for smaller institutions. Similarly, because of the broad diversification in their financial market activities and their relatively large capital base, large institutions may be able to achieve substantial `economies-of-risk' - that is, combine their portfolio and operating risks an a way that minimizes aggregate risk, manage these risks efficiently on an on-going basis, and absorb fairly easily any financial shocks that could arise from these risks. With sufficient competition for the provision of gateway services among large institutions within the network, these economies may be shared with the smaller members of the network that access upstream clearing and settlement services indirectly through the larger institutions.[11]

There may, of course, be disadvantages for smaller members of a network in indirectly accessing upstream clearing and settlement services through a larger network member with which it competes downstream in the provision of payment acquisition services. The economies-of-scale available to the large institutions in the network from the provision of gateway services to the smaller members for upstream clearing and settlement could perhaps

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[11]. National Trust, for example, is eligible to become a Direct Clearer in the CPA but currently finds it more advantageous to operate as an Indirect Clearer.

provide the large institutions with a competitive advantage in the provision of payment acquisition services. The scope-and-risk-economies available to larger institutions in providing a range of payment instruments to users and for supplying gateway services to smaller institutions in other clearing networks for these instruments could potentially increase that competitive advantage.

The greatest competitive disadvantages, however, might arise for institutions that are excluded from clearing networks. For example, consider the situation of a non-deposit-taking financial institution that is a member of Interac and, as an acquirer, provides some users with access to debit card services. This institution is, however, excluded from upstream clearing networks and cannot issue debit cards. It clearly has no opportunity to provide gateway services to other Interac members and loses any opportunities that card issuance might have for enhancing its competitiveness in the downstream market for payment acquisition services. The institution can access CPA payment networks only through contractual arrangements with a CPA member and, if competition among these service providers were restrained, it might be exposed to higher prices or greater difficulties in obtaining services in markets for upstream clearing and settlement services than would otherwise be the case. This could, in turn, cause the excluded institution to suffer a loss in its potential share of downstream payment acquisition markets to institutions that are members of both networks since it may be unable to provide instruments and associated services to clients at competitive prices.

Restrictions on the Type of Payment Instruments

CPA standards with respect to the characteristics of payment instruments eligible for clearings may be adopted to reduce operational and settlement risks and to lower operational costs. However, they may also slow innovation and restrict competition in the provision of payment services. Pre-authorized debits (PADs) for variable amounts, as opposed to only fixed amounts, are an example. These were proposed by some CPA members and, indeed, marketed to customers several years ago. However, they were not eligible for the clearings until the CPA's rules were changed in May 1996.

Less formal limitations on payment instruments may also diminish competition. For example, CPA members do not currently provide facilities that would allow certain types of payment instruments to enter the clearings, notably payable-through facilities for drafts drawn on client accounts at insurance and investment companies. In the case of payable-through drafts, CPA by-laws and rules do not prevent the entry of such items. However, CPA members indicate that legal uncertainties about the allocation of liability and potential losses in the event of a payment default are a deterrent to accepting such drafts for clearing and settlement. Since current practices limit the ability of non-CPA members to provide their customers with payment features on liquid balances held with them, they limit the capacity of non-depository institutions to raise funds in the markets for such liquid assets. Since many of these institutions operate in the same financial markets as deposit-taking institutions and their investment subsidiaries, independent non-deposit-taking institutions might be at a competitive disadvantage. As a result, consumer interests might not be well served.

2.3 Some Concerns of Non-Deposit-Taking Institutions Regarding Access

A key dimension of access to payment networks is the capacity of various institutions to provide their customers with the ability to transfer liquid balances held at the institution to a third party in fulfilment of a payment obligation. Depending on circumstances and preferences, the instrument of transfer may be either paper-based or electronic. In either case, the activity depends on the institution's ability to submit payment items to the payments system for clearing and settlement. In Canada, this requires the payment items to be eligible for entry into the clearing networks operated by the CPA and the institutions initiating the entry to have direct or indirect access to these networks. For some types of payments, such as those using debit card and credit cards, the institution must also participate directly in the payment acquisition network. For a variety of non-deposit-taking institutions, the capacity to meet these requirement is restricted to some extent.

Life Insurance Companies

Federally incorporated life insurance companies are permitted under the Insurance Companies Act to issue payment cards and to participate in payment card networks. They provide clients with wealth management products (such as annuities, RRSPs, and RRIFs), life protection products, and health and disability insurance products. Each of these vehicles provides the client with potentially transferable balances in an account held at an insurance company. However, under current rules and conventions, payment instruments drawn directly on any of these accounts cannot be cleared through the CPA networks. Consequently, life insurance companies maintain that better access to the payments system through the issuance of payment cards would allow their clients to directly access and transfer balances held on account at the insurance company without the additional complication of using the intermediation services of a deposit-taking institution.

Investment Companies

Unit holders in mutual funds, particularly money market mutual funds where `same-day-value' transactions are common, have access to funds that could readily be liquidated and transferred. Similarly, clients of investment dealers often carry `free credit balances', which are deposit-like accounts that could also be readily transferred. Some clients of these dealers may also have excess value in their securities margin accounts that could be readily transferred. A payable-through arrangement between a deposit-taking institution, an investment company (either an independent investment dealer or mutual fund management firm), and the investment company's clients is one mechanism that could permit the transfer of such balances to a third party through payment drafts. Another is access to client accounts at the investment company through debit card systems. Both methods allow debits directly to the client's accounts at the investment company. For an investment company, or an insurance company for that matter, such arrangements could provide better access to the payments system. However, current conventions among CPA members appear to constrain the provision of payable-through arrangements to non-members, while Interac's membership rules prevent the issuance of debit cards by non-deposit-taking institutions for use in Interac's ABM and EFTPOS networks.[12]

[12]. There are a variety of arrangements between deposit-taking institutions and their subsidiary mutual fund and investment dealer companies that provide clients with access to their accounts at these subsidiaries.

Third-Party Service Providers

Third-party payment service organizations, such as those operating bill payment and payroll services, submit payment items, usually in the form of direct debit and credit transfers, to the clearing networks through a CPA member. On behalf of clients, these payment service organizations transfer balances from a deposit account at the payor's deposit-taking institution to accounts at the payee's institution through the service provider's account at its deposit-taking institution, which is typically a Direct Clearer in the CPA. For a fee, and possibly for float earnings, these payment service organizations often provide the service to clients of small deposit-taking institutions that do not offer similar proprietary services. However, since a third-party processor does not have direct access to clearing services, its clients may be at a cost disadvantage relative to the clients of payment service providers that have such access. Third-party processors suggest that, if they were CPA members, they might be able to negotiate arrangements that reduce the cost of accessing clearing services for themselves, and their clients.

Retailers and Other Non-Financial Enterprises

Access for retailers refers primarily to networks for the acquisition of payments, such as those provided by Interac's debit card networks. As a convenience for customers, as well as for marketing purposes and revenue generation, some large retailers would like to have the capacity as a member of Interac to issue payment cards. A multipurpose card, with both credit and debit card features, could provide customers with direct access to their deposit balances at financial institutions through automated banking machines and point-of-sale terminals operated by Interac. Under the current membership rules of Interac, retailers can acquire payments if their systems are compatible with the standards set by Interac, but they cannot issue debit cards that access Interac's ABM and EFTPOS networks.

3. Access, Competition, and Public Policy Objectives

As indicated above, exclusion from access to clearing and settlement networks may arguably put some financial institutions at a competitive disadvantage in the provision of payment acquisition services and as suppliers in markets for related financial services. From a public policy perspective, the central concern, however, is that such exclusion might impact negatively on the overall economy by adversely affecting the appropriate balance between the efficiency and safety of the payments system, and its responsiveness to consumer interests. At issue, for example, is whether users of payments services and related financial services could acquire these services under cost, risk, and availability conditions that are no less favourable to them with the inclusion of a broad range of service providers and network participants than with greater exclusivity. Also, could the inclusion of new participants be achieved without unduly increasing the overall risk to the system?

A basic proposition is that if markets are well-behaved, in the sense that market power is unattainable (or, at least, unexploitable) and market outcomes are reasonably certain, broader participation in the use and provision of specific market services improves the competitiveness of the markets. This generally enhances market efficiency and the responsiveness of markets to consumer interests. Restrictions on access to payment networks could, under some circumstances, contribute to non-competitive behaviour in markets for payment services that would diminish the achievement of these public policy objectives.

However, for payment services provided through co-operative joint-venture networks and involving substantial risk for at least some participants, the conditions for `well-behaved' markets may not be satisfied in all instances. Thus, as will be discussed in the following sections, broader access to payments system networks may not always yield an appropriate balance among the public policy objectives. For this reason, criteria for membership in payments system networks, such as those operated by the CPA, need to be carefully considered.

3.1 Types of Competition

With joint venture, co-operative networks providing clearing and settlement services in the payments system, the notion of competition in payment services markets must be clearly defined. Indeed, there are several notions of competition relevant to the payments system. There is, first, the notion of competition ***within*** a payment service network. Members of the network compete with each other to provide downstream payments services directly to final users. CPA members selling pre-authorized debit services and MasterCard members issuing credit cards to eligible users are examples. They also compete with one another in the downstream clearing networks to provide gateway services to excluded institutions acting as third-party processors for some payment services provided to final users (often in competition with the network member). CPA members offering sweep accounts to insurance companies for client chequing or direct credit transfer services to bill payment processing enterprises such as TelPay would be examples. Finally, the large deposit-taking institutions compete within the network to provide smaller institutions with gateway services to upstream clearing and settlement networks. Obvious examples are Direct Clearers in the CPA providing access to the ACSS and settlement services for Indirect Clearers, and settlement agents in Interac providing access to the CPA's clearing and settlement services for indirect connectors.

Competition ***between*** payment service networks is another important dimension of competition in payments systems. Two types of `between network' competition are worth noting. The first is competition between payments system networks that provide virtually the same type of instrument or service to users. Competition between MasterCard and Visa in the credit card market and between proprietary ABM networks in markets for retail bill payment services are useful illustrations of this concept. Also, with the exception of the credit card networks where MasterCard and Visa have exclusivity agreements with their members, an individual financial institution may be a member of more than one of these competing networks.[13]

The second type of `between network' competition is between networks that provide different types of payment instruments to users, but where these instruments are close substitutes. Credit card networks, for example, provide some competition to debit card networks or cheque payment networks for small-value payments by consumers. As in the case of identical instruments from competing networks, the relative cost, convenience, and risk differentials in using these competing, though differentiated, instruments may cause individual users making or receiving payments to prefer one instrument over another. The degree of substitutability in demand for these different instruments and services is likely less, however, than for identical instruments provided by competing networks. Again, an individual financial institution may provide a number of these different instruments and services through its own proprietary networks or through membership in joint venture networks.

3.2 Access and Payment Market Conditions

As indicated in the discussion of current access conditions in the Canadian payments system, and in an earlier discussion paper on public policy objectives for the system, the `competitive' performance of markets for payments services is likely affected by:

(i) the interdependency among members of the various networks for payment services;

(ii) the spillover effects of actions in one payment service network on the performance of networks for related payment services and markets for other complementary financial services;

(iii) distortions arising from the market power of certain participants in payments systems and related financial markets that could potentially arise from the joint-

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[13]. Anti-duality rules in credit card networks restrict service providers to the issuance of only one brand of card - Visa or MasterCard - but do not prevent consumers from acquiring both brands of cards (or, indeed, the same brand of card from several different issuers). Similarly, consumers may hold several debit cards from different issuers within the Interac network.

venture structure and exclusionary nature of networks providing upstream clearing and settlement services;

(iv) the concentration of payments system risks within a payment service network; and,

(v) the allocation of payments system risks between users and service providers, among the members of a payment service network, and between payment service networks.

These are the general conditions around which broader access to clearing and settlement service networks either improves or diminishes the efficiency and safety of the payments system and its responsiveness to consumer interests. Accordingly, the advantages and disadvantages of broader access to a payment service network, as measured against the achievement of the public policy objectives, should be considered in light of these conditions and the notion of competition most appropriate to them.

Access, Interdependency, and Spillover Effects

One of the arguments favouring broader membership in shared payment acquisition or clearing and settlement networks is the possible existence of positive network externalities that could increase the efficiency of the payments system. If adding another participant to a network increases the value of individual participation in the network, then a positive network externality exists. In this event, the members of the network may offer incentives to attract participation.

In payments systems, such externalities may be most apparent in acquisition networks for highly automated payment services and electronic payment instruments and services. In addition, these networks may be able to achieve significant scale-economies in the transmission of payment information and in the value transfer processes. For example, the addition of another service provider to a shared acquisition network, such as the networks for debit cards or credit cards, may provide a net gain in the number of users and the number of transactions processed through the network. It provides additional access points to payment instruments provided by the existing members of the shared network to their customers, thereby increasing the convenience for customers and raising potential sales for merchants buying the services of the payment network. Also, the addition of another service provider in a shared acquisition, clearing, or settlement network reduces the average set-up cost of expanding network facilities, installing new technologies, and developing new services that can be provided through the network. However, because of the different structure and operations, the network externalities in proprietary acquisition networks, such as those for cheques and direct funds transfers, are more limited than in shared networks.

Network externalities may not be inexhaustible, particularly for upstream clearing and settlement systems. Indeed, this is one of the primary reasons for tiered membership in clearing networks in which only a subset of downstream network clearing members (generally the larger deposit-taking institutions) have access to upstream clearing or settlement networks. At some point, the addition of a new network member can increase average operating costs of the network because of congestion or satiation, and may add no value to network membership for individual incumbents (and even possibly reduce it through a loss in market share and service revenues). The result may be higher prices for users of gateway services and payment instruments in downstream clearing networks and payment acquisition networks, respectively.

Moreover, to the extent that new entrants into a network obtain the cost and competitive advantages offered by a large, well-established network without incurring a full share of the set-up costs, a free-rider problem can exist. Mandatory access rules, which prevent restrictions on access to an established network, may leave members of the network with little incentive to innovate new technologies and services. Similarly, the formation of new networks for payment services may be discouraged by the prospect that some potential members can simply wait for the development of a successful joint venture network, thereby avoiding set-up costs and risks, before joining. Such outcomes would diminish positive network externalities and reduce payments system efficiency.[14]

Access, Market Structure, and Market Power

In the earlier description of access to payment service networks in the Canadian payments system, it was noted that exclusion from clearing and settlement networks, such as those operated by the CPA, could potentially place a financial firm at a competitive disadvantage to those institutions in the network. The cost and competitive disadvantage may be even greater if the financial institution is excluded from a downstream payment network as well - say, for example, a network for debit or credit card payments. The institution would then have to access all clearing and settlement services through a Direct or Indirect Clearer in the CPA if it wished to sell payment instruments to users. The fees it pays to the CPA member to access all upstream clearing and settlement services must cover the cost of these upstream services charged to the gateway provider (which they would pay even if they were included in the network), the costs associated with the provision of the gateway services to the downstream network, and possibly an additional mark-up representing a portion of the value to the user of access to the network.

This prospect is relevant to the Canadian payments system since effective membership status in some downstream networks, such as Visa and Interac, currently coincides with membership in the CPA. Deregulation of the financial industry in the early 1990s has, however, allowed some financial institutions that are themselves excluded from the CPA, such as insurance companies and investment companies, to establish (or acquire ownership of) deposit-taking institutions that are eligible for CPA membership. While this avenue entails its own costs, including some related possibly to legal restrictions to prevent information sharing among associated firms, it could afford some of these excluded institutions the opportunity to reduce overall cost and competitive disadvantages. It might

[14]. In the extreme, where network externalities become negative at the margin, the intensification of within-system competition, with the addition of new members, may even cause existing networks to break up into proprietary or smaller shared networks.

also intensify `within system' competition in the provision of upstream gateway services and downstream clearing and payment acquisition services.

Alternatively, direct inclusion in the membership of the CPA, rather than through a deposit-taking subsidiary, could potentially yield greater reductions in cost and gains in competitiveness in the marketing of payment acquisition services for currently excluded institutions. At the very least, some of these institutions could benefit competitively from some relaxation of restrictions on eligible payment instruments. Drafts written under payable-through arrangements extended to clients of eligible money-market mutual funds may be one example. Users of the downstream clearing services and payment acquisition services could perhaps benefit through lower prices and more responsive service from the increase in within-system competition.

There is, however, a possibility - particularly under mandatory inclusion - that direct access to some existing payment service networks can become `overinclusive' and, therefore, reduce the efficiency of the payments system. As noted previously, for upstream clearing and settlement services, this would relate to the exhaustion of network externalities and, possibly scale-economies, to the point where the benefit to new entrants is insufficient to compensate incumbents for their loss. However, for downstream clearing and acquisition services, such as those provided by MasterCard, Visa, and Interac, overinclusiveness is often used in another sense referring to the expansion of an existing joint venture network to an extent that the prospect of establishing a competing network becomes negligible.

Although it is essentially an empirical issue, the general presumption is that competition between networks enhances the efficiency of the payments system by diminishing the prospect of collusion. Between-network competition is thus believed, under some circumstances, to benefit users of downstream payment acquisition services more than competition among members within a joint venture clearing network. This observation is based on the intense price competition and innovation in processing technologies that ensued among Discover Card, Visa, and MasterCard in the United States after the court's rejection of a suit by Discover Card (Dean Witter) for mandatory access to Visa, as well as that which followed the establishment of new credit card networks operated by AT&T and GE. Some observers also argue that the competition between Visa and MasterCard is stronger in Canada than in the United States as a result of the court's support of the anti-duality clause in the Canadian membership agreements of the two credit card networks.[15] This decision preserved exclusive memberships for each credit card network. Although the courts had earlier rejected the anti-duality clause in the credit card agreements of these two organizations in the United States, more recently the threat of anti-trust action encouraged Visa and MasterCard to abandon plans for a joint venture, EFTPOS, debit card network in favour of competitive networks similar to their Plus and Cirrus ABM networks.

In the consideration of mandatory inclusion under the provisions of the Competition Act dealing with `abusive dominant position', the Director of Investigation and Research in the Competition Bureau has to demonstrate that the parties under investigation have substantial control of a specific business activity and have engaged in practices that substantially lessen competition. With regard to access to a payment system network, this may require that the Director demonstrate the `essential facility' characteristic of the network for the provision of those services.

Assuming that a financial institution was able to demonstrate an effective capacity to offer compatible payment acquisition services, the essential facility notion implies that the clearing service network potentially provides existing members with substantial power in a narrowly-defined market. It also implies that a competing network with a reasonable prospect of success could not be formed so that access to the existing network could be necessary in

[15]. In 1980, the National Bank of Canada challenged the Interbank Card Association, the issuer of MasterCharge (the former brand name of MasterCard) over its anti-duality rule. MasterCharge had terminated the National Bank's membership in late 1980 after it refused to cease issuing Visa cards following its 1979 merger with the Provincial Bank of Canada, which was a Visa member. The termination was challenged in a New York district court, which upheld the termination. On behalf of the Canadian Bank Credit Card Association, Royal Bank and TD Bank had also petitioned the Ontario Supreme Court in 1980 to rule on the validity of the anti-duality rule in the Visa Canada membership agreement with regard to National Bank's refusal to honour the agreement. The case was dropped in early 1981 when National Bank sold its Visa operation to the Confederation des Caisses Populaires et d'Economie Desjardins du Quebec.

order to compete effectively in the payment services market. The financial institution would have to demonstrate that exclusion from that network indeed places it at a substantial competitive disadvantage to network members in that market and that its exclusion from the network could substantially diminish market competition.[16]

Although there may be some debate about membership status, these are the types of broad criteria that were used to encourage Interac to broaden its membership base. Interac was considered an essential facility in the provision of ABM and EFTPOS services and, because of its market penetration and substantial scale-economies, the formation of a new competing domestic network would likely have little chance of success. The agreement between Interac and the Bureau of Competition Policy suggests that inclusion of non-CPA members in Interac might yield positive network externalities and intensify within system competition in a manner that could improve efficiency, without increasing risk, and promote consumer interests in the payments system. However, courts have also used these type of criteria to support the anti-duality rules in the Visa and MasterCard membership agreements in Canada, which effectively restrict access to these networks. Despite its substantial market penetration, Visa was not considered an essential facility for credit cards in Canada because of the existence of a viable MasterCard network. Moreover, competition between the networks was considered to be more beneficial than dual membership for the efficiency of the payments system and the promotion of consumer interests.

With regard to the CPA, the application of these criteria may be modified somewhat by the current membership restrictions and the present organizational structure that are specified by the Act of Parliament establishing the CPA. The CPA is clearly an essential facility for upstream payment services and, under current arrangements, it is unlikely that a rival network for the provision of these services would be viable. Following through with these criteria, exclusionary membership restrictions would be justifiable, however, if they

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[16]. In addition to the competition aspect, other issues related to direct access to a payment network, such as network risks discussed in the following section, might need to be considered.

result in the better achievement of public policy objectives for the payments system than would inclusion of a broader range of financial institutions.

Access and Network Risk

To this point, the discussion of the advantages and disadvantages of broadening access to payment service networks has focussed primarily on the implications for the efficiency of the payments system and the consequent benefits for users. However, since settlement is on a deferred net basis for most payment networks, there is an extension of intraday credit among the financial institutions participating in the payment clearing networks. Consequently, individual institutions, particularly the larger deposit-taking institutions that provide gateway services between networks, and some networks could be at risk of substantial loss in the event of a default by a participating institution.[17] In many cases, these risks may be adequately managed through effective monitoring, risk sharing, and control and coverage of risk exposures.

Broader membership in a clearing network might pool risk more effectively for members.[18] The spread of payment risks, particularly those related to the failure of an individual institution to fulfil payment obligations, over a larger number of members within a system can improve the safety and soundness of the system if all members of the system are able to manage their individual risks responsibly. Moreover, the addition to the network of an institution providing compatible clearing services for similar payments instruments effectively lowers the cost to users of switching between service providers. Therefore, users concerned with the viability of an institution in a network providing a certain payment instrument and

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[17]. Deposit-taking institutions providing gateway services for other members to upstream clearing and settlement services often provide other members of the network with credit facilities. This is particularly evident in the CPA networks where direct clearers in ACSS implicitly, and direct participants in LVTS explicitly, provide each other with credit lines and provide other indirectly clearing CPA members with overdraft facilities on their settlement accounts.

[18]. Although some payments may be unwound under CPA rules in the event of default, there is a residual risk to surviving direct clearers in the CPA if settlement balances of the defaulting institution are still insufficient to cover its payment obligations. This is particularly true for electronic payments, such as debit card payments and direct funds transfers, where there are no `returnable items'. Large-value payments processed through the ACSS involve the greatest risk exposure.

related services may also be able to lower the risk by switching more easily between providers.

Although clearly an empirical question, it is sometimes argued that the more heterogeneous are network members in their operations and financial controls, the greater may be the risks to the surviving members of the network, and to the viability and reputation of the network itself. In ACSS, intraday credit is uncollateralized and not easily managed, leaving some members of the network exposed to the risk of a loss on their net credit positions. Individual members may feel more comfortable about general counterparty risk when all members of upstream clearing and settlement networks are governed by the same legislative and regulatory framework and compete in the same range of financial markets under similar operating standards. The reaction of a counterparty to particular market events, and the legal rights and obligations of all parties in the event of a payment default, might be less uncertain.

Incumbent members of a joint-venture network may wish to restrict membership to institutions with similar prudential regulations and profiles of creditworthiness. Differences in business activities, operating standards, and prudential regulation might contribute to higher network risks if they masked the entry of fundamentally weak institutions with a high risk of failure. Of course, the entry of low-risk institutions into the network - some possibly with lower risk profiles than incumbents - can also improve the safety and soundness of the network. In any event, since risk assessment and risk monitoring are costly activities, network members will likely prefer institutions that are very closely monitored for creditworthiness by a credible agency, such as a government regulatory authority or a well-recognized credit rating agency. Indeed, close regulation by public agencies is often perceived to `certify' financial institutions to some extent. Also, minimum asset or payment volume restrictions may be imposed on members to limit participation to large institutions in the belief that they are better able to manage unforseen market events.

Alternatives to homogeneity restrictions on membership in a clearing network, and ones which could possibly achieve public policy objectives more effectively, may be private sponsorship or some form of defaulter-pays, or survivors-pay, collateralization mechanism. Principal members in the MasterCard network sponsor affiliate members, for example, and guarantee their credit card payment obligations to the network. Under the defaulter-pays tranche 1 collateralization arrangement in the CPA's LVTS, participants can fully collateralize their own net debit positions in the absence of a bilateral credit line from the receiving member. As for survivors-pay mechanisms, credit card networks require members to contribute to a loss reserve fund, which is used to complete payments to merchants in the event of a default by a member. Since the loss reserve account is pre-funded, it spreads the cost of a default among the surviving members of the network. The defaulter, through its accumulated past contributions, would also cover a small portion of the loss. The explicit cost to users of network facilities may be higher as a result of these risk-avoidance and loss allocation mechanisms, although the more intense within-system competition could limit the pass-through of these higher risk-management costs to downstream users of payment instruments cleared through the network.

Another aspect of safety that could impinge on the reputation and viability of the network, is the security of access to users' payment accounts. This may be the greatest concern with respect to the inclusion of non-financial institutions as card-issuing, third-party, processors in ABM and EFTPOS networks operated by Interac. The risk to users, and to the reputation of the network, of unauthorized debits to their accounts by unregulated enterprises, without independent guarantees of compensation, could be significant. Moreover, the member deposit-taking institution holding the account from which the payment is debited may be required to share the depositor's loss. Closely related would be the concern about the privacy rights of users with respect to payment information.

Restrictions on the eligibility of payment instruments for clearing and settlement in particular networks may relate to risk considerations as well as compatibility standards. While a particular network must obviously have the technological capacity to process particular types of items, restrictions on the acceptability of an instrument may also be related to prudential concerns. For example, under a payable-through arrangement, a client's draft may be forwarded to its insurance or investment company for verification. In the event of insufficient funds to cover the settlement obligations of the insurance or investment company arising from drafts payable through the account, the drafts would no longer be in the possession of the CPA member and could be unavailable for prompt return through the system. As a result, the CPA member might, under some circumstances, incur a loss from the failure of an investment or insurance company. Similar risks may be faced by a Direct Clearer with the return of cheques to an Indirect Clearer within the CPA. However, the CPA rules require the Indirect Clearer to return the cheques promptly in the event of insufficient funds in the customer's account or of a default by the Indirect Clearer.

4. Some General Options for Broader Access to Networks

One possible result of the structure of the Canadian payments system is that members of the CPA, having direct access to various clearing networks and to settlement services, might have a competitive advantage in the provision of payments services relative to those financial institutions excluded from the system. Under its current legislation and organizational structure, the CPA is clearly an `essential facility' for the provision of upstream clearing and settlement services and for some downstream clearing and payment acquisition services, such as those related to chequing, direct funds transfer, and debit cards. However, it is not unambiguously clear that excluding, or including, a broad group of non-deposit-taking institutions in the CPA would improve safety, raise efficiency, or broadly promote consumer interests in the payments system, which is the primary concern of public policy. Available empirical evidence must be thoroughly analyzed to reach any conclusions.

To proceed further on the discussion of broader direct access to the CPA or greater functional powers in Interac for non-deposit-taking institutions, some options regarding broader access may be considered. Building on the previous analysis, the options are cast in the context of arguments for and against broader access and the potential trade-offs that they might imply for the public policy objectives. It should be emphasized that these options are only illustrative - meant to focus the discussion. They are not recommendations for reform of the payment networks. The working assumption for the illustrative options is that any necessary legislative changes can be made. Indeed, making the required changes to the legal framework for payments - especially electronic payments - would be critical to the implementation of any institutional changes outlined in the options. The appendix contains more detail on the illustrative scenarios, focussing on counterparty risks related to broader access and some possible risk control mechanisms.

Access to Acquisition Networks

Non-deposit-taking institutions already have direct access to some downstream, non-CPA, clearing networks for credit card payments through MasterCard and for debit card payments through Interac. However, benefits from their membership in these networks may be limited by their ineligibility to obtain upstream gateway services to CPA clearing networks, requiring them to obtain these services from a CPA member, and by the limits on their participation in the networks. For example, only deposit-taking members can issue debit cards for Interac's ABM and EFTPOS networks. Since the prospect for positive network externalities and effective within-system competition could be substantial for these networks, broader membership with card issuance privileges might increase efficiency and, thereby, promote the interests of consumers.

The arguments against such access would seem to be based on safety. Card issuers are responsible for meeting payment obligations to merchants participating in the Interac network and failure to do so could impose a loss on surviving members under existing CPA rules regarding the clearing of electronic payments. Card issuers are also responsible for ensuring that access to customers' payment accounts is fully authorized and that the security risks are well explained to customers. Failure to perform these functions adequately could damage the reputation, and possibly even the soundness, of the network.

Payable-through accounts might be viable with some form of guarantee to the CPA member providing that it would not be burdened with the loss in the event of insufficient funds in the client's account at its investment dealer or insurance company, upon which the draft is drawn. The prospect of this outcome might be enhanced by a broader CPA membership, which included institutions willing to provide such accounts to independent investment and insurance companies. Payable-through arrangements could be facilitated by the introduction of cheque truncation where only the image of the cheque is forwarded to the investment dealer or insurance company for verification. The drafts would be retained in the possession of the CPA member providing the clearing service. The investment or insurance company could also agree to provide a prompt verification response or be liable for the loss in the event that the draft misses the return deadline. Indeed, the latter option is possible even without cheque truncation. Investment firms and insurance companies seeking payable-through accounts for their clients might also consider methods to collateralize potential or existing overdrafts on their account provided by the CPA member to contain the risk to the CPA member in the event of a default.

Functional restrictions on membership in Interac could possibly be relaxed to permit some non-deposit-taking members to issue debit cards for ABM and EFTPOS networks. These institutions could be sponsored by a deposit-taking Interac member that assumes responsibility for the payment obligations against some form of pre-funded settlement account. All card-issuing members might also contribute to a loss reserve fund, administered by Interac Inc., with agreements regarding the allocation of any residual losses in the event of a default by a member.

Access to Clearing Networks

One option for network access, although possibly a costly one for some institutions, is already available to many financial institutions currently excluded from the CPA. Non-deposit-taking financial institutions can acquire or establish a deposit-taking subsidiary institution that is eligible for CPA membership.

Another option would be to allow certain non-deposit-taking financial institutions membership in the CPA as Indirect Clearers. Among other membership criteria, their entry could be made subject to reasonable prudential standards. Their payment processing systems would have to be compatible with CPA standards. Also, their contractual arrangements with Direct Clearers in the CPA might include a variety of risk-proofing mechanisms. These mechanisms could be constructed to take account of differences between the regulatory structures and insolvency regimes of deposit-taking and non-deposit-taking financial institutions. They may include, for example, different types or levels of collateral.

A more far-reaching option could be to restructure the CPA's clearing services, as well as its membership. Under its present structure, the CPA does not operationally distinguish between downstream clearing services of payment exchange, reconciliation, confirmation and netting of particular types of payment instruments and upstream services such as final multilateral netting over all instruments and entry of the final net positions into the ACSS for settlement. Consequently, membership in the CPA is an `all-in' proposition so that the current criteria for CPA membership may be more restrictive than would be necessary if such operational distinctions were made and associate membership to a specific downstream clearing network were possible. In this regard, the Australian system provides an interesting model. The CPA could be restructured to create separate clearing network associations for paper items, direct funds transfers, and credit and debit card payments, in addition to its LVTS network. Each of these networks could have a different membership group and could provide downstream clearing and acquisition services for their respective types of eligible payment instruments. The networks could share the same upstream processing facilities provided by ACSS to maintain scale-and-scope-economies when accessing settlement services, possibly through a subset of downstream network members acting as settlement agents. Members of each network could possibly be subject to somewhat different membership criteria and risk-proofing arrangements and could form separate network associations that would guide the operations and development of each particular network. Representatives from each network could sit on the Board of the CPA to help co-ordinate the interests of each separate network in the general policies of the CPA.

Access to the Settlement Networks

Positive externalities in settlement networks are possibly exhausted more quickly than in downstream payment networks since new members in the network are unlikely to bring a higher volume of settlement items to the network or its existing members. Also, the scale-economies in settlement networks depend primarily on the number of transactions, not the number of participants. Nevertheless, broader access to the settlement network could enhance within network competition in the provision of gateway services to members of downstream clearing networks. Financial institutions that have membership in a number of downstream clearing networks could have an advantage, however, in acquiring and pooling a broad variety and large volume of payment obligations for settlement. Therefore, while broadening access to settlement networks might improve payments system efficiency somewhat through within system competition, pooling settlement obligations into financial institutions that internally generate a substantial share of payments activity for settlement could be more important in generating network efficiency.

Safety considerations are paramount for settlement service networks and, because risk usually becomes concentrated in a few large institutions, broader access to settlement networks could complicate risk control. The CPA's LVTS network could, in principle, handle non-deposit-taking institutions because all participants are required to collateralize payment-related intraday credit. Accordingly, if included in the CPA and if they satisfy technical standards, non-deposit-taking institutions could, in principle, participate in the large-value settlement network without increasing network risk.[19] However, intraday credits for payments settled through the CPA's ACSS are not collateralized. ACSS network members rely on other risk control mechanisms such as payment unwind and homogeneity rules with regard to prudential regulation and creditworthiness, as well as on having sufficient collateral that could be used to obtain liquidity support from the Bank of Canada.

Direct inclusion in the CPA's ACSS settlement network of a more heterogeneous group of regulated financial institutions could require different standards. These criteria would likely try to limit the risk profiles of otherwise diverse types of institutions into some acceptable range, and might require that they provide some form of collateralization or privately-sponsored, third-party, payment guarantee for intraday credit. Enhancements to risk proofing are costly and these costs would have to be weighed against the potential efficiency gains of greater access by a more diverse group of institutions. In this regard, institutions could be required to maintain a reasonable minimum transaction volume or value in the aggregate of all payment instruments eligible for clearing and might be encouraged to form group clearing arrangements. These limitations might help reduce technical, administrative, and risk management costs by raising the size and lowering the number of institutions eligible for participation in the settlement network.

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[19]. The frequency of failure might, however, increase with more institutions providing payment services, which would impose some additional cost on the economy.

5. Summary and Conclusions

The Canadian payments system is organized as an amalgam of payment service networks vertically related from payment acquisition networks at the base (most of which are proprietary networks), through joint venture clearing networks, to settlement networks. The essential clearing and settlement networks are operated by the CPA, while some other downstream, joint venture, clearing networks are operated by entities such as MasterCard, Visa, and Interac. Each of the clearing networks has a tiered membership structure that features a subset of members that link the downstream clearing networks to upstream clearing and settlement networks. These `gateway providers' in each clearing network are generally large deposit-taking institutions. Moreover, membership in the essential clearing and settlement networks operated by the CPA is restricted to deposit-taking institutions, while in other networks, such as ABM and EFTPOS networks, Interac restricts functions such as card issuance to deposit-taking institutions.

The central role of large deposit-taking institutions in these clearing and settlement networks could potentially provide them with a cost and competitive advantage in the provision of downstream gateway services and payment acquisition service over smaller network members. Depending on the price and availability of upstream clearing services, the cost and competitive disadvantage in payments service markets could be especially significant for those financial institutions that are excluded from the clearing networks. These institutions must access clearing services indirectly through a network member.

However, the primary public policy concern is not about whether some particular group of financial institutions has or does not have a competitive advantage over another in the provision of payment services. The essential issue with regard to access is whether the inclusion of a broad range of financial institutions in clearing and settlement networks, notably insurance companies and investment companies, would result in an improvement in the efficiency, safety, or responsiveness of the payment system to consumer interests, or at least produce an acceptable trade-off among these objectives. Arguments both for and against the inclusion of a broader range of financial institutions in the clearing and settlement networks operated by the CPA, and in other downstream clearing networks, have some merit. Consequently, there is no clear path to a policy decision, particularly since a number of the controversial issues are largely empirical ones that cannot be answered without a thorough analysis of the implications of broader access.

More direct inclusion of a broader range of financial institutions in the CPA's clearing and settlement networks could involve some trade-offs among policy objectives - most notably between the efficiency and safety of the payments system. In the event of direct inclusion of a broader range of financial institutions in the CPA's networks, the broad policy problem would be to minimize the trade-offs between safety and efficiency and achieve an appropriate balance among the policy objectives.

In this regard, a number of options for broader inclusion in acquisition, clearing, and settlement networks are developed for illustrative purposes and for the purpose of promoting policy discussions. The inclusion of some non-deposit-taking financial institutions in these networks might improve the efficiency of the payments system, although modifications to the risk-proofing of the clearing and settlement networks could be required. The cost of these modifications to existing as well as new members might offset some of the efficiency gains. Nevertheless, it is possible that there could be changes that allow the overall balance among the public policy objectives to remain appropriate and the achievement of some objectives to be improved.

Appendix: Options for Broader Access and Counterparty Risk

Following are a series of brief scenarios examining the implications of hypothetical changes in the payments system that would allow regulated non-deposit-taking financial institutions (NDFIs), such as insurance companies, investment dealers, and possibly mutual funds, to participate more directly in the system. These changes are designed to provide the clients of these institutions with access to available funds or credit held in a variety of accounts at these institutions for the purpose of making payments to third parties.[20] The scenarios focus on the counterparty risk profiles of each option under consideration and possible mechanisms for mitigating these risks. These scenarios, which are based on the illustrative options outlined in the paper, are designed to facilitate discussion.

The scenarios considered relate only to retail (small-value) payments and are of two types. The first two scenarios - a payable-through arrangement and a debit card arrangement - would provide NDFIs with access to the clearing and settlement networks through deposit-taking institutions (DTIs) that are members of the CPA. In effect, NDFIs are provided with more direct access to payment acquisition networks. The second set of scenarios consider the implications of membership by NDFIs in the CPA either as an Indirect Clearer, which could allow participation in clearing networks, or as a Direct Clearer, which could permit more direct access to settlement networks as well.

The general assumptions that underpin the scenarios are that:

(i) the NDFIs (insurance companies, independent investment dealers, and possibly mutual funds) are all federally or provincially regulated financial institutions or entities; and,

(ii) appropriate changes are made in regulations and rules of the CPA and Interac, in legislation and regulation regarding the NDFIs, and in institutional

[20]. Liquid balance accounts include: free credit balances and available margin accounts at investment dealers, redeemable units or shares in mutual fund accounts, and segregated fund accounts, investment accounts and annuity accounts at life insurance companies. Credit accounts could include overdraft facilities on free credit balances or income annuities as well, possibly, as personal credit lines, home equity credit lines, or credit card accounts with life insurance companies.

arrangements only if required; otherwise prevailing rules and procedures are followed.

Scenario 1: A Payable-Through Arrangement

1. Description and Process

The NDFI holds a deposit account at the `collecting' DTI (which is assumed for simplicity to be a Direct Clearer in the CPA) through which drafts drawn on the accounts of the NDFI's clients are payable. A draft drawn on a client account at the NDFI is received by the `collecting' DTI in the payment item exchange among Direct Clearers at the end of day T and the NDFI's account at the DTI is debited before 8:00 am (Ottawa time) on T+1. The draft is forwarded to the NDFI for final verification on the morning of T+1. The NDFI verifies on T+1 that the client has sufficient funds available in its account to make the payment while the DTI verifies by the morning of T+1 that the NDFI has sufficient funds (or overdraft credit) on its account at the DTI for settlement by noon of T+1 of the accumulated value of payable-through drafts.

2. Risk Profile and Risk Control Mechanisms

Client fails - insufficient funds in the client's account for the NDFI to authorize payment.

The NDFI returns the draft to the collecting DTI on T+1, which reverses the debit to the NDFI's account and returns the draft to the `negotiating' DTI (the Direct Clearer that initially presented the draft to the clearing network on behalf of the payee) in the T+1 clearing cycle. The negotiating DTI reverses the provisional credit on its client's (payee's) deposit account before the clearings close on the morning of T+2. If the negotiating DTI were unable to reverse the credit, it would be at risk of a loss.

As a risk control feature in its arrangement with the collecting DTI, the NDFI could assume responsibility for the payment so that if the draft is not promptly returned on T+1, the NDFI would bear the loss. The NDFI -- not the collecting DTI nor the negotiating DTI -- faces the liquidity and credit risk of a client failure in such circumstances.

NDFI fails - the NDFI has insufficient funds (and overdraft credit) in its deposit account at the collecting DTI to cover the settlement of the aggregate value of the payable-through drafts drawn on its clients' accounts.[21]

The client remains liable for the payment and faces liquidity and possibly credit risk as a creditor of the failed institution.

Depending on the circumstances, the collecting DTI, the negotiating DTI, or the payee may be at risk of a loss.

(i) If the NDFI fails on day T, the collecting DTI can return the drafts drawn on the NDFI's client accounts that it receives at the end of the day, thereby unwinding any payments. Assuming that the negotiating DTIs are able to reverse the provisional credits on their client's accounts, the risk is then shifted to the payees.

(ii) If the NDFI fails on T+1 after it has received the client drafts from the collecting DTI (but before settlement), the collecting DTI may be required to complete the payments since there are no items in its possession to return.[22] Although the law is unclear in Canada, in its analysis of payable-through facilities, the CPA's Legal Department, referring to American case law and the Uniform Commercial Code in the United States, indicated that drafts which clearly state they are (only) *payable through the collecting DTI* might absolve the collecting DTI of liability, leaving the NDFI liable. In this event, the risk would be shifted to the negotiating DTI.[23] If the negotiating DTI can reverse

[21]. A `failure' for these scenarios is a failure to perform. For insurance companies and investment dealers, this could be the result of either a solvency problem or a liquidity problem (which could presumably elicit an overdraft loan from the DTI at which the settlement account is held). For a mutual fund, where the value of client shares is derived from the asset portfolio value of the fund, insolvency is of less concern than liquidity problems. Such problems are related to a mismatch between redemptions and unit sales that could produce negative cash flows and, therefore, negative balances in a fund management firm's settlement account.

[22]. To the extent that it can recover items from the failed NDFI, the DTI can avoid this problem.

[23]. See Appendix A in *Sweep Account Arrangements: Policy Issues and Possible Actions to Deal with Them*, Payments System Policy Working Group, Canadian Payments Association, May 4, 1995.

the provisional credit to the payee's deposit account, the risk is then shifted to the payee.

(iii) If the instrument does not state that it is a payable-through draft, the collecting DTI could bear the risk.

Some possible risk control mechanisms for the collecting and negotiating DTIs may be as follows.

(i) NDFIs could be required to hold positive balances in their deposit account at the collecting DTI in an amount related to the maximum (or average) daily payout over some specified interval. The contractual arrangement could provide the collecting DTI with the right to debit the NDFI's account to settle payment obligations provided that such a debit occurs before the NDFI has been declared in default.[24] The counterparty risk exposure would then be limited to the value of drafts above the required daily balance. Such pre-funded accounts are a form of collateralization.

(ii) In situations where the value of drafts exceeds the required daily balance by some margin, the drafts could be delivered by the collecting DTI to the NDFI against collateral for this `overdraft'. This requires the collecting bank to calculate the value of the overdraft by the morning of T+1 and the NDFI to maintain available free collateral to assign and deliver upon delivery of the payable-through drafts.

(iii) The proposals above would help ensure that the payments are completed, which would shift the risk of loss onto the unsecured creditors and shareholders of the failed NDFI. Alternatively, the collecting DTI could hold the drafts and deliver only an image of them, or relevant information from them, to the NDFI in the morning of T+1 for client account verification. The collecting DTI would have the drafts in its possession in the event of a default by the NDFI on

[24]. Such a debit to the NDFI's settlement account would not be possible after the NDFI is declared in default.

T+1 and could reverse the payments so that the payees (or their DTIs) bear the risk.

Collecting DTI fails - insufficient funds in its settlement account at the Bank of Canada.

If the failure is on day T, drafts received by the collecting DTI at the end of day T are returned and either the negotiating DTI (if it cannot reverse its credit to the payee) or the payee is at risk for the payment.[25] Although the NDFI faces no settlement risk, it is at risk as a creditor in a failed institution.

If the failure occurs on the morning of T+1 before settlement, but after the drafts have been delivered to the NDFI, the debit to the NDFI's account cannot be reversed and the NDFI is not liable for the payments. The negotiating DTI is at risk of the loss unless it can reverse the provisional credits to the clients' accounts and shift the risk to the payees that accepted the payable-through drafts as payment.

Scenario 2: Debit Card Payments

Case A: NDFIs Issue a Sponsored Debit Card

1. Description and Process

The NDFI is assumed to have an arrangement with a sponsoring DTI, which is a Direct Clearer in the CPA, that allows its clients to access their accounts at the NDFI through the shared ABM and EFTPOS networks operated by Interac.[26] The client's debit card is sponsored by the DTI, but is issued by the NDFI with its name and logo on the card. The client can use the card only to make cash withdrawals through ABMs or to make payments

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[25]. Although it depends on the contractual arrangements, the payor is generally liable to the payee for payment when the latter is left short of funds. The payor would, in turn, have an unsecured claim against the failed institution.

[26]. Co-branding, where the card is issued by the sponsoring DTI, is permitted under Interac rules. In fact, there has been at least one promotion where a temporary co-branded card has been issued that allowed the cardholder access to a fixed amount of funds (a lottery prize) in an account at a DTI set up by a non-deposit-taking institution.

through EFTPOS terminals at merchant locations. An NDFI without its own proprietary networks can lease access to ABM and EFTPOS terminal equipment, and through it to the shared networks, from the sponsoring DTI.

For each client transaction, two real-time authorizations could be required. The NDFI would verify that the client has sufficient funds or credit availability in the account and the sponsoring DTI could verify that the NDFI has sufficient funds or overdraft credit in its settlement account to meet the payment. The DTI would have no direct access to the NDFI's client accounts. Only if both account verifications were positive, and the transactions met the specified standards, would the payment proceed. The NDFI must clearly be linked, on-line, into the payment communications network through the sponsoring DTI.

When the dual authorizations are given, the DTI would immediately debit the corporate settlement account and place the funds in a pooled suspense account, which holds the accumulated debits until final settlement on T+1 (with value backdated to T). Once authorized, payments are irrevocable. The NDFI guarantees performance on authorized payments in its contractual arrangement with the sponsoring DTI and the DTI is required to complete authorized debit card payments, as currently stipulated by CPA rules.

2. Risk Profile and Risk Control Mechanisms

2.1 Market Risk

Assuming the debits to the client's account are in real time, there could be some market risk if the value of the client's account is closely related to asset prices in securities markets. With the performance guarantee, the NDFI may be exposed to market risk.

For example, the available margin in a client's margin account at an investment dealer is subject to variation with securities market prices, as are share values in mutual fund accounts and balances in segregated funds accounts at insurance companies. If the intra-day market value of securities drops sharply following authorization of the payment, such that the client's available margin or mutual fund share value is no longer sufficient to cover the payment, the NDFI is still liable for the settlement of the payment and could suffer a loss.[27]

The NDFI may find it prudent to mitigate against the loss by capping the daily value of client debits at a percentage of the opening value of the available margin or mutual fund account. An NDFI, such as a mutual fund, may also shift some of the market risk onto its client by setting redemption price for the client's shares at the closing market value of the underlying fund for the day on which the redemption order is received, which is the current practice. For example, share redemptions to cover debit card payments might be valued at the end of day that they are authorized (i.e. day T), while valuation to cover payable-through drafts would be at the closing value on day T+1, the day on which they were received by the NDFI for verification. In addition, payment accounts might be restricted to mutual funds with limited market risk, such as money market mutual funds of investment grade paper.

2.2 Counterparty Risk

Client fails - insufficient funds in the client's account for the NDFI to authorize payment.

The NDFI simply withholds authorization of the payment and there is no risk imposed on participants since the payment does not enter the clearing and settlement system.

NDFI fails - insufficient funds (and overdraft credit) in the NDFI's settlement account.

The DTI withholds its authorization of the real-time payment, even if the client has sufficient funds (according to the NDFI) in its account. To minimize the prospect of insufficient funds in the NDFI's settlement account intraday, the sponsoring DTI could require that the NDFI maintain a minimum account balance related to the maximum daily payout calculated in relation to past observations over some moving fixed interval.

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[27]. The available margin in a client's margin account at an investment dealer would be a fraction of the client's collateral in that account, which would mitigate against a large loss since the collateral could be liquidated.

The NDFI, upon debiting its client's account for a payment in real time, may also be able to segregate (within its own accounts), and pledge to the DTI to back the payment obligations, securities held in a depository or custodial agent from either the client's collateral (in the case of available margin accounts) or its own free collateral. The pledge may be updated at fixed intervals throughout day T in accordance with a batch calculation of client payments if real-time debits prove too cumbersome and costly.[28]

Sponsoring DTI fails - insufficient funds in its settlement account at the Bank of Canada.

Since the debit is in real time and the authorized payment item is deemed to no longer be in the possession of the failed DTI, the payment cannot be unwound under current CPA rules and the debit to the NDFI's account is irrevocable. The payee's DTI is at risk (assuming the DTI guarantees payment in its contractual arrangement with the payee, which is typically a merchant).[29]

Case B: NDFIs Directly Issue Debit Cards

1. Description and Process

In this case, NDFIs are assumed to be given the power by Interac to issue debit cards directly to their clients without the need for a sponsoring DTI. Each NDFI is assumed to have an arrangement with a DTI that is a direct clearer in the CPA to act as its settlement agent, and maintains a settlement account with that DTI. The NDFIs may still access the network through an arrangement with a third-party service provider such as its settlement bank. The basic process is the same as described in Case A.[30]

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[28]. Since risk is related to the potential size of the loss and the duration of the exposure, shortening the duration of exposure reduces the risk. Indeed, when LVTS becomes operational, an NDFI that has reached its intraday credit limit on its settlement account with the sponsoring DTI can transfer funds immediately, in real time, into its account to cover its overdraft.

