

Discussion Paper 2

**The Canadian Payments System:
Public Policy Objectives and Approaches**

**Background Paper for Discussion by the Payments System Advisory Committee
Prepared by
Staff of the Bank of Canada and the Department of Finance**

May 1997

Foreword

This paper is the second 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.

Following from the first paper in the series, entitled *The Payments System in Canada: An Overview of Concepts and Structures*, this second paper considers the public policy objectives for the payments system, the general approaches to achieving them, and the possible trade-offs among the objectives. The discussion is focused around three broad policy objectives: efficiency, safety, and the consideration of consumer interests in the payments system. The various dimensions of each of these objectives are considered in some detail. The approach to achieving these objectives, which is one based primarily on market forces, is also considered, as is the rationale for possible government intervention in the payments system. The paper also explores the nature of the potential trade-offs among the policy objectives and the conditions under which technical or institutional changes might improve the achievement of at least one objective while avoiding a deterioration in the achievement of the other objectives. The paper provides an illustration, based on a literature review, of the balancing of these policy objectives in retail and wholesale payment systems.

Accompanying this discussion paper is a summary of the Advisory Committee's discussions on the issues raised in the paper. These comments are in addition to those directed at the specific structure and content of the discussion paper, many of which have been incorporated in the paper. They provide further insight into the nature of the concerns of participants about public policy objectives for the Canadian payments system and approaches to achieving them.

TABLE OF CONTENTS

1. Introduction	.....	1
2. A Framework for Public Policy Objectives and Approaches		4
2.1 Public Policy Objectives	.....	4
2.1.1 Efficiency	.....	5
2.1.2 Safety	.....	6
2.1.3 Consumer Interests	.....	8
2.2 Public Policy Approaches	.....	10
2.2.1 A Market-Based Approach to Policy	.....	11
2.2.2 The Reasons for Government Intervention in the Payments System		13
<i>Spillover Effects</i>	.....	14
<i>Adverse Market Structure</i>	.....	16
2.3 Public Policy Coordination	.....	18
3. Balancing the Public Policy Objectives	.....	20
3.1 The Nature of Trade-offs Among Policy Objectives	.	20
3.2 Achieving Objectives Without Trade-Offs	...	22
3.3 Balancing Objectives in Retail and Wholesale Payments Systems	.	25
<i>Retail Systems</i>	.....	26
<i>Wholesale Systems</i>	.....	27
4. Summary	.....	28
Bibliography	.....	30

1. Introduction

Economic policy in Canada, as elsewhere, is aimed at achieving a strong economy, and one that is internationally competitive. An efficient and strong financial sector is one of the key requirements for achieving these aims. Central to the financial sector, and indeed to the overall economy, is the payments system. The payments system is a complex network of instruments, institutions and services that facilitate the transfer of value between parties in a transaction. As in most areas of economic activity, the organizational structure and the operations of the payments system are shaped by the policy and regulatory environment as well as by market forces. This paper sets out the public policy objectives with respect to the payments system and explores the fundamental relationship between market forces and government policy in the Canadian payments system.

Since the passing of the *Canadian Payments Association Act* in 1980, technology has had a significant impact on Canada's predominantly paper-based system - - from the automation, management, and processing of payments information, to the introduction of innovative electronic payments instruments. More recently, legislative and regulatory changes to the financial sector have altered the competitive landscape facing banks, insurance companies, trust companies and securities dealers, thereby giving rise to new business opportunities. These developments have implications for the Canadian payments system. Among the important recent changes have been: the rapid growth in the use of debit cards and other electronic payments instruments; new opportunities for distributing products and services electronically; the emergence of various pilot projects to test the market potential for electronic money; the restructuring of Interac to broaden acquirer access to its automated banking machine (ABM) and point-of-sale (POS) networks; and the Canadian Payment Association's (CPA) development of a new, large-value, electronic payments system.

Although payments system issues are seen primarily as part of the "plumbing" of the financial sector, they have taken on a growing importance among system participants and those responsible for the oversight of the system. For policy-makers, central banks and regulators, interest in the payments system derives both from its role in contributing to overall economic efficiency through its function of transferring value in the economy and from heightened awareness of the risks that difficulties in the payments system can pose for

participants in the payments system, the broader financial system, and for the economy as a whole. Payments services, especially those related to electronic payments, are also becoming increasingly important factors affecting the strategic competitiveness and future profitability of both private service providers in the system and business users. Moreover, new payments technologies can offer both lower costs and greater convenience to the retail consumer of these services.¹ However, there are risks associated with the use of new and innovative payments procedures, as well as with existing payments systems. An essential input, therefore, into the current payments system review launched by the Government of Canada is a clear statement of policy objectives for the payments system, of the factors that require consideration in determining the appropriate balance among them, and of the circumstances where there may be a trade-off among the objectives.

The primary goals of this paper are to set out a framework for discussing the policy objectives that could guide the regulation and operation of the diverse components of the Canadian payments system, and to provide a discussion of the factors associated with balancing these objectives. The discussion of policy objectives, the general approaches to achieving them, and the possible trade-offs among the objectives is an important element of the Payments System Advisory Committee's work since it will help to frame the discussion in forthcoming papers on the appropriate criteria for access to the various parts of the payments system and on the appropriate governance structure for the payments system.

The paper begins by establishing a conceptual framework for discussing three possible public policy objectives for the payments system. While these policy objectives, outlined at the start of the next section, are relevant for any payments system, issues associated with the achievement of these policy objectives are illustrated with reference to particular types of payments systems or particular services within a system. The general approaches to achieving the policy objectives and the reasons for government intervention are also considered in this section, as are issues of policy coordination. In the third section, the process of determining an appropriate balance among the three policy objectives is considered

1. In this paper, "users" is the global term for those who use payments services, while the term "consumers" refers only to those in the household sector.

and illustrated through examples of both the trade-offs that may be required in balancing them and the circumstances under which trade-offs can be avoided. This is followed by a discussion, based on some of the relevant literature, of the implied balance among the objectives for retail and wholesale payments systems. The paper ends with a summary of the main issues discussed.

2. A Framework for Public Policy Objectives and Approaches

The public policy objectives refer to the desirable properties of a well-functioning payments system. Most stakeholders in the system, including payments service users and providers in both the private and public sectors, share with policy-makers and regulators the desire to achieve these objectives. Various groups of stakeholders may, however, have different views on the relative importance of the various objectives and on the best approach to achieving them.

2.1 Public Policy Objectives

Three broad policy objectives are considered: *efficiency* of the payments system; *safety* of the payments system; and *consumer interests* in the payments system. *Efficiency* refers to the appropriate market arrangements and institutional structure for the allocation and management of resources so that users' payments needs are satisfied, in a timely fashion, at the lowest possible cost to providers and the lowest possible price to users. *Safety* of the payments system is defined in terms of a system that controls risks well, is robust to adverse shocks, and is governed by a solid and transparent legal framework. *Consumer interests* in the payments system encompass issues such as privacy and broad access to payments services. These policy objectives for the payments system are consistent with the broad policy objectives of the Government with respect to the proper functioning of the overall financial system in Canada. Moreover, like the broad financial system objectives, the policy objectives for the payments system, especially those related to consumer interests, are linked to a broader social policy objective of ensuring that the benefits from safe and efficient systems are broadly shared.²

2. Arguably, the achievement of specific goals with respect to the decision-making process regarding the future operations of the payment system, such as a role for stakeholders in decisions on the future objectives of the system, could be treated as another objective. However, in this paper, process considerations are incorporated into the discussion of the approaches to achieving the objectives for the payments system. Process considerations will be discussed in detail in the fourth paper of this series.

