

REGULATION OF MERGERS AND ACQUISITIONS IN THE BANKING SECTOR

The impact of deregulating M&As on financial stability

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ABSTRACT

Financial markets all over the world are facing a severe crisis. The recent bankruptcy of Lehman Brothers Holdings Inc. and collapse of several mortgage lenders following the subprime mortgage crisis has led to a significant liquidity crisis that is spreading all over the world. Canada's banks, for the most part however, have managed to avoid being struck by the liquidity crisis. The soundness of the Canadian banking system can be attributed to its structure and its regulations. Past attempted mergers between banks have been rejected, which is partly responsible for the stability of the banking system today. The purpose of this paper is to examine the causes and consequences of mergers and acquisitions in the banking sector, and to consider their impact on financial stability with the goal of determining an optimal regulatory structure. First, a comparison of the history of structural differences between the banking systems in the U.S. and Canada is made, followed by an analysis of the motivations for consolidation. The next section then discusses the consequences of consolidation. From there, the paper seeks to develop an optimal regulatory policy with regards to M&As. Finally, this paper concludes with recommendations for stabilizing the financial sector in the face of the current crises.

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1. Introduction

With the global financial market in crisis, financial institutions all over the world have been left scrambling to remain solvent. It has become evident that the fall of the financial sector has presented the global economy with its worst crisis since the Great Depression of the 1930s. Recent months have seen the closure of several of the largest financial institutions in the United States, and the unveiling of financial bailout packages by governments worldwide. Prior to this series of closures and economic turmoil, recent decades had witnessed the establishment of a global trend towards increasing consolidation in the banking sector. The latest crisis, however, has resulted in much attention to the practices and procedures of banking institutions, and renewed the debate on regulatory reform. Fortunately, in Canada, the presence of regulations in the financial industry has sheltered major Canadian banks from the mass turmoil being experienced globally. These regulations have helped to ensure that Canada's banks have remained solvent through these harsh times. In early November 2008, the World Economic Forum even ranked the Canadian banking system as the most sound in the world.

How have Canadian banks managed to shield themselves from the global financial crisis, and managed to maintain their solvency? There are two essential factors that have protected Canadian banks. First, regulations require that the average capital reserves in Canada be maintained at a minimum of 7%; however, for Canada's *Big Six*¹ banks the average capital reserves rate is much higher – at 9.8%. This rate is slightly higher than major commercial banks in the United States, and significantly higher than most

¹ The term *Big Six* refers to the six largest banks currently dominating the Canadian market: the Royal Bank of Canada, the Canadian Imperial Bank of Commerce, the Toronto-Dominion Bank Financial Group, Bank of Nova Scotia (Scotiabank), the Bank of Montreal, and the National Bank of Canada. The National Bank of Canada is commonly excluded since it is substantially smaller than the others, with the remaining banks known as the *Big Five*.

commercial banks in Europe.²

The second key factor stems from the government's decision in the late 1980s that allowed commercial banks to acquire investment dealers. The relaxation of regulations allowing commercial banks to make these acquisitions meant that these investment institutions would now be required to adhere to the same strict set of requirements applicable to commercial banks. Comparatively, prior to the collapse of the financial market in the United States, American investment dealers were subject to minimal supervision by the Securities and Exchange Commission (SEC). There is, however, a downside to the restrictions imposed on the banking sector. Regulation does provide Canadian banks with some shelter from financial shocks that would otherwise lead to crises, but at the same time restricts the potential gains that can be achieved during growth periods by limiting their ability to compete with other financial institutions on an international level. These are not the only differences between the banking industries in Canada and the United States. The two industries have differed throughout most of their histories, both in terms of structure and regulatory practices. This is discussed later in the paper.

The purpose of this paper is to understand the motivations behind consolidation in the banking industry and to analyze the impact of mergers and acquisitions on financial stability so that an optimal regulatory structure can be established. This refers to how mergers and acquisitions should be regulated in the Canadian banking sector. The implications of this analysis could provide justifications for deregulating the consolidation process in the Canadian banking industry. Faced with the turmoil of the current financial crisis, this paper concludes by offering recommendations on how to alleviate the crisis and stabilize the economy. In order to do this, the paper is organized as follows.

² Heinrich, Erik (2008).

Section 2 provides a brief comparative history of the banking sector in Canada versus that of the United States. Despite the high level of interconnectedness between them and the multitude of similarities, the two countries have established two very different systems of financial institutions and have implemented different systems of regulation. This section provides a description of the characteristics that have resulted in the evolution of each banking system into what it is today. This discussion also compares the stability and efficiency of the two regimes at a time when the two regulatory systems were at the peak of their differences and provides a brief summary of changes to banking industry regulations since 1980. After establishing a brief history of the banking system and its regulation in Canada – and comparing its implications for stability and efficiency – section 3 discusses the motivation that causes banks to pursue consolidation. This discussion centers upon the ex ante reasons for which banks would enter into a merger agreement or make an acquisition (or be acquired). In this section, several theories for why banks choose to consolidate are introduced and accompanied by explanatory research. With the motivation for mergers and acquisitions as a background, the next section, section 4, discusses the consequences of consolidation. Does consolidation improve efficiency or make the financial sector more stable? This section discusses the impacts of mergers and acquisitions on the competitiveness of the banking industry by taking from examples all over the world and its implications for the stability and efficiency of the entire financial sector. Section 3 and 4 discuss the external factors that influence mergers and acquisitions and their consequences on the banking industry. Section 5 is based on these motivations and consequences and examines the external role of consolidation. The discussion in this section analyzes the use of mergers and acquisitions to deal with situations of financial crisis. Based on these results, section 6 discusses whether

consolidation should remain “regulated”³ in Canada or whether regulatory authorities should be more lenient towards mergers and acquisitions among banks, as is the case throughout the rest of the world. Based on the results of the research reviewed in this paper, there is no global solution to dealing with all proposed mergers and acquisitions in the banking sector. However, there are some important guidelines to keep in mind when determining when any proposal should be approved or rejected. Any regulations imposed on the financial system should be used to ensure that the banking sector remains contestable, while maintaining a balance between competitiveness and financial stability and curbing moral hazard. Finally, this section also returns to face the issue of the current global financial crisis and addresses how to stabilize the financial system and the economy and concludes with recommendations for dealing with the current financial crisis.

2. A Comparative History of the Financial Sector: Canada versus the United States

Canada and the United States share the largest trade relationship in the world, and there are many cultural and economic similarities between the two nations. However, when it comes to the financial sector, the two countries are immensely different. Throughout most of their history, the United States has had a unit banking system, where restrictions on interstate branching resulted in a large number of very small banks (approximately 12,000 banks in 1990).⁴ This has not been the case in Canada, where a system that allows unlimited branching has been the norm and has resulted in the

³ Mergers and acquisitions are not officially prohibited by the regulation authorities in Canada. All domestic mergers among Canada's financial institutions face a review process with the Competition Bureau of Canada. With only six major banks, however, any merger among the largest financial institutions could result in a significant decline in competitive forces. In order to protect consumers, proposals that could result in anticompetitive pressures are usually rejected. This essentially gives Canada an “unofficial prohibition” on mergers and acquisitions among the largest financial institutions (Mailander, 1999).

⁴ Bordo (1995).

emergence of a small number of very large nationwide banks (approximately 11 banks between 1920 and 1980).⁵ In addition to the systems in place, both countries have also had very different regulatory systems throughout history. Reserve requirements, which had long been a pillar of U.S. banking, were only integrated into the Canadian banking system during the 1930s. Furthermore, Canadian regulators have maintained capital requirements that have been much higher than in the United States, while also requiring new banks to obtain a charter.

The most useful comparison of the two countries' differing banking sectors takes place from 1920-1980. By 1920, Canada's nationwide branch banking system was fully established, with few structural changes occurring until the 1967 and 1980 changes to the Bank Act. These changes significantly altered the landscape of the Canadian banking sector by allowing for increased competition in banking services, permitting foreign banks to enter the market, and by introducing deposit insurance. During the same time, the dual banking system of the United States was also fully implemented. The McFadden Act in 1927 established a system where each state was responsible for their own banking sector, with a separate system established for national banks. In the late 1970s, the U.S. banking system also began to experience some changes of its own; regulations were relaxed and the entire system began moving towards a national branch banking infrastructure, beginning with the allowance of intrastate branching in many states. It is interesting then, to consider the implications of these two differing systems on the stability and efficiency of the banking industry. In the case of the financial system, stability refers to the ability of the banking infrastructure to avoid financial crisis. This involves the removal of volatility from the financial system to ensure that the overall system remains stable.

⁵ Ibid.

It is commonly believed that when compared to the United States, Canada's system of regulation has resulted in a financial system that offers much more stability, but is less efficient. Bordo (1995) undertook a study to compare the stability and efficiency of the two systems between 1920 and 1980, in which stability was measured by the incidence of bank failures and efficiency was measured using the rate of return on equity. Significant levels of contraction in the banking system after 1900 suggested that when regulatory barriers are not implemented, branch banking would result in an oligopolistic industry.⁶ The view that the Canadian banking industry is essentially a highly concentrated oligopoly resulted in the assumption that it would be less efficient than its American counterpart and the benchmark of perfect competition. The results showed that this was not the case. During the period 1920-1980, the Canadian banking system was in fact superior to the American banking system based on both criteria – both more stable and more efficient. This is attributed to Canada's branch banking system, which gave banks the ability to diversify their portfolios nationally across regions, and is perhaps indicative of Neave's (1989) argument that Canada's financial system does not function as an oligopolistic industry; but rather a highly competitive, profit-seeking, and efficient system despite being highly concentrated.

National banks in the U.S. were the most appropriate for comparison to banks in Canada due to their similarities in size and function. During the sixty year period where the regulatory systems in the two countries were most different, only one major Canadian bank failed – the Home Bank in Winnipeg in 1923.⁷ The failure of this bank was incomparable to the number of failures that occurred in the United States during the 1920s, where one-third

⁶ Bordo et al. (1994).
⁷ Bordo (1995).

of all banks failed during the Great Depression.⁸ It is argued that the nationwide branching system in Canada allowed Canadian banks to diversify their loan portfolios nationally and provided some shelter from the severe crisis affecting American banks during that time.

The results of the comparison between the two banking systems resulted in three explanations for the superior stability and efficiency of the Canadian banking system (Bordo, 1995). First, the United States imposed higher reserve requirements on their banks to counter instability, which resulted in regulatory differences that directly affected their portfolios. The second, more commonly presented explanation suggests that a system of large nationwide branching results in economies of scale and scope that allows individual branches to reduce their holdings of liquid assets through diversification. Finally, the third explanation suggests that the commonly held perception that there is a low risk of bank failure in Canada had allowed Canadian banks to reach higher asset-equity ratios by holding a lesser amount of non-interest bearing assets.⁹ Due to the perception that the Canadian banking system was stable, banks did not have to maintain high liquidity ratios to prove that the system was sound and no additional reserve regulation was necessary. Since there was less fear of failure, branch banking meant that banks could increase their leverage at the expense of reserve ratios without having to worry that their own actions would lead to consumer panic or restrictive regulation.

Beyond this time frame, the banking sector has continued to evolve. In the United States, consolidation had already accelerated considerably between 1997 and 1999, at which time the repeal of the Glass Steagall Act resulted in a renewed vigour for consolidation in the financial industry. While much has changed, the American banking

⁸ Ibid.

⁹ Bordo (1995).

system still has different regulatory bodies from state to state, along with an overlapping regulator at the federal level, maintaining the duality that has always characterized the American system.¹⁰

Recent decades have also witnessed a significant evolution in the Canadian banking industry. These key changes include allowing foreign banks to enter into the Canadian market, and permitting banks to expand to a wider array of other financial services. Changes to regulations in 1987 allowed Canadian banks to invest in corporate securities dealers, to distribute government bonds, and to conduct brokerage activities, while further legislative revisions in 1992 allowed banks to enter the trust business.¹¹ These regulatory changes set off a wave of acquisitions by Canada's largest banks into each of these extended financial services. All major banks began investing heavily in the securities business and purchased control of most existing investment dealers. After the collapse of the speculative real estate boom in the late 1980s, many trust companies faced substantial financial hardship and became frequent acquisition targets of Canada's largest banks. The following section discusses the motivation that leads to mergers and acquisitions in the banking industry.

3. Bank Consolidation: Motivations for mergers and acquisitions

In Canada, domestic consolidation between the major banks has essentially been outlawed, culminating with the highly publicized rejections of two major merger proposals in 1998.¹² Since the decision was made to block the two mergers, Canadian banks were

¹⁰ Carpentier and Suret (2003).

¹¹ Allen and Engert (2007).

¹² In 1998, two mergers were proposed among Canada's *Big Five* banks. The two proposals, one presented by the Bank of Montreal which proposed to merge with the Royal Bank of Canada and the other by CIBC which proposed to

forced to consider alternative strategies to achieve continued growth. This entailed a more significant presence in the global financial market through the acquisitions of international institutions. Throughout the rest of the world, however, consolidation has been increasing at a rapid pace. The financial industry has undergone massive deregulation beginning in the United States, and spreading to Europe during the 1990s. The spread of deregulation, along with significant technological advancements, has resulted in a wave of mergers in the banking industry all over the world. To understand the implications of mergers and acquisitions on the financial market, it is important to first consider the motivations that lead banks to pursue consolidation. Since the Canada has not had any significant domestic mergers between banks in its recent history, this paper examines the motivation provided for mergers and acquisitions in other countries where consolidation has been far more prevalent.

In all industries, consolidation can be achieved either via merger or acquisition. There are different reasons for which a bank would choose to pursue a merger rather than acquire another bank, or be acquired themselves. Before delving deeper into motives, it is important to make the distinction between these two methods of consolidation. In the case of mergers, there is both a bidder and a target which enter into an agreement resulting in full integration of the two banks. The second case of an acquisition occurs when one institution purchases a controlling stake in another without combining the assets of the two individual firms. Consider the research regarding the motivation for acquisitions and mergers conducted in the Italian market, which seeks to expand on the analysis of the

merge with TD Bank, would have left Canada with only three remaining national banks. The two proposals were reviewed by the Competition Bureau of Canada, who determined that the negative effects of the proposed mergers would be too great. As a result, Finance Minister Paul Martin rejected both proposed mergers; since then the issue of bank mergers has not been revisited.

efficiency motives for consolidation (Focarelli et al., 2003).

The results of their ex ante analysis of mergers in the Italian market suggest that mergers occur due to strategies that seek to sell more services. In this case, the active (or bidding) bank is larger and derives a higher share of its income from services, while the passive (or target) bank is one that is less proficient in providing financial services. By entering into a merger agreement the customers of the passive bank provide a consumer base for the services of the active bank. Furthermore, active banks – which also can benefit from cost reductions via a merger – are motivated to pursue mergers in order to reduce the risk of vulnerability to liquidity shocks. Target banks are inherently less profitable and exhibit higher labour costs, making them viable candidates for restructuring. For this reason, the passive bank will be motivated to merge with the active bank in order to increase income by marketing the services of the bidding bank to their own customer base.

The motivation for acquisitions is based on a completely different strategy. Acquisitions are linked to strategies based on credit management, where both of the dealing banks have high loan-to-asset ratios, but the bank being acquired also has a high bad loan-to-total loan ratio. Thus, profitability plays an important role in determining whether a bank will be a buyer (banks must be healthy in order to be able to make acquisitions). Acquisitions are in part motivated by potential increases in value of the loan portfolio under new ownership. Since an acquired bank tends to have more loans than average but of a poorer quality, acquiring banks seek to increase the value of the loan portfolio without the high costs of entering into a merger agreement.

Another argument, based on the financial market in the United States, designs a framework in which maximization of shareholder value is the main motivation for

consolidation; however, motives of other stakeholders (managers, government) are also considered to an extent (Berger et al., 1999). In addition to the motivations for consolidation, their research attributes the recent trend of rapid increases in consolidation to five changes in the global economy: technological progress, improvements in global financial conditions, excess capacity or financial distress in the banking industry, consolidation in international markets, and the deregulation of geographical or product restrictions. In this framework, all activities are undertaken to increase the bank's value to existing shareholders, including consolidation.

In the financial sector, consolidation can increase value to shareholders either by increasing market power – to allow firms more power in price setting – or by increasing efficiency. There is evidence to suggest that by entering into merger or acquisition agreements, market concentration increases substantially (Berger et al., 1999). Increased market concentration may provide a significant increase in market power which would allow banks to set higher prices on services. There is also evidence that supports the argument that consolidation improves efficiency as studies have shown that M&As in the U.S. often involve a larger, more efficient institution taking over another that is not only smaller, but also less efficient. Case studies on the U.S. financial market have also shown that the potential for increased efficiency is a sufficient justification for bank consolidation (Calomiris and Karceski, 1998).

At the same time, other research on the financial market in the United States contends that changes to state laws that regulated branch banking, and a climate that became far less stringent towards antitrust, created more opportunities for consolidation (Hughes et al., 1999). This research argues that in addition to these increased opportunities, expansion through consolidation may lead to better diversification of assets

and liabilities and a wider scope of products and services offered; however it may also increase costs of production, and inefficiency due to agency problems between managers and owners, by increasing organizational complexity (Hughes et al., 1999). Thus, the objective is to determine whether there exist net economic benefits from taking advantage of the new found opportunities for consolidation by testing the effects of M&As on profit, efficiency, market value and bank safety (defined as the probability of remaining solvent).

To investigate the motivation for consolidation and its impact on bank safety, Hughes et al. (1999) adopt an approach that synthesizes the production-based and market-value approaches to analyzing consolidation. In terms of production-based measures, this includes: expected profit, profit risk, profit inefficiency, and insolvency risk; market-value measures include the market values of: equity, assets, and inefficiency. The results of simulations show that when controlling for size and branch network, increased geographic diversity leads to greater efficiency and potentially higher asset value. When branching is allowed to expand without geographic restraint, a more extensive branching network is related to lower profit risk and insolvency risk. The results show that bank consolidation in the U.S. has not only improved banks' financial performance, but has also reduced the risk of insolvency in the banking system. This result provides banks with a significant economic incentive for consolidation, especially across regions.

Other research (Gorton, Kahl and Rosen, 2006) presents a theory that suggests the anticipation of a regime shift that would lead to value-increasing merger opportunities can lead to mergers. There are several important assumptions to this theory. First, managers of the firm derive value from its operations, in addition to the value of any ownership shares held. As a result, self-interested managers will have an interest in avoiding consolidation for fear of losing this value. Second, there exists the possibility that a shift in regimes will

lead to economies of scale, making larger targets more attractive merger options. Third, it is assumed that a firm can only acquire another firm that is smaller in size, as the acquisition of a larger firm is more difficult to finance. These three assumptions create an industry where a race to greater firm size takes place – either for defensive or positioning reasons.¹³ It is thus important to differentiate between a defensive and a positioning merger.

A defensive merger occurs when managers seek to stay in control of their firm, and thus decide to acquire other institutions to avoid being a target for acquisitions themselves. By using acquisitions to increase their size, a firm becomes less attractive as a merger or acquisition target by becoming larger than some rivals. This leads to the aforementioned acquisitions race, as firms that do not make acquisitions become more likely to become acquired due to their smaller size. In some cases, this may even lead to unprofitable defensive acquisitions.

On the other hand, a positional merger may allow an institution to make itself a more attractive target for future acquisitions and earn a takeover premium in the process. Although a larger firm is more difficult to acquire, due to economies of scale a larger firm actually becomes a more attractive target. In this event, only profitable acquisitions occur as any acquisitions that occur, take place with the goal of being in a wealth-creating acquisition in the future. Thus, being acquired generates an additional premium for shareholders of the firm and whether it is for defensive or positioning purposes, firm size is the driving force behind mergers in the presence of economies of scale. This “eat or be eaten” mentality could explain the motivation behind the rapidly increasing pace of consolidation in the banking sector.

¹³ Gorton et al. (2006).

The motivations for consolidation appear to be heavily contingent on the structure of the country's banking sector and its regulations. Consider the analysis of bank consolidation in the Japanese market since the 1990s. Hosono et al. (2007) identify taking advantage of a too-big-to-fail government policy and managerial empire building, along with the standard value-maximization and efficiency, as four reasons motivating banks to participate in mergers and acquisitions. This is in line with Hadlock et al. (1999), who used a sample of 84 bank acquisitions and a matched sample of banks that remained independent (not acquired) to analyze the impact of management incentives, corporate governance, and performance on the likelihood that a bank is acquired. They conclude that banks with higher levels of management ownership are less likely to be acquired because managers of the target institution are often forced to leave the organization following the acquisition, and because of the high rate of management turnover that follows bank acquisitions. This is the idea behind the entrenchment hypothesis, where managers with significant ownership positions in the target bank will attempt to block efforts to be acquired at a reasonable price.

When regulatory authorities are expected to abide by a "too-big-to-fail" policy, there is significant incentive for weak banks to consolidate with one another. This can allow bank managers to keep their positions in the bank and provide shareholders with gains from the value of deposit insurance by surviving through a merger. In some cases, the government may even persuade (or force) larger healthier banks to acquire unhealthy banks, while also giving weak banks incentives to consolidate with each other by offering recapitalization for consolidated banks. In the specific case of Japan, Japanese authorities first recapitalized banks in 1998 following the peak of the banking crisis, but did so only for

major banks and two large regional banks.¹⁴ This created the perception amongst banks that as long as they were large enough, they would receive government bailouts in the event of crisis. When the government is anticipated to follow “too-big-to-fail” and local market stabilization policies, unhealthy banks (or banks that have already been recapitalized by the government) tend to consolidate with each other.

If corporate governance structures are weak, then managers may seek out consolidation for the purposes of “empire-building.” Managers, who are also owners of the bank, may discover that it is possible for them to extract benefits, either financial or non-financial, by entering into merger or acquisition agreements. This leads to consolidation for empire-building purposes. This occurs more frequently in the presence of weak governance structures as managers are able to spend on activities designed to generate private benefit. The problem with these motives is that mergers and acquisitions that are driven by managers’ desires to extract personal benefits cannot realize efficiency gains, and will not be willing to downsize or face restructuring.

Finally, research by Dermine (1999) expands on these motivations for consolidation in the banking sector, reviewing eleven arguments that can be used to provide the economic justification for the global trend towards mergers and acquisition. The first five arguments deal with economies of scale, which refers to the reduction of per unit average production costs due to expansion. The next set of arguments presented in Dermine (1999) addresses the economies of scope motivations for consolidation, which refers to efficiency gained through cost reductions that are achieved by combining the production of multiple goods or services at a single unified outlet.

The five economies of scale arguments are: cost-based, brand-based, revenue-

¹⁴ Hosono et al. (2007).

based, safety net-based, and defence-based. Cost-based economies of scale is the standard argument presented above that cost efficiency can be achieved by lowering average unit cost by expanding a bank's service to a broader base. Brand-based economies of scale is considered a special type of cost-based economies of scale. The argument in this case is that through significant mergers and acquisitions, the bank can grow to a large enough size that will allow it to obtain brand recognition at a lower cost, potentially providing the bank with a future competitive advantage. Another argument for economies of scale is revenue-based, which deals with the size of banks. A bigger bank, with a larger capital base, will be able to underwrite larger loans or securities issues, which increases the demand for underwriting services. In the presence of integrated capital markets, size could be used to gain a competitive advantage on capital markets. Next, the safety net-based argument is the argument presented by the examination of bank consolidation in Japan. As a bank increases in size, it is more likely to garner "too-big-to-fail" status by regulatory authorities. This provides a bank with a competitive advantage by reducing the funding cost for any given level of capital and risk. Finally, the last argument presented under economies of scale refers to the defence-based argument discussed earlier in this section. By consolidating with others, it is possible for banks to achieve a size substantial enough that acts as a defensive measure against takeover. The problem with this, however, is that it can sometimes lead to unprofitable consolidation that increases inefficiency.

The four economies of scope arguments are: cost-based, sales (revenue)-based, and financial diversification-based. The cost-based economies of scope argument suggests that greater cost efficiencies could be achieved by offering a broader set of financial products or services to a customer base. This occurs when consolidation of two

banks allows different services to be provided from a single outlet, resulting in significantly reduced fixed costs. The next argument regarding economies of scope assumes an investor preference for purchasing all their financial products and services at one location. The sales-based economies of scope argument refers to the banker's hope of cross-selling new products to an existing customer base. Finally, the last argument regarding economies of scope is based on financial diversification. As evidenced from previous research presented in this section, when a portfolio contains imperfectly correlated risks, the overall volatility of profit is reduced. A reduction in the expected volatility of profit provides customers with an increased perception of bank stability. When a bank achieves an increased perception of stability, the necessary amount of capital is reduced and the bank is able to pursue other higher risk-higher reward opportunities without alarming their depositors.

Besides economies of scale and scope, there are three other arguments presented as the motivation for consolidation in the banking industry. These arguments consist of X-efficiency, market power, and the 'quiet life' (or hubris) hypothesis. X-efficiency refers to situations where banks are not operating at their maximum cost efficiency, given a certain level of output. This high cost structure argument is often considered the primary reason for domestic mergers, and can be partially attributed to overlapping branch networks of competing banks. When two banks enter into a merger agreement, they are able to coordinate cost reductions in their branch network by reducing the number of branches, without having to close a bank altogether. The market power argument is straight forward, as some banks will merge or make acquisitions to increase the concentration of banks and financial institutions in the market. By increasing market concentration, market power could increase, which in turn would allow banks to charge higher fees for their financial

services in order to collect higher margins. The 'quiet life' (or hubris) hypothesis, also suggested by Berger et al. (2007), is the argument presented in the examination of consolidation in the Japanese market that suggests self-oriented managers may try to capture higher profits generated by economies of scale or market power. This can be in the form of higher managerial salaries, increased perks, or reduced risk. Under this hypothesis, consolidation is driven purely by corporate hubris at the expense of some performance.

The motives for consolidation presented in this section provide a background for the analysis of the consequences of consolidation examined in the next section. The following section discusses the impact of mergers and acquisitions on the competitive forces of the banking industry. Changes in the competitive dynamics also have further reaching implications on the efficiency and stability of the entire financial sector. The resulting implications for stability and efficiency may provide justification for either regulation or deregulation of mergers and acquisitions.

4. Consequences of Consolidation: Impact on banks and the financial sector

With the rapid trend towards consolidation in the financial sector, considerable research has been conducted to determine how market concentration and competition in the banking industry impacts bank performance. The function of banks is crucial to the economy as they are responsible for providing firms and consumers with the financial services necessary to contribute to the economy. Among their functions, banks serve as a means to hold and exchange financial assets, act as an intermediary to redirect saved funds into productive investments through the provision of credit and also serve to enable

risk-sharing.¹⁵ By serving these functions and acting as the key decision makers, banks play a vital role in capital allocation and fostering economic growth.¹⁶ This section analyzes the impact of consolidation on the performance of banks, on competition and efficiency in the market, and on financial stability and fragility of the economy.

In terms of bank performance, one of the first benefits of consolidation (from the banks' perspective) is the resulting gain in market power that occurs due to increased market concentration. Among large institutions where their pre-merger markets overlap, consolidation may result in significant increases in market concentration.¹⁷ If the merging institutions are large enough, increased market concentration could sufficiently reduce competitive forces and allow consolidated banks to exert market power, resulting in increased profits via higher prices to customers for any given level of services. Carletti et al. (2002) argue that if competition and regulatory authorities follow a permissive regime towards consolidation, the entire financial system could be exposed to greater liquidity risk while also creating competition problems.

On the other hand, there exists plenty of research which suggests that increased concentration in the banking industry does not result in anticompetitive pressures. After estimating the Lerner indexes, which serve to measure a firm's market power, for several geographical markets within the Italian system, the results of Angelini and Cetorelli (2003) offer no indication that consolidation leads to any long-term decrease in competitive forces. Their research found that the Lerner indexes are relatively unchanged leading up to 1992, and decline thereafter. This suggests that there has actually been an increase in competition across the Italian banking sector after 1992. While little empirical evidence

¹⁵ Northcott (2004).

¹⁶ Berger et al. (2004).

¹⁷ Berger et al. (1999).

exists, the estimations conducted by Angelini and Cetorelli (2003) have led them to suggest that mergers and acquisitions actually lead to greater bank efficiency and that these gains have been passed on to customers. These changes in the Lerner indexes suggested that the Single Banking License introduced to the market in 1993 had a noticeably favourable impact on competition in the Italian banking industry. Similarly, Yildirim and Philippatos (2007) find that banks in the restructured Latin American banking system operate under the conditions of monopolistic competition where increased concentration does not necessarily result in decreased competition and monopoly rents. At the same time, some studies (see Beck et al. (2005)) have shown that there is no support for the argument that increased concentration increases the fragility of the banking system and that the probability of severe crises is much lower in more concentrated banking systems. Concentrated banking systems have banks that are more diversified (less risky) and thus have a lower probability of failure. The research also shