

Introduction

The decision on the bank mergers will be made by this government, by this Parliament, and by the Canadian people. It will not be made by any financial institution. Anybody who has doubt about that had better just watch us.

Paul Martin, Minister of Finance
Ottawa Faces the Big Squeeze
Maclean's, May 4, 1998: 22

Jobs are certainly the government's concern and I have made it clear that they will be at the top of the agenda.

Paul Martin, Minister of Finance
Competition a Must if Banks Merge
Financial Post, June 3, 1998: 7

This would not be allowed in Britain or in the United States. Any other country would consider this anti-competitive.

Peter Godsoe, Chairman, Bank of Nova Scotia
Is Bigger Really Better?
Maclean's, May 4, 1998: 16

Recent proposals to merge (1) the Royal Bank of Canada and the Bank of Montreal, and (2) the Canadian Imperial Bank of Commerce and the Toronto Dominion Bank have sparked considerable debate in political and policy circles. Supporters of the mergers believe that greater consolidation in the industry is essential for Canadian banks to remain competitive in an increasingly global economy. Opponents argue that greater consolidation will result in reduced competition among Canadian banks, higher prices for banking services, and reduced consumer welfare. The highly politicized nature of the debate concerning the merits and demerits of the mergers has precluded intelligent discussion of the issues (with the notable exception of the excellent analysis in Mathewson and Quigley 1998).

Concerns about the negative impacts of mergers are misplaced and reflect a fundamental misunderstanding of how technological progress is changing the nature of the financial services industry. As a result of improvements in

computer systems, software, and communications networks, it is no longer necessary for banks to have a physical presence in all communities in order to deliver banking products. Large-scale rationalization of the physical infrastructure of the banking system is necessary if the banks are to adopt these new technologies—technologies that can reduce many of the transaction costs associated with banking. Merging is an effective way for the large chartered banks to effect this rationalization and do away with the excess “bricks and mortar” associated with the conventional delivery of banking services.

Opponents of the mergers fail to realize that the main barriers to competition in the financial services industry are not due to features of the industry per se. Rather, they are a product of government regulation that limits the ability of firms—in particular, foreign-owned financial institutions—to enter the Canadian market and compete on an equal footing with existing institutions. Indeed, if Canadian consumers are to realize the benefits associated with the rationalization of current banking infrastructure, it is imperative that the federal government remove existing barriers to competition. Hence, as part of an overall reform package, it is important that ownership restrictions on financial institutions be removed and that regulatory barriers to entry be repealed.

Our study is organized as follows. Part 1 provides an outline of the structure of the Canadian financial industry and briefly describes the nature of financial services regulation. Part 2 presents a brief overview of Canadian competition law and the impact that it may have on bank mergers. Part 3 discusses the issue of market power and shows that what matters for competition is not the number of firms in an industry but rather the threat of entry and technological progress. Part 4 presents empirical evidence showing the benefits of the current rationalization of the banking system and the extent of technological progress. Part 5 presents empirical evidence demonstrating the difficulty of defining markets in the financial services industry. Part 6 offers a number of policy recommendations for restructuring the banking sector.

1 Overview of the financial services industry

Role of the financial services industry

The financial services industry, which includes a plethora of institutions such as banks, trust companies, mutual fund providers, insurance companies, investment houses, and credit unions, is a vital and dynamic component of the Canadian, and indeed of any industrialized economy. Its importance to the Canadian economy cannot be understated. In 1997 alone, the industry as a whole maintained assets in excess of \$2 trillion with profits exceeding \$15 billion.¹

Beyond its sheer size relative to the economy, the financial services industry is an importance facilitator of economic activity. The primary function of any financial institution, whether it be a bank, a trust company, a brokerage house, an insurance company or a mutual fund company, is to facilitate the exchange of financial resources between savers and borrowers. The financial services industry, therefore, has a dual function that is often viewed only from the side of the borrower. Financial institutions offer a variety of financial products for borrowers—from mortgages to demand loans to equity offerings to lines of credit. These and a host of other products provide customers with the ability to consume and invest today even though they do not currently have the necessary financial resources. Borrowers and investors are able to use funds today in exchange for a stream of payments (principal and interest or capital appreciation and dividends) in the future.

This exchange exists because, at any particular time, there are individuals that possess excess financial resources (savings). Financial institutions exist in order to facilitate the exchange of financial resources from these savers to borrowers. All too often the focus is placed solely on the borrower, or user, side of the ledger. In order for financial institutions to function as lenders they must attract the necessary financial resources. Financial institutions, therefore, offer a variety of products for savers—guaranteed income certificates, personal financial accounts, and mutual funds—so as to attract as much excess financial resources as possible.

A healthy financial services industry can facilitate economic growth by channeling financial resources to their most productive uses.² Similarly, a healthy and vibrant finan-

cial services industry can increase both individual wealth by promoting savings, and individual utility by allowing for current consumption based on future income.

The financial services industry and the banking sector

A common mistake made when discussing financial services is to focus solely on the banking sector. This error in analysis is understandable since the banking sector dwarfs the other segments of the industry. Table 1 presents selected 1997 information about the various sectors of the financial services industry that are regulated by the federal government.³

The banking sector dominates the financial services industry based on asset value and profitability. Measures of size, or market power other than assets and net income also indicate the dominance of the banking sector. For instance, the banking sector maintains 55.13 percent of the equity of the federally regulated financial institutions and pays 63.49 percent of the total salaries in the sector.⁴

Schedule I and Schedule II chartered banks

There is an important differentiation to be made within the banking sector. There are two types of chartered banks in Canada: Schedule I and Schedule II. The key difference between the two is the ownership structure.

All chartered banks are regulated according to the rules set forth in the federal *Bank Act*. Until 1980, bank charters could only be obtained by a special Act of Parliament. Since 1980, it has been possible to obtain a bank charter via letters patent from the Minister of Finance. Schedule I institutions must be owned primarily by Canadians and must be widely held—no individual or group of associated shareholders can own more than 10 percent of any class of shares in a Schedule I bank. Further, no more than 25 percent of the shares of a Schedule I bank can be held by non-residents.⁵ In contrast, Schedule II institutions are not subject to such ownership restrictions.

Table 1: 1997 assets and net income for federally regulated financial institutions

Type of Institution	Assets (in Thousands)	Percent of Total	Net Income (In Thousands)	Percent of Total
Chartered Banks	1,224,314,345	69.26	7,954,176	55.15
Trust Companies	37,264,018	2.11	358,717	2.49
Loan Companies	159,874,500	9.05	1,385,746	9.61
Cooperative Credit Associations	7,115,649	0.40	28,973	0.20
Life Insurance*	279,768,607	15.83	2,764,362	19.17
Societies*	6,903,037	0.39	63,520	0.44
Property & Casualty Companies*	52,280,245	2.96	1,866,333	12.94

* Includes both foreign and domestic firms.
Source: calculated by the authors from data in Canada, Dep't of Finance, Office of the Superintendent of Financial Institutions 1998.

Appendix A lists the various Schedule I and Schedule II banks in Canada. There are eight Schedule I banks in Canada; all of the “Big 5” banks—the Royal Bank of Canada, the Canadian Imperial Bank of Commerce, the Bank of Montreal, the Bank of Nova Scotia, and the Toronto-Dominion Bank—are Schedule I banks. There were 50 Schedule II banks in Canada in 1997, consisting mainly of subsidiaries of foreign banks and banking subsidiaries of widely held non-bank financial institutions such as mutual fund, insurance, and trust companies.

In order to understand the structure of the Canadian banking system, it is necessary to recognize the differences between Schedule I and Schedule II banks. The differentiation between the two types of banks effectively means that Canada has both a national banking system constituted by the Schedule I banks and a much smaller, regional or niche-based banking sector constituted by the Schedule II banks. Table 2 presents selected information on the Schedule I and Schedule II banks in Canada.

The Schedule I banks eclipse the Schedule II banks in every criteria presented in table 2. What is not explicit in the data, however, is that the Schedule II banks are mainly regional or niche banks. The Schedule II banks' assets and operations are much more concentrated than those of the the Schedule I banks. Take, for instance, the largest Schedule II bank in Canada, the Hongkong Bank of Canada. Table 3 presents specific financial information for the Hongkong Bank of Canada.

The Hongkong Bank of Canada is clearly a marginal player on the national level when compared to the Schedule I banks. On a regional basis, however, the Hongkong Bank of Canada represents a material participant both in the banking sector and in the larger financial services industry. Table

4 presents specific information concerning the geographic concentration of the Hongkong Bank of Canada based on the distribution of branches.

The Hongkong Bank of Canada's high concentration of operations in British Columbia and specifically within the greater Vancouver region is indicative of its regional focus. Like the Hongkong Bank of Canada, other Schedule II banks are competitive with the Schedule I banks and, indeed, with all financial institutions within specific product markets and geographic regions. For example, both the Amex Bank of Canada and Citicorp focus almost exclusively on credit card products in Canada. The Schedule II banks represent a significant competitive threat to the Schedule I banks in particular regions and product lines, a threat that is not evident when analyzed on a national or broad product-line basis.

There are, thus, two distinct types of banks operating in Canada, offering two unique types of competition. The Schedule I banks compete with one another on a national basis while the Schedule II banks compete with the Schedule I banks within specific geographic regions or product lines. The varying nature of competition among the chartered banks also characterizes the larger financial services industry as depicted in table 1. There are a variety of financial institutions competing for the financial business of individuals and firms in Canada.

In addition to the various federally regulated financial institutions, there are a number of important provincially regulated firms such as brokerage houses and pension managers. The common characteristic of all these financial institutions is that through a variety of means they facilitate the movement of excess financial resources from savers to investors and borrowers.

Table 2: Select data for Schedule I and Schedule II Banks

	Schedule I Bank		Schedule II Bank	
	Value (In Thousands)	Percent of Total*	Value (In Thousands)	Percent of Total*
Total Domestic Assets	1,131,286,519	92.50	93,027,826	7.50
Equity	49,690,947	90.98	5,007,662	9.02
Net Income	4,530,283	94.92	254,025	5.08

* Percent of the total banking sector, not of the larger financial services industry. This percentage is used to gain a relative comparison between Schedule I banks and Schedule II banks within the banking sector.
Source: calculated by the authors from data in Canada, Department of Finance, Office of the Superintendent of Financial Institutions 1998.

Table 3: Financial data for the Hongkong Bank of Canada

Category	Total Value (In Thousands)	Percentage of Banking Sector	Percentage of Schedule II Banks
Assets	23,909,957	1.95	26.02
Deposits	20,114,507	2.45	33.77
Equity	671,247	1.23	13.61
Net Income	138,288	1.74	34.22

Source: calculated by the authors from data in Canada, Department of Finance, Office of the Superintendent of Financial Institutions 1998 and from the 1997 annual report of the Hongkong Bank of Canada.

Table 4: 1997 branch information for the Hongkong Bank of Canada

Region / City	Number of Branches	Percent of Total Number of Branches
Canada*	117	98.32
British Columbia	52	43.70
Alberta	12	8.40
Ontario	33	27.73
Greater Vancouver	36	30.25
Metro Toronto	16	13.45

* The Hongkong Bank of Canada also has two branches in the United States.
Source: calculated by the authors from data in the 1997 annual report of the Hongkong Bank of Canada.

2 Regulation of the Canadian financial services industry

Legal Framework

In most countries, financial institutions and financial markets are highly regulated. Canada is not an exception. Financial institutions and financial markets in Canada are regulated at both the federal and the provincial levels. Under the *British North America Act* of 1867, banking falls within the exclusive jurisdiction of the federal government. The activities of banks are monitored by the federal Office of the Superintendent of Financial Institutions (OSFI), which reports to the Minister of Finance. The OSFI is responsible for administering the *Bank Act*, the *Insurance Act*, the *Trust and Loan Companies Act*, and the *Co-operative Credit Associations Act* (OSFI 1992).

Both federal and provincial governments regulate trust companies and insurance companies. Traditionally, trust companies have specialized in the provision of residential mortgages while insurance companies have focused on underwriting and selling life insurance policies.

Provincial governments regulate investment dealers, whose principal function, “market intermediation,” is critically important to the functioning and liquidity of Canadian financial markets.

Historical perspective

From the 1930s until the 1960s, Canada’s financial institutions were regulated according to the “pillar” system. Under the pillar system, chartered banks, insurance companies, trust companies, and investment dealers were regulated as separate financial institutions. Each pillar carried out functions that were separate and distinct from that of the other pillars. Virtually no overlap among the pillars was permitted. Concerns about the solvency and stability of the banking system, prompted by a wave of bank failures (particularly in the United States) during the Depression, motivated the move towards this form of regulation, which was designed to guarantee the independent functioning of each sector and

to minimize the possibility of negative spillover from one pillar to another (Economic Council of Canada 1986).

Ownership restrictions were also an integral part of the pillar system of regulation. Institutions in one pillar were prohibited from owning institutions in other pillars. Financial institutions were also prohibited from owning non-financial institutions. These constraints assured the stability of the system but reduced competition within the financial services industries (ECC 1986).

From the 1960s onwards, the pillar system of regulation began to disintegrate and concerns about competition came to overshadow concerns about solvency. Revisions to the *Bank Act* in 1967, 1980, and 1992 permitted greater inter-pillar competition so as to encourage the creation of a greater variety of financial services for consumers. Some of the highlights of these *Bank Act* revisions are listed below.

Key revisions to the Bank Act

1967 revisions

- (1) The interest rate ceiling on chartered banks was removed. In addition, chartered banks were permitted to provide conventional mortgages and loans.
- (2) The 10/25 rule was introduced so as to reduce foreign ownership of Canadian banks. Under this rule, no single investor could hold more than 10 percent of a bank’s voting equity, and non-residents in aggregate were prohibited from owning more than 25 percent.

1980 Revisions

- (1) Amendments were introduced to bring foreign-owned banks under federal regulatory control. Previously, foreign owned banks were provincially regulated. It was hoped that putting all banks under the same regulatory regime would “level the playing field” among banking institutions.

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- (2) Under these amendments, subsidiaries of foreign banks were classified as Schedule II banks. Provisions were introduced, however, so as to prevent Schedule II institutions from competing in certain markets.

1992 Legislative Package

- (1) Chartered banks and trust companies were given permission to own and establish subsidiaries engaged in securities.
- (2) A number of inter-pillar ownership restrictions were eliminated. Banks and insurance companies were allowed to own trust companies; banks and trust companies were permitted to own insurance companies.

Financial institutions were granted permission to own corporations that carry out related financial services, such as the purchase and sale of accounts receivable. Further, financial institutions were permitted to own up to 25 percent of shareholders' equity or 10 percent of voting shares of non-financial corporations.

As a result of these revisions to the federal *Bank Act* and revisions to other federal legislation regulating the financial services industry, there has been a substantial breakdown of the pillar system. Many barriers to entry into the financial services industry have been either eliminated or reduced. As a result, the focus of financial service regulation has shifted from concerns about solvency to a focus on competition.



3 Competition law and economic efficiency

Theoretical rationale for competition law

A central proposition in economic theory is that, under perfect competition, the allocation of resources is Pareto efficient. A Pareto efficient allocation of resources is one in which it is impossible to make one person better off without making another person worse off. For economists, Pareto efficiency is a desirable objective because it implies that all gains from trade among economic actors are exhausted. If so, it follows that no individual can be made better off without at least one person being made worse off. The fact that free markets (i.e., perfectly competitive markets), under certain conditions, can result in all gains from trade being exhausted, is testimony to the power of markets to allocate resources in an optimal manner.⁶

However, in order for the market to be Pareto efficient, it needs to be perfectly competitive. Perfect competition requires that all market participants be price takers. In other words, all market participants (consumers or firms) must have sufficiently little market power that they have no influence over market prices. All goods must be homogeneous and, if a single firm raises its price above the market price, its demand must fall to zero. Furthermore, there must be enough markets so that all goods, services, and contingencies are priced, and the costs of transactions in markets must be negligible—zero or extremely small. In the real world, few markets can be described as perfectly competitive since goods are non-homogeneous, both firms and consumers often possess market power (i.e., they are able to influence market prices), and there are missing markets for many goods, services, and contingencies. Further, there are real costs to transactions in the real world. Hence, most markets cannot be properly characterized as perfectly competitive.

Deviations from perfect competition have traditionally been used as a rationale for state intervention in economic affairs (e.g., Bator 1958). Because perfect competition is necessary for markets to be efficient, politicians and policy makers have often argued that deviations from perfect competition justify state intervention.

Competition law, or anti-trust law, is one means by which governments intervene in the operations of markets with the alleged goal of ensuring that real world markets operate in a manner roughly consonant with perfect competition. The main goal of competition law is to curb the ability of firms to influence price; in other words, it is aimed at reducing the market power of economic actors. Hence, the traditional focus of competition law has been to eliminate restraints to trade which, from the perspective of state authorities, are detrimental to competition and enhance the market power of firms. Thus, competition law authorities are concerned about such matters as cartelization of industries, price agreements among competing firms in an industry, vertical restraints on trade, and mergers, for these are all activities that—according to the conventional wisdom—are means by which economic actors are able to exercise and enhance their market power and, in so doing, reduce the efficiency of the market place.

Objectives of Canadian competition law

Over the past several decades, the stated objectives of Canadian competition law have evolved considerably (see Ross 1998). Most scholars agree that the primary objectives of Canadian competition policy have been to (1) maintain free competition; (2) prevent abuses of monopoly power; and (3) achieve economic efficiency. In addition, competition law has been used to advance a number of supplementary objectives, which include (1) codifying the Common Law doctrine of restraint of trade; (2) fighting inflation; (3) protecting the interests of small business; and (4) ensuring honesty and fairness in the market place (Gorecki and Stanbury 1984).

During the 1970s, many of these objectives came under increasing scrutiny. Partly as a result of advances in the field of industrial organization, many commentators came to the view that the primary objective of competition law should be to foster economic efficiency and that this objective should take precedence over the other goals (Skeoch

- and McDonald 1976). In the 1980s, concerns about efficiency were broadened to the international market place and, increasingly, efficiency was viewed as key to improving the performance of Canadian firms in world markets. Furthermore, the recognition that foreign competition (in particular, imports) can limit the market power of domestic firms was acknowledged (Leitzinger and Tamor 1983).

These developments eventually led to the overhaul of Canadian competition policy and the passing of the *Competition Act* in 1986. The purpose clause of the *Competition Act* reflects a primarily, but not exclusively, efficiency-oriented view of the objectives of competition policy. It states:

The purpose of this Act is to maintain and encourage competition in Canada in order to promote the efficiency and adaptability of the Canadian economy, in order to expand opportunities for Canadian participation in world markets, while at the same time recognizing the role of foreign competition in Canada, in order to ensure that small and medium-sized enterprises have an equitable opportunity to participate in the Canadian economy, and in order to provide consumers with competitive prices and product choices.

As Hazeldine (1998) notes, the pursuit of economic efficiency is not the sole objective of the 1986 *Competition Act*. Other objectives of the *Competition Act* are to ensure “equitable opportunity” for small and medium-sized enterprises and to “expand opportunities for Canadian participation in world markets.” These objectives are not always consonant with the pursuit of economic efficiency. However, at a first pass, it appears that efficiency is the primary goal of the *Competition Act* and that competition is not an end in and of itself (Ross 1998).

The Competition Bureau

The *Competition Act* is administered by the Competition Bureau and its Director of Investigations and Research (Priest and Stanbury 1998). Under the *Competition Act*, mergers and a number of other potentially anti-competitive business practices are dealt with through an administrative review process. The merger provisions of the *Competition Act* apply to all transactions that involve the acquisition or establishment of control over a significant interest in a business or a competitor, supplier, customer, or other person. Other potentially anti-competitive business practices that fall under

the administrative review process include abuse of dominant position, refusal to deal, consignment, and tied-selling. Cases involving administratively reviewable matters of the *Competition Act* may be resolved by application to the Competition Tribunal, a specialized adjudicatory body established under the Act.

Conspiracies in restraint of trade, bid-rigging, predatory pricing, and price discrimination fall under the criminal provisions of the *Competition Act*. Matters relating to the criminal provisions of the Act may be prosecuted by the Attorney General of Canada, upon referral by the Director of Investigations and Research, in the Federal Court of Canada, or in a provincial court of relevant jurisdiction.

Since the *Competition Act* was passed in 1986, the Director has focused on ensuring effective enforcement of the Act. Effective enforcement involves not only applying the Act but also ensuring public awareness of the law and resolving competition disputes in a flexible and efficient manner. In this regard, the policy of the Competition Bureau has adopted a compliance-oriented approach to ensuring the effective enforcement of the provisions of the Act (Goldman 1989).

For instance, in order to assist firms in avoiding conflicts with the *Competition Act*, the Competition Bureau encourages firms to make use of the Director’s program of Advisory Opinions. The bureau has found that requesting an Advisory Opinion frequently allows parties to obtain an explanation of the Director’s concerns and affords opportunity to discuss possible ways of resolving them before a proposal (for instance, a bank merger) is implemented. Thus, under the *Competition Act*, it is possible for the Director of Investigations and Research to resolve competition problems before proceeding to the more expensive process of presenting a case before the Competition Tribunal or the Courts (see McFetridge 1998).

Policy guidelines of the Competition Bureau as applied to bank mergers

As part of an ongoing review of financial service regulation, the Government of Canada set up the Task Force on the Future of the Financial Services Sector in 1996. Until the final report of the Task Force is delivered in the fall of 1998, the federal government is not expected to make a decision regarding the proposed bank mergers between the Royal Bank and the Bank of Montreal, and between the Canadian Imperial Bank of Commerce, and the Toronto Dominion Bank.⁷ Currently, a merger between major banks would be prohibited as government policy toward bank mergers is based on the principle “big shall not buy big.” The preliminary report

of the Task Force has suggested that this prohibition be lifted and that the Competition Bureau review each of the proposed mergers and approve or disapprove of each merger on the specific merits and demerits of each case. In the meantime, the bureau is not expected to reach any conclusions until the Task Force has issued its final report.⁸

As part of its submission to the Task Force on the Future of the Canadian Financial Services Sector, in 1997 the Competition Bureau issued *Merger Enforcement Guidelines as Applied to a Bank Merger*. Based on the Bureau's 1991 *Merger Enforcement Guidelines*, the 1997 document provides the framework the bureau will use to assess the competitive effects of a bank merger among Schedule I banks. Much of this document is focused on defining the relevant geographic and product markets that are affected by a bank merger. In particular, the document discusses (1) whether the product markets should be defined as the individual services provided by retail banks, or the cluster of banking services generally available in retail banks; (2) whether individual neighborhoods, cities, or regions should be viewed as markets, or whether the relevant markets are national; and (3) whether substitute products are available. Market definitions are crucial for assessing the competitive effects of a merger because any market can be deemed a monopoly if the market definition is sufficiently narrow.⁹

Mathewson and Quigley (1998: 11–12) provide a succinct overview of the Bureau's approach to analyzing the competitive impacts of a bank merger.

As a general matter, in defining markets, the Bureau looks to the extent to which the merging parties supply substitute products and identifies suppliers who are competitors to the merging parties. It considers both the ability of consumers to switch across alternative products and suppliers (the demand side) and the ability of other suppliers not currently in the market to switch capacity into the relevant market (the supply side). Markets can also have a geographical component.

The bureau identifies current general bank products as deposits, loans, and other services, such as cash management. There may be further refinements in definition. It is useful to identify various classes of demanders, from individual consumers through small businesses to large national and international corporations.

Under the bureau's hypothetical monopolist test, a set of products purchased by consumers con-

stitutes a relevant product market if a sole supplier of these products (the merged entity) could profitably raise its price by a small but significant and non-transitory amount. (In most contexts, the bureau defines *significant* as 5 percent and *nontransitory* as a period of a year.)

With respect to the definition of product markets, analysis conventionally requires an examination of the cross-price elasticities of demand or relevant proxies. In its guidelines, the bureau indicates that it will consider factors such as product attributes; the view, strategies, behavior, and identity of both buyers and the trade; consumer switching costs; and, prior to the merger, the correlation of prices and relative prices of potential substitutes. In analyzing supply substitutability, in general, the bureau looks at the ease with which potential suppliers can switch capacity into the market for the goods in question.