2.1.1 Efficiency

The dimensions of efficiency can be described in terms of the use of resources in providing payments services, incentives for innovation, and the pricing and adequacy of payments services. Focusing first on efficiency from the perspective of *providers of payment services*, specific goals are defined in terms of the minimum cost provision of payments services. If a supplier can attract a sufficiently large number of users, the supplier's average cost of providing the service may actually decline over some range of production (economies-of-scale). Also, if the provider of payments services offers complementary financial services to users, additional profit opportunities and further cost reductions (economies-of-scope) are possible. Low average cost is a measure of provider (supply) efficiency in the provision of payments services.

Efficiency is also related to the *pace of technological innovation* in payments services. As new information and telecommunications technologies are brought on stream, existing and potential providers develop applications for use in payments systems, either to reduce the costs of providing existing payments instruments and services or to create new, commercially-viable instruments and systems. A payments system that is sufficiently flexible to adopt new technologies and innovations quickly benefits both providers and users. Such dynamic efficiency requires a flexible institutional and regulatory environment, especially in terms of the legal and regulatory framework, so that the pace of technological innovation in the payments system is not unnecessarily hindered.³

Efficiency may also be described from the perspective of *users of the payments services*. Efficiency for users indicates low overall costs, including the prices for instruments and services, the convenience costs of acquiring those instruments and services, the information costs and learning costs related to new payments methods, and the costs of managing payments risks. Efficiencies that permit minimum cost provision of payment instruments and services can contribute to low prices for users. However, whether the actual prices to the

3. However, in an uncertain and dynamic market environment, sunk costs in existing technologies and systems, resource adjustment costs, and information costs (including learning costs) tend to slow the spread of new technologies.

users of specific payment instruments and services are as low as possible depends on the capacity and willingness of users to seek the lowest-priced alternatives for a payment and on the incentives for the suppliers of payment instruments and services to price them at the lowest possible supply cost. Note, however, that providers of payments services can sustain production only if they can cover the costs of labour, capital, and intermediate services used in the payments technologies. The quality of payment instruments and services is also important to users. Quality in payments services relates to such characteristics as the speed and predictability of settlement and the convenience of access to payment instruments and related services. A system that is highly responsive to users' needs and demands is also desirable. Finally, providing users with information on the availability and the relative risks and prices of various payments instruments contributes to greater efficiency since adequate and relevant information is necessary to choose efficiently among various payments options.⁴

The payments system is efficient overall if provider efficiency, user efficiency and dynamic efficiency are jointly achieved in the system in an absolute sense. However, there is also a relative dimension to overall efficiency, which is typically described in terms of competitiveness and relates to the overall efficiency of one payments system relative to another system. Comparisons of the relative efficiency among payments systems may be made either domestically or internationally. Competitive payments systems attract a broad range of users and, through their cost-effective use of resources, contribute positively to the efficient operation of the national and international economy.

2.1.2 Safety

Perhaps the best way to describe safety is in terms of risk minimization, where risk is the prospect that the realized outcome at some future date may deviate from the current expected outcome. Such deviations, typically in the form of a payment that is not completed in accordance with the payor's instructions or payee's expectations, are costly to participants. Payments system risks are generally measured in terms of the frequency of payment failures or the expected value of associated payments losses.

4. Because of the costs associated with gathering, processing and disseminating information, it may not always be readily available to all participants in the payments system.

Payments losses occur when a payor or its institution cannot fulfil a commitment to make a payment, or delays the delivery of a payment, resulting in a cash shortfall for the payee or its institution. Losses can be measured in terms of the principal amount of the payment loss and any replacement cost for the accompanying transaction (credit risk), and any interest costs incurred in re-financing due to delayed payment (liquidity risk). In addition to the potential size of a loss, the expected value of such losses depends also on the likelihood of individual payment failures. The likelihood of a payment failure is generally related to the creditworthiness of the payor, the financial position of the institutions and firms providing payments instruments and services, and the integrity of the legal framework and the operational network for processing the payment. Frequency of payment failures, and the potential size of payments losses, may thus be the result not only of default by a payor, but also of operational breakdowns or of incomplete contractual arrangements regarding the legal rights, obligations and distribution of liability among participants. Developments that reduce the frequency of failure and the size of potential losses would clearly enhance the safety of a payments system. Steps to strengthen the robustness of payments system institutions and networks and to enhance the operational integrity, reliability and predictability of the clearing and settlement system would help accomplish this objective. Transparent and complete rules and regulations regarding the legal rights and obligations of each participant in the system, as well as a clear definition of payment finality would contribute further to the safety of the payments system by helping eliminate the unexpected consequences of a payment failure.

The risks considered above refer largely to those borne by the individual participants in the payments system. Often, however, the loss from a failure is not absorbed solely by the creditors of the defaulting party; other participants and organizations involved in the delivery, clearing, and settlement of the payment may bear part of the loss. To the extent that the failure of a key participant to complete payments can increase the prospect of failure of other participants in the system to complete their payments, there are systemic risk concerns as well. This suggests that collective risks may be greater than the aggregate of perceived individual risks in the system. Individual risk management efforts may, therefore, be insufficient to effectively manage the overall risk in the payments system, and procedures to

contain the transmission of losses from a failed participant in a payments system to other participants become necessary when risk exposures among participants are significant. Consequently, the safety of the payments system can be considered in terms of how robust or well-protected the overall system is with respect to major shocks from within the system as well as from outside the system. The safety goal can be expressed in terms of ensuring that the system continues to perform adequately in the event of a major shock, without undue cost to the taxpayer.

2.1.3 Consumer Interests

In considering payments systems, efficiency and safety are generally accepted as two of the key policy objectives. Consumers of payments services are, of course, well-served by an efficient and safe system. There are, however, a number of issues that cannot be adequately considered within the confines of efficiency and safety. While closely related to these objectives, issues such as the privacy and security of payment information and reasonable access to payments system instruments and services by specific groups of users, such as low-income consumers, need to be addressed specifically in order to promote the broad utility of the payments system. Many of these issues are also of interest to the wider group of participants in the payments system. All users of retail and wholesale payments services are, for example, concerned about the security of payment information, and providers of payments instruments and support services in the system are driven by market forces to respond to these concerns.⁵ Consumers, however, may be less able to voice their concerns as effectively as business users and are, therefore, less able to influence the design and operations of the payments system.

In terms of *privacy and confidentiality*, technology now permits a record to be kept of individual payments, for virtually all non-cash transactions. With the development of

5. A retail payments system is an interbank funds transfer system that handles a large volume of low-value payments using cheques, direct credit and debit transfers, credit cards, debit cards, and stored-value cards. A wholesale payments system is also an interbank funds transfer system, but one through which large-value, high-priority, funds transfers are made between participants on their own accounts or on behalf of customers. Payment instruments typically include direct credit transfers (often as part of an Electronic Data Interchange message), as well as cheques and other paper instruments. Although dividing lines are arbitrary, relative to retail payments, wholesale payments are relatively large in value (minimum \$50,000 and over) and low in volume.

electronic payments records, there is a greatly enhanced capacity to transmit, store and manage consumers' payment information, as well as other financial information. Payment information at both an aggregated and an individual level can be useful to firms for marketing and other purposes. At an aggregated level the information can be used, for example, to understand market trends (such as the growth of debit card use in Canada, the average value per transaction and the frequency of use). Although the use of highly aggregated information may be of no concern to consumers, the use of detailed personal payment information for targeted marketing or other purposes can be a major concern because of privacy considerations. Unauthorized use of this information by payments participants to exploit commercial opportunities unrelated to contracted payments services may thus pose concerns regarding a consumer's, or indeed any user's, right to privacy.

