

## Bank Act Revision in Canada: Past and Potential Effects on Market Structure and Competition\*

At its introduction, the Canadian Bank Act of 1967 was proclaimed by the Minister of Finance to be "A Blueprint for Competition". The Act incorporated a number but by no means all of the recommendations made in 1964 by the Royal Commission on Banking and Finance (the Porter Commission). The Commission had explicitly stated that it favoured:

... a more open and competitive banking system... carefully and equitably regulated under uniform legislation but not bound by restrictions which impede the response of the institutions to new situations, enforce a particular pattern of narrow specialization or shelter some enterprises from competitive pressures. We believe that this framework will encourage creativity and efficiency... [19; p. 564].

Now, some eight years since enactment of the legislation, it is possible tentatively to evaluate whether the 1967 Act had sufficient market impact to realize any of the Commission's hopes, and also to develop some guidelines for the impending Bank Act of 1977.

The Porter Commission's *Report* is replete with expressions such as 'competitive markets', 'competition', and 'making financial institutions more competitive'. The chartered banks were to become more competitive with near banks, and were as well to compete more vigorously with each other. This provides a neat dichotomy for the discussion which follows.

In their submissions to the Porter Commission, the chartered banks argued that they were denied entry to a number of financial

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\* Thanks are due to John Chant, Kevin Cinton, Jack Galbraith and Grant Reuber for valuable comments, and to Eileen Stewart for her excellent research assistance.

markets as a result of legally imposed barriers. A discussion of the nature of these barriers and the effects of their attenuation by the Act constitutes Section I of this study.

In its deliberations the Commission also noted that competition between the chartered banks themselves was somewhat deficient and sought to remedy this with policy suggestions, a number of which eventually became law. Section II of this paper therefore involves a discussion of the structure and conduct of the Canadian banking industry and provides some insights into the efficacy of the Act in bringing to that industry more vigorous interfirm competition.

The paper concludes with suggestions for the 1977 Act.

### I. Bank/Near Bank Competition

Under the Bank Act of 1954, banks faced various impediments to entry into loan and deposit markets, where their major competitors were the near banks.<sup>1</sup> With the exception of its provision of federally-backed deposit insurance, which probably helped the near banks more than the banks by aiding the former's relative credibility, the 1967 Bank Act was clearly designed to improve the relative position of banks, by removing both direct and cost-related barriers to their participation in financial markets. The two main direct barriers were an interest rate ceiling and a ban on conventional mortgage holding, whereas the cost disadvantages concerned reserve requirements and the ability to issue debentures.

#### 1. Eradication of the interest ceiling

Prior to May of 1967, Canadian chartered banks were subject by law to a 6 per cent ceiling on the rate they could charge on loans. By December of 1965, the banks' prime rate had hit the ceiling, while other interest rates continued to rise. In fact by 1966 the

<sup>1</sup> As can be seen from Table I, the latter institutions consist, in order of size, of trust companies, credit unions and *caisses populaires*, mortgage loan companies, and Quebec savings banks; in 1967 they numbered over 5,000, as opposed to 9 chartered banks. The Quebec savings banks compete with the banks on a somewhat limited basis: there have in recent years been very few of them (only one since 1969) and they have never operated outside Quebec.

banks' major competitors for deposits, the trust companies, were able to pay in excess of 6 per cent for long term deposit funds. To a considerable extent, the banks could and did circumvent the ceiling by demanding compensating deposit balances, charging insurance and service fees, and quoting rates on nondeclining principal; nevertheless, their position in both deposit and loan markets was gradually being eroded.

The 1967 Act provided for complete removal of the ceiling by January 1, 1968, and since then the prime rate has never in fact fallen below 6 per cent. Clearly the ceiling had become inappropriate to market conditions and would have forced nonprice rationing even in the prime loan market had it been maintained.

It is difficult to draw conclusive inferences from data on market shares since both before and after the Act banks among financial institutions enjoyed a near monopoly of the business loan market, and in the market for personal loans they had begun to bid heavily and therefore increase their share well before 1967. Nevertheless certain patterns do emerge.

Banks' increased concentration on personal loans is evidenced by a steady increase in the proportion of such loans in both total bank loans and total bank assets prior to the tight money year of 1966. However that proportion did not increase in 1966, and it is difficult to see given generally rising interest rates how it could have continued to rise, as it did from 1967 on, had the ceiling not been removed. The banks would have had to rely increasingly on the previously mentioned methods of circumvention; these were clumsy and dishonest and were already leading to pressure for legislation requiring disclosure of true rates of interest. Business loans also continued to increase relative to other bank assets, so that between the year-ends of 1967 and 1974, total general loans as a percentage of assets rose from 51 to 58 per cent (Table 8).

In the bank/near bank market for personal loans, removal of the loan ceiling was followed by a relatively minor increase in banks' share, between 1967 and 1974 from 73 to 79 per cent (Table 4). This reflected the simultaneous growth of their major competitors, the credit unions and *caisses populaires*. However dramatic growth, from 35 to 53 per cent, is evident in the banks' share of the total market for consumer credit, which includes such high rate lenders as retail dealers and consumer loan and sales finance com-

panies (Table 4). Such lenders tend to charge considerably higher rates than do banks and near banks, reflecting their customers' ignorance and/or unreliability. Removal of the ceiling enabled banks to bid for this class of borrower thereby reducing the monopoly rents which had been accruing to high rate lenders.

This increased ability to bid for the high risk borrower is of particular importance in tight money periods, when some such borrowers are typically rationed out of bank credit by nonprice means. For personal borrowers the only major alternative sources of funds are credit unions or sales finance and consumer loan companies. Small businesses are in an even less flexible position. Aside from the government-backed Industrial Development Bank, they have few nonbank credit sources short of selling commercial paper, the sales finance companies, and, in recent years, foreign wholesale banks.<sup>2</sup>

One would hope and expect that discrimination against small borrowers was diminished after 1967, and there is some evidence from the one tight money period since the Act that this has been the case. Small business, construction and personal loans declined markedly during 1966, a year of sharply reduced growth in both money and total loans, but were not squeezed nearly so hard in 1969-70, an even tighter period and the tightest since the Act (Table 7). In fact mortgage loans in both 1969 and 1970 grew at about twice the rate of loans as a whole, although this undoubtedly reflected in large part adjustment to the 1967 removal of the prohibition against holding conventional mortgage paper.

<sup>2</sup> Sultan [20] calculates market shares of short term industrial-commercial credit in 1974 as chartered banks 66 per cent, commercial paper and bankers' acceptances 12 per cent, U.S. banks 11 per cent, sales finance companies 8 per cent and the Industrial Development Bank 3 per cent. Trust companies generally are prohibited by their charters from granting noncollateral business loans because of potential conflict of interest with their role as trustees. Credit unions have traditionally concentrated on mortgages and personal loans, although they are legally free to grant business loans and have recently begun to seek out that market. Mortgage loans companies handle only a very small volume of collateral loans and grant no unsecured business loans. This leaves the sales finance companies as the major nonbank institutional source of business loans. These companies charge rates considerably above the banks and are heavily dependent on the latter as a source of funds. The government-backed Industrial Development Bank is an attempt to fill this gap, but it concentrates on medium and long term loans, lends only to businesses that have been turned down by banks, and then only in small amounts averaging about \$25,000.

## 2. *Permission to hold conventional mortgage paper*

A second direct barrier to competition between banks and other financial institutions was the pre-1967 exclusion of banks from most of the mortgage market. Although the 1954 Bank Act permitted them to hold residential mortgages guaranteed under the National Housing Act (NHA) as well as a limited range of other mortgages on specified assets, it disallowed most conventional mortgages. In fact by 1959 NHA mortgage rates had exceeded the 6 per cent loan ceiling, and at that point banks by and large dropped out of the mortgage market completely.<sup>3</sup>

The removal of the 6 per cent lending ceiling allowed banks to re-enter the NHA mortgage market at prevailing rates. In addition, the 1967 legislation permitted banks for the first time to originate and trade in conventional mortgages. Their holdings were restricted to 3 per cent of Canadian deposit and debenture liabilities until October 31, 1967; thereafter the limit increased 1 per cent each year to a maximum of 10 per cent effective October 31, 1974. By the end of 1974, banks had taken full advantage of this provision, with mortgage holdings at 9.97 per cent of the liability base.

Banks' share of the bank/near bank mortgage market rose from 13 per cent at the end of 1967 to 24 per cent at the end of 1974 (Table 5). In the same period their share of new mortgage loans approved by selected institutions rose from 9 to 28 per cent, at the expense of life insurance companies and the government-sponsored Central Mortgage and Housing Corporation (Table 6).

However examination of mortgage holdings by firm reveals that despite the relaxation of restrictions on banks, institutional concentration has *increased*. The top eight firms held 45 per cent of bank/near bank holdings in 1962, 43 per cent in 1967 and 46 per cent in 1974. In fact the increase in concentration is clearly a *result* of banks' entry, as was the decrease in the early sixties a result of their exit: of the top eight firms, only two were banks in 1967, but four were banks in 1962 and three in 1974 (Table 11).

The need for further improvement of mortgage markets is evident. Small brokers continue to flourish charging rates sub-

<sup>3</sup> Of course banks kept a hand in mortgage revenues all along via their ownership holdings in trust and mortgage loan companies. The 1967 Act curtailed such ownership.

stantially above those of banks and near banks, an indication of market segmentation. It is difficult, moreover, to detect any fall in mortgage relative to other lending rates, nor has the differential between Canadian and U.S. rates narrowed appreciably.

Recent developments in both the private and government sectors should help both to widen and deepen mortgage markets. The supply of mortgage funds has been considerably enhanced since the appearance in 1972 of Mortgage Investment Trust Corporations (MICs) and real estate investment trusts (the latter are typically owned by trust companies and banks). The enactment in 1973 of the Residential Mortgage Financing Act provides for the creation of another such institution, the Federal Mortgage Exchange Corporation (FMEC).

The FMEC is designed to improve the secondary mortgage market by buying residential mortgages from primary lenders, and will also lend against mortgage paper to institutions active in the market. The MICs are a special form of housing-oriented loan company similar to real estate investment trusts and are intended to appeal to smaller financial institutions and to individual investors.<sup>4</sup>

### 3. *Reduction of cost barriers: the split reserve requirement and the debenture provisions*

The 1967 Act changed banks' reserve requirement from an 8 per cent requirement behind all deposits to a split requirement of 4 per cent behind time deposits and 12 per cent behind demand deposits. The effect has been to lower the average requirement from 8 to just over 6 per cent, as well as to provide the banks with an incentive to offer, for the first time, nonchequable personal savings deposits. Consumers have been encouraged to economize on their holdings of demand deposits and banks have been able to offer savings deposit rates which are now competitive with those offered by near banks. Chequable personal savings deposits declined between 1967 and 1974 from 37 to 14 per cent of banks' total publicly-held deposits, and in the same period demand deposits fell from 29 to 19 per cent (Table 9); nonchequable savings deposits, both personal and business, increased their share accordingly, resulting in pecuniary benefits (increased interest income) to depositors

<sup>4</sup> For a detailed description of the intended roles of the FMEC and MICs, see [18].

as a whole. Simultaneously, the turnover rate of demand deposits rose from 88 to 147 per cent per year, reflecting their more efficient use.

A second cost-reducing feature of the Act was to allow banks, for the first time, to raise funds by issuing debentures (which carry no reserve requirement). Banks took immediate although limited advantage of this provision, and their share of debentures in total liabilities now stands at about 1.2 per cent (Table 9).

### 4. *Overall effects of the legislation removing restrictions on banks*

Given the considerable convenience to most depositors in using a bank rather than a near bank, convenience which flows largely from the Canadian banks' extensive branching system, it has probably redounded to the average consumer's advantage to permit banks into the mortgage market and to adjust the banks' reserve requirements so that they could pay more on deposits. It is also probable that the consumer has benefited from the removal of the interest ceiling, both via the erosion of monopoly rents accruing to high rate lenders of personal funds and via the reduction of nonprice discrimination against the small borrower in tight money periods.

What is equally evident is that banks have benefited. The Act has permitted the banks between 1967 and 1974 to increase their share of loans in total assets from 51 to 58 per cent and of mortgages from 4 to 10 per cent (Table 8). As high yield assets these have increased banks' ability to attract deposits. Thus banks' size relative to near banks has stabilized at its 1967 level of 68 per cent of bank plus near bank assets, whereas this fraction had been falling continuously before 1967 from a high of 88 per cent in 1945 (Table 1). Moreover banks' profit rate has risen from an average of about 8 per cent over the six years prior to and including the Act to about 13 per cent over the seven years since (Table 13).<sup>5</sup> Yet concentration in

<sup>5</sup> Further evidence that banks benefited by the Act at the expense of near banks is developed in a paper by Griffiths [10]. He calculates cumulative residual returns to both bank and near bank equity, where the residual is a difference between bank or near bank returns and a Toronto Stock Exchange "security market line" with systematic risk. He concludes (p. 29), "The fact that the cumulated residuals of banks was positive throughout and those of near banks predominantly negative suggests that it was not that the banks gained relatively more than the near banks gained nor that they lost relatively less than the near banks lost but that the banks gained and the near banks lost".

the industry has barely diminished (Table 10). The second section of this paper therefore is concerned with competition and potential competition between the banks themselves.

## II. Competition in the Banking Industry

Students of industrial organization characterize the level of interfirm competition through investigation of market structure, conduct and performance. We shall deal with each of these in turn.

### I. Structure

Discussions of market structure generally emphasize concentration and barriers to entry.

#### (i) Concentration

Concentration in the Canadian banking industry is, quite simply, very high. The proportion of total industry assets controlled by the five largest banks has not fallen below 91 per cent over the last thirteen years (Table 10).

Strictly speaking, however, 'banking' does not qualify as an industry. Rather, the chartered banks compete with other financial institutions both for deposits and earnings assets in a number of distinct markets. The five largest chartered banks do maintain a tight oligopsony in both the savings and demand deposit markets (Table 2 and 3). However as sellers, three trust companies and two mortgage loan companies combine with the three largest banks to control 45 per cent of the mortgage market (Table 10). In the consumer credit market the five major banks constitute a fairly loose oligopoly, holding according to our estimates slightly less than one-half the market; however this is *double* their share in 1962 (Table 4).

These barebones concentration ratios do not tell the whole story. Firstly, the degree of monopoly is increased beyond the level implied by the ratios through the activities of the Canadian Bankers' Association to which all banks belong. The association performs a number of functions for the industry including research, education, lobbying, clearing of cheques, and prior to the 1967 Act, coordination of industry-wide pricing policies.

Secondly, a number of the above mentioned financial markets can themselves be subdivided geographically and according to clientele. For example geographically the residential mortgage market would not qualify as a national market. Thus the five largest banks, with 5,790 branches in 1973 as compared with 336 outlets for the five largest trust and mortgage loan companies, probably enjoy local monopolies in a significant number of regions. Moreover the consumer credit market is hardly homogeneous with respect to clientele. Traditionally the banks have catered to low risk borrowers while less credit worthy customers have had to rely on the consumer loan and sales finance corporations.

Theoretical explanations for industrial concentration are manifold, ranging from government-sanctioned monopolization to empire building by individual firms. However the most common justification for concentration in banking is that the banks are simply exploiting scale economies.

The existence of scale economies in banking is a much discussed but still unsettled question with such fundamental issues as definition of industry output remaining unresolved. Additionally the bulk of research in this area is dated, applies to unit banking and uses U.S. data, all of which makes its application to the contemporary Canadian system extremely tenuous.

Stuart Greenbaum in his 1966 review of the literature concluded that:

... small banks — say \$10 million or less in assets — are probably grossly inefficient. It seems likely that significant economies of scale prevail beyond the \$10 million asset size but they are probably of a smaller order of magnitude. The conditions under which banks of more than \$300 million in assets operate are much more difficult to judge. The studies done have run the gamut, observing rising costs, falling costs, and essentially constant costs [9; p. 473].

With respect to branch banks Greenbaum [9] cites evidence from his own research which shows that they enjoy lower costs than unit banks with the same output. Conversely Benston [4] found that there were actually additional costs attributable to branching not offset by any economies of scale, whereas Alhadeff [2] found little difference in costs between unit and branch banks.

Subsequent to Greenbaum's survey, Kalish and Gilbert [14], employing a frontier estimation procedure, generated cost curves explicitly for U.S. branch banking. Using loans plus investment as

the output proxy, they found significant scale economies up to about the U.S. \$17 million level of output, and gradually increasing cost when output expanded beyond this level. While their estimate of minimum optimal scale is somewhat larger than Greenbaum's, even when the latter is adjusted for inflation, their finding of diseconomies of large size is significant and alarming.

While intercountry comparisons of minimum optimal scale are hazardous (see Bain [3]), application of the Kalish and Gilbert findings to Canadian banking yields some startling results. For example, in 1968 (their sample year) the Canadian Imperial Bank of Commerce was 352 times larger than their estimate of minimum efficient scale while the smallest of the big five, the Bank of Nova Scotia, was 167 times the minimum. In fact if each bank had been of minimum scale there would have been room for 1,437 participants in the industry. Furthermore, if Kalish and Gilbert's estimate of the slope of the cost curve is accurate it implies that in 1968 costs for the five major banks exceeded the minimum possible by some \$470 million, or 0.7 per cent of that year's GNP.

Worse still, comparison of the actual unit costs of Canadian banks with Kalish and Gilbert's frontier estimates, while revealing remarkable consistency for the smallest and the largest banks, suggests that the other seven banks were operating well above the minimum cost attainable at their respective levels of output (Table 12).

While the evidence does not conclusively resolve the scale economies controversy it does lead us to concur with Jones and Laudadio that "... we feel justified in not accepting the hypothesis of the existence of scale economies in Canadian banking and recommending that those interested in explaining the present banking structure look elsewhere" [12, p. 27].

One factor which may help to explain the level of concentration in the Canadian banking industry is the attitude of public authorities. Banking is unique amongst industries in that it is at once a privately owned, profit seeking industry and a critical vehicle for the implementation of monetary policy. This results in contradictory goals for public officials responsible for the industry. They must seek market structures concurrently compatible with competition and with public control; the former implies an atomized structure, the latter a concentrated structure if policy is to include "moral suasion" (see Acheson and Chant [1]). It is no wonder that moral

suasion is an efficient tool of monetary policy in Canada while it is nearly worthless in the fragmented U.S. banking system. Nor is it surprising that in Canada official policy has not been hostile to concentration in banking.

Concentration then is *prima facie* high, and when supercontrol forces are considered is probably even higher. High concentration in an industry, especially when combined with high profit rates, generally indicates significant barriers to entry, and it is to this second dimension of market structure that we now turn.

#### (ii) Barriers to entry

The barrier to entry to an industry is defined as the disadvantage vis à vis established firms faced by the most advantaged potential entrant. With respect to Canadian banking the two most important types of entry barriers are those imposed by legislation and those associated with product differentiation.

Two barriers to entry are imposed by legislation. Bond and Shearer [5] have called these the incorporation barrier and the financial barrier. The former is the process by which a bank is chartered, requiring as it does a special Act of Parliament. The latter amounts to a \$1 million capital subscription, half of which must be deposited with the Minister of Finance. Of the two, the incorporation barrier seems to be the more significant in that the lags between initial petition to the Senate of Canada and the actual opening of the bank can be lengthy; in fact in the case of the Bank of B.C. it took a full four years.

Another kind of entry barrier is related to product differentiation. A product differentiation barrier exists when the potential entrant is forced either to charge a price lower than that of the established firm (due to consumer loyalty to the established firm's product), or to incur substantial selling costs in order to charge an equivalent price. Theory predicts that in tight oligopolies non-price competition prevails over price competition, and therefore the banks, as participants in a tight oligopoly, are likely to follow policies aimed at differentiating their services. This in fact seems clearly to be the case.

The principal source of differentiation in Canadian banking is customer convenience, and it is realized through an impressive degree of branching. The ten chartered banks held, as of 1974,

6,705 branches, with the five major banks holding about 90 per cent of these. The Porter Commission noted this proliferation of branches, found the number of branch outlets *per capita* to exceed significantly that in the U.S., and concluded that "there are tendencies in some areas to excessive expenditures on branching" [19, p. 121]. The Commission based its conclusions upon a density of one branch per 3,862 persons. As of 1974 that density had increased to one branch per 3,362 persons.

Besides providing convenience, extensive branching also reinforces depositors' perception of the safety of the institution to which they have entrusted their funds. Large absolute size implies safety, and the most direct public evidence of large size that a bank can provide is a plethora of branches. This combination of convenience and safety attained through extensive branching results in a formidable barrier to potential entrants.

This, then, is the structure of the Canadian banking system: highly concentrated with strong possibilities of supercontrol forces; an "incorporation" barrier to entry; product differentiation barriers related to a pervasive propensity to branch. We now turn to the question of whether the Bank Act of 1967, through lowering of the incorporation barrier, tempering of the rate of branching or otherwise, fostered a more competitive banking structure.

### (iii) Effects of the 1967 Act

Concentration ratios based upon assets have declined very slightly since enactment of the 1967 legislation, five-firm concentration declining from 94 per cent in 1967 to 91 per cent in 1974 (Table 10).<sup>6</sup> Nevertheless market growth, one of the traditional explanations for concentration erosion over time, was impressive. Between 1967 and 1974 assets grew by 202 per cent (Table 10)<sup>7</sup> and yet did not lead to any significant decrease in five-firm concentration. The maintenance of a five-firm concentration ratio of over 90 per cent in the face of such market growth is truly exceptional.

<sup>6</sup> In order to obtain a stricter measure of *domestic* asset concentration, five-firm ratios were constructed netting out foreign asset holdings. This had a minor effect, reducing the ratios by approximately two percentage points.

<sup>7</sup> This figure is an overstatement of real domestic asset growth. Netting out price level increases and growth of foreign asset holdings yields a still impressive 120 per cent growth figure.

Market growth should have acted as a strong inducement to entry. In addition a potential entrant should have found encouragement in industry profit rates (Table 13). The average rate of return on stockholders' equity for the six years preceding and including enactment was about 8 per cent, in sharp contrast with the 13 per cent average rate experienced in the seven post-legislation years.

The fact that concentration was maintained in the face of increased inducement to entry leads to the suspicion that the Bank Act of 1967, regardless of its intent, did not significantly lower barriers to entry into the industry. The incorporation barrier, which could easily have been reduced by legislation, remained intact. The product differentiation barrier, based upon perceived convenience and safety as manifested by pervasive branching, has been only partially affected by the change of legislation. Branching itself has increased both absolutely and relative to total population.

On the other hand the perceived 'safety' advantage held by the established banks has been to some extent diminished by the implementation of deposit insurance. Such insurance, required by the 1967 Act of all deposit-accepting financial institutions which are federally incorporated (i.e. all the chartered banks), ostensibly would benefit the entrant bank more than existing banks, whose safety has already been established by their longevity and visibility.

The Act, then, did reduce at least one barrier to entry. However at the same time it erected barriers to those who were already on the periphery of the market and therefore the most likely actually to enter. The near banks are prohibited from establishing banks (unless they give up near banking) by the Act's ban on joint directorships and bank/near bank ownership connections. Additionally the Act restricted the entry of foreign institutions into the banking industry through the "25 per cent rule" whereby non-residents can hold a maximum of 25 per cent of the shares of federally incorporated financial institutions. The Act also required 75 per cent of the directors of a chartered bank to be resident Canadian citizens.

The Bank Act therefore did little to induce a more competitive structure in the industry. We next consider the effect of the Act upon market conduct. While noncompetitive behaviour is usually a symptom of noncompetitive market structure there are, nonethe-

less, certain types of conduct which if curtailed can lead to more competitive performance even though the actual structure of the industry remains untouched.

## 2. Conduct

In an industry as highly concentrated as Canadian banking the chartered banks necessarily share a strong sense of mutual interdependence in their pricing policies. The banks are not liable to the anti-combines legislation and up until 1967 the Bank Acts did not forbid price collusion. The unsurprising consequence of this lack of public control, as noted by the Porter Commission [19, p. 127], was cartel pricing presided over by the Canadian Bankers' Association.

As of May 1, 1967 collusion on price for either loans or deposits was forbidden by Section 138 of the Bank Act. This prohibition seemingly has affected both the timing of rate changes and, in certain markets, the frequency of rate changes. Prior to the Act all banks simultaneously announced changes in the prime rate and the rate paid on personal savings deposits. Subsequent to the Act, according to Jones and Laudadio [13], rate changes are staggered with lags ranging from several days to several weeks. They rightly argue that this introduction of lags does not imply competitive pricing.

Section 138 did result temporarily in more competitive bidding for large denomination term deposits, but within two years this had become too intense for both the banks and the Bank of Canada. In mid-1969 the latter initiated an arrangement which fixed an interest ceiling.<sup>8</sup> This ceiling ceased to be effective once interest rates began to fall in the second half of 1970, but was replaced in May of 1972 by a similar arrangement (the "Winnipeg Agreement") which lasted through February 1975. Legislative intent was thus insufficient, at least in the market for wholesale deposits, to dominate the oligopolistic bias toward collusion.<sup>8</sup>

<sup>8</sup> Pattison [16] suggests that frequent rate changes and the consequent shifting of deposits from bank to bank causes a welfare loss manifested by a higher proportion of liquid "precautionary" assets in banks' portfolios. Certainly in any tight oligopoly there is strong inducement to coordinate prices in order to avoid mutually costly price wars. Overt coordination is probably unnecessary in most banking markets: instead banks since the Act have relied upon more subtle forms of consciously parallel action. In the wholesale deposit market, which is exceptionally competitive and where large sums are at stake, a formal agreement appears to have been necessary.

Competition for personal savings deposits on the other hand remained relatively lackluster, with interest rates changing less frequently than prime. This presumably reflects the banks' continued oligopsony power in that market due to the individual depositor's lack of mobility and information.

Collusive agreements on service charges have not been forbidden by legislation. Consequently the banks continue to collude on service charges, although such collusion has been less explicit since the introduction of single charge service packages, all of which feature zero service charges on cheques but which differ from bank to bank in other details.

In summary, the effect of the Bank Act of 1967 upon market conduct in the banking industry has been minimal. It has centered upon price fixing for deposits and loans but with little substantive effect since the oligopolistic incentive to price coordinate is unaltered. What remains now is to see if the Act, despite its superficial effect upon structure and conduct, has had any marked effect upon performance in the banking industry.

## 3. Performance

The principal aspects of performance are technical efficiency as related to scale economies and allocative efficiency as related to the difference between price and marginal cost.

As previously discussed the existence of significant scale economies in banking is unproved. Moreover our application of a recent U.S. study to the Canadian system implies that the majority of the Canadian banks are neither at minimum optimal scale nor for that matter even on the lowest possible cost curve ('X' inefficiency). While the evidence is obviously too weak to justify a deconcentration movement in the industry it is strong enough to bring into serious question any justification of increased concentration based upon the exploitation of scale economies. Moreover it tends to discredit those who would curtail the granting of charters to small banks on the grounds that they are inefficiently small and thus prone to failure.

The question of allocative efficiency is difficult to contend with as it ideally necessitates the estimation of marginal cost. However, E. Brucker [6] has suggested a facile method of estimating the price elasticity of demand for banks' output. Under certain assumptions this elasticity approximates the inverse of Lerner's [15] index



of monopoly power,  $(P-MC)/P$ , where  $P$  is price and  $MC$  is marginal cost.

Brucker assumes that the government bills market is essentially a 'dumping market', wherein no bank exerts influence over price, with the result that average and marginal revenue in this market are equal. Profit maximization implies that the marginal revenue from every credit instrument will be equalized and thus will equal average revenue earned in the bills market,  $AR_b$ . Assuming that the bank issues one type of loan for which average revenue,  $AR_l$ , is known, then price elasticity of loan demand,  $e$ , can be expressed by:

$$e = AR_l / (AR_l - AR_b)$$

Lerner's index is equivalent to the reciprocal of the price elasticity of demand when marginal cost equals marginal revenue. Therefore the smaller the value of  $e$  the greater the divergence between price and marginal cost and hence the greater the degree of monopoly power.

The assumption that individual banks are price takers in the government bills market is admittedly somewhat tenuous in the Canadian context. However, the banks' oligopoly power in this market is obviously tempered by the government's monopsony power as sole purchaser of such loans, whereas the borrowing public, which "buys" ordinary loans, is relatively atomized. Treasury bill yields merely provide a base against which to measure changes in the banks' oligopoly power vis à vis the borrowing public.

This elasticity measure will obviously vary in the short run due to cycles in financial markets but it is perhaps significant that our calculations<sup>9</sup> show the 1962-67 average (2.26) to be slightly higher than that for 1968-74 (2.12), indicating an increasing divergence between marginal cost and price and hence a greater degree of allocative inefficiency. This is not to say that there is necessarily a causal link between the Act and an increment in monopoly power, but rather that the post-legislation years have witnessed no decrement in such power, at least according to this admittedly imperfect measure.

In summary, it has been argued that the Bank Act of 1967 has

<sup>9</sup> Using  $AR_l$ =average revenue on loans, and  $AR_b$ =average yield on 3 month Treasury bills. Data from Bank of Canada *Review*.

done little to bring the structure, conduct or performance of the banking industry closer to the competitive ideal. In fact it has had, in certain instances, the opposite effect.

### III. Conclusions

#### 1. *Deficiencies of the 1967 Act*

We conclude that the 1967 Bank Act had its major impact in strengthening the position of the banks relative to the near banks as a result of its removal of the loan rate ceiling, granting permission to hold conventional mortgages, and lowering of the average reserve requirement. These measures to some extent benefited bank customers by reducing nonprice credit rationing, increasing the total supply of mortgages, and raising bank deposit rates relative to those offered at near banks. These benefits are important since the majority of Canadians find it necessary to use a bank rather than or in addition to a near bank because of the locational and other advantages which flow from the former's pervasive network of branches.

Nevertheless, the measures have also helped to strengthen the financial industry's oligopolistic structure. Most loan and deposit markets are dominated by the five big banks, or, in the case of the mortgage market, by the banks and a handful of trust and mortgage loan companies.<sup>10</sup> Attempts by the Act to stimulate price competition by forbidding collusion over loan charges had predictably cosmetic results, and two years after the Act, when intense competition for large term deposits resulted in frequent interbank deposit shifts that forced them to remain unnecessarily liquid, the banks welcomed an agreement fixing maximum interest rates. Considerable

<sup>10</sup> The chartered banks are currently concerned over the appearance in Canada of U.S. "suitcase" banks, which escape the Bank Act's prohibition of foreign banking since they do not accept deposits. Their share of the short term business credit market has risen from 8 per cent in 1970 to 11 per cent in 1974, mostly at the expense of the chartered banks. Their impact, however, is largely confined to that market: in April 1975 their total assets stood at only 1.8 per cent of banks'.

Another smokescreen sometimes raised by the banks is that they operate in a highly competitive environment internationally (see, for example, Sultan [20]). However this in no way denies their oligopolistic domestic structure, as Table 10 illustrates by netting out foreign currency assets.

time lags persist between changes in prime rates and changes in rates offered to small depositors. Our index of divergence between the marginal cost of loans and their price shows a slight *increase* in banks' monopoly power. Clearly if the 1967 Act benefited consumers in some respects, it was seriously deficient in others.

## 2. *Liberalization and integration of financial markets*

The key to improved performance in Canadian financial markets is, in our minds, the granting of easier access on equal terms to all potential entrants to all loan and deposit markets, with guarantees of equal regulation once entry has been accomplished. These principles if applied would concentrate regulation on markets rather than institutions, and thereby eliminate much of the inefficient market segmentation that currently exists.

The costs of market segmentation in terms of resource misallocation are well known. A further problem with segmentation has been identified by those concerned with foreign ownership of Canadian industry: the paucity of funds available for small and venturesome business due to banks' and near banks' concentration on specified and in particular *safe* earning assets has led to a gap in the market for wholesale funds which is typically filled by direct investment from abroad, expansion by multinationals from internal sources, or, most recently, foreign-based banks and venture capital firms.<sup>11</sup>

Easier access on equal terms to all potential market entrants would involve the elimination of cumbersome chartering procedures as well as the opening of all markets to all institutions subject only to the regulations which are specific to each market. It would involve dropping all regulations or advantages which are purely institution-specific: for example, the preferential tax treatment presently enjoyed by credit unions, or the lender-of-last-resort facilities currently available only to banks.

The most obvious specific result of this type of legislation would be to allow foreign deposit-taking institutions to operate in Canada. Nationalist fears seem to us paranoic in this instance. If financial market segmentation and lack of competition has encouraged foreign

<sup>11</sup> See Pattison [17] for a similar argument as well as reference to such arguments by various committees on foreign ownership.

direct investment, the entry of foreign banks should encourage domestic enterprise by improving competition, increasing the supply of funds and reducing their price. There is no reason to restrict foreign entry to non-deposit-taking institutions, since the small saver clearly suffers under the present oligopoly and a more competitive market for bank deposits should help to increase Canadian savings.<sup>12</sup>

## 3. *Regulation of financial markets*

It is impossible to ignore a major political problem with regulatory policy in the Canadian context of federalism. Near banks more often than not operate under provincial charter whereas banks are regulated federally under the Bank Act. And the activities of foreign banks, which are prohibited from obtaining charters under the 1967 Act, currently fall under provincial jurisdiction. All that federal legislation can do is to liberalize both the chartering procedures and regulations covering banks so that certain provincially chartered institutions are encouraged to become chartered banks and/or provincial authorities are induced to liberalize their laws equivalently.

The kinds of regulation that need to be enforced after entry has been accomplished should follow three principles: insurance of creditors, monetary control, and the counteraction of monopoly power.

The insurance principle would require institutions to regulate their asset and liability mix with consideration to protection of their creditors. Proportions of liquid assets, equity-to-debt ratios, etc. should be sufficiently high for this purpose. Much of this kind of regulation could be left to insurance companies — in the case of deposit-accepting institutions, the Canada Deposit Insurance Corporation. In addition, premiums could be adjusted between institutions in accordance with the insurer's calculation of the institution's riskiness given its portfolio, and firm rules on asset or liability mix could thereby be eschewed.

Considerable segmentation in Canada's capital market results, in our opinion, from the unnecessarily conservative restrictions which

<sup>12</sup> This point is well-argued in Pattison [17].

federal and provincial legislation imposes on banks' and near banks' portfolio mix. With appropriate deposit insurance premiums, there is no reason why Canadian banks could not involve themselves more heavily in industrial finance, including venture loans and even purchases of equity. It is also difficult to believe that trust management carries sufficient potential for conflict of interests that the trust companies should be prohibited entirely from making unsecured business loans.<sup>13</sup> Proposals of this nature should carry considerable political appeal given that many committees on foreign ownership have identified restrictions on merchant banking activity as a crucial gap in Canadian financial markets.<sup>14</sup>

The second principle we suggest for the regulation of financial markets involves monetary control. If reserve requirements are to be imposed, they should be uniform across deposit-taking institutions. The question of which liabilities ought to be subject to reserve requirements is (aside from insurance considerations) identical to the question of which liabilities should be considered « money » for control purposes. The present system whereby the Bank of Canada can control chartered bank but not near bank deposits is both illogical because it treats similar deposits differently and inequitable because it imposes the opportunity costs of zero-interest reserves on banks but not near banks. Moreover there is no reason insofar as monetary control is concerned to impose different reserve requirements on deposits of differing liquidity (although insurance principles may dictate something similar).<sup>15</sup> Neither does monetary control require the currently-imposed « secondary » reserve requirement to supplement the original primary ratio.<sup>16</sup> Ideally, also, the Bank of Canada should pay interest on reserves, since under the present system it effectively receives an interest-free loan from the private

<sup>13</sup> As substantiation of this we note that a 1975 revision of legislation permits credit unions in British Columbia to engage in trust management without curtailing their growing involvement in business loans.

<sup>14</sup> See Pattison [17], p. 10.

<sup>15</sup> Uniform reserve requirements on all types of deposits should encourage the banks to pay interest on deposits and charge actual clearing costs for cheques drawn, a system Johnson [11] shows to be optimal.

<sup>16</sup> However it can be argued that the secondary reserve requirement might aid in the attainment of certain targets to which the monetary authority aspires in addition to monetary control: interest rate stabilization, enhancement of the market for Treasury bills, or control over the *velocity* of money (see Dean [7]).

sector, introducing an incentive to overallocate deposits to the public sector and underallocate them to the private.

The third regulation principle stems from recognition of the fact that even in the absence of economies of scale, many if not most financial markets would continue to be dominated by the current institutional giants for the foreseeable future despite the impetus to competition that the foregoing recommendations should provide.<sup>17</sup> Therefore it will be necessary to limit the exercise of oligopoly power to restrict output and extract supernormal profits.

A further potential consequence of oligopoly power is more insidious since it would serve to enhance that power. If all institutions are to be granted equal access to all markets, it would be possible for those with monopoly power and the wherewithal to survive a price war to eliminate smaller participants by temporarily subsidizing uneconomic interest rates out of earnings from other activities or out of past profits. In this way chartered banks might for example drive out venture capital firms, subsidiaries of large foreign banks might dump their services and eliminate the smaller Canadian institutions, or established institutions might bankrupt new entrants.

The identification and prohibition of financial pricing below average cost would provide sufficiently prophylactic regulation to stem predatory activity. A regulatory agency with such information and powers would also be capable of the more traditional role of restraining pricing above average cost. Thus the regulation of financial markets can be argued on two grounds: to prevent predatory practices via pricing practices that are temporarily below cost and to eliminate the supernormal profit and restricted output that would otherwise result from monopoly pricing above cost in the long run.

The practical problems of identifying costs, especially in the presence of joint products, are significant. Nevertheless there is ample precedent for regulation in utilities and other monopolistic industries. In fact pressure to subject service industries to the Com-

<sup>17</sup> Of course the ultimate impetus to competition would be the « trust-busting » option of renewing the banks' charters in 1977 only with the proviso that those with dominant market shares break into smaller units within a certain period of time. This possibility we reject as politically unrealistic.

Business Act began with a report in 1969 by the Economic Council of Canada which stated that:

... it is our view that the application of competition policy is as relevant to the provision of financial services as it is to other fields. The Director of Legal Proceedings and the tribunal should be given the authority to investigate and, where appropriate, strike down practices in the financial area that are inimical to the public interest in competition and efficiency [8; pp. 154, 155].

Institutionalized supervision could easily lead to unwarranted interference with market mechanisms. We envision adequate price regulation to be confined strictly to limiting the exercise or extension of monopoly power. Even this kind of regulation is not costless: there is presumably a tradeoff between reducing supernormal profits and maintaining an inducement to entry. It may be that the price of ameliorating the oligopoly structure's impact through regulation would be to prolong its existence, but we have little faith that the lowering of entry barriers would in and of itself modify structure very quickly. Therefore we choose to err if we must toward granting the oligopolists a longer life but forcing them to behave more in the public interest.<sup>18</sup>

A possibility worth considering is the establishment of a government financial institution to compete freely with private institutions and provide a yardstick by which their performance might be gauged. Not only would this provide a standard for regulation, it could remove much of the burden of regulation by providing market pressure for private institutions to price nearer to cost and even to innovate.<sup>19</sup>

One avenue through which monopoly power is particularly effectively exercised, since it involves the oligopolists' joint action, is shared facilities. The banks currently monopolize the clearing

<sup>18</sup> In practice public policy toward business is usually either an attempt to promote competition or an attempt to regulate in recognition that the industry is naturally monopolized. Our somewhat hybrid proposal is intended to encourage a more competitive structure in the long run (given the paucity of evidence of economies of scale in banking) but recognizes that evolutionary structural change takes time.

<sup>19</sup> The Provincial Government of British Columbia currently proposes to establish such an institution, although legislation has not yet been enacted (October 1975) and details are far from worked out. It is also worth noting that three nationalized banks control 60% of the French commercial banking industry and have proved remarkably innovative.

system, to the continued aggravation of near banks. Of much more significance in the future, however, is the control of electronic banking terminals. An electronic payments system is probably a natural monopoly like the telephone; banks have an incentive to own and operate this system, and near banks are extremely concerned that this not happen. This will be a major issue during debate prior to the 1977 Bank Act, and in our view the fledgling payments system is a prime candidate for surveillance by a regulatory agency. In fact access to such a system by all institutions on equal terms might, somewhat ironically, provide the Achilles' heel through which the branch banks' tentaculate hold on retail markets is forced free.

*Burnaby*

J.W. DEAN - R. SCHWINDT

TABLE 1

## SIZE DISTRIBUTION OF BANKS AND NEAR BANKS

End of Year	Total Assets of Banks* plus Near Banks (millions of dollars)	% Held by				
		Chartered Banks	Trust Companies	Credit Unions and Caisses Populaires	Mortgage Loan Companies	Quebec Savings Banks
1945 . . . . .	6,781	88.4	3.9	2.1	3.5	2.1
1955 . . . . .	12,632	82.6	5.7	5.1	4.5	2.1
1967 . . . . .	34,365	67.9	12.7	9.8	8.1	1.5
1974 . . . . .	91,257	66.7	13.6	11.3	7.4	1.0

\* The total assets series for banks includes net foreign assets but excludes items in transit and customers' liability under acceptances, guarantees and letters of credit.

Sources: Data for 1945 and 1955 calculated from [10], pp. 106-7; 1967 and 1974 calculated from Bank of Canada Review data.

TABLE 2

## BANK/NEAR BANK SAVINGS DEPOSIT MARKET

End of Year	Banks plus Near Banks (millions of dollars)	% Issued by					
		Largest Five Banks	All Banks	Trust Companies	Credit Unions and Caisses Populaires	Mortgage Loan Companies	Quebec Savings Banks
1962 . . . . .	12,855	63.0	69.5	10.5	10.2	7.3	2.5
1967 . . . . .	23,340	58.8	64.3	14.3	11.3	8.1	2.0
1974 . . . . .	65,772	54.9	62.4	16.6	12.8	7.0	1.2

Bank data exclude foreign currency deposits, Federal and provincial government deposits, other banks' deposits and demand deposits, but include chequable savings deposits (the latter's turnover is very low relative to demand deposits: 1.5% versus 147.5% in 1974). Near bank data include all nonchequable deposits as well as trust companies' guaranteed investment certificates, mortgage loan companies' debentures and credit unions' share capital. For credit unions, nonchequable and chequable deposit data are not disaggregated; we therefore estimated the latter using B.C. Central Credit Union estimates that 25% of total nonterm deposits in B.C. are chequable.

Sources: Individual bank data calculated from Canada Gazette. All other data calculated from Bank of Canada Review and Statistical Summary.

TABLE 3

## BANK/NEAR BANK DEMAND DEPOSIT MARKET

End of Year	Banks plus Near Banks (millions of dollars)	% Issued by				
		Largest Five Banks	All Banks	Trust Companies	Credit Unions and Caisses Populaires	Mortgage Loan Companies
1962 . . . . .	5,575	81.2	87.5	6.4	3.7	2.4
1967 . . . . .	7,608	79.2	85.3	7.5	5.2	2.0
1974 . . . . .	13,233	80.7	87.4	3.7	7.6	1.3

Bank data are demand deposits and near bank data are chequable demand and savings deposits. For credit unions, chequable deposit data are estimated as described under Table 2.

Sources: As in Table 2.

TABLE 4

## CONSUMER CREDIT MARKET

End of Year	Banks plus Near Banks (millions of dollars)	% Lent by Banks	All Institutional Lenders (millions of dollars)	% Lent by						
				Largest Five Banks*	All Banks	Credit Unions & Caisses Populaires	All Other Banks	Sales Finance and Consumer Loan Companies	Retail Dealers	Life Insurance Company Policy Loans
1962 . . . . .	1,719	68.8	4,694	23.1	25.2	11.1	0.3	32.3	23.2	7.9
1967 . . . . .	4,091	72.8	8,616	32.1	34.6	12.7	0.2	27.9	18.9	5.6
1974 . . . . .	13,768	78.6	20,539	47.4	52.7	13.4	0.9	14.6	13.2	5.2

\* Estimates obtained by applying the five banks' share of "other loans in Canadian currency" (Canada Gazette) to all bank's consumer credit.

Sources: Individual bank data calculated from Canada Gazette; all other data calculated from Bank of Canada Review.

TABLE 5

## BANK/NEAR BANK MORTGAGE MARKET\*

End of Year	Mortgages Held by Banks plus Near Banks (millions of dollars)	% Held by					
		Chartered Banks	Trust Companies	Mortgage Loan Companies	Credit Unions and Caisses Populaires	Quebec Savings Banks	Top 8 Firms**
1962 . . . . .	3,332	27.6	25.4	29.7	14.4	2.9	45.1
1967 . . . . .	6,543	12.8	36.9	31.7	14.9	3.7	43.4
1974 . . . . .	24,863	24.2	35.6	22.2	16.2	1.8	46.3

\* Other major institutional holders of mortgages include life insurance companies, central credit unions, mortgage investment trust corporations (since late 1972), mutual funds, fire and casualty insurance companies, sales finance and consumer loan companies, trustee pension plans, Central Mortgage and Housing Corporation, and estate, trust and agency funds. At the end of 1974, bank/near bank holdings were 50.6% of total holdings by banks, near banks and the above institutions (source: Statistics Canada, 61-006); however banks and near banks approve the bulk of new mortgages (see Table 6).

\*\* See Table 11.

Sources: Calculated from Bank of Canada *Review* data. Credit union data for 1962 from Bank of Canada *Statistical Summary*.

TABLE 6

## MORTGAGE LOANS APPROVED BY SELECTED LENDING INSTITUTIONS\*

Year	Total** (millions of dollars)	% Approved by			
		Chartered Banks	Trust, Loan and Other Companies***	Life Insurance Companies	Central Mortgage and Housing Corporation
1962 . . . . .	1,415	0.0	40.3	45.9	13.8
1967 . . . . .	2,484	9.3	36.2	25.2	29.3
1974 . . . . .	6,759	28.0	51.3	8.3	12.4

\* Credit unions approve a significant proportion of new mortgages but are not covered by this Table. See also Tables 5 and 10.

\*\* Includes mortgages both on new residential construction and on existing residential property.

\*\*\* Includes mutual benefit and fraternal societies and the Quebec savings banks.

Source: Calculated from Bank of Canada *Review* data.

TABLE 7

## LOAN ALLOCATION AND TIGHT MONEY

(% changes over previous year-end)

Year	Private-ly-held Money Supply*	Total Loans Including Mortgages**	Business Loans Under \$0.1 million***	Business Loans Over \$0.1 million***	Personal Loans	Mortgage Loans	Loans to Construction Contractors
1966 . . . . .	7.7	6.7	-5.2	11.3	6.5	-3.9	-8.9
1969 . . . . .	1.6	13.4	4.7	16.7	10.5	27.0	10.1
1970 . . . . .	10.6	6.0	7.6	1.6	10.1	10.0	4.2

Note: For each year, % changes below the % change for "total loans" are in italic type.

\* Based on year-end data for personal savings deposits, nonpersonal notice deposits, and nongovernment, nonbank demand deposits.

\*\* Total general loans plus NHA and conventional mortgages.

\*\*\* Loans outstanding under (over) authorized limits of \$0.1 million.

Source: Calculated from Bank of Canada *Review* data.

## BANKS' ASSET MIX

TABLE 8

End of Year	General Loans as % of Total Assets*	Personal Loans*** as % of General Loans	Mortgage Loans** as % of Total Assets*
1962 . . . . .	43.4	18.4	6.2
1967 . . . . .	50.7	25.2	3.6
1974 . . . . .	57.5	30.9	9.9

\* Total assets defined as in Table 1.

\*\* Prior to 1967 only NHA-insured mortgages were held; 1967 and 1974 data include conventional mortgages.

\*\*\* Excludes home improvement loans and personal loans against marketable securities.

Source: Calculated from Bank of Canada *Review* data.

TABLE 9

## BANKS' LIABILITY MIX

Years (averages of Wednesdays)	Total Publicly- Held Deposits	% of Total Publicly-Held Deposits				Deben- tures as % of Total Canadian Dollar Liabilities (end of year)
		All Personal Savings	Non- personal Term and Notice	Demand	Chequa- ble Personal Savings	
1962 . . . . .	12,805	58.5	41.5		not available	0.00
1967 . . . . .	20,170	54.8	15.9	29.3	36.7*	0.16
1974 . . . . .	47,898	58.6	22.0	19.4	13.5	1.15

\* Based on averages for last 4 months of 1967. Data for earlier months unavailable  
 Source: 1962 and 1967 data from Bank of Canada *Statistical Summary*; 1974 data from  
 Bank of Canada *Review*.

TABLE 10

## CONCENTRATION OF BANKING ASSETS

	Assets*		Domestic Assets**	
	millions of dollars	%	millions of dollars	%
1962				
Largest Five Banks . . . . .	17,717	93.1	13,746	91.7
Total all Banks . . . . .	19,029		14,987	
1967				
Largest Five Banks . . . . .	27,824	93.5	21,408	91.8
Total all Banks . . . . .	29,810		23,307	
1974				
Largest Five Banks . . . . .	82,100	91.1	55,168	89.0
Total all Banks . . . . .	90,087		62,023	

\* Excludes net float.

\*\* Excludes net float and foreign assets.

Source: *Canada Gazette*, "Chartered Banks of Canada, Statement of Assets and Liabilities," for appropriate years. Figures are as of December 31.

TABLE 11

## CONCENTRATION IN THE MORTGAGE MARKET

Institution	Top 8 Firms as a Percentage of All Mortgages Held by Near Banks 1962
Canada Permanent Mortgage Corporation *	8.4
Royal Bank . . . . .	7.9
Bank of Montreal . . . . .	6.7
Canadian Imperial Bank of Commerce . . . . .	6.7
Huron & Erie Mortgage Corporation . . . . .	5.3
Guaranty Trust Company . . . . .	3.7
<i>Credit Foncier</i> . . . . .	3.3
Toronto-Dominion Bank . . . . .	3.1
	45.1
Institution	1967
Canada Permanent Mortgage Corporation *	12.4
Huron & Erie Mortgage Corporation . . . . .	8.6
Royal Trust Company . . . . .	5.3
Guaranty Trust Company . . . . .	4.7
Victoria & Grey Trust Company . . . . .	3.3
Royal Bank . . . . .	3.3
National Trust Company . . . . .	2.9
Bank of Montreal . . . . .	2.9
	43.4
Institution	1974
Royal Trust Company . . . . .	8.8
Huron & Erie Mortgage Company . . . . .	7.5
Canada Permanent Mortgage Corporation *	7.4
Canadian Imperial Bank of Commerce . . . . .	6.2
Royal Bank . . . . .	5.4
Bank of Montreal . . . . .	3.9
Victoria & Grey Trust Company . . . . .	3.8
Guaranty Trust Company . . . . .	3.3
	46.3

\* Includes Canada Permanent Toronto General Trust Company.

Banks hold both NHA approved and conventional mortgages; however data on individual banks' holdings of conventional mortgages are unavailable. Therefore it was assumed that each bank held the same proportion of the total of bank-held mortgages as it did of total NHA approved bank-held mortgages.

See also Tables 5 and 6.

Sources: Chartered banks, *Canada Gazette*, "Chartered Banks of Canada, Statement of Assets and Liabilities." All others, *Financial Post*, *Survey of Industrials*, MacLean Hunter, Toronto.

BANKS' OUTPUT AND AVERAGE COSTS FOR 1968

Bank	Loans Plus Securities (1) (millions of dollars)	Ratio of Expenses to Loans Plus Securities	
		Jones & Laudadio Calculations (2)	Estimates Using Kalish & Gilbert Procedure (3)
Canadian Imperial Bank of Commerce . . . . .	5,988	.058	.056
Royal Bank of Canada . . . . .	5,696	.062	.055
Bank of Montreal . . . . .	4,962	.065	.052
Toronto-Dominion Bank . . . . .	2,911	.066	.043
Bank of Nova Scotia . . . . .	2,846	.065	.043
Banque Canadienne Nationale	1,242	.064	.036
Banque Provinciale du Canada	634	.061	.033
Mercantile Bank of Canada	136	.083	.031
Bank of British Columbia . . . . .	25	.034	.031

Sources: (1) *Canada Gazette*, "Statement of Assets and Liabilities," items 9, 10, 11, 12, 13, 14, 16, 17, 19, 20, 21, 24.  
(2) Jones & Laudadio [12]. (3) See [14].

NET PROFITS ON EQUITY

	Banking (1)	Average for 9 Sectors (2)	(1) - (2)
1962 . . . . .	7.5%	5.5%	2.0%
1963 . . . . .	8.3	5.9	2.4
1964 . . . . .	7.5	5.8	1.7
1965 . . . . .	9.9	8.3	1.6
1966 . . . . .	8.0	8.3	-0.3
1967 . . . . .	8.9	7.9	1.0
1968 . . . . .	9.1	9.0	0.1
1969 . . . . .	11.4	9.0	2.4
1970 . . . . .	11.8	7.1	4.7
1971 . . . . .	14.1	NA	
1972 . . . . .	17.0	NA	
1973 . . . . .	14.5	NA	
1974 . . . . .	12.4	NA	

Sources: (1) Calculated from Bank of Canada Review.  
(2) Sectors included: agriculture-forestry-fishing, mining, manufacturing, construction, utilities, wholesale trade, retail trade, finance, service. Data for 1962, 1963, 1964 from Taxation Division of the Department of National Revenue, *Taxation Statistics Part 2 - Corporations*; for 1965-70 from *Statistics Canada*, 61-207.

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