As the bureau indicates, the geographical market obviously can vary from the local to regional to national to international. Again the general test is whether, over a hypothetical geographic market, a sole seller could impose a significant and nontransitory price increase. (Mathewson and Quigley 1998: 11–12)

Problems with the mainstream view of competition and efficiency

Standard economic theory contends that market power—the ability of individual firms or consumers to influence market prices—is a source of market failure. If firms or consumers have market power, then one of the conditions required for markets to be perfectly competitive is violated. If markets are not perfectly competitive, then free market outcomes are not Pareto efficient and there exist unrealized gains from trade. The existence of market failure is a traditional justification for government intervention in the market place. Government intervention can take the form of regulation, competition law, or outright public ownership and control of industries.¹⁰

Measuring market power in a meaningful way

One problem with this approach to public policy is that it requires that the analyst be able to define the relevant “industry” or “market.” The extent to which a firm has market



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power is a function of how the market or industry is defined (Armstrong 1990 and Hovenkamp 1990). Operationally, this is a difficult exercise for what exactly constitutes an industry or market is a conceptually slippery matter. For example, if an industry is defined as “banking services offered by the Bank of Montreal,” then a monopoly exists since there is only one producer of this service. (i.e., the Bank of Montreal). However, if we define the market more broadly as “banking services offered by chartered banks,” then clearly the Bank of Montreal has less market power than in the former situation because there are other chartered banks in Canada, such as the Hongkong Bank of Canada, the Toronto Dominion Bank, and the Bank of Nova Scotia. If we define the market even more broadly as banking services, then the industry becomes quite competitive, for now we must include many of the services offered by trust companies, credit unions, and mutual funds. Clearly, how much market power an individual firm possesses depends critically on how one defines the relevant market, and the broader the definition used, the less market power any particular firm will have. Because it is not clear where one ought to draw the line, the very definition of market power is suspect and this calls into question the ability of public policy to remedy the “problems” caused by this particular market failure.

Suppose, however, for the sake of argument, that it is possible to define the relevant market clearly and, by extension, that it is possible to measure the market power of individual firms in the “banking industry.” Does it therefore follow that the government should intervene in order to alleviate the inefficiencies arising from an imperfectly competitive market for banking services? The answer to this question is “not necessarily,” because (1) the number of firms in an industry may be a poor indicator of how competitive the industry actually is and (2) technological change works to reduce the market power of firms.

Market power in a contestable market

The first reason why intervention by the state may be undesirable is that the number of firms in an industry may be a poor measure of the extent of competition in that industry. According to Demsetz (1968), and Baumol (1982), and Baumol, Panzar, and Willig (1981), a monopolistic firm can be induced to behave “as if” it is competitive if there is a threat that other firms will enter the market. The key to understanding this kind of market structure—called a “contestable market”—is to note that what determines whether or not a firm enters an industry is the presence of positive prof-

its, and that when profits are positive, other firms have an incentive to enter the industry. When other firms enter, prices fall, output increases, and profits are eroded. The very threat of entry may deter the incumbent firm from setting its prices above the competitive level.

The fact that only one firm (or only a few firms) supply a product (or in the case of chartered banks, a cluster of products) is not a reason in itself to believe that the firm (or the few firms in the industry) is producing the monopoly level of output and earning super-competitive profits. Indeed, H. Demsetz writes that “no good theoretical link has been forged between the structure of [an] industry and the degree to which competitive pricing prevails, because no good explanation has been provided for how present and potential rivals are kept from competing without some governmentally provided restrictions on competitive activities” (1974: 166–67).

Consider the contestable market argument in the context of the banking sector. Suppose mergers between the Bank of Montreal and the Royal Bank and between the Canadian Imperial Bank of Commerce and the Toronto Dominion Bank, are supported by the Competition Tribunal and the OSFI, and ultimately permitted by the Minister of Finance. If we believe that the banking market is a contestable market, then the fact that only three firms (the two mega-banks plus Scotiabank) as opposed to five are servicing the market need not result in less competition and higher prices for consumers.¹¹ If entry into the banking sector is open to both foreign and domestic firms, then the threat of such entry deters the banks already operating in that banking market from raising their prices by restricting output. An effort on the part of these banks to raise prices by restricting output could be met by, say, a large-scale entry of a foreign bank, or the expansion in the operations of other financial or non-financial institutions such as credit unions. Hence, the impact of mergers on the competitiveness of the banking industry may be benign if free entry into the industry is permitted.

Technological progress and market power

Another reason why government intervention may be unnecessary is that the market place is dynamic in nature as entrepreneurs and firms are constantly searching for new methods of production and new products. If technology is always changing, then what constitutes a monopoly at one period in time need not be a monopoly in the future. In oth-

er words, the market power that firms possess today can be eroded by technological change and the appearance of new products (Brenner 1990).

The growth in telecommunications and the Internet permits other banking institutions with no physical presence in Canada to offer products to Canadians. Consider, for instance, Wells Fargo Bank and the service it offers to small businesses in Canada. Wells Fargo provided a pool of \$50 million for unsecured lines of credit for small businesses (mainly in southwestern Ontario) through direct mail and a 1-800 number located in the United States. Competition law and regulations that were set up to reduce the market power of firms under a given set of conditions can therefore become quickly outdated in an age of rapid technological advance. The argument for government intervention to reduce the market power of large firms is greatly weakened when we acknowledge the dynamic nature of the market place and the power of innovation and technological progress to undermine the market power of firms already operating in a market.

Conclusion

There are several reasons to question the need for significant government intervention to mitigate the effects of market power. Contestable market theory suggests that the relation between the number of firms in an industry and the ability of firms to exercise market power is weak at best. If entry is possible, then even a monopolistic firm may be induced to behave as if it were a competitive one. Some empirical studies (Nathan and Neave 1989; Shaffer 1993) suggest that the Canadian banking industry may be adequately characterized as contestable. Hence, it is unclear whether mergers among the Big 5 chartered banks will reduce competition in the banking sector, particularly if current barriers to foreign competition in the banking sector are reduced or eliminated.

The dynamic nature of the market place tends to reduce the market power of firms already operating in a market. In the long run, this process of creative destruction will curb the market power created by the formation of megabanks. Hence, the need for policy intervention is called into question.



4 Empirical evidence: branch banking, technology, and cost savings

Parts 4 and 5 of this report bridge the gap between the economic theories associated with consolidations and the empirical data available for the financial services industry in Canada. Part 4 presents a detailed discussion and the empirical evidence about technological progress in the financial services industry.

Decline of bricks and mortar banking

Although the modes of delivery of bank products may be changing, the essential functions of the banks have remained relatively constant. Banks have traditionally served three functions: transactional, saver, and lender. The transactional function of banking consists, for the most part, in accepting and processing payments in the form of cheques. At the same time, banks complete the fundamental function of any financial intermediary by facilitating the exchange of financial resources from savers to borrowers or investors. Banks accomplish this exchange by offering a variety of products both to savers (e.g. GICs, mutual funds, deposit accounts) and to borrowers and investors (e.g. mortgages, credit lines, demand loans, credit cards).

It is important to point out that the traditional bricks and mortar—the physical infrastructure—of the banking

system is largely devoted to the retail, or consumer, side of banking. Banks tailor their services to a number of customers including corporate, international and retail. Retail banking varies in its importance among the Big 5 banks from a high of 74.20 percent of net income at the Bank of Montreal to a low of 34.35 percent at the Bank of Nova Scotia. Nevertheless, most of the physical infrastructure of the banking sector is dedicated to the retail segment.

A great deal of attention has been paid to the effect that the proposed mergers may have on the branch banking system in Canada. Opponents of the mergers have argued that it will leave smaller communities without branch service and inevitably increase the cost of services to consumers. Even proponents of the mergers have downplayed rationalization of the branch system as a motivating factor for consolidation. Both ignore the fact that rationalization is already well under way in the Canadian branch banking system.

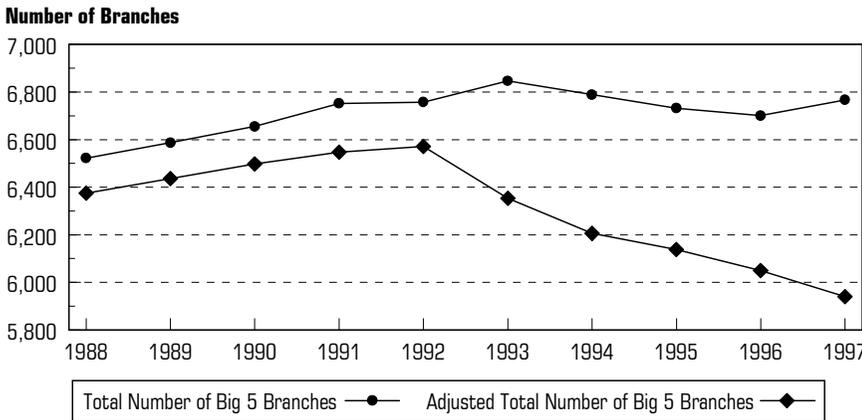
Chart 1 graphically depicts, and table 5 summarizes, the data regarding the historical growth (decline) in the number of branches operated by the Big 5 banks over the last 10 years. At first glance, as illustrated by the top line in chart 1 and by the first row of data in table 5, it appears that the number of branches operated by the Big 5 banks has been increasing over the last 10 years.

Table 5: Number of branches operated by the Big 5 banks

Category of Branch	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Unadjusted Total Number of Branches	6522	6587	6655	6752	6758	6847	6789	6732	6701	6767
Number of International Branches	330	348	345	398	405	420	452	470	529	567
Number of Domestic Branches	6192	6239	6310	6354	6353	6427	6337	6262	6172	6200
Number of Integrated Trust Branches	0	0	0	0	0	297	360	360	360	535
Adjusted Total Number of Branches	6192	6239	6310	6354	6353	6130	5977	5902	5812	5665

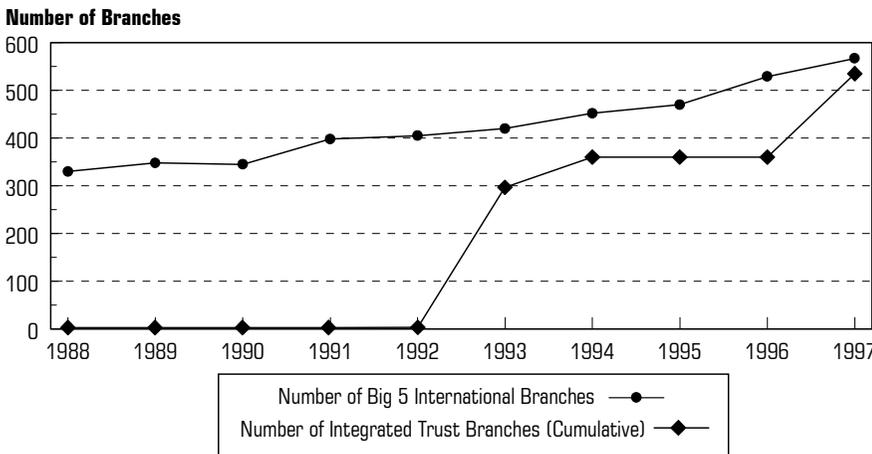
Source: data compiled independently by the authors using information from the 1997 annual reports of the Big 5 banks and specific data requests.

Chart 1: Number of branches operated by the Big 5 banks



Data compiled independently by the authors from information contained in the 1997 annual reports of the Big 5 banks as well as from specific data requests to the bank

Chart 2: Adjustments to the number of branches operated by the Big 5 banks



Data compiled independently by the authors from information contained in the annual reports of the Big 5 banks as well as from specific data requests to the bank

There are however, two factors, as depicted in chart 2 that must be considered when analyzing the growth of the domestic branch banking system: (1) the growth in the number of international branches and (2) the number of trust branches acquired by the Big 5 banks during the last 10 years.

First, in order to analyze the rate of growth in the domestic branch banking system, the number of international branches must be removed. The addition of branches in Asia, the United States, Europe, or South America does not increase the number of domestic branches in the banking system, yet these branches are included in the statistics provided in each banks' annual report.¹²

before adjusting for the acquisition of trust companies.

Second, an adjustment must be made to account for the acquisition of trust companies and the subsequent integration of their branches by the Big 5 banks. During the 10-year period under review, four major acquisitions of trust companies were made by the Big 5 banks as summarized in table 6 and graphically presented in chart 2.

The four acquisitions effectively integrated a large number of the trust companies' branches into the branch system of the banks. The only major trust company to remain independent was Canada Trust. The reasoning behind the removal of the trust company acquisitions from our analysis is quite straightforward: in order to assess any

The removal of overseas branches from the total number of branches operated by the Big 5 banks has a material effect due to the high rate of growth in international branches. Between 1988 and 1997, the Big 5 banks expanded their international network of branches at an average annual rate of 6.31 percent. The growth rate in the total number of branches operated by the Big 5 banks, before accounting for the previously mentioned factors was only 0.41 percent for the same 10-year period. Obviously the expansion in overseas branches explains a large portion of the overall increase in the total number of branches.