Related to the privacy issue is the *security of payments information*. Access to consumers' deposit and credit accounts is required for payments processing. The transmission and recording of this information in the payment transfer process could leave consumers vulnerable to loss if anyone other than authorized service providers gained access to the information.⁶ Such problems are particularly relevant for new electronic payments vehicles such as payments systems on the Internet. The policy goal, in this case, is to promote the development of effective security standards, such as industry standards on encryption, to strengthen consumer confidence in the payments system.

Some of the consumer issues related to payments instruments and services and to information about them are noted in the earlier discussion of user efficiency. However, the user efficiency goal deals with consumer needs in a general sense only and presumes that all consumers are treated equally. Some consumers (notably low-income earners) may not have the same access to the payments system as other consumers, because of safety considerations on the part of deposit-taking institutions, individual income constraints, or other factors such as the location of branches and ABMs or discomfort with particular payments technologies.

6. Since all stakeholders recognize that confidence in the payments system would be seriously impaired if deposit and credit accounts could be accessed without authorization, there is widespread agreement that access to accounts must be safeguarded. There is, however, some debate as to how this should be best achieved.

Also, individual consumers often perceive little difference, at the point of access, among different payment mechanisms. Their awareness of the regulatory status of the specific payment service provider, or of the degree of protection that a particular system affords them, becomes blurred. Because of the costs of acquiring such detailed information, consumers can easily misperceive the risks they face. Also, because of the legal complexities associated with the contractual allocation of liabilities, it is possible that simple disclosure of their rights and obligations with regard to a particular payment system would not effectively protect consumer interests and that more active regulatory intervention by the public sector may be warranted.

2.2 Public Policy Approaches

There are a number of approaches that can be adopted to achieve public policy objectives. The range of possible approaches is best described as a continuum representing a mix of public and private actions aimed at achieving a desired policy outcome. At one end of the continuum is a completely market-based approach in which private actions are the sole force shaping the outcomes in the payment system with no role for government. At the other end is a totally interventionist approach in which public sector involvement would be the sole mechanism for allocating resources and shaping outcomes in the system. In practice, modern economies such as Canada's reflect a mix of public and private actions in their approach that avoids both extremes of the continuum. Different countries, however, arrive at different positions on the continuum.

Directly related to the continuum of policy approaches is a spectrum of techniques for public sector intervention. These techniques range from the simple *monitoring* of private actions by the authorities all the way to the *direct provision* of payments instruments and services by public agencies. Within the spectrum are measures such as *moral suasion* (which encourages payments system participants to undertake certain actions), the use of *financial incentives or support*, and the direct *regulation* of the operations of markets for payment instruments and services. Since payments systems offer a range of services through organizational structures that become more centralized as a payment proceeds from initiation to settlement, the public policy approach, and the instruments used in that approach, usually vary across service levels. Criteria for selecting an approach and the associated instruments

would include such matters as their adaptability and might relate more generally to their effectiveness, inclusiveness, transparency, responsibility and accountability.⁷

In Canada, the organizational structures for the provision of most payments instruments and services are largely determined by market forces. For activities such as the provision of payments instruments and associated processing and messaging services, the public authorities provide only a loosely woven legislative framework to guide payments procedures and a regulatory structure for financial institutions relating to their general activities in financial services markets. However, on the basis of the *Canadian Payments Association Act* and the *Payments Clearing and Settlement Act*, the public sector is more directly involved in the design of clearing and settlement systems. Indeed, final settlement services are provided solely by the Bank of Canada.

2.2.1 A Market-Based Approach to Policy

An approach to policy that is largely market-based allows the private participants in the system to have the predominant role in developing mechanisms that coordinate and govern the activities of providers and users of payments services. This is achieved, depending on the circumstances, both through the development of cooperative network organizations for the provision of some payments services and through competition among individual providers or networks for specific services. Profits and market share motivate the providers of payment instruments and services, and cost savings the users of these instruments and services, to develop the appropriate conventions, rules and institutions in the markets for payments services. Mechanisms, such as price and non-price rationing processes, are developed to organize the production and distribution of services and to allocate the available instruments and services among users to reflect individual demand.

Competition is a key element of the market-based approach and is characterized by the absence of unnecessary barriers to entry, a flexible and predictable legal framework, and the full disclosure of the properties of payments instruments and services and of the roles and

7. Details on the governance of the payments system in Canada will be discussed in a future paper.

responsibilities of the various participants. The opportunity to compete in the provision of payments instruments and services is essential for the development of an efficient payment system. Furthermore, while flexible legal and regulatory frameworks are necessary to set the rules for effective competition, adequate information regarding the nature of the opportunities and reasonable access to the markets for payment instruments and services are the engines of competition. Access to these markets for eligible providers of payments instruments and services promotes innovation and low cost production. Access for users encourages the competitive pricing of instruments and services by providers as well as a broad distribution among users of the benefits of an efficient payments system.

A noteworthy aspect of payments system design is the scope for the development of cooperative service networks among individual competitors. While many providers offer payment instruments and services in an effort to augment revenues and to achieve economies-of-scope, network associations, such as the CPA, Interac, MasterCard, and Visa, are created to organize the delivery of payments services and the clearing and settlement of payment obligations in a least-cost manner. Individual institutions form these network organizations to internalize and share the collective benefits associated with the standardization of, and broad participation in, the provision of these services. Indeed, standards, particularly those relating to equipment, software, and messaging, are critical to the development of an efficient payments system. Formal rules reflected in contractual arrangements, as well as informal conventions that help standardize and organize the commercial activities of the various participants in payments system networks, generally result in greater reliability and efficiency in the provision of payment services.

However, the development of networks for the provision of payments instruments and of messaging, processing and clearing services can also raise concerns about the safety of the payments system because of the way they concentrate risk. Definite and transparent rules to improve the certainty of settlement, to validate netting arrangements, and to allocate losses create incentives for participants to manage risks effectively. Other standards, such as those

relating to the financial integrity of third-party service providers, also tend to enhance the safety of the payments system.⁸

A largely market-based approach to policy presumes that competitive market activities generally produce outcomes that satisfy the public policy objectives. In this context, public sector intervention is minimal and is designed primarily to facilitate private market development and the workings of competitive forces by ensuring that adequate standards of disclosure, entry, and exit are developed. To this end policy instruments may include: the passage of laws and operating rules to govern the behaviour of participants in the system; the creation of standards and the establishment of organizations to oversee and possibly regulate particular operating procedures in payments systems; and, the development of pricing procedures, including subsidies and taxes, to affect financial incentives for the provision and use of payment instruments and services.

2.2.2 The Reasons for Government Intervention in the Payments System

In the Canadian payments system, the government intervenes actively only when it is determined that a totally market-based approach will not achieve the desired balance among the public policy objectives. Usually this occurs in circumstances in which the market incentives are inadequate to manage efficiently the positive and negative externalities, or spillover effects, on other financial services and economic activities from the provision or use of payments services. It occurs also when the technical conditions and market incentives for the creation of network organizations for the provision of some payments services result in the development of adverse market structures and outcomes for users of payment service.

Spillover Effects

What may appear to be a desirable structure for some participants in a particular payment system may result in undesirable effects on other participants in that system, on other payment systems, and on other financial markets. This would typically be the case if developments in

8. Even though standards may be developed by the private or the public sector to enhance efficiency and safety in the payments system, policy makers must ensure that they are not unduly restrictive so as to become barriers to innovation or entry.

a specific payment system imposed some unwarranted, and uncompensated, costs on other participants in that payment system, on other systems or on financial markets. The prospect of such a negative externality has led to concerns about systemic risk in wholesale payments systems. In the event of a major shock, inadequate measures for the containment of systemic risks can threaten the financial integrity of a broad range of financial institutions, disrupt financial markets, and reduce the ability of the central bank to efficiently implement monetary policy. Private participants in a payments system may be unwilling or unable to take full account of such externalities. Furthermore, in developing their payments systems, they may also rely on the inappropriate perception that the public sector implicitly offers unlimited guarantees against the possible failure of participants providing payments services. This may produce systems that leave participants and the payments system vulnerable to unanticipated shocks that can spill over into other systems and financial markets. Many of these aspects were considered extensively by the public and private sector experts that designed the CPA's Large-Value Transfer System (LVTS).