[29]. If the sponsoring DTI that fails is an Indirect Clearer in the CPA, then its Direct Clearer, and not the payee's DTI, is at risk.

[30]. Even if a mechanism to collateralize settlement account overdrafts in real time could be devised, the DTI may still require the power to refuse payment requests by clients of the NDFI in the event that it believes the NDFI would be unable to honour its payment guarantee or meet its collateral requirements.

2. Risk Profile and Risk Control Mechanisms

The risk profiles and the possible risk control mechanisms are generally the same as in Case A, where there is dual real-time authorization in which the NDFI verifies sufficient funds in the client's account and the DTI verifies sufficient funds (or credit availability) in the NDFI's settlement account. The DTI acting as the NDFI's settlement agent would then be liable for authorized payments if the NDFI fails and at risk of a loss if the funds in the NDFI's settlement account were subsequently found to be insufficient or unavailable.

Even in the case of dual real-time authorization, it is not clear that existing CPA rules deal adequately with the failure of a DTI when it is acting as a settlement agent for another debit card issuer that is not a CPA member. To the extent that the DTI would have authorized a payment and debited the NDFI's settlement account in real time, it would appear to have assumed the liability. If the NDFI's DTI fails and is unable to complete the authorized payment, which had already been debited to the NDFI's settlement account, the payee's DTI would then be at risk.

If the DTI acting as settlement agent is unable to jointly authorize the debit card payments in real time because of contractual or technological limitations, it could be at risk in the event of a failure by the NDFI. To cover this risk, it may require a minimum positive balance in the NDFI's account at the beginning of each day or some other form of intraday collateralization as outlined in Case A. Alternatively, the contractual arrangement may be able to specify that the DTI is acting only as settlement agent for the card-issuing NDFI and assumes no liability for the payment. This would shift the risk onto the payee's DTI (or the payee if its DTI can reverse the credit).

Scenario 3: NDFIs as Indirect Clearers in the CPA

1. Description

This scenario considers the possibility that some NDFIs become CPA members and operate as Indirect Clearers. As an Indirect Clearer, an NDFI accesses final clearing and settlement networks operated by the CPA through an arrangement with a DTI that is a Direct Clearer in the CPA and at which the NDFI holds a settlement account. As a member of the CPA, it is assumed that the NDFI would be subject to the same by-laws, rules, and agreements of the CPA as are DTIs that are Indirect Clearers in the CPA. In particular, the NDFI would be subject to the CPA's Rule L2 on procedures regarding the default of an Indirect Clearer. The contractual arrangement between the NDFI Indirect Clearer and the DTI Direct Clearer is determined through negotiation between the two parties but must comply with the rules and by-laws of the CPA.

Building on the previous scenarios, two types of payment instruments are considered: a cheque payment and a debit card payment. With an NDFI as a CPA member, its clients can draw cheques on their accounts at the NDFI that are eligible for clearing and the NDFI can issue debit cards directly and without sponsorship to its eligible account holders under existing Interac rules. The clearing and settlement process for these payments would be similar to the current process followed by any Indirect Clearer.

2. Cheques Drawn on NDFI Client Accounts

2.1 Process

Cheques drawn on the client accounts of the NDFI are presented at the DTI providing direct clearing services by the end of day T. The cheques are processed and the net debit or credit position is posted to the NDFI's settlement account at the Direct Clearer in the morning of T+1 (for value at T), before the Direct Clearer settles on its account at the Bank of Canada at noon of T+1 (for value backdated to T). Once sorted, the cheques are delivered to the NDFI for final verification in the morning of T+1, by which time the client account is debited for value on day T.

2.2 Risk Profile and Risk Control

Client fails - insufficient funds in the client's account at the NDFI.

On the morning of T+1, the client is found to have insufficient funds (and overdraft credit) to meet the payment obligation. The cheque is returned to the Direct Clearer for a payment reversal in the T+1 clearing and settlement cycle. The debit to the NDFI's settlement account at the Direct Clearer is reversed and the net settlement value posted to the Direct Clearer's account at the Bank of Canada on T+2 (backdated for value on T+1) is adjusted to reflect the payment reversal. Upon the return of the cheque, the payee's DTI reverses the provisional credit to the payee's deposit account. The payee bears the risk (or the payee's DTI if it cannot reverse the provisional credit).

***NDFI fails - insufficient funds (or overdraft credit) in the NDFI's settlement account at the Direct Clearer*.**

The Direct Clearer declares the NDFI in default on the morning of T+1 before the cheques drawn on the client accounts, and received in that clearing and settlement cycle, are forwarded to the NDFI. The Direct Clearer returns these items in the T+1 clearings and reverses the debits to the NDFI's settlement account. The payee's DTI reverses the provisional credit to the payee's account upon the return of the cheque. The items presented by the NDFI to its Direct Clearer for collection from other CPA members (including the Direct Clearer itself) are forwarded through the clearings for payment and credited to the NDFI's settlement account.

If the excess overdraft position in the NDFI's settlement account at the Direct Clearer is not recorded until after the Direct Clearer has returned cheques to the NDFI for verification on the morning of T+1, CPA guidelines to Rule L2 require the Indirect Clearer to return to the Direct Clearer all payment items in its possession. The Direct Clearer, in turn, reverses the debits to the settlement account of the NDFI and returns the items through the clearings on T+1, as above.

The risk is generally borne by the payee, or by the payee's DTI if it cannot reverse the conditional credit to the payee's account because funds are no longer available. Under CPA rules, however, the DTI providing the NDFI with access to settlement services is at risk for the value of payment items delivered to the NDFI that cannot be returned. This would include, for example, cheques that the NDFI released to the payor.

To mitigate the prospect of insufficient balances in the settlement account of an Indirect Clearer, the Direct Clearer could require that some positive balance be maintained daily in the account. On occasions when the account is in overdraft, Indirect Clearers may pledge collateral against the delivery of payment items on the morning of T+1. Also, the Direct Clearer could forward only an image of the item or its payment information to the NDFI on the morning of T+1 and hold the payment items until settlement at the Bank of Canada is completed.

Direct Clearer fails - insufficient funds in its settlement account at the Bank of Canada.

The Direct Clearer is unable to arrange for sufficient funds to be in its account at the Bank of Canada before noon settlement on T+1 and is in default. The failed Direct Clearer returns the payment items still in its possession that were drawn on it and on its Indirect Clearers, reversing the debits to the Indirect Clearers' settlement accounts. It also returns to the NDFI Indirect Clearer items still in its possession received from the NDFI for collection and reverses the credits to the NDFI's settlement account.[31] Amounts due to the Direct Clearer from the NDFI Indirect Clearer for items drawn on the NDFI on the day of default that cannot be returned and that result in a clearing loss for the failed Direct Clearer are deposited by the NDFI directly into the Direct Clearer's settlement account at the Bank of Canada.[32]

The NDFI Indirect Clearer is at risk for the amounts in its settlement account at the failed Direct Clearer. The payees for cheques drawn on the client accounts of the NDFI are at

[31]. The Indirect Clearer does not want payment items to flow into a failed institution, which could increase its exposure to loss.

[32]. This amount may relate, for example, to items that had been delivered to the NDFI Indirect Clearer for verification on the morning of T+1 or to authorized debit card payments by the NDFI's clients. To make a payment on a same-day basis, the NDFI would have to obtain funds from the Bank of Canada.

risk of loss because of the default of the Direct Clearer. If a payee's DTI is unable to reverse the provisional credit to the payee's account, it bears the risk.

3. Debit Card Payments

3.1 Process

All CPA members satisfy Interac's current requirements for the issuance of debit cards, but only Direct Clearers in the CPA can act as settlement agents. Interac is assumed to extend the same rights to an NDFI Indirect Clearer in the CPA that it extends to DTI Indirect Clearers. The NDFI could then issue a debit card to allow its clients direct access to their accounts, but would have to establish a settlement account at a Direct Clearer DTI.

As in earlier scenarios, the NDFI is assumed to access the shared ABM and EFTPOS networks through a third-party provider, most likely the DTI that acts as its settlement agent. In the contractual arrangement to act as settlement agent for the NDFI in the Interac network, the Direct Clearer is assumed to treat the NDFI in the same general manner as a DTI Indirect Clearer. However, the contractual arrangement might still reflect the differences among regulatory systems and insolvency regimes for various types of eligible financial institutions.

Once an Indirect Clearer authorizes a payment, it is irrevocable under current CPA rules. The NDFI is, therefore, liable for the payment to the Direct Clearer. In turn, the Direct Clearer for the NDFI guarantees the payment to the payee's DTI under CPA rules E1 and E2.

3.2 Risk Profile and Risk Control Mechanisms

Client fails - insufficient funds in the client's account for the NDFI to authorize payment.

Since the payment request requires real-time authorization, the NDFI simply refuses to authorize the payment and the payment does not enter the clearing and settlement process. As indicated in earlier scenarios, the NDFI may manage any market risk associated with the authorization of client's payments in real time by limiting the amount in market-sensitive accounts on which cheques can be drawn to a percentage of their opening daily value.

***NDFI fails - insufficient funds (and overdraft credit) in the NDFI's settlement account at the Direct Clearer*.**

The Direct Clearer does not verify the balances in the client's account at the NDFI to authorize each payment in real time. Even though it can monitor, in real time, the net debit position in the NDFI's settlement account, such real-time monitoring may be costly and the Direct Clearer would do so only if the assessment of the Indirect Clearer flagged some concerns about its viability. Although the Direct Clearer can refuse to accept a payment obligation, it is unconditionally liable to the payee's Direct Clearer for those it does accept.

To mitigate this risk, the direct clearer could require an Indirect Clearer to maintain a positive balance in its settlement account related to the debits to that account recorded over some fixed interval. The Direct Clearer is, however, at risk for debit values above this level which result in an intraday overdraft position. If part of the overdraft is due to clearing losses related to cheques written by the NDFI's clients as well as to debit card payments, the unwind of these cheque payments would help reduce (and possibly even eliminate) the net debit position in the NDFI's settlement account, which reduces the risk to the Direct Clearer.

The Direct Clearer through its contractual agreement with the Indirect Clearer can, however, refuse to accept payment requests that would increase the debit position in the NDFI's settlement account. In effect, the Direct Clearer has the capacity to monitor the NDFI's settlement account in real time and the contractual right to refuse to authorize debit card transactions on all the client and proprietary accounts of an NDFI that clears through it.[33]

Direct Clearer fails - insufficient funds in its settlement account at the Bank of Canada.

Since authorized debit card payments are irrevocable under existing CPA rules, the payee's DTI bears the risk, assuming that its contractual arrangement guarantees payment to the merchant (payee).

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[33]. These measures are viewed as extreme and would only be undertaken by a Direct Clearer that perceives the risk as unacceptable and, presumably, intends to terminate its contractual arrangement with the indirect clearer.

Scenario 4: NDFIs as Direct Clearers

1. Description and Process

In this scenario, an NDFI, which is assumed to be a CPA member, becomes a Direct Clearer.[34] At present, the primary requirements for Direct Clearer status in the CPA are:

(i) a settlement account at the Bank of Canada, with an overnight overdraft facility from which all borrowings are fully collateralized by eligible liquid assets, and on which the zero reserve averaging requirement must be satisfied[35];

(ii) satisfaction of various technical and operating standards for direct participation in a Regional Clearing Association, the National Electronic Settlement Region, and the Automated Clearing Settlement System (ACSS); and,

(iii) a minimum volume requirement of 0.5 percent of the total value of ACSS clearings.

The volume requirement may prove to be a barrier for many NDFIs. While possibly unnecessary for the `normal' functioning of the ACSS system, it may provide some cost control advantages for clearings at Regional Settlement Points. Moreover, since the back-up system to ACSS in the event of an operating failure is a manual process, the volume rule restricts the number of Direct Clearers to large institutions, which could help reduce delays in final clearing and settlement.[36]

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[34]. NDFIs may also consider a group clearing arrangement in which at least some of the NDFIs clear and settle through a Group Clearer in the CPA. Although similar in operations to a Direct Clearer in the CPA, a Group Clearer must guarantee payment by the members of its group arrangement to the other CPA members under the CPA's Clearing By-Law.

[35]. To avoid an advance or an equivalent interest rate penalty at the end of the calculation period, the average daily-weighted settlement balance (excluding overdrafts) in a Direct Clearer's account at the Bank of Canada, over a one-month period ending the third Wednesday of each month, must equal at least zero.

[36]. Larger institutions may be able to absorb operating risks and payment risks more effectively than smaller institutions. Also, because of the continuous and broad attention that such institutions receive from both the public and private sector, the cost to individual creditors of monitoring large institutions could be lower than that of monitoring smaller institutions.

2. Risk Profiles and Risk Controls

2.1 Intraday Credit Risk among Direct Clearers

Direct Clearers provide intraday credit to one another. There is a possibility, however, that some NDFIs would allow clients only to make payments to third parties from their accounts and not allow them to receive payments from third parties into these accounts. With this payment asymmetry, NDFI's would not extend intraday credit to other direct clearers, but would require such credit from them in a deferred net settlement system such as ACSS.

Without real-time monitoring of intraday credit exposures among Direct Clearers, intraday credit limits are largely ineffectual for risk control since the full extent of the credit position to an NDFI would not be known until early on T+1. At that point, collateralization may not be a practical procedure given noon settlement, as evidenced by the absence of such collateral requirements among direct clearers at present. However, a real-time LVTS payment early on T+1 for at least the overdraft amount would reduce the credit exposure to within the agreed limit.

2.2 Counterparty Risk

Client fails - insufficient funds in the client's account at the NDFI.

The NDFI returns the cheque through the clearings on T+1 and the payee's DTI reverses the provisional credit to the payee's account. Therefore, unless the payee's DTI is unable to reverse the credit, the payee bears the risk.

Since debit card payments are authorized in real time, the NDFI simply withholds authorization and the payment does not enter the clearing and settlement process.

NDFI fails - insufficient funds in its settlement account at the Bank of Canada.

Cheques still in the possession of the failed NDFI are returned according to CPA rules with debits reversed on the client's accounts from which the cheques are drawn. The payee's DTI reverses the provisional credit on the payee's account upon receipt of the returned cheque. If the cheque were forwarded to the client drawing the cheque before the default and before settlement, the payee's DTI is at risk.

The process and risk profile are similar for situations in which the NDFI acts as a clearing agent for Indirect Clearers. All payment items still in the possession of the failed NDFI that were deposited by Indirect Clearers for collection are returned and any credits to their settlement accounts at the NDFI are reversed. Items in the possession of the failed NDFI for which payment is due from an Indirect Clearer are returned through the clearings and the debits to the settlement of the Indirect Clearer at the failed NDFI are reversed. The payee's DTI would present the cheques for settlement by the Indirect Clearer through its new Direct Clearer.

If the payment items were no longer in the possession of the failed NDFI, or of the other CPA members that cleared through it, then the payee's DTI would be at risk.

An Indirect Clearer that used the NDFI as its Direct Clearer may also be at risk if it were a creditor in the failed institution. However, any amounts owed to the failed NDFI by the Indirect Clearer as a result of clearing losses on unreturned items would have to be paid directly into the NDFI's settlement account at the Bank of Canada.

Since authorized debit card payments are irrevocable under current CPA rules, even when the NDFI acts as settlement agent for Indirect Clearers in the CPA that issue debit cards, the payee's DTI bears the risk for these payments unless:

(i) the cheques returned by the failed NDFI are sufficient to raise its settlement balance at the Bank of Canada enough to cover the aggregate value of the client's authorized debit card payments; or,

(ii) the payee's DTI can reverse the credit on the payee's account under a contractual arrangement, thereby shifting the risk to the payee.

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Summary of Discussion

Introduction

The Payments System Advisory Committee met twice to discuss issues related to access to the payments system in Canada. The discussion paper, *Access to Payment Networks in the Canadian Payments System*, prepared by staff of the Bank of Canada and the Department of Finance, served as background to the Committee's discussion.

With regard to the discussion paper, one member remarked that the paper did not sufficiently bring to life the risks associated with broadening access to the payments system. The paper could have addressed, for example, whether the current practice of providing same-day availability of funds on cheques deposited at a financial institution could be sustained if access were broadened.

Another member expressed the view that the paper did not present a compelling case that there are serious problems regarding payments system access. The member suggested that many of the access issues could be dealt with under the current rules and framework for the payments system.

The Provision of Payment Instruments

This part of the discussion focused on arrangements available to non-deposit-taking institutions (such as insurance companies, securities firms and mutual funds) to allow their customers to make payments or to withdraw cash by drawing on funds (or available credit) at the institution. Some members expressed the view that the topic was relevant only to regulated financial institutions; others thought that the provision of payment instruments by unregulated entities should not be ruled out.

Members discussed existing arrangements for providing customers of a non-deposit-taking institution (non-DTI) with access to funds through a sweep account. It was noted that sweep account arrangements require that individual customers of the non-DTI open an account at the deposit-taking institution that has contracted with the non-DTI to provide payments system access. When compared to a “payable-through” arrangement, or to the possibility of a non-DTI offering payment instruments directly, the sweep account was said to be less convenient to the customer and to have marketing disadvantages for the non-DTI. It was also argued that the cost of obtaining payment system access using a sweep account arrangement is higher than it would be under a payable-through arrangement or direct access because sweep accounts require that the non-DTI’s client open an additional account with the DTI. Sweep accounts were said to have the additional disadvantage of making it difficult and costly for the non-DTI to move to another deposit-taking institution as this would require that each of the non-DTI’s clients also move their deposit account to the new deposit-taking institution. With respect to the cost associated with operating two accounts, one member suggested, however, that a payable-through arrangement would also require some segregation of individual accounts for payment clearing purposes and, therefore, may not be less costly. Both arrangements were perceived to be more costly than allowing payments from the client’s account at the non-DTI to enter directly into the clearing and settlement processes.

The Committee discussed recent experience with the use of payable-through drafts by non-deposit-taking institutions in the United States. It was noted that securities dealers offer accounts with cheque and credit card access and a rate of interest approximately 200 basis points higher than demand accounts at deposit-taking institutions in the United States. Two wholesale deposit-taking institutions in the U.S. specialise in providing payable-through arrangements to non-DTIs. It was noted that the information on the face of payable-through drafts does not make clear the roles of the various institutions involved, and that consumers tend not to scrutinise the institutional information on the face of drafts or cheques, or differentiate between cheques or drafts drawn on different institutions.

The feasibility of setting up a trust company subsidiary to provide payments system access was also discussed. One member noted that under current conventions, this still only permits the use of a sweep arrangement. The cost of establishing and operating a trust company subsidiary, including the required capital and other regulatory costs, also makes this option unattractive to most non-deposit-taking institutions. It was noted that even if a corporate entity were able to establish a payable-through arrangement through its own trust company subsidiary, the co-operation of a CPA Direct Clearer would be needed in order to clear the associated payment items, and there are concerns that deposit-taking institutions within the CPA do not support the clearing of payable-through drafts.

The Committee discussed the potential risks associated with different forms of access to the payments system, and measures taken to control them. The particulars of an existing sweep account arrangement between a non-DTI and a CPA member were discussed and the requirement that the non-deposit-taking institution maintain a deposit balance with the CPA member equivalent to its average one-day settlement obligation was noted.

One member observed that the relationship between a Direct Clearer and an Indirect Clearer in the CPA is different from that between a deposit-taking institution and a non-deposit-taking institution in a sweep arrangement. The Direct-Indirect Clearer relationship is governed by a clear set of rules defined by the CPA; Indirect Clearers are covered by CDIC and are subject to OSFI guidelines on liquidity; and Indirect Clearers can arrange to have access to Bank of Canada liquidity. Other members suggested that certain non-DTIs compare favourably to deposit-taking institutions with respect to liquidity and financial stability.

The Committee also discussed the potential risks associated with the admission of new participants in the payments system. Existing members would need to assess the financial strength of new entrants. Some members indicated that there was no reason why a financially stable non-DTI could not meet the same standards as DTIs. They claimed that life insurance companies, securities firms, and mutual fund companies compare favourably to deposit-taking institutions in terms of financial stability.

Access by Non-Financial Entities to Clients’ Accounts

The Committee discussed the forms of access that non-financial entities - particularly retailers - might be interested in pursuing. With respect to the issuance of co-branded debit cards, the view expressed was that most retailers would likely be satisfied with an arrangement where the deposit-taking institution co-issuing the card would control the registration of the Personal Identification Number (PIN). Some large retailers, however, may want to register the PIN.

The discussion focused on the importance to the retailer of customer information. One member stated that current payment methods, including co-branded credit cards, do not give retailers control over customer information. The issue was characterised as a question of whether, at the point of sale, the retail customer is a customer of the retailer or of the financial institution whose payment card the consumer uses to make the purchase. The answer has implications for who “owns” the information and who has access to it.

The discussion pointed out privacy concerns and the importance of customers’ understanding of what is being done with information about their transactions. It was noted that these kinds of concerns increase when a single card serves many functions, such as debit, credit, smart card, and information card.

Access to Clearing and Settlement Systems

The Committee discussed the relationship between institutions that provide access to clearing and settlement and the institutions that obtain these services. A range of relationships is possible. For example, the institution providing access may be a Direct Clearer providing access to an Indirect Clearer or any CPA member providing access through a sweep or payable-through arrangement to an institution that was not a CPA member.

One Committee member noted that that the decision by a Direct Clearer to provide clearing and settlement services to another institution is primarily a credit decision and may be backed up by a guarantee from the parent of the Indirect Clearer. The Committee noted, however, the distinction between the credit risk generated when a deposit-taking institution chooses to provide the payee with provisional credit for the amount of the cheque and the liquidity risk that is inherent in the clearing and settlement process for cheques.

The Committee discussed possible risk containment measures that could accompany broader access to clearing and settlement services. One suggestion put forward for discussion purposes is a system for retail electronic payments that would allow individual transaction requests to be approved or rejected in “real-time” based on information about the associated credit exposure toward the institution on which the payment is drawn. It was noted that there were practical difficulties associated with implementing risk controls, such as collateralization, to cover cheque payments.

Some members questioned whether broader access necessarily implies greater risk and, therefore, the need for new risk containment measures. It was also suggested that the Committee might be giving too much emphasis to risk issues given that large payments will soon move to the proposed Large Value Transfer System (LVTS). One member noted, however, that approximately $5.4 billion per day is expected to clear outside LVTS and that nothing will prevent large value payments from clearing outside LVTS.

The discussion turned to the criteria for access to settlement networks. As the payments system moves toward increased reliance on electronic forms of payment, and if processes such as cheque truncation are adopted with appropriate amendments to the Bills of Exchange Act, the burden of sorting paper items would be greatly reduced. The volume requirements for Direct Clearers in the CPA might then be eliminated. From an operational efficiency standpoint, it might be appropriate to allow all payments system participants - including any non-deposit-taking institutions that might be given access - to have settlement accounts at the Bank of Canada and operate as Direct Clearers do currently. Under such a scenario, all participants would be exposed to the usual risks associated with being a Direct Clearer, but smaller members might find it more efficient to establish contractual arrangements with other participants to process their payment items. One member suggested that the critical issue of liquidity support could be resolved by having the Bank of Canada provide lender-of-last-resort facilities to all CPA members. The opinion was expressed by some members, however, that this approach greatly understates the issue of credit risk and the cost of monitoring additional participants.

Consumer Interests and Access to Payments Systems

According to one member, approximately 600,000 adult Canadians do not have accounts at a deposit-taking institution, and these people tend to be in the lower income bracket. The member concluded that, in a payment environment where it is difficult for anyone to avoid the use of cheques or pre-authorized debits (PADs), these people are being increasingly marginalized.

On the subject of payment options available to consumers, one member noted that some retail outlets will not accept cash and at least one large retail company accepts payment only by pre-authorized debit. Another member expressed the view that, while cost considerations may limit the availability to consumers of certain forms of payment, competition among retailers can generally be expected to expand the overall range of options. Nevertheless, security concerns about holding large quantities of cash are leading many retailers to encourage the use of debit cards. In fact, it has become common practice for some merchants to encourage customers to use their debit cards to get cash from the merchant by putting through a debit for an amount exceeding the purchase and taking the difference out in cash. Cash advances through credit cards are also common since cash handling costs may exceed merchant credit card transaction fees. Some customers have come to rely on these merchants as an alternative to an ABM for cash withdrawals. The member noted that the relative costs of handling different forms of payment, and of providing cash to customers in this way, are not well understood.

One member suggested that if the payments system were opened up to new competition, the new activity would likely focus on serving the needs of the most wealthy clients. The member asked how this “cherry-picking” would affect the position of institutions that now serve those with less wealth. An alternative outcome put forward was that institutions may become more innovative and provide new payment options that could service low-income consumers better. In the ensuing discussion, a number of members noted that providing basic deposit accounts represents a net cost to the deposit-taking institution.

The Committee discussed the issue of consumer disclosure, in terms of whether new and different forms of access to the payments system would create a need for greater disclosure than currently exists. The point was made that opening up the system could lead to increased variation in the types of payment instruments used, the types of accounts these items are drawn on, including variation in coverage under different insurance schemes, and the types of entities involved in the clearing and settlement process. For the consumer, these products will come to be seen as increasingly close substitutes, and it is important that the differences be clearly understood.

It was noted that consumers expect reasonable assurances that, in the event of a failure, their funds will be secure, regardless of the type of savings or investment vehicle in which they are held. Simple disclosure to consumers regarding the risks may not be sufficient, as many consumers may not understand these risks. One example cited concerned the difference between instruments that are covered by deposit insurance and those that are not. One member noted that, if consumers do not fully understand the difference between insured and uninsured products, insured deposits will be placed at a competitive disadvantage, as the cost of deposit insurance will not be offset by any value added in the mind of the consumer. The opinion was expressed, however, that these issues relate to the risks associated with different savings and investment vehicles but not to the payments system per se.

Regulation and Access to the Payments System

The discussion of access to clearing and settlement services led to a discussion of the factors that create “comfort” among Direct Clearers in the CPA, with respect to credit risk and the safety and soundness of the clearing and settlement system. Three key factors were noted in this regard: (1) a common regulatory framework for participants, allowing members to know with certainty the outcomes that will result in various circumstances; (2) the ability of direct clearing counterparties to have access to liquidity support from the Bank of Canada; and (3) appropriate capital and liquidity rules.

Some members noted that the common regulatory and supervisory framework that applies to current participants in the payments system provides a means of managing risks. In their view, if participants were no longer governed by the same set of regulations, counterparty risk would become a key consideration and the added cost of risk mitigation would be significant.

There was some discussion of the need for a common regulatory framework. Some Committee members felt that the further you move away from requiring participants to have the same regulatory regime, the less comfort is afforded. Others felt that the regimes need only be similar, but equivalent. The issue of “same” versus “similar” regulation is complicated by the fact that the nature of assets and liabilities differs significantly across different types of institutions.

The members generally agreed that, in assessing whether two regulatory regimes are equivalent, consideration should be given to both who the regulator is and the substance of the regulation. On the issue of who regulates, it was noted that, with the involvement of many regulatory authorities, reactions and outcomes can become less certain. The point was made, however, that not all current CPA members are regulated by the same body. The key is transparency -- that is, knowing what the rules are and how they are applied. The comment was made that the same regulation should apply to common lines of business (e.g., payment clearing and settlement), regardless of the type of entity engaging in that business. Another member suggested that payment system legislation and regulation should be reviewed periodically as is the practice with other financial sector legislation.

To address these regulatory concerns, it was suggested that standards could be set for various forms of participation in the payments system, applicable across the board to all types of institutions. For example, to become a Direct Clearer in the CPA, an entity could be required to meet certain minimum requirements with respect to such things as liquidity and capital, and these standards might be more stringent than those for an Indirect Clearer. Under such a scenario, any interested entity meeting the requirements for a particular form of participation would be granted access. This would avoid the problem of having to deal with an increased number of regulatory authorities and might remove questions regarding jurisdiction.

The Committee generally supported the idea of expanding direct access to the payments system, provided that the issues of regulatory structure for participants and access to lender of last resort could be dealt with satisfactorily. It was also agreed, however, that the real substance is in the details of how these issues can be resolved and that, without those details, support for the general notion of increased access means very little.

There was some discussion of the regulatory structure in place to govern mutual funds. The nature of the relationship between a mutual fund and its unitholders was also explored. Among the points noted were that: mutual funds face liquidity requirements at the fund manager level and are prohibited from borrowing and pledging except under specific circumstances and conditions; they must adhere to portfolio restrictions and investment regulations; and the regulation of mutual funds is the responsibility of provincial securities commissions. An unresolved issue is which corporate entity associated with a mutual fund would be best suited to access the payments system.

The appropriate role of unregulated entities in the payments system was also considered. It was generally agreed that access to liquidity support should be a key requirement for direct access to the payments system and that while consideration could be given to extending access to Bank of Canada liquidity support to regulated non-deposit-taking institutions, the same could not be said for unregulated entities. The Bank lends on a secured basis to solvent institutions and, without a regulatory body to turn to, would have no source for an opinion on the solvency of a given entity. In addition, there would be concerns about moral hazard issues if the “safety net” (including lender of last resort) were extended to unregulated entities.

The involvement in the payments system of Canadian branches of foreign institutions was also discussed briefly. Committee members noted that the source and nature of regulation, and the nature of loss allocation, would be important issues to consider in this regard.

The question was raised as to whether continuing developments in payments technology, and expanded access to the payments system, would require the development of a regulatory framework for electronic payments. In response, one Committee member noted that contract law would probably create the legal precedents needed to settle this issue, but that it might take some time for this to occur. It was noted that regulation might be required for public policy reasons - to ensure, for example, fair outcomes for consumers.