The third row in table 5 gives the number of domestic branches operated by the Big 5 banks while the top line in chart 2 depicts the level of growth in the number of overseas branches. The number of domestic branches increased marginally over the 10-year period, from 6,192 in 1988 to 6,200 in 1997, an average annual increase of 0.02 percent. Only the Bank of Nova Scotia experienced an increase in the number of domestic branches during the 10-year period while the remaining Big 5 banks experienced a net decline in the number of branches be-



Table 6: Acquisitions of trust companies

Bank	Trust Company Acquired	Date of Purchase	Number of Branches Acquired
Royal Bank of Canada	Royal Trust	1993	143
Toronto-Dominion Bank	Central Guaranty Trust	1993	154
Bank of Nova Scotia	Montreal Trust	1994	63
Bank of Nova Scotia	National Trust	1997	175

Source: Data compiled independently by the authors using information from the 1997 annual reports of the Big 5 banks and specific data requests.

trend in the decline of branch banking, exogenous factors must be controlled. Thus, the effect of consolidation and specifically the amalgamation of the trust company and banking sectors must be accounted for, and removed from, the analysis in order to isolate the trend in the domestic branch-banking system.

An alternative to removing the acquired trust branches from the analysis of the domestic branch-banking system is to assess the overall impact of the consolidation of the trust company branches and bank branches jointly. The results would be similar to those garnered by analyzing the branch-banking system since many of the acquired trust branches have been, or are scheduled to be, closed.¹³ As the proposed mergers exist exclusively in the banking sector, the branch analysis has therefore focused on the branch banking system exclusively.

Once the effect of the acquisitions is removed, each of the Big-5 banks shows a pronounced decline in the number of branches (see chart 1 and table 5). The average annual rate of growth in the number of branches operated by the Big 5 banks declines from the original positive rate of 0.41 percent to a negative rate of 0.97 percent (table 8). It is clear that a rationalization process within the branch-banking system of the Big 5 banks is already well under way.

Automated banking machines—a substitute for traditional banking

The driving force behind the rationalization of the branch-banking system has been technological progress, specifically the development of alternative delivery systems made possible by improvements in communications and software. Chart 3 depicts, and table 7 shows the data documenting the rapid increase in the number of automated banking machines (ABMs) operated by the Big 5 banks in Canada. The number of ABMs operated by the Big 5 banks has increased from 4,373 in 1988 to 13,291 in 1997, representing an average annual increase of 13.81 percent (table 8).

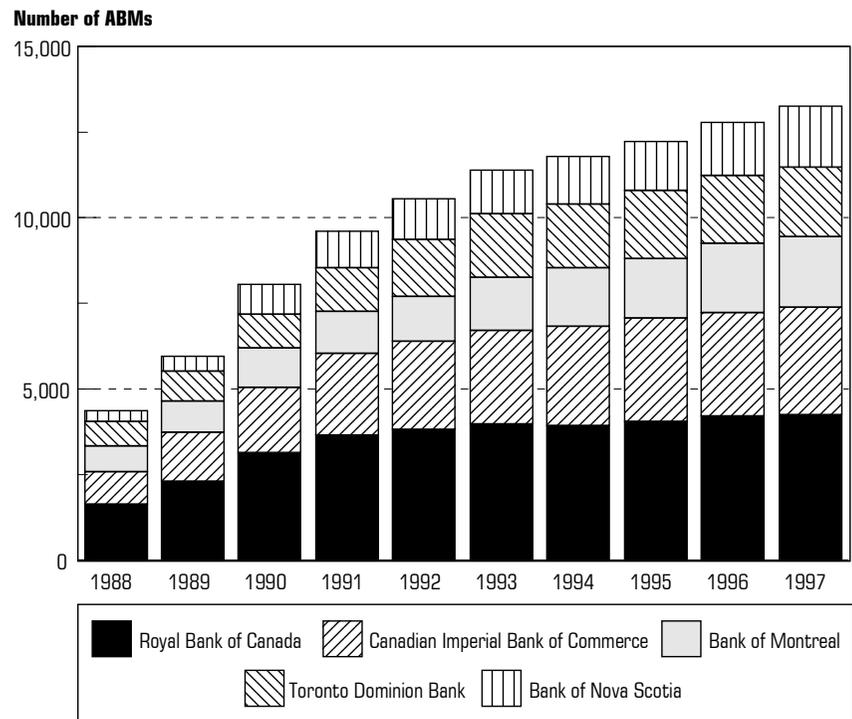
The comparative growth figures contained in table 8 are instructive in terms of understanding how ABMs are substitutes for branch-based transactions. The introduction of ABMs allowed customers to choose between two types of delivery systems for the same product—they could choose make deposits, withdrawals or transfers, or pay bills through a teller in a branch or through an ABM. The substitutability of ABMs and branches is demonstrated by the fact that as branches declined (–0.97 percent) the number of ABMs increased at a rate (13.81 percent), which more than offset the effect of the decline in the branches.

Table 7: Automated banking machines (ABMs) operated by the Big 5 banks

Bank	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Royal Bank of Canada	1,632	2,334	3,142	3,651	3,828	3,981	3,948	4,079	4,215	4,248
C.I.B.C.	987	1,399	1,914	2,405	2,596	2,754	2,887	2,990	3,032	3,169
Bank of Montreal	753	937	1,163	1,221	1,293	1,538	1,708	1,763	2,017	2,035
Bank of Nova Scotia	304	422	873	1,070	1,190	1,280	1,381	1,429	1,526	1,801
Toronto-Dominion Bank	697	877	991	1,290	1,663	1,858	1,891	1,966	1,991	2,038
Total	4,373	5,969	8,083	9,637	10,570	11,411	11,815	12,227	12,781	13,291

Source: Data compiled by the authors using information from the 1997 annual reports of the Big 5 banks and specific data requests.

Chart 3: Number of ABMs operated by the Big 5 banks



Data compiled independently by the authors from information contained in the annual reports of the Big 5 banks as well as from specific data requests to the bank

branch-banking system were to have kept pace with population growth (but not increased its service), it would have had to expand at a rate that at least kept pace with the increase in population. As indicated in tables 5, 8 and 9, the number of branches in Canada has actually decreased while population increased. The divergence in growth rates between population and the number of branches explains the increasing number of people served per branch. In relative terms, even excluding the adjustment for the integration of trust branches, the Big 5 banks show a decline in the number of domestic branches.

Second, it is important to recognize that the negative rate of growth in the number of individuals served per ABM indicates a real expansion in the number of ABMs, even relative to population growth. The fewer the number of people per



Population growth and the real decline in the number of branches

Another way of presenting the same data is to examine the number of individuals served by each delivery system— per branch or ABM. Chart 4 depicts, and table 9 presents data for the number of customers served by both branches and ABMs between 1988 and 1997.

The figures in table 9 indicate that as the number of domestic branches has declined over the past 10 years, the population served has increased, thus increasing the number of customers served per branch. If the Canadian

ABM, the less the waiting time and the greater the accessibility in terms of location.

Catalyst for technological progress

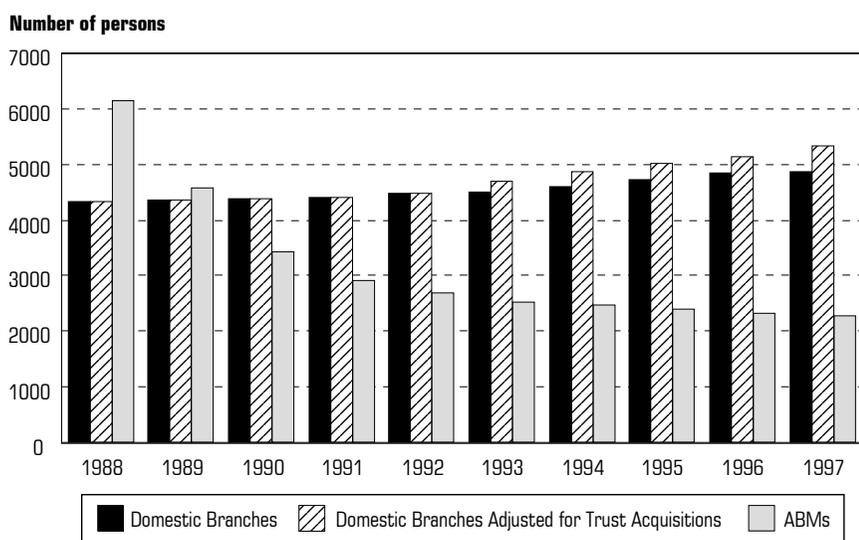
The subsequent rationalization process depicted in chart 1 and documented in table 5 is simply an outgrowth of consumer demand. The number of ABMs increased at a rate demanded by consumers while the number of branches declined given reduced demand for in-branch services. If consumers preferred to use the branch delivery system

Table 8: Comparative growth rates for branches and ABMs

Type of Delivery System	10-Year Average Annual Growth Rate (1988-97)	5-Year Average Annual Growth Rate (1993-97)
International Branches	6.31%	7.01%
Domestic Branches	0.02%	-0.48%
Adjusted Domestic Branches*	-0.97%	-2.26%
Big Five ABMs	13.81%	4.70%

* Adjusted for the acquisition of trust companies.
 Source: Data compiled independently by the authors using information from the 1997 annual reports of the Big 5 banks.

Chart 4: Number of persons per domestic branch and ABM in Canada



Data compiled independently by the authors from information contained in the annual reports of the Big 5 banks as well as from specific data requests to the bank

rather than the ABM network, then there would be a reduced level of usage of ABMs by consumers and a lower rate of diversion from the branch system to the ABM network. Consumers, facing the costs of in-branch banking versus ABM banking, including both direct and indirect costs such as time and convenience, have chosen automation.

The substitutability of the two products allows consumers to choose the method of delivery best suited to their preferences—i.e. personal service or convenience. The bank customer who prefers to stand in line to deal personally with a teller has that choice but is faced with the direct costs of that preference in the form of higher service charges.¹⁴ Customers who value the expediency of ABMs and the convenience of 24-hour banking also have the ability to exercise their preferences by selecting the alternative that best fits their particular preferences. The importance of substitutable products is their ability to permit individu-

als with varying preferences to select methods of delivery that most closely approximate their individual preferences.

The critics of consolidation fail to understand the substitute relationship that exists between branches and ABMs and the fact that the expansion in the number of ABMs is consumer, not producer driven. If a large and growing number of consumers did not choose ABMs as their preferred method of bank transactions, then the number of ABMs would not be expanding at such a high rate. Consumers are demanding the convenience and reduced costs associated with ABMs and financial institutions are providing those products and delivery systems de-

manded by consumers. But, this does not eliminate branch banking. Branch banking will remain as long as there is sufficient demand for personal service. Again, the driving force behind the technological changes and the future changes in the delivery of financial products is based on the preferences of consumers.

ABMs—only the first step

The substitution of ABMs for in-branch teller service is only one aspect of the technological advancements that are changing the financial services industry. Alternative delivery systems in the form of direct debit payment, Internet processing of transactions, and telephone banking are available to customers as a substitute for both ABM transactions and in-branch service. For instance, customers can now pay bills in a number of ways: (1) traditional processing in-branch by a teller, (2) pre-authorized debit, (3) direct payment using a

Table 9: Number of customers served per branch/ABM*

Type of System	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	Linear Growth Rate	Average Annual Rate
Domestic Branches	4344	4363	4404	4426	4493	4504	4617	4730	4856	4884	12.43	1.31
Domestic Branches**	4344	4363	4404	4426	4493	4722	4895	5018	5156	5345	23.05	2.34
ABMs	6150	4587	3438	2918	2700	2537	2476	2422	2345	2278	-62.96	-9.97

* Includes the Big 5 banks exclusively. ** Adjusted for the acquisition of trust branches.

Source: Data compiled by the authors using information from the 1997 annual reports of the Big 5 banks and specific data requests.

cheque, (4) direct payment using a debit card, (5) payment through an ABM, (6) payment through the telephone banking system or (7) Internet bill payment.

The additional choices in delivery systems that technological change has allowed is not restricted to the transactional side of branch banking. That is, the revolutions available in delivery systems have not been limited to the traditional functions associated with banking such as the cashing of a cheque or the paying of a bill. All five of the big banks offer Internet, telephone, and direct-debit banking services. Customers can complete a wide array of financial transactions through these alternative delivery systems including the sale and purchase of stocks, transactions in mutual fund accounts, applications for loans, credit cards, and mortgages, and the purchase of insurance. The development and introduction of technologies have increased the number of choices that consumers have for completing financial transactions.

The preliminary usage results¹⁵ garnered from alternative delivery systems suggests an extraordinarily high level of demand by consumers. In its 1997 Annual Report, the Canadian Imperial Bank of Commerce celebrated the level of usage by its customers of its alternative delivery systems: 490 million transactions completed through self-serve delivery systems (ABMs, direct payment, and pre-authorized payments), 165,000 registered PC users, over 500 security trades per day completed on-line through Internet services, 880,000 telephone users, and over 12 million debit card transactions per month (CIBC 1997:15). This level of alternative delivery usage by customers is not restricted to the Canadian Imperial Bank of Commerce; the Toronto-Dominion Bank similarly stressed the depth of choice its customers have with respect to Internet services. Transactions ranging from traditional banking to security trading to credit applications can all be completed through the bank's Internet system.

There is, however, an important difference between ABMs and other alternative delivery systems. Customers are not limited in their access to ABMs since the banks themselves provide the infrastructure required to use the delivery system; that is, the banks purchase, maintain, and operate the ABM network. Two main alternatives to ABMs, namely telephone and Internet banking, present infrastructure limitations on customers, who cannot perform banking transactions through the phone system or the Internet unless they have access to a touch-tone phone or an on-line computer. Thus, the usage of telephone and Internet banking will be limited by the dissemination of the underlying technology to households. According to a recent study examining living standards in Canada, 99 percent of households in Canada had a telephone and 32 percent had home computers (Sarlo 1998: 3). The dissemination of technology, and especially home computers and Internet access, will therefore dictate the level of possible usage by customers. Table 10 and chart 5 present usage figures for the Big 5 banks for both telephone banking and Internet banking.

Given the relatively limited access to computers and on-line services, the number of registered customers¹⁶ indicating their preference for computer-based banking is high. It seems quite plausible, then, that, as the underlying technology is further developed and made more accessible, the number of users for telephone and Internet banking will increase.

These types of alternative delivery systems are not restricted to the Big 5 banks. Vancouver City Savings Credit Union (VanCity), the country's largest independent credit union has consistently been at the frontier of developing new and innovative technologies. In 1997, VanCity customers completed 1.858 million phone transactions and 1.087 million teleservice calls (Vancity 1997: 12). VanCity, along

Table 10: Customers registered with the Big 5 banks for telephone and Internet banking*

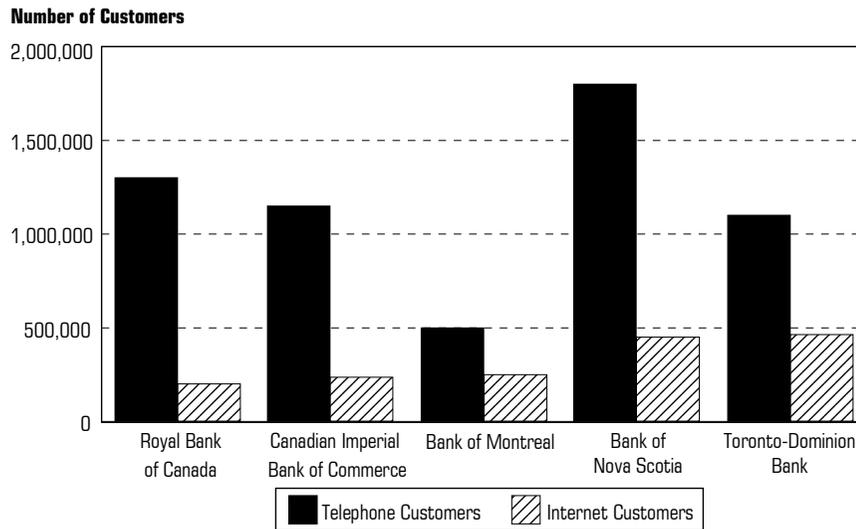
Institution	Number of Telephone Customers	Number of Internet / On-Line Customers
Royal Bank of Canada	1,300,000	200,000
Canadian Imperial Bank of Commerce	1,150,000	240,000
Bank of Montreal	500,000	250,000
Bank of Nova Scotia	1,800,000	450,000
Toronto-Dominion Bank**	1,100,000	465,000
Total	5,850,000	1,605,000

* Registered customers were used, as opposed to actual users since the banks view specific usage data as proprietary.

** Refers exclusively to domestic customers; does not include Price Waterhouse customers.

Source: Data compiled independently by the authors using information garnered from data requests.

Chart 5: Numbers of customers registered* with the Big 5 banks for telephone and Internet banking



* The figures refer to registered customers, not actual users. The figures therefore indicate the capacity for usage by current customers as opposed to actual usage. Since the banks view specific usage data as proprietary, capacity for usage, i.e. registered customers was the closest proxy available for alternative delivery systems to ABMs.

Source: Data compiled independently by the authors from information contained in the annual reports of the Big 5 banks as well as from specific data requests to the bank

with the Bank of Montreal, were the first two financial institutions in Canada to develop and market completely autonomous virtual, Internet banking units.

Alternative delivery systems are not restricted to large financial institutions located in major cities. Surrey Metro Savings Credit Union, which, like VanCity has consistently been a pioneer in innovative service delivery systems, serves a much smaller market but has been able to provide a wide variety of choices to its customers. Surrey Metro Savings was the second financial institution in Canada to offer phone-based services and, in 1997 alone, logged some two million phone calls (Surrey Metro Savings: 8–10).

Technological innovations are not restricted to the retail consumer segment of the financial services industry. A host of advancements have been made for small, medium, and large companies, again facilitated by customer demand. All of the Big 5 banks offer their business customers ABM access for business transactions, real-time, direct computer access to accounts and cash management tools.

Technology has broken down some of the regulatory barriers imposed by the federal government on foreign competitors and allowed them to enter the financial services market more readily and at a reduced cost. This is important for the commercial market, since foreign financial institutions

are required by regulation to establish a Canadian subsidiary rather than only to operate a Canadian branch. This regulation imposes a significant additional cost on foreign competitors in terms of the initial, or sunk, investment required to enter the Canadian market. However, improvements in telecommunications and financial services software have reduced the regulatory barriers to entry.

A case in point is the entry of the Wells Fargo Bank of San Francisco into the small and medium commercial market. Rather than establish a Canadian subsidiary and incur the substantial costs associated with the operation of a subsidiary, Wells Fargo pursued a strategy based on electronic management and direct mail advertising. Wells Fargo offered unsecured credit lines ranging between \$15,000 and \$75,000 mainly for small companies. It contacted a large number of

potential clients, mainly in southwestern Ontario, through a direct mail campaign. The loans were processed over the phone by the bank's call centre in Colorado using a 1-800 number. Loans were processed and approved within 48 hours of application. Wells Fargo achieved its goal of \$50 million in lending well before the established deadline and has announced plans for further lending initiatives in Canada (press release, Wells Fargo, Public Relations Department, June 25, 1998). Advances in telecommunications technology, database management, and information systems, allowed Wells Fargo to offer Canadian businesses a competitive product by circumventing the regulatory hurdles.

This type of innovative approach to commercial and retail operations is not limited to the Wells Fargo Bank. Companies like General Electric Capital Corp. have adopted similar strategies. As recently as June 24, 1998, Finova Group, another new entrant to the Canadian market, announced that it will contest the mid-commercial market (loans between \$500,000 and \$30 million) in the Toronto region, effectively competing directly with the Big 5 banks (Richard Blackwell, Newcomer Finova Challenges Canadian Banks, *The Financial Post*, June 24, 1998: 4). Even this limited anecdotal evidence indicates the innovative nature of the financial services industry as a whole and the fact that many

of the control-type regulations that currently exist will be rendered ineffective by technological progress.

The demand by customers, both retail and commercial, for choice in the method of delivery for financial transactions and services, has necessitated investment by financial institutions in a wide array of financial products, delivered in a multitude of ways. This demand has not been restricted on a geographic, product, or customer basis. Rather, all financial institutions have been forced by consumer demand to offer choices for their customers regardless of location, product, or customer-type. Regardless of the outcome of the restructuring of the financial services industry, consumers will continue to demand innovative methods of delivery that increase convenience while decreasing costs. Technology, facilitated by this demand, will continue to provide these choices for consumers.

Technology and cost savings

The importance of branch rationalization lies in the cost savings associated with providing the same or greater level of service through relatively less expensive channels. There is very little agreement regarding the extent or even presence of cost savings through financial institution mergers. Evidence from the United States over the last 15 years has been contradictory; some studies have shown positive savings, others negative savings and still others have indicated no long-term savings.¹⁷

In the recent C.D. Howe Institute publication, Mathewson and Quigley (1998) present a thoughtful and clear analysis of the possible savings to be garnered from consolidation. The authors quite clearly assert that the United States is not the appropriate comparison in order to gain comparative savings estimates for Canada due to the unique character of the American market.

Using data from recent New Zealand consolidation experiences in the financial services industry, Mathewson and Quigley (1998) estimate that savings from a Canadian merger could amount to between 20 and 30 percent of non-interest expenses, that is, the costs associated with staff such as salaries and benefits, and with physical infrastructure such as rent, utilities, and communications. The authors state that the lower bound, 20 percent, should be used given corroborating evidence from Great Britain and in order to ensure conservatism. Other estimates from unnamed "bank sources," which have appeared regularly in the popular press, suggest that the actual cost savings would average around 10 percent of non-interest expenses (Shona McKay, *Odd Man Out*, *The Financial Post Magazine*, July/August 1998: 20).

Rather than debate the merits of any particular cost savings estimate, we have chosen to present a range of savings estimates. Table 11 contains estimates of annual and cumulative savings arising from the proposed consolidation of the banking sector.

The possible savings generated by consolidation among four of the Big 5 banks is extraordinary. The possible annual savings represents between 30 and 91 percent of the total profits of the Big 5 banks in 1997 depending on the particular estimate of cost savings used. The cumulative 10-year savings ranges between 3.40 percent and 10.28 percent of the total value of all goods and services (GDP) produced in Canada in 1997. The per-capita savings estimates are equally as startling. The annual savings per person ranges between \$72.83 and \$218.50, while the cumulative 10-year estimate ranges between \$996.39 and \$2,989.13 per person.

The cost savings estimates assume only the mergers between the Royal Bank of Canada and the Bank of Montreal, and between the Canadian Imperial Bank of Commerce and the Toronto-Dominion Bank. The savings would be higher if estimates included other merger candidates such as the Bank of Nova Scotia, Canada Trust, the various regional

Table 11: Estimates of cost savings

Estimate	One-Year Savings (In Millions)	Projected 10 Year Savings (In Millions)*
Upper Bound (30%)	6,471	88,523
Middle Bound (20%)	4,314	59,016
Lower Bound (10%)	2,157	29,508

*The ten-year estimate utilizes the 10-year historical average annual increase in non-interest expenses of 11.06 percent and an inflation discount figure of 4.00 percent.
Source: Data compiled independently by the authors using information from the 1997 annual reports of the Big 5 banks and from Mathewson and Quigley 1998.

- credit unions across the country, and the larger life insurance companies. For instance, including the remaining Schedule I banks (Bank of Nova Scotia, National Bank, Laurentian Bank, and Western Bank), the Hongkong Bank of Canada (largest Schedule II), and Canada Trust (largest trust company) increases the estimate of the total annual savings for 1998 to between \$2,971 million and \$8,915 million, depending on which cost savings estimate is used.

The relative size of the possible savings seems to preclude the possibility of government preventing such scale efficiencies. Mathewson and Quigley (1998) quite appropriately urge that the policy recommendations focus on ensuring that the cost savings generated by consolidation flow to consumers.

Consolidation and the effect on staff

Opponents of consolidation have argued that the proposed mergers would necessitate a large reduction in the number of staff employed by the Big 5 banks. Indeed, even pro-consolidation scholars such as Mathewson and Quigley (1998) concede that “substantial” staff reductions could occur as a result of the proposed mergers. It is clear that staff reductions will result immediately following consolidation. However, the data for the effects of consolidation over the longer term are less clear.

An interesting insight about the effect of consolidation on staffing can be obtained by examining the data for the Big 5 banks over the last 10 years. The rationalization that occurred as a result of the acquisition of four trust companies by the Big 5 banks (table 6) resulted, after an initial period of transition, in a net expansion of employment and an increase both in the total wages and wages per employee. Although the consolidation of the trust and banking sectors represents rationalization based on economies of scope rather than scale, it nonetheless indicates that the net employment and wage effect of rationalization may be positive or less negative than first thought.

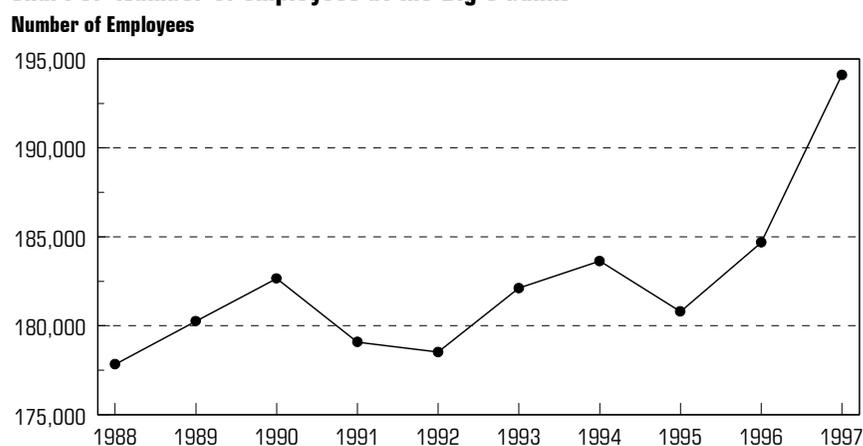
Chart 6 illustrates both the contractions and expansions that occurred in the level of employment in the Big 5 banks over the last 10

years. The first contraction (1990 to 1992) can largely be explained by the severe recession that hit North America and parts of Europe. The Big 5 banks, like most businesses, were forced to rationalize operations and reduce staff levels in order to reduce the overall cost of operations. In fact, only the Bank of Nova Scotia increased the level of employment during this period while the remaining Big 5 banks reduced staffing by 4,692 full-time equivalent positions, 2.6 percent of the total employment in the Big 5 banks. By 1993, one year after the end of the recession, employment levels for the Big 5 banks had returned to 99.70 percent of their pre-recession levels.

The second, less severe, contraction can be partially explained by the integration of trust company acquisitions by the Big 5 banks between 1993 and 1997 (table 6). As suggested by Mathewson and Quigley (1998) and, indeed, by the opponents of the consolidation process, a rationalization of the branch system occurred with subsequent employment reductions.

The puzzling aspect of the data, one that cannot be adequately explained by the opponents of bank consolidation, is the fact that the overall trend in the sector is one of expansion. Employment grew by 9.14 percent from 1988 to 1997, an annual average increase of 1.00 percent. It seems difficult, given the empirical data for the last 10 years, to describe the long-term effects of consolidation as a net decrease for employment in the banking sector. Also, this evidence does not account for intra-industry employment transfers wherein a former employee of the bank, for instance, leaves the bank for a competing financial institution, such as a mutual fund company.

Chart 6: Number of employees at the Big 5 banks



Data compiled independently by the authors from information contained in the annual reports of the Big 5 banks as well as from specific data requests to the bank

Employment growth in the bank sector has often been interpreted as a real net decrease in the level of wages; it is assumed that more people are working but at a reduced level of compensation. However, as the statistics in table 12 and chart 7 indicate, there has been both an increase in the total value of wages and benefits as well as an increase in the wages and benefits per employee in the Big 5 banks.

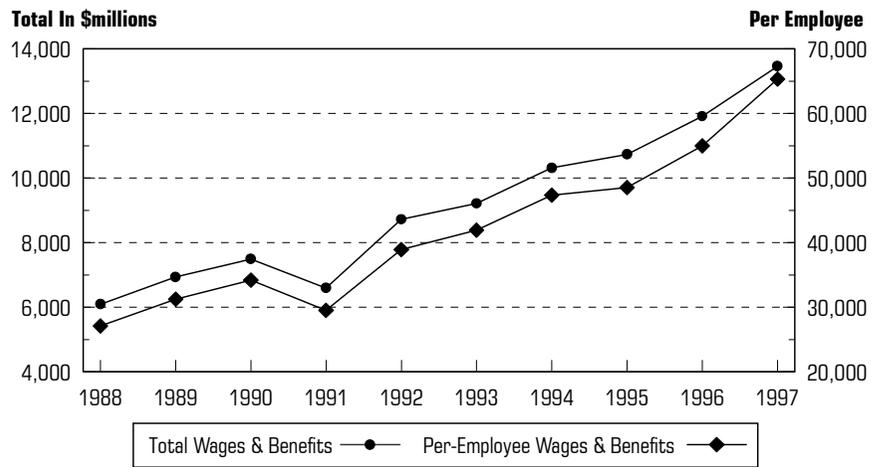
The empirical evidence suggests that the total value of wages and benefits paid to the employees of the Big 5 banks has increased over the last 10 years. In fact, total real wages and benefits, that is, wages and benefits expressed in constant 1988 dollars, increased 89.98 percent between 1988 and 1997, representing a real average annual increase of 8.13 percent (table 12). The increase in wages and benefits per employee has out-paced the real average annual increase in revenues of 6.74 percent for the same period.

More importantly, however, the wages and benefits of the individual employees have also increased. Due to the lack of micro-economic data on wages and employment, the study is unable to present variance and distribution information on wages and benefits. We are not suggesting that the average teller earned \$67,326 nominal dollars in 1997. However, the number of employees at the upper echelons of

management in each of the Big 5 banks are not sufficient to explain the entire expansion in the value of wages and benefits. That is, there is not enough senior staff to account for all of the increase in wages and benefits. Thus, the real average annual increase in wages and benefits between 1988 and 1997 of 6.99 percent must have been broadly dispersed across all levels of employment.

The question for the critics of consolidation is how the rationalization process resulted in such a wide scope of beneficial results, namely higher levels of employment, increased wages, and heightened opportunities for growth, given the doomsday scenario presented in the popular press. The simple answer is technological change. As suggested by

Chart 7: Total and per-employee wages and benefits in the Big 5 banks



Data compiled independently by the authors from information contained in the annual reports of the Big 5 banks as well as from specific data requests to the bank

Table 12: Wages and benefits

Category	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	Linear Growth Rate	Average Annual Growth
Total nominal wages and benefits (\$millions)	5,421	6,251	6,844	5,909	7,788	8,391	9,471	9,706	11,001	13,068	141.06	10.91
Total real wages and benefits (\$millions)	5,421	5,956	6,220	5,087	6,604	6,990	7,874	7,899	8,809	10,299	89.98	8.13
Nominal wages and benefits per employee*	30,482	34,677	37,469	32,995	43,624	46,076	51,575	53,680	59,566	67,326	120.87	9.75
Real wages and benefits per employee*	30,482	33,041	34,055	28,406	36,993	38,382	42,878	43,686	47,698	53,060	74.07	6.99

* Stated on a Full-Time Equivalent Basis to control for part-time and casual workers

Source: Data compiled by the authors using information from the annual reports of the Big 5 banks and specific data requests.

- Mathewson and Quigley's (1998) analysis of the New Zealand experience, a number of new labour-based delivery systems were developed and implemented. In the New Zealand context, the most high profile change in delivery systems was the introduction of mobile bankers, similar to the traditional insurance agents who make home visits.
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Canada has experienced a similar trend in terms of trust, mortgage, and investment specialists who are no longer assigned to any particular branch but rather to a geographic region. Technology has, therefore, allowed and, indeed, facilitated the replacement of lower-skilled, lower-valued positions with higher-skilled, higher-paid positions.

This type of technological substitution makes everyone better off: consumers and employees. Consumers have a greater number of choices for completing financial transactions and employees are able to earn a higher wage given the more sophisticated skill set involved in the new positions.

The empirical evidence presented in this section overwhelmingly refutes much of the rhetoric presented by the opponents of consolidation. The potential cost savings of consolidation and the positive results garnered thus far from the partial consolidation of the trust and banking sectors indicates a large net positive economic benefits from consolidation.

5 Empirical evidence: market definitions and foreign competition

This section of the report will combine the theoretical discussion of the difficulty in defining the appropriate markets with empirical examples from the Canadian financial system. It is essential to acknowledge and understand the theoretical and practical difficulties associated with defining markets since the Competition Bureau has stated that one of its criteria for evaluating the merger is market power. The market power guidelines in the Bureau's analysis of the proposed banks mergers are as follows: no merger will be challenged if the merged firm commands less than 35 percent of the market; the remaining four largest firms account for less than 65 percent of the market; and the merging firms individually hold less than 10 percent of the market.

These guidelines as they stand seem sound except that they assume that a market can be readily, and appropriately defined either according to geography, customer-type, or product line. The following empirical analysis, coupled with the theoretical problem of defining a market, suggests that defining market power is a difficult task.

Defining geographic markets: a case study of the greater Vancouver region

If we assume that technology does *not* have a material effect on competition and that branch banking is essential, then, given the unavailability of microdata, the key variable to examine in terms of geographic market power is the number of branches in any one particular area. In an attempt to assess the effect of consoli-

dation, we did a case study of the greater Vancouver region, which, because it encompasses areas of the diverse size and commercial focus, allows an analysis that is applicable on a national level.

Tables 13 and 14 depict the numerical presence of each bank both currently and post-merger in 12 separate regions of greater Vancouver. Tables 15 and 16 then document the presence of regional and niche financial institutions.

The analysis performed by authors Mathewson and Quigley (1998) of the New Zealand consolidation experience suggests that between 40 and 50 percent of the combined branches would be closed through branch rationalization.

Table 13: Actual number of branches operated by the Big 5 banks in greater Vancouver

Region	RBC	CIBC	BMO	BNS	TD	Total
Burnaby	5	5	6	8	5	29
Coquitlam	4	3	2	3	3	15
Langley	3	2	1	2	3	11
Maple Ridge	2	1	2	1	2	8
New Westminster	3	2	3	2	2	12
North Vancouver	5	3	6	3	2	19
Port Coquitlam	2	1	1	1	1	6
Richmond	6	4	5	3	4	22
Surrey-Delta	11	10	9	10	8	48
Vancouver	28	26	24	25	22	125
West Vancouver	3	3	4	1	1	12
White Rock	2	1	2	1	1	7
Total	74	61	65	60	54	314

Note: RBC = Royal Bank of Canada, CIBC = Canadian Imperial Bank of Commerce, BMO = Bank of Montreal, BNS = Bank of Nova Scotia (Scotiabank), TD = Toronto-Dominion Bank.
Source: Data compiled by the authors using information from the annual reports of the Big 5 banks and regional financial institutions in the lower mainland of British Columbia as well as from financial directories for greater Vancouver.

Table 14 depicts the restructured banking sector for the greater Vancouver region assuming a 50 percent rationalization of branches.

Using a 50 percent rationalization ratio results in a net decrease in the number of Big 5 branches in greater Vancouver of 41.40 percent. The analysis must be extended beyond the reduction in the number of Big 5 branches in order to account for the introduction of alternative financial institutions ranging from small, regional banks (both Schedule I and Schedule II) to local credit unions to national non-financial institutions such as mutual fund companies. Table 15 presents five financial institutions that currently compete with the Big 5 banks in the greater Vancouver region. Two of the five financial institutions presented in table 15 dominate three of the 12 regions analyzed in greater Vancouver. Surrey Metro Savings has more branches in both Langley and White Rock than any other financial institution and also effectively competes in its home market of Surrey-Delta. Similarly, Richmond Savings dominates the Richmond market with more branches than any competing financial institution.

The smaller, regional financial institutions are using the proposed mergers to market themselves more aggressively as a direct alternative to the Big 5 banks and two have recently undertaken major advertising campaigns in the greater Vancouver region. Richmond Savings' campaign refers to gaining relief from the "humungous banks" while Westminster Savings refers to the "Cure for the common bank." In addition, many regional and niche financial institutions have traditionally, although not as aggressively, marketed themselves as direct alternatives to the banks. Rather than viewing the possibility of consolidation as a hindrance to future market opportunities, institutions like Richmond Savings and Westminster Savings have seized upon the market change as an opportunity for growth.

The data in table 15 is deficient in that it only views geographic competitiveness. One of the major strengths of smaller, local firms is their ability to carve out specific niches

Table 14: Projected number of branches in greater Vancouver after mergers

Region	RBC/BMO	CIBC/TD	BNS	Total	Change in the Number of Big 5 Branches
Burnaby	5	5	8	18	-37.93%
Coquitlam	3	3	3	9	-40.00%
Langley	2	2	2	6	-45.45%
Maple Ridge	2	1	1	4	-50.00%
New Westminster	3	2	2	7	-41.67%
North Vancouver	5	2	3	11	-42.11%
Port Coquitlam	1	1	1	3	-50.00%
Richmond	5	4	3	12	-45.45%
Surrey-Delta	10	9	10	29	-39.58%
Vancouver	26	24	25	75	-40.00%
West Vancouver	3	2	1	6	-50.00%
White Rock	2	1	1	4	-42.86%
Total	67	56	60	184	-41.40%

Note: RBC = Royal Bank of Canada, CIBC = Canadian Imperial Bank of Commerce, BMO = Bank of Montreal, BNS = Bank of Nova Scotia, TD = Toronto-Dominion Bank.
Source: Data compiled by the authors using information from the annual reports of the Big 5 banks and regional financial institutions in the lower mainland of British Columbia as well as from financial directories for greater Vancouver.

within larger markets. Table 16 summarizes the number of alternative financial institutions, both large and small that exist in direct competition with the banks in the greater Vancouver region.

The breadth and variety of financial services offered by the firms highlighted in both tables 14 and 15 is large. Traditional bank services as well as unique, niche services are provided by the firms contained in both tables in direct competition with the Big 5 banks. The range of services include venture capital financing, mortgages and loans, financial planning, mutual fund products, specialized sale of securities and commodities, traditional savings products, and leasing.

Tables 13 through 16 illustrate the need for a view of financial services broader than the narrow concept of banking.¹⁸ Bank services are but one aspect of a larger and more dynamic market for financial services. In order accurately to analyze the effect of a merger within this industry, the total financial services market must be assessed. It is clear that there are many firms competing for geographic markets and in specific niches that can and will continue to compete with the larger banks.

Table 15: Financial institutions in greater Vancouver competing with traditional banks

Name	Type	Region	Number of Branches
Surrey Metro Savings	Credit Union	Langley	4
		Surrey-Delta	7
		White Rock	3
Hong Kong Bank of Canada	Schedule II Chartered Bank	Burnaby	3
		Langley	1
		Maple Ridge	1
		North Vancouver	2
		Richmond	5
		Vancouver	17
VanCity	Credit Union	Burnaby	5
		Surrey-Delta	5
		Vancouver	17
Richmond Savings	Credit Union	Richmond	7
Canada Trust	Trust Company	Burnaby	4
		Coquitlam	2
		Richmond	5
		Vancouver	12
		West Vancouver	2
		White Rock	1

Source: Data compiled by the authors using information from the annual reports of the Big 5 banks and regional financial institutions in the lower mainland of British Columbia as well as from financial directories for greater Vancouver.

Defining product markets: case study of Canadian fixed-income mutual funds

The final segment of this section of the report discusses the operational difficulties associated with defining a product market. The Competition Bureau applies specific criteria to determine whether a merger will be reviewed for its effects on competition. Underlying these criteria is the assumption that product markets, like geographic markets in the previous section, can be readily and appropriately defined. Any deficiency in the preliminary definition of a market will therefore necessarily lead to a subsequent deficiency in the analysis of the effect of a merger on market competition.

Canadians, and indeed North Americans in general, have made a pronounced shift to mutual funds from the traditional instruments of savings such as deposit certificates

and savings accounts. The total assets invested in mutual funds stood at over \$328 billion dollars as of May 1998.¹⁹ In other words, the value of the total amount invested in mutual funds is almost 38 percent of the total value of all goods and services (GDP) produced in Canada last year.

We used a sample of 22 mutual fund companies operating in Canada.²⁰ The sample encompasses the 15 largest mutual fund companies, including all of the Big 5 banks. The mutual funds were divided into 12 separate categories.²¹ Only one of the 12 categories—Canadian Fixed Income—will be presented in the body of the paper but data for four of the remaining 11 categories is presented in Appendices E(1) through E(4).

The progression of the following five tables illustrates the effect that a successive broadening of the product definition can have on the respective market shares. To reiterate, it is the market share of the consolidated firms that the Competition Bureau analyzes to gauge the effect of a merger. It is the extent of the market definition that determines the market shares of the partici-

pants—a broader definition necessarily decreases each participant's market share; a narrower definition necessarily increases it. As illustrated in the following tables, a narrow product definition results in a high market share, which suggests that negative effects may result from consolidation. However, a broader product definition diminishes the market share of each firm to the point where there is little or no market power after consolidation.

Canadian fixed income mutual funds

The fixed income component of any portfolio can consist of a number of different types of mutual funds including dividend, bond, and mortgage. We initially defined the product market as including only Bond funds. Table 17 shows a narrowly defined market—bond funds—that will be progressively expanded in order to illustrate the effect of a

Table 16: Alternative niche firms in greater Vancouver

Type of Institution	Number of Individual Firms	Range of Branches per Firm
Schedule I Banks (other than the Big 5 banks)	2	2–4
Schedule II Banks	15	1–3
Trust Companies	11	1–6
Credit Unions	28	1–46
Finance	64	1–2
Financial Planners	156	1–3
Mutual Funds & Brokers	41	1–6
Stock & Bond Dealers	42	1–3

Note: Duplication and overlap between subsidiaries and parent companies was largely eliminated in the analysis of the number of firms and branches.
Source: Data compiled independently by the authors using information from the annual reports of the Big 5 banks and regional financial institutions in the lower mainland of British Columbia as well as from financial directories for greater Vancouver.

broadening product definition. Table 17 contains market share information for bond funds provided exclusively by the Big 5 banks.

If the market is initially defined narrowly, that is, in terms of funds provided exclusively by the Big 5 banks, the market appears to be highly concentrated. There are only four firms providing four separate products. The Royal Bank of Canada prior to a merger with the Bank of Montreal, given the narrow market definition, accounts for 44.01 percent of the entire market. Assuming the merger occurs, the post-merger firm of the Royal Bank of Canada and the Bank of Montreal would control 71.35 percent of the consolidated market.

As there are obviously other companies providing similar mutual funds, Table 18 expands the product definition to include Bond funds provided by any chartered bank in the sample.

By simply extending the product definition to include all chartered banks in the sample, the number of competitors increases by 50 percent, from 4 to 6 firms. The largest firm now represents 39.45 percent of the market share, down 11.56 percent from its previous high of 44.01 percent. Similarly, the effect of the proposed merger between the Royal Bank of Canada and the Bank of Montreal is reduced. The post-merger firm now accounts for 63.97 percent of the market, down from 71.37 percent when the

market was more narrowly defined.

There are a number of non-financial institutions that deal almost exclusively in the provision of mutual funds. Templeton, Investors Group, and Fidelity are three examples of large mutual fund providers in Canada that are not classified as banks. Table 19 contains market share information for all providers of bond funds in the sample. Note that we have excluded specialty bond funds from table 19 in order to maintain homogeneity amongst the mutual funds contained in the table. That is, by maintaining a narrow definition of the product, Canadian Bond funds, there is a great deal of similarity among the funds provided by the various companies included in table 19.

Table 17: Canadian fixed income bond funds from the Big 5 banks

	Name of Company		Name of Fund	Market Share*
1	Bank of Montreal	1	Bond Fund	27.35%
2	C.I.B.C.	2	Canadian Bond Fund	13.20%
3	Royal Bank of Canada	3	Bond Fund	44.01%
4	TD Greenline	4	Canadian Bond Fund	15.44%

* Market Share refers only to those companies included in the table; it does not, therefore, represent the market share for the entire category or the mutual fund industry.
Source: Data compiled independently by the authors using information from the annual reports, websites, and data requests from the various mutual fund providers.

Table 18: Canadian fixed income bond funds from all financial institutions*

	Name of Company		Name of Fund	Market Share**
1	Bank of Montreal	1	Bond Fund	24.52%
2	Canada Trust	2	Bond Fund	9.14%
3	C.I.B.C.	3	Canadian Bond Fund	11.84%
4	Hongkong Bank of Canada	4	Canadian Bond Fund	1.20%
5	Royal Bank of Canada	5	Bond Fund	39.45%
6	TD Greenline	6	Canadian Bond Fund	13.84%

* Restricted to the original sample that excludes smaller companies and segregated mutual funds.
** Market Share refers only to those companies included in the table; it does not therefore represent the market share for the entire category or the mutual fund industry.
Source: Data compiled independently by the authors using information from the annual reports, websites, and data requests from the various mutual fund providers.

Table 19: All Canadian fixed income bond funds (excluding specialty bond funds)*

	Name of Company		Name of Fund	Market Share**
1	AGF Group of Funds	1	Canadian Bond Fund	8.28%
2	Altamira Investment Services Inc.	2	Bond Fund	4.56%
3	Atlas Mutual Funds	3	Canadian Bond Fund	0.51%
4	Bank of Montreal	4	Bond Fund	17.04%
5	Canada Trust	5	Bond Fund	6.35%
6	C.I. Funds	6	Canadian Bond Fund	1.56%
7	C.I.B.C.	7	Canadian Bond Fund	8.23%
8	Fidelity Funds	8	Canadian Bond Fund	1.30%
9	Global Strategy Investment Funds	9	Bond Fund	0.19%
10	Hongkong Bank of Canada	10	Canadian Bond Fund	0.84%
11	Investors Group	11	IG Sceptre Canadian Bond Fund	0.09%
12	Mackenzie Financial Corp.	12	Industrial Bond Fund	5.56%
13	Royal Bank of Canada	13	Bond Fund	27.42%
14	Sagit Investment Management Ltd.	14	Trans-Canada Bond Fund	0.01%
15	TD Greenline	15	Canadian Bond Fund	9.62%
16	Templeton	16	Canadian Bond Fund	0.39%
17	Trimark Mutual Funds	17	Advantage Bond Fund	6.53%
		18	Canadian Bond Fund	1.52%

* Restricted to the original sample that excludes smaller companies and segregated mutual funds.
** Market Share refers only to those companies included in the table; it does not therefore represent the market share for the entire category or the mutual fund industry.
Source: Data compiled independently by the authors using information from the annual reports, websites and data requests from the various mutual fund providers.

• Broadening once more the definition of providers results in an increase in the number of firms to 17, with a total of 18 products offered. One of the interesting facts that can be derived from the table is the recognition of both interfirm and intrafirm competition. Interfirm competition refers to the standard type of competition that exists between two separate companies. Intrafirm competition refers to competition that occurs within a company. For instance, separate departments within the same company may compete for staff or budgetary resources. In the mutual fund sector, intrafirm competition results from the presence of two similar or substitutable products offered by the same firm. Customers of one company would be able to choose between more than one product from the same company. Each fund would compete with the other funds the firm offers for its customers. Intrafirm competition is illustrated by the Trimark example in table 19. Trimark International offers two separate funds within the same category. This effectively means that the two funds will compete for the same group of clients within their own company as well as with other, external, mutual fund sector competitors. Thus, two distinct types of competition exist within the mutual funds sector.

Interfirm competition—competition between separate companies—obviously increases as the number of firms increases. Under this broader market definition, the number of firms offering a similar product increases by 183 percent, from 6 to 17 firms. The market share of the largest firm in the market is again reduced from the previous level of 39.45 percent to 27.42 percent, a 43.87 percent decline in market share. The effect of the merger between the Royal Bank of Canada and the Bank of Montreal is further reduced as the market share controlled by the post-merger firm decreases to 44.46 percent from a high of 71.35 percent.

Table 20 further broadens the product definition by including specialty bond funds.²² Specialty bond funds focus either on a particular duration or maturity, such as short or long term bonds or they focus on a particular type of bond, such as corporate bonds.

Again broadening the product definition increases the number of providers marginally to eighteen, adding one more company. The number of funds offered, however, increases by 61 percent, from 18 to 29 funds. The single largest market share is reduced to 18.65 percent from a high of 44.01 percent. The post-merger market share of the Royal Bank of Canada and the Bank of Montreal has also decreased: the post-merger firm would now control only 30.24 percent, down from its original high of 71.35 percent. Intrafirm competition has also increased, as the number of

firms offering more than one bond fund increased eightfold from one to eight firms.

Portfolio management is basically concerned with the allocation of investment resources amongst competing alternatives. In general, a portfolio manager will allocate a certain percentage of funds to each of the following categories: cash and cash equivalents, fixed income and equities.²³ Table 21 expands the product definition to include all types of bond funds provided by the sample companies. However, it does not expand the product definition to include competing alternatives within the fixed income category. A number of mutual funds would compete directly with bond funds for the resources allocated to the fixed income segment of a portfolio. These mutual funds would include income, dividend, and mortgage funds. Table 21 includes market share information for all the funds from the sample companies categorized as fixed income.

The broadening of the product definition again results in the number of funds expanding significantly. The number of funds included in the Canadian Fixed Income category increases by 148 percent, from 29 to 72 funds. Similarly, the number of firms offering products in this category increases by 22 percent, from 18 to 22 firms. The fund holding the largest market share now controls only 6.67 percent of the market, down 84.84 percent from its original high of 44.01 percent. Similarly, the post-merger firm of the Royal Bank of Canada and the Bank of Montreal now account for only 25.58 percent of the entire fixed income category of mutual funds.

The process of broadening the definition of the product market could again be undertaken to include products that would compete directly with fixed income mutual funds such as guaranteed income certificates, government and corporate bonds, and high yield dividend stocks. Alternatively, the product definition could be expanded further to include all categories of mutual funds, as a specific product in competition with other general types of financial products such as savings accounts. The overall effect of broadening the product market definition is clear: reduced market power for the participants and an increasing level of both interfirm and intrafirm competition.

There is no clear analytical rule for narrowly or broadly defining a particular product market. However, the availability of substitute products that closely approximate the original product should be an indication of the appropriate product market definition. It is evident that for the financial services market, a wide definition of the product market should be used in order to include all the institutions that offer a close substitute for a particular product.

Table 20: All Canadian Fixed Income Bond Funds Including Specialty Bond Funds*

Name of Company		Name of Fund		Market Share**
1	AGF Group of Funds	1	Canadian Bond Fund	5.63%
2	Altamira Investment Services Inc.	2	Bond Fund	3.10%
		3	Short Term Government Bond Fund	0.53%
3	Atlas Mutual Funds	4	Canadian Bond Fund	0.35%
		5	Canadian High Yield Bond Fund	3.40%
4	Bank of Montreal	6	Bond Fund	11.59%
5	Canada Trust	7	Bond Fund	4.32%
		8	Short Term Bond Fund	0.65%
6	C.I. Funds	9	Canadian Bond Fund	1.06%
7	C.I.B.C.	10	Canadian Bond Fund	5.59%
		11	Canadian Short-Term Bond Fund	1.17%
8	Fidelity Funds	12	Canadian Bond Fund	0.89%
9	Global Strategy Investment Funds	13	Bond Fund	0.89%
10	Hongkong Bank of Canada	14	Canadian Bond Fund	0.57%
11	Investors Group	15	IG Sceptre Canadian Bond Fund	0.06%
		16	Investors Corporate Bond Fund	6.62%
		17	Investors Government Bond Fund	11.96%
12	Mackenzie Financial Corp.	18	Industrial Bond Fund	3.78%
13	Royal Bank of Canada	19	Bond Fund	18.65%
14	Sagit Investment Management Ltd.	20	Trans-Canada Bond Fund	0.01%
15	Spectrum United	21	Long-Term Bond Fund	1.12%
		22	Mid-Term Bond Fund	4.53%
		23	Short-Term Bond Fund	0.22%
16	TD Greenline	24	Canadian Bond Fund	6.54%
		25	Canadian Government Bond Fund	1.57%
		26	Real Return Bond Index	0.20%
17	Templeton	27	Canadian Bond Fund	0.27%
18	Trimark Mutual Funds	28	Advantage Bond Fund	4.44%
		29	Canadian Bond Fund	1.03%

* Restricted to the original sample that excludes smaller companies and segregated mutual funds.

** Market Share refers only to those companies included in the table; it does not therefore represent the market share for the entire category or the mutual fund industry.

Source: Data compiled independently by the authors using information from the annual reports, websites and data requests from the various mutual fund providers.

Table 21 : All Canadian fixed income funds*

Name of Company		Name of Fund		Market Share**
1	AGF Group of Funds	1	Canadian Bond Fund	1.80%
		2	High Income Fund	1.41%
2	Altamira Investment Services Inc.	3	Bond Fund	0.99%
		4	Dividend Fund	0.69%
		5	Growth & Income Fund	0.31%
		6	Income Fund	1.31%
		7	Short Term Government Bond Fund	0.17%
3	Atlas Mutual Funds	8	Canadian Bond Fund	0.11%
		9	Canadian Dividend Growth Fund	0.17%
		10	Canadian High Yield Bond Fund	1.09%
4	Bank of Montreal	11	Bond Fund	3.70%
		12	Dividend Income Fund	3.32%
		13	Mortgage Fund	3.28%
5	Canada Trust	14	Bond Fund	1.38%
		15	Dividend Income Fund	0.61%
		16	Mortgage Fund	3.28%
		17	Short Term Bond Fund	0.21%
6	C.I. Funds	18	Canadian Bond Fund	0.34%
		19	Canadian Income Fund	0.54%
		20	Dividend Fund	0.10%
7	C.I.B.C.	21	Canadian Bond Fund	1.79%
		22	Canadian Short-Term Bond Fund	0.37%
		23	Dividend Fund	1.58%
		24	Mortgage Fund	3.87%
8	Dynamic Mutual Funds	25	Dividend Fund	0.88%
		26	Government Income Fund	0.04%
		27	Income Fund	0.90%
9	Ethical Funds Inc.	28	Ethical Income Fund	0.46%
10	Fidelity Funds	29	Canadian Bond Fund	0.28%
		30	Canadian Income Fund	0.14%
11	Global Strategy Investment Funds	31	Bond Fund	0.04%
		32	Income Plus Fund	4.44%
12	Guardian Mutual Funds	33	Canadian Income	0.05%
		34	Monthly Dividend	1.14%
		35	Monthly High Income	1.28%
13	Hongkong Bank of Canada	36	Canadian Bond Fund	0.18%
		37	Mortgage Fund	0.53%

Table 21(continued): All Canadian fixed income funds*

Name of Company		Name of Fund		Market Share**
14	Investors Group	38	IG Sceptre Canadian Bond Fund	0.02%
		39	Investors Corporate Bond Fund	2.11%
		40	Investors Government Bond Fund	3.82%
		41	Investors Income Portfolio	2.02%
		42	Investors Mortgage Fund	6.36%
15	Mackenzie Financial Corp.	43	Industrial Bond Fund	1.21%
		44	Industrial Dividend Fund	2.29%
		45	Industrial Income Fund	6.67%
		46	Industrial Mortgage Securities Fund	1.30%
		47	Ivy Mortgage Fund	0.69%
16	Royal Bank of Canada	48	Bond Fund	5.95%
		49	Dividend Fund	5.41%
		50	Mortgage Fund	3.51%
		51	Royal Trust Advantage Income Fund	0.41%
17	Sagit Investment Management Ltd.	52	Trans-Canada Bond Fund	0.01%
		53	Trans-Canada Dividend Fund	0.01%
18	Bank of Nova Scotia - Excelsior Funds	54	Defensive Income Fund	0.30%
		55	Dividend Fund	2.35%
		56	Income Fund	0.90%
		57	Mortgage Fund	1.06%
19	Spectrum United	58	Long-Term Bond Fund	0.36%
		59	Mid-Term Bond Fund	1.45%
		60	Short-Term Bond Fund	0.07%
20	TD Greenline	61	Canadian Bond Fund	2.09%
		62	Canadian Government Bond Fund	0.50%
		63	Dividend Fund	1.15%
		64	Mortgage Fund	1.76%
		65	Mortgage-Backed Fund	0.21%
		66	Real Return Bond Index	0.07%
		67	Short Term Income Fund	0.50%
21	Templeton	68	Canadian Bond Fund	0.08%
22	Trimark Mutual Funds	69	Advantage Bond Fund	1.42%
		70	Canadian Bond Fund	0.33%
		71	Government Fund	0.64%
		72	Interest Fund	1.91%

* Restricted to the original sample that excludes smaller companies and segregated mutual funds.

** Market Share refers only to those companies included in the table; it does not therefore represent the market share for the entire category or the mutual fund industry.

Source: Data compiled independently by the authors using information from the annual reports, websites and data requests from the various mutual fund providers.

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Foreign competition

One of the interesting aspects of the data contained in tables 17 through 21 is the lack of foreign competitors in the mutual fund industry. Only two of the top 15 mutual funds in Canada (measured by asset size) are foreign: Templeton and Fidelity. Likewise, none of the Schedule I, chartered banks are foreign. The reason the mutual fund industry lacks foreign competitors is the same reason none of the major banks in Canada are foreign: government regulation.

It is not the intent of this particular report to discuss the pros and cons associated with regulation.²⁴ Regulation in the financial services industry controls and defines the participants and the level of competition between them. For example, federal regulations regarding foreign banks operating in Canada place foreign institutions at a distinct disadvantage to their Canadian competitors. Foreign banks are prohibited from using the capital of their parent company to finance operations in Canada. Put another way, foreign competitors are forced, by regulation, to raise capital within Canada even if they maintain sufficient capital abroad to establish operations.

Although this regulation may seem to have only a marginal effect on cost, when combined with other foreign restrictions the net result is a competitive cost disadvantage for foreign companies based solely on the imposition of reg-

ulation by the federal government. Perhaps the single greatest cost from regulation derives from the requirement of subsidiary status for foreign companies. Foreign firms are required by regulation to establish a Canadian subsidiary rather than operate simply as a branch of a parent company. Foreign financial institutions cannot, therefore, simply open an office in Canada. They must establish a separate company, with its own capital, management, and reporting structure. All of these regulatory requirements result in additional costs to the foreign company that would not be necessary if they operated as a branch.

In assessing the likelihood of heightened foreign competition, it is essential to recognize that the lack of a large-scale entrance to the Canadian financial services industry by foreign companies is largely due to the barriers—the regulations—imposed on them by the federal government. Mathewson and Quigley (1998) suggest that removing the barriers to entry for foreign financial and non-financial institutions in order to allow them to compete directly with Canadian financial institutions would ensure that the gains from consolidation flow through to the customer. Further, the evidence on the concept of contestable markets suggests that the removal of barriers themselves will facilitate behaviour that approximates a competitive market.



6 Policy recommendations

The purpose of this report is to disprove the falsehoods associated with the proposed bank mergers and to provide empirical evidence as to the actual nature of the financial services industry. There are however, several positive public policy recommendations that flow from the theoretical and empirical work contained in the report.

1 Allow the proposed bank mergers to proceed

Given the enormous cost savings and efficiencies to be gained by branch rationalization, the federal government should allow the proposed bank mergers to take place.

2 Allow unimpeded rationalization

The enormity of the potential cost savings generated by rationalization of the branch banking system will facilitate significant efficiency improvements in the financial services industry. The government, in its review of the merger proposals should not attach branch or employment restrictions on the post-merger firms. To inhibit the cost savings and subsequent efficiency gains made possible by rationalization calls into question the entire reasoning for consolidation. Any proactive policy initiative on the part of the federal government should be focused on policies that will insure that (1) consumers gain the majority of any cost savings and (2) that competitors can freely contest the financial services market.

3 Broaden the discussion of financial services

All too often the discussion regarding the proposed bank mergers has focused solely on the banking sector. Although the banking sector constitutes a large portion of the financial services industry, there are nonetheless a host of direct and indirect competitors such as trust companies, loan companies, insurance companies (both life and property & casual), pension managers, mutual fund companies, securities brokers, and financial planners whose presence must be recognized and included within any analysis.

4 Factoring de-mutualization

More disturbing than the narrow focus on the banking sector is the complete lack of discussion of the pending restructuring

of the life insurance segment of the financial services industry and its impact on the competitiveness of the industry. Four of Canada's largest providers of life insurance have stated their formal intention to de-mutualize—that is, these companies will move from a capital structure in which the policyholders own the firm (represent the equity base) to a structure in which policyholders are separate from shareholders. The firms will have shareholders' equity and maintain shares on the stock exchange. This financial restructuring will permit the life insurance companies to purchase, merge with, or be purchased by, other financial institutions. This type of large-scale restructuring should be a central part of the discussions currently underway. The lack of discussion of the proposed changes in the life insurance sector simply means that Canada will be faced with another round of gut wrenching decisions regarding the financial services industry in one to two years.

5 Remove barriers to entry

As posited by authors Mathewson and Quigley, the removal of barriers to entry, particularly those imposed on foreign firms will insure that a lion's share of the benefits garnered from rationalization flow through to the consumer.

The specific regulations that most impede foreign entry are the domestic capitalization requirement, the subsidiary/branch restriction, the 25 percent ceiling on foreign ownership of Schedule I banks, and the 10 percent limit on ownership concentration of Schedule I banks. Any new regulatory regime would have to be neutral with respect to origin; that is, the federal government should be precluded from playing favourites with domestic banks and simply define the ground rules and allow competition to develop among all market participants.

Likewise, the federal government should ensure that any impediments to non-financial institutions entering the banking sector or the larger financial services industry are removed. Although technological advances will continue to erode the effectiveness of government regulation restricting the competitive ability of non-banks, a determined initiative by the federal government to deregulate the market

- will act as a catalyst in facilitating competition. The focus for the federal government must be the definition of the ground rules that best serve to foster the exchange of financial resources between savers and borrowers rather than any type of industrial policy or employment objective.
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6 Include peripheral issues in discussions

There are a host of peripheral issues that will be affected by the consolidation process. Among the issues of importance

not currently being discussed are the future role of the Canadian Deposit Insurance Corporation and the Canadian Payments Association. Both organizations are heavily influenced, if not entirely controlled, by the large chartered banks. If the Canadian financial system is to be deregulated and open and fair competition are to be the ground rules, then a full and frank discussion of the future roles of these institutions must be included within the broad discussion of financial restructuring.