Some spillover effects from changes in the architecture of a payments system may have desirable impacts on related financial markets, which should not be discouraged. For example, in mid-1986, the Bank of Canada began backdating the settlement date on payments by one day to match the clearing date in the CPA's Automated Clearing Settlement System (ACSS). This institutional change was designed primarily to eliminate settlement float, which had some undesirable influences on behaviour in financial markets. However, because this change also provided same-day settlement accounting for financial transactions, money markets in Canada received a boost in their pace of development, which added to their breadth, depth, and liquidity. Similarly, in the United States, both clearing and trading in the markets for repurchase agreements (repos) involving government securities have been affected somewhat by the imposition of intra-day credit charges for Fedwire payments, which began in 1994. Government securities, which act as collateral for repos, have been returned earlier in the banking day as overnight transactions are unwound, and have been redelivered earlier as new transactions are settled. Market trading also deepened in the early morning trading hours. These activities have helped reduce the size and duration of some intraday credit exposures of the Federal Reserve and improve the efficiency of the repo market.

For all payments systems, network externalities are a prominent characteristic of the systems' architectures. In retail payments systems, such as credit and debit card systems, demand for the payment instruments and services depends on the number of members, the number of cards that they issue, and the number and size of participating merchants that they enroll. Individual participants clearly benefit from increases in the size of the network, not only in the sense of spreading network operating costs, but also in the sense of convenience gains for users and sales gains for merchants. Accordingly, existing members of the network can achieve net gains from the addition of each new member, at least up to some critical size. Indeed, the potential for positive network externalities and economies-of-scale encourages the development of network organizations by payments system providers for infrastructure payments services such as clearing and settlement. Set-up costs for such services are significant and standardization achieves substantial savings. Absent any adverse market structure issues, participating firms would nonetheless compete actively in the provision of payment instruments and acquisition services.⁹

While positive network externalities exist, there may also be problems associated with networks that can reduce overall efficiency in markets for payment and other financial services. Cross-subsidization among network members, in which some members consume the benefits of the network without bearing the appropriate costs, is one possible problem. For example, in payments networks where contributions to loss-reserve funds are unrelated to risk, high-risk participants may not bear an adequate share of the costs of risk-proofing the system, which could discourage low-cost entrants. Also, in some cases, new entrants to a network may acquire the “brand value” of the network without always absorbing a full share of the set-up cost of the network. Accordingly, networks may charge entry fees to new participants or limit participation in the service network to new members that are in the same risk class as incumbents. Although free-riders may be eliminated and the integrity of the

9. Acquisition (or access) services are related to the provision of payments instruments to users and include, for example: the provision of chequable deposit accounts and cheque collection services; the provision of services for direct funds transfers such as pre-authorized debits, direct deposit and bill payments; the marketing and issuance of payments cards to consumers; the provision and maintenance of ABMs and other on-line terminal equipment at point-of-sale; and the processing of individual payment records for entry into clearing systems.

network more clearly established, users of payments services may suffer some convenience loss.

Adverse Market Structure

Another concern related to the development of cooperative network organizations for payment services is the prospect that service monopolies could emerge. Economies-of-scale in particular payments services can result in the provision of that service by a single private organization. However, as long as firms can enter into that service market without restriction, and information on market conditions and new technologies is equally available to all existing and potential market participants, the single provider may be unable to exploit its monopoly position. In other words, the industry can operate efficiently even with a single service supplier.

In other circumstances, a single service provider may be able to control access to technologies and entry to the service and thereby discriminate among particular classes of participants. In payments systems, this issue is most relevant in the case of cooperative network organizations offering infrastructure clearing services, as well as some data processing services for payments. Existing members of the network may restrict new membership to the organization as a risk control vehicle that minimizes monitoring costs and limits exposure to less creditworthy participants. However, such restrictions can effectively become barriers to new competitors and to the development of new instruments. In this case, it is possible that existing members may profit excessively from the provision of the infrastructure payment services. Moreover, given the complementary relationship between access, clearing, and settlement services, they may obtain market advantages in the provision of particular payments instruments to users.

Because of concerns with this problem, the public authorities may adopt measures aimed at preventing private cooperative networks providing payments services from exploiting any natural monopoly powers. In many instances, policy intervention may not be required to ensure that private payments networks respond appropriately to user needs. While it may be too early to judge its effectiveness, the recent establishment of the Stakeholder Advisory

Council by the CPA is an example of a private sector initiative to broaden input into the operations and the future development of the payments system in Canada. The Competition Bureau's investigation of Interac, and the Consent Order issued by the Competition Tribunal in 1996, illustrates an instance of active policy response to such concerns. The basic policy instruments in this approach include the use of anti-combines legislation, an official monitoring agency to oversee compliance with the legislation, and a judicial structure to enforce the legislation with the imposition of penalties in the event of non-compliance. The process involved negotiation between the public oversight agency and the private network organization to establish a set of operating criteria for membership, pricing, and operations of the network that would satisfy, in the context of this element of payments services, the basic tenets of the legislation governing business practices. Although the public sector intervened in this instance, the basic approach to the provision of these payment services remains a largely market-based approach.

For other services, such as settlement services, where efficiency for users results in a single provider, the public sector intervenes more directly. Not only is the threat of monopoly exploitation of possible concern to users, but the risk of provider failure can also have serious systemic consequences for the payments system and, more generally, the entire financial system. Settlement services for payments are, therefore, typically provided directly by the central bank.¹⁰

2.3 Public Policy Coordination

In Canada, the policy approach to the payments area requires careful coordination with respect to non-financial public policies within the same jurisdiction, to financial policies in both federal and provincial jurisdictions, and to cross-border policy initiatives in a wide range of financial services. With respect to policies in the same jurisdiction, recall that the privacy of payment information was one of the policy objectives considered under consumer interests.

10. Although a private institution closely monitored by the public sector and backed by a public sector guarantee of performance could provide settlement services, the moral hazard problems involved and the relatively high costs of close monitoring and regulation seem to justify the provision of these services directly by a public body such as the central bank.

To determine the appropriate policy approach for privacy in retail payments, and the extent of government intervention, it would be useful to consider the government's broad approach to the protection of privacy in other areas. Even though it may be the case that a higher degree of privacy is required when an individual's financial affairs are concerned, a consistent approach to privacy across the same level of government is necessary to avoid conflicts in legislation and policy interpretation.

Another practical issue in balancing the policy objectives for the payments system in Canada is the interaction of federal and provincial jurisdiction over financial institutions and markets. In fact, overlapping and, in some circumstances, concurrent jurisdictions are an important constraint on the range of possible policy approaches. To illustrate the problem in the context of payments systems, recall that all members of the Canadian Payments Association are deposit-taking institutions. Even though some are federally-regulated and others provincially-regulated institutions, because of federal-provincial coordination efforts they now face a certain degree of commonality in their respective regulatory frameworks. Although many aspects of payments systems are within federal jurisdiction, proposals to amend payments system policies must take into account the fact that some important aspects of payments systems are within provincial jurisdiction. This is especially compelling given the spillover effects such amendments may have on the other activities of regulated financial markets and institutions. One area of shared jurisdiction that often complicates policy formulation is consumer protection. Although these issues are generally matters of provincial jurisdiction, policies relating to the payments system also include concerns about the privacy and confidentiality of financial information. The consumer interest objectives of the federal authorities in regard to this issue need, therefore, to be coordinated with consumer protection and financial sector policies of provincial authorities.

International efforts to address problems related to cross-border trade in goods and services (including financial services) through policy coordination are also critical to achieving the policy objectives for the Canadian payments system. As noted earlier in the discussion of the efficiency objective, an internationally competitive payments system contributes to the overall efficiency of the economy. Well-coordinated and transparent legal

and regulatory frameworks that are consistent with international standards, such as those developed by the G-10 central banks at the Bank for International Settlements (BIS), enhance the efficiency and safety of payments systems with respect to both domestic and international payments. In addition to adopting these standards, Canada has assumed regulatory obligations with respect to international money laundering, and participates in international efforts to address concerns with Internet payment systems, both of which could influence the government's approach to policy choices.

3. Balancing the Public Policy Objectives

Since the policy objectives set out in the previous section can come into conflict under certain circumstances, it is necessary that some balance be struck among them. As noted, if the market-determined balance among objectives is considered inappropriate from a public policy perspective, public policy authorities intervene to strike a more appropriate balance. Finding an acceptable balance among the objectives for various elements in a payments system is essential for promoting the confidence of participants in the system. The question of how to balance the objectives appropriately can perhaps best be explored by discussing the nature of some of the trade-offs among the policy objectives when designing a payments system. It is also useful to examine circumstances when policy objectives can be achieved and advanced without trade-offs among them. Some observations from the literature on balancing policy objectives in retail and wholesale payments systems provide a familiar context to the discussion.

3.1 The Nature of Trade-offs Among Policy Objectives

Changes in the technical and institutional characteristics of payments systems and in the preferences of their participants can affect the balance among the different public policy objectives. For example, in the late 1980s, central banks and payments system regulators became increasingly aware of, and concerned with, the nature of systemic risks, especially in wholesale payment systems. As a result, policy goals were rebalanced to emphasize safety through, for example, the introduction of large-value, real-time payments systems, which monitor and manage risk exposures in a continuous fashion. Such systems are relatively costly to operate so that, in the current technological environment, lower risk exposures, which help reduce systemic risk and improve the safety of the payments system, are achieved at the expense of higher costs in the system.

There are many other circumstances under which desirable achievements in one policy objective for the payments system may be associated with the lesser achievement of others. For example, an institutional change in the membership criteria that broadens access to a clearing network may lead to increased competition among providers of the retail payments

instrument and services, and this, in turn, can potentially result in lower user prices. However, the broader membership could also raise the monitoring costs for providers and users of these services and lower confidence in the system. The efficiency of the retail payments system could improve, although the safety of the system might be reduced from the perspective of both users and providers. As a second example, one related to certain technologies, consumer concerns about privacy could potentially inhibit the full adoption and use of a low-cost payment instrument, which would reduce the efficiency of the payments system. There are costs associated with protecting privacy through the adoption of privacy standards that could render certain technologies unprofitable. Although largely a matter of individual preference, consumers have indicated that, depending on the circumstances, they will tolerate the use of some types of personal financial information. Public policy-makers must try to strike a reasonable balance between the privacy standards of personal information and the costs imposed on providers and users of payments instruments and services.

As a general caveat to this discussion, it should be noted that the impact of major institutional or structural changes on policy objectives can be complex to assess. The stylized trade-offs in the above examples seem straightforward because the institutional changes are one-dimensional. More realistically, there could be a package of changes. For example, broader access to a retail payments clearing facility could be combined with some risk-proofing requirements, such as contributions to a loss reserve fund to support a clearinghouse guarantee or possibly the use, at some point in the future, of real-time processing, credit caps, and collateral. In this event, some of the efficiency gains from broader consumer choice and greater competition could be offset by higher costs associated with increased risk-proofing. Moreover, depending on the terms of the risk-proofing agreement, the safety objective may or may not be better served than it was prior to the changes.

In such cases of multi-dimensional institutional or structural changes, the effect of the changes on the achievement of the policy goals is not straightforward. In fact, trade-offs often arise between different dimensions of a single broad policy objective. The institutional changes associated with the development of LVTS illustrate this point well. The collateralization requirements for intra-day credit make LVTS safer than ACSS and

International Interbank Payments System (IIPS), where intra-day credit is uncollateralized and unpriced. The collateral also imposes higher clearing costs on members of the LVTS. However, the higher costs are offset by the higher quality of clearing and settlement associated with real-time accounting, the novation of payments obligations under continuous multilateral netting, and the certainty of settlement. Therefore, LVTS offers considerable safety gains over ACSS and IIPS for users and providers of wholesale payments services, with higher costs partly offset by higher quality of services.

The designers of payments systems try to find ways to minimize trade-off costs. With regard to the LVTS example, greater safety in the wholesale payments system is achieved through collateralization, as noted above. However, to limit the costs of achieving greater safety, the approach selected combines 'survivors-pay' and 'defaulter-pays' principles of collateralization. Compared to a defaulter-pays approach, the survivors-pay principle requires less collateral from individual participants, which lowers their costs, but leaves surviving participants with some risk of loss. This, however, encourages participants to monitor the creditworthiness of other participants in order to set their own bilateral credit lines efficiently, and to provide information so that others can extend credit lines to them. This approach allows the public sector to adopt less costly monitoring procedures and reduces the moral hazard problems associated with regulatory oversight, which contributes to both the efficiency and safety of the system. Compared to a survivors-pay principle, a system incorporating a defaulter-pays approach provides a more accessible system for participants, which can improve competition and efficiency without compromising safety.

3.2 Achieving Objectives Without Trade-Offs

There are circumstances where trade-offs can be avoided and where the greater achievement of one or more objectives is possible without diminishing the capacity of the system to achieve other objectives. Even taking current technology as a given, there may be opportunities through institutional changes to improve the use of existing technology in order to achieve gains in efficiency, safety and in the consideration of consumer interests. The adoption of bilateral or multilateral payments netting to reduce settlement costs and risks by reducing credit exposures among participants in a clearing system is an example of private

collective action that could improve safety while, at the same time, potentially improving the efficiency of the system.

The effectiveness of netting arrangements in improving safety and efficiency of clearing and settlement systems depends critically on the degree of legal certainty surrounding those arrangements and rules governing the operation of the payments system. Netting is just one area where greater legal certainty, as provided for example by the Payment Clearing and Settlement Act, has made a positive contribution. Enhancing legal certainty more generally in the payments system, through measures such as the passage of legislation that better defines the legal rights and obligations of parties involved in payments transactions, can improve efficiency and safety and further the interests of consumers. Such legislation, especially in the case of electronic forms of payment, would clearly help users make informed decisions about different types of payments.

Significant technological change may also permit the achievement of one or more goals without seriously damaging the position of others. Indeed, many of the considerations surrounding this examination of the Canadian payments system revolve around the proposition that advances in computer and telecommunications technologies permit changes in some aspects of payments systems so that gains in some, if not all, of the policy objectives can be achieved. A prime example is the development of on-line systems for transmitting payment messages. With the decline in computing costs, these systems may offer substantial cost savings relative to the processing of paper items. At the same time, on-line systems make it possible to monitor payments as they are submitted to the payments system to control credit exposures. Such monitoring is cost-effective for larger-value payments at present, and, with some innovation, may eventually be practical for retail systems as well.

Structural or legal obstacles sometimes stand in the way of the adoption of new technologies that could advance public policy objectives. For example, technologies now exist that would permit the adoption of cheque truncation, which could improve efficiency in cheque clearing without additional risk. Cheque truncation refers to any process that captures vital payment information from a cheque for transmission by electronic means rather than by

physical delivery of the cheque. It is advocated as a more efficient means of clearing cheques, but it is not permitted by the *Bills of Exchange Act*, which requires the physical return of each cheque to the institution on which it is drawn. In addition, the *Canada Evidence Act* does not currently provide for the use of electronic records for evidence purposes. If issues related to the rights of parties making and receiving payments by cheque can be resolved satisfactorily, the development of a system of cheque truncation could lead to considerable cost savings. Also, there would likely be no reduction in the overall safety of the cheque payment system, although there may be some trade-offs in particular dimensions of this general property. Specifically, without a highly sophisticated imaging technology, the return of an electronic image rather than the physical cheque to the payor's branch could compromise its ability to determine whether a cheque had been forged or altered, which raises the legal issue of acceptability in evidence.¹¹ On the other hand, the technology for capturing and transmitting the information on a cheque electronically can also permit more rapid detection of cheque fraud.

There are also changes in institutional arrangements and technological conditions related to the allocation of losses and management of risk and that can qualitatively affect both efficiency and safety in the same way. Conditions and arrangements that prevent an appropriate allocation of losses distort both the decisions of participants about an appropriate payment method and their efforts to manage the risks associated with those instruments. Consequently, the laws pertaining to payments systems need to be up to date with developments in the payments system so that appropriate loss allocation rules can be adopted and innovative payment instruments and processes, such as the newer electronic ones, are not disadvantaged. In fact, even without reducing or reallocating individual exposures to potential financial loss, a transparent legal statement of the rights and obligations of participants at all stages of the payments process, for all payments instruments, can contribute positively to more than one objective. It will reduce legal risks, which adds to the safety of the payments system, and will lower legal and other risk management costs, which improves efficiency.

11. Under some truncation schemes, the original cheque is stored for a fixed period by the receiving institution and may, therefore, be recovered for legal purposes within that interval.

3.3 Balancing Objectives in Retail and Wholesale Payments Systems

A survey of the payments literature, including primary source material on the Canadian payments system, would indicate that all three objectives - efficiency, safety and the consideration of consumer interests - should be pursued for a smoothly functioning payments system. The discussions in the literature generally focus on achieving some particular balance among these objectives. However, the diversity of the proposals in the literature indicates the difficulty in obtaining a consensus on the acceptable balance among these goals.¹²

The discussion of retail and wholesale payments systems in the literature suggests some differences in the emphasis assigned to the policy objectives for these two types of systems, due in part to some differences in the characteristics of retail and wholesale payments systems. Consideration of the safety objective - or its converse, payment system risk - in the balancing of policy objectives is complicated by its dependence on both the magnitude of risk and the participants' attitudes toward risk in the various payment systems. In general, large risks, and a strong aversion to risk, produce greater efforts to prevent and control risk. In the discussion of retail payments systems, the greatest emphasis, in qualitative terms, seems to be assigned to efficiency with somewhat less emphasis on the remaining objectives. In wholesale payment systems, both safety and efficiency are the focus of attention, with consumer interests receiving little attention in most discussions of wholesale payments systems.

Retail Systems

In the discussion of retail payments systems, the efficiency goals most frequently cited in the literature are user cost efficiency (including convenience costs), responsiveness to user demands, and innovativeness in instrument design and service delivery. Occasionally, the

12. Differences in views regarding the desired balance among objectives reflect not only the difference in the type of payments system but also the interests of different participants in the systems. The discussion of wholesale payments systems is largely derived from a literature that is typically authored by central banks, while the literature on retail payments systems largely reflects discussions by private providers of instruments and acquisition services.

timing, predictability and speed of settlement are cited. The safety goals considered include the reliability and security of the payments system, as well as effective risk management programs (including network back-ups) and loss sharing rules among participants in the system. The promotion of consumer interests through improvements in the transparency of payments systems is also frequently cited as a specific goal for retail payments systems.

The literature points to a number of characteristics of retail payments systems that appear to influence the emphasis on efficiency, relative to safety. Notable among these is the broad range of payments instruments, provided through a number of firms, that are available to users for small-to-medium sized payments. This offers a degree of consumer choice, as well as availability of 'default' options in the event of failure of one particular instrument or system.¹³ In addition, an individual participant is likely to use a variety of instruments to meet payment obligations arising from different types of transactions. Therefore, in retail payments systems, there is a marked focus on provider and user costs, and on the convenience and breadth of access for consumers to payments instruments.

Overall concern about individual financial risk in retail payment systems may be moderate relative to efficiency issues because users would likely be exposed to losses on only a few transactions. Also, the financial loss from the failure to complete a single payment is, on average, small relative to the overall financial worth of most individual users, including both consumers and merchants. Nevertheless, safety is not ignored. Participants in clearing and settlement systems can face significant losses in the event of a failure by one of their number. Moreover, some retail payments are at least occasionally quite large for individuals. In addition, for issuers of some retail payments instruments, the exposure to potential financial loss in the event of an operating failure in the system can be substantial because of the volume of items processed. For example, if an electronic money provider were to fail, a consumer could be exposed to a loss of a couple of hundred dollars, but a merchant might have a much higher exposure. There is significant concern over operating risks, legal risks, and security risks with regard to particular retail payments instruments and systems, which is

13. On occasion, contractual arrangements with some vendors can constrain the user's choice of payment instruments.

reflected in the gradual pace of acceptance for some retail electronic payment innovations. An operating failure at a credit card clearing centre, for example, could cause liquidity problems that might have broader risk implications for other payments systems in which the financial institutions issuing cards participate.

Wholesale Systems

The emphasis on safety as an objective in wholesale payments systems is expressed in the literature as concern about security of individual payments, reliability and integrity of large-value payments systems, and systemic risks in these payments systems. Efficiency goals in wholesale (large-value) payments systems are typically expressed in terms of fast, low-cost clearing and settlement services. A central issue surrounding the promotion of user confidence in wholesale payments is the coordination of the legal and regulatory framework, both nationally and internationally.

The users of wholesale payments services are typically regulated financial institutions, some of which are also the main payments service providers, and sophisticated non-financial firms. The main characteristic of wholesale payments systems that apparently results in the relatively higher weighting of safety than in retail systems is the existence of substantial systemic risk. Wholesale, or large-value, payments systems are more susceptible to systemic risk because of the high value of the payment items sent through these systems. Among payments system participants, central banks are most concerned with safety in wholesale payments. Central banks take account of the negative externalities in the provision of wholesale payments services and, therefore, aim for the development of systems that minimize or eliminate systemic risk.

4. Summary

Efficiency, safety and the consideration of consumer interests are identified as the broad public policy objectives for the payments systems in Canada. The specific policy goals for *efficiency* are generally defined in terms of cost minimization in the provision of payments instruments and services, which is passed forward into prices charged to users, and in terms of the quality of services such as rapid settlement, predictable clearing and settlement periods, and responsiveness to user demands. *Safety* goals are usually defined in terms of risk minimization and are related to the frequency of payment failure or the expected losses from payment failures. The reliability of a payments system and its robustness in the face of major shocks are also cited as safety goals. Finally, the consideration of *consumer interests* in payments system design and development closely relates to efficiency and safety, but more specifically from a consumer's perspective. The policy goals refer to the privacy rights and the security of payments information, which concern other participants in the payments system as well as consumers, and to the extent to which consumers have reasonably broad access to payment systems.

Policy approaches to achieving these objectives range from relying largely on private markets as an effective coordinating mechanism with public involvement focussed only on ensuring disclosure of relevant information and reasonable access for users, all the way to substantial and direct public involvement in the operations of payments systems. In Canada, a largely market-based approach to achieving policy objectives, guided by a legal and regulatory system that promotes and facilitates competition, is predominant.

The public sector intervenes actively in the payments system when the market approach fails to strike an appropriate balance among the policy objectives. This occurs in the event that significant externalities arise, especially where negative shocks to one payments system could spill over to other payments systems and financial markets. The public sector also typically intervenes in the markets for payments services to prevent the emergence of adverse market structures and outcomes. The market incentives to create cooperative network organizations to provide infrastructure payment services such as clearing and settlement services can result in monopoly behaviour. Under some circumstances, such networks can

enhance efficiency in the payments system. However, in other circumstances, monopoly behaviour can lead to excess profits for the members of the network, and reduced benefits to users, through the pricing and provision of these infrastructure services, or can confer market advantages to particular providers in offering complementary payments services and other financial services.

The diversity of the arguments in the literature about appropriate objectives in the payments system indicates that there are complex factors in balancing the public policy objectives appropriately for a particular payments system. There are circumstances in which improvements in the achievement of one objective can occur only at the expense of other objectives. The potential for such trade-offs must be clearly recognized and considered. There are, of course, circumstances where such trade-offs can be avoided. Significant technological changes, such as those related to computerization and telecommunications, as well as institutional reforms can permit gains in one or more goals without sacrificing others. Even in the absence of significant technological change, there are occasions where the elimination of some institutional rigidities will also promote the achievement of all objectives, or permit the advancement of one objective without damaging others.

The literature indicates that all broadly defined public policy objectives must be achieved to a greater or lesser extent to produce a well-functioning payments system. However, because of differences in interests, these objectives might be balanced differently by different participants in different systems. For example, the discussions of retail payments systems and wholesale payments systems in the literature indicate that the balance of policy goals differs across the two types of payments systems. In retail payment systems, efficiency - particularly measures of user efficiency - receives more emphasis than considerations of safety or consumer interests. In wholesale payments systems, where systemic risk is a greater concern, safety and efficiency are the primary goals.

Bibliography

Government Documents and Selected Submissions

(i) Canada

Association of Canadian Financial Corporations, Submission to the Department of Finance on *1997 Review of Financial Sector Legislation: Proposals for Change*, August 1996.

Canadian Bankers Association, *Banking in Canada: Maximizing Service, Efficiency and Competition in Canada's Financial Sector*, Submission to the Department of Finance on *1997 Review of Financial Sector Legislation: Proposals for Change*, August 1996.

Canadian Life and Health Insurance Association, Submission to the Department of Finance on *1997 Review of Financial Sector Legislation: Proposals for Change*, August 1996.

Insurance Bureau of Canada, Submission to the Department of Finance on *1997 Review of Financial Sector Legislation: Proposals for Change*, August 1996.

Life Underwriters Association of Canada, Submission to the Department of Finance on *1997 Review of Financial Sector Legislation: Proposals for Change*, August 1996.

Loewen, W. H., President, TelPay Bill Payment Service, Presentation to the (House of Commons) Standing Committee on Finance on *1997 Review of Financial Sector Legislation: Proposals for Change*, September 24, 1996.

Retail Council of Canada, Submission to the Department of Finance on *1997 Review of Financial Sector Legislation: Proposals for Change*, August 1996.

Towards an Electronic Payment System, Government of Canada, Ottawa, 1975

Trimark Investment Management, *Mutual Funds in the Financial Services Sector: Consumer Access and Payments System Organization*, Submission to the Department of Finance, March 1996.

(ii) Other

Australian Payments and Clearing Association Ltd., *Submission to the Financial System Inquiry*, September 1996.

Blinder, A. S., Vice Chairman, Board of Governors of the Federal Reserve System, Statement (on Electronic Money) to the Sub-Committee on Domestic and International Monetary Policy of the House Committee on Banking and Financial Services, in *Federal Reserve*

Bulletin, Vol. 81, No. 12, Board of Governors of the Federal Reserve System, Washington D.C., December 1995.

Reserve Bank of Australia, *Submission to the Financial System Inquiry*, September 1996.

Articles, Reports and Books

Anvari, M., "The Canadian Payments System: An Evolving Structure", in *The U.S. Payments System: Efficiency, Risk and the Role of the Federal Reserve*, D. B. Humphrey (ed.), Kluwer Academic Publishers, Boston, 1990.

Berger, A. N., D. Hancock, and J. C. Marquardt, "A Framework for Analyzing Efficiency, Risks, Costs and Innovations in the Payments System", *Journal of Money, Credit and Banking*, Vol. 28, No. 4, Part 2, November 1996.

Berger, A. N., W. C. Hunter, and S. G. Timme, "The Efficiency of Financial Institutions: A Review of Research Past, Present and Future", *Journal of Banking and Finance*, Vol. 17, No. 2-3, April 1993.

Coleman, W. D., "Financial Services Reform in Canada: The Evolution of Policy Dissension", *Canadian Public Policy*, Vol. XVIII, No. 2, June 1992.

Crow, J. W., "Clearing and Settlement of Financial Transactions: A Perspective from the Bank of Canada", *Bank of Canada Review*, Bank of Canada, Ottawa, November 1990.

Dingle, J. F., "The Public Policy Implications of EFTS", *Journal of Bank Research*, Vol.7. No.1, Spring 1976.

Dingle, J. F., "Some Guidelines for the Evolution of the Payments System", mimeo, Canadian Payments Association, Ottawa, July 1982.

Efficiency and Regulation: A Study of Deposit-Taking Institutions, Economic Council of Canada, Ottawa, 1976.

Evans, J. L., "Technological Change and the Regulation of Financial Services", in *Putting Consumers First: Reforming the Canadian Financial Services Industry*, J. M. Mintz and J. E. Pesando (eds.), Policy Study No. 27, C. D. Howe Institute, Toronto, 1996.

Faulhaber, G. R., A. Phillips, and A. M. Santomero, "Payment Risk, Network Risk, and the Role of the Fed", in *The U.S. Payments System: Efficiency, Risk and the Role of the Federal Reserve*, D. B. Humphrey (ed.), Kluwer Academic Publishers, Boston, 1990.

Folkerts-Landau, D., P. Garber, and T. Lone, "Payment System Reform in Formerly Centrally Planned Economies", *Journal of Banking and Finance*, Vol. 17, No. 5, September 1993.

- Freedman, C., "Regulatory, Monetary and Legal Issues of Evolving Clearing and Payments Systems", *Bank of Canada Review*, Bank of Canada, Ottawa, August 1989.
- Freedman, C., "Recent Developments in the Structure and Regulation of the Canadian Financial System", in *Shifting Frontiers in Financial Markets*, D. E. Fair (ed.), Martinus Nijhoff Publishers, Boston, 1986.
- Horii, A. and B. J. Summers, "Large-Value Transfer Systems", in *The Payments System: Design, Management and Supervision*, B. J. Summers (ed.), International Monetary Fund, Washington D.C., 1994.
- Junker, G. R., B. J. Summers, and F. M. Young, "A Primer on the Settlement of Payments in the United States", *Federal Reserve Bulletin*, Vol. 77, No. 11, Board of Governors of the Federal Reserve System, Washington D.C., November 1991.
- Listfeld, R. J., "Commentary (On Tucker: The Conflicting Role of the Federal Reserve as Regulator and Services Provider in the U.S. Payments System)", in *The U.S. Payments System: Efficiency, Risk and the Role of the Federal Reserve*, D. B. Humphrey (ed.), Kluwer Academic Publishers, Boston, 1990.
- Marquardt, J. C., "Payments System Policy Issues and Analysis", in *The Payments System: Design, Management and Supervision*, B. J. Summers (ed.), International Monetary Fund, Washington D.C., 1994.
- Martel, J., "Regulatory Duplication and Harmonization", in *Financial Services Reform*, Vol. II, Insight Press, Mississauga, April 1992.
- McAndrews, J., "Antitrust Issues in Payments Systems: Bottlenecks, Access, and Essential Facilities", *Business Review*, Federal Reserve Bank of Philadelphia, September/October 1995.
- Padoa-Schioppa, T., "Retail Payments: Recent Developments and Central Banks", Bank of Italy, Rome, September 1996.
- Pingitzer, J. C. and B. J. Summers, "Small-Value Transfer Systems", in *The Payments System: Design, Management and Supervision*, B. J. Summers (ed.), International Monetary Fund, Washington D.C., 1994.
- Quigley, N., "Public Policy and the Canadian Payments System: Risk, Regulation and Competition", in *Putting Consumers First: Reforming the Canadian Financial Services Industry*, J. M. Mintz and J. E. Pesando (eds.), Policy Study No. 27, C. D. Howe Institute, Toronto, 1996.

- Smee, D., "The Public Policy Vision", Summary of Remarks at the CPA's 1995 Conference, in *Forum*, Vol.11, No. 3, Canadian Payments Association, Ottawa, September 1995.
- Spindler, A. J. and B. J. Summers, "The Central Bank and the Payments System", in *The Payments System: Design, Management and Supervision*, B. J. Summers (ed.), International Monetary Fund, Washington D.C., 1994.
- Summers, B. J., "Clearing and Payment systems: The Role of the Central Bank", *Federal Reserve Bulletin*, Vol. 77, No. 2, Board of Governors of the Federal Reserve System, Washington D.C., February 1991.
- Tucker, D. P., "The Conflicting Role of the Federal Reserve as Regulator and Services Provider in the U.S. Payments System", in *The U.S. Payments System: Efficiency, Risk and the Role of the Federal Reserve*, D. B. Humphrey (ed.), Kluwer Academic Publishers, Boston, 1990.
- Ziegel, J. S., "Which Way to Go? Federal Control or Europe 1992 Model?", in *Financial Services Reform*, Vol. II, Insight Press, Mississauga, April 1992.

Summary of Discussion

Introduction

The Payments System Advisory Committee was convened twice to discuss the public policy objectives associated with the payments system: a meeting in Ottawa attended by all members on January 29, and a conference call on March 21. The discussion paper (*The Canadian Payments System: Public Policy Objectives and Approaches*), prepared by staff of the Department of Finance and the Bank of Canada, served as background for the Committee's discussions. Over the two meetings, Committee members expressed various views on the issue, and also provided useful feedback on the paper.

In general, the discussion paper was revised to reflect the Committee's comments and includes those items which were broadly supported. This Summary of Discussion reports the main comments which Committee members made (whether orally or in writing) on the question of the payments system and the public policy objectives.

Selection of the Policy Objectives

Much of the Committee's discussion focused on the specific public policy objectives which should guide payments system policy. While there was little debate that "efficiency" and "safety" considerations should be two key objectives, a range of views was expressed on the third objective - - "consumer interests". Some members were concerned that consumer interests were singled out over the interests of other users such as businesses and retailers. They questioned whether it was appropriate for public policy makers to give greater consideration to the interests of consumers over other users. It was also pointed out that, in many instances, all users share the same interests (such as efficiency, convenience, reliability and choice).

Other members were of the view that consumer interests were in fact important enough that they should be considered as a separate objective. This was particularly so in the case of consumer concerns about the privacy of their payment information, the ability of low-income consumers to have different payments options, and generally

consumers' exposure in the current Canadian environment where the legal framework for consumer protection in payments could be seen as unclear in some areas. The point was also made that consumer interests are served by the first two objectives - - efficiency and safety in the payments system.

The view was expressed that the third objective was rather narrowly defined, and that it would be better to describe it as "fairness" or "equity", rather than "consumer interests". In so doing, the framework would be more complete and would assist policy-makers in addressing some of the complex issues under consideration in the payments system review. It was noted, however, that "fairness" or "equity" are less measurable objectives than efficiency and safety. The fairness objective would, nevertheless, cover matters such as: users' control over the choice of payments methods, fairness in pricing, clarification of the rights and liabilities of consumers and the allocation of risks, promoting public confidence in the payments system, and input into decision-making regarding the operation of the payments system. There was considerable discussion of this last point. It was noted that the decision-making aspects associated with the payments system could instead be viewed as the *means* to achieve the public policy objectives, but that it is understandable that some people might view an inclusive decision-making process as a separate objective in itself. For some, the key issue was that the decision-making process should be unbiased, and that this goal should be sufficiently important to public-policy makers to constitute a separate objective. Finally, the view was expressed that it is appropriate for those players at the heart of the payments system to be the decision-makers. The co-chairs noted that decision-making and the governance of the payments system would be explored in-depth in the fourth paper that Finance and Bank of Canada staff will produce in the fall of 1997.

Some members expressed a concern that the proposed framework, as set out in the discussion paper, would not be useful in evaluating some of the difficult issues under consideration in the payments review. Most members felt that, after discussing the questions of access to the payments system and the governance of the payments system later in the year, there may be a need to revisit the paper and its framework.

Most members also were of the view that three objectives - - efficiency, safety, and consumer interests - - were suitable and that these would provide a useful framework for tackling payments system issues.

In discussing the selection of the objectives, members discussed the appropriateness of the concept of “wholesale” (large value) and “retail” (small value) payments. Some members felt that there was no such clear distinction in the marketplace, particularly since some payments systems such as the Canadian Payment Association’s Automated Clearing and Settlement System (ACSS) are used for both kinds of payments. It was also noted that payments systems such as those for credit and debit cards are clearly identified with retail payments. It was suggested that a more specific definition of “retail payments” would be helpful. On a related matter, some members wished to make the point that the aggregate value of retail payments gives rise to considerable risk to participants, whereas other members pointed out that large-value payments account for the vast majority of the value of payments cleared in Canada.

Continuing their discussion of the selection of the three public policy objectives, some members observed that certain objectives could be seen as transcending the payments system. In other words, public policy objectives for the payments system should be seen within a broader context of societal objectives such as equity, distributional considerations and participation in the democratic process.

Other Comments

The remainder of the Committee’s comments focused primarily on the question of how to balance the public policy objectives and the approaches available to achieve the objectives. A number of suggestions for redrafting the paper were also made.

The point was made that many aspects of payments system operation are difficult to measure. Lack of empirical data makes it difficult to assess the impact of potential or actual policy changes on the balancing of objectives. As a result, it may well be that policy-making in the payments area may be based largely on judgement.

A general comment supported by members was that, wherever possible, it is more precise to make reference to the various components of the payments system, rather than simply “the payments system”. Reference was made to the usefulness of Figure 1 in the first discussion paper (“The Payments System in Canada: An Overview of Concepts and Structures”) in helping to understand the complexity of various components.

A comment more specifically focused on the draft discussion paper was that there should be an elaboration of the “tools” or instruments available to policy-makers to influence private actions in the payments area. Several members agreed with this view. The co-chairs noted that this matter would be reviewed in the third paper (on access to the payments system) and more extensively discussed in the fourth paper (on the governance of the payments system).

It was noted that the public’s expectation of consumer protection was an important consideration in determining the appropriate extent and type of government intervention in the payments system. Consumers may expect that there is a degree of protection through regulation of the entities they are dealing with in the various payment mechanisms. Many consumers are not aware of the regulated or unregulated status of the payment service providers. Approaches to deal with this concern for consumer protection range from formal solvency regulation to disclosure of the regulatory status of the service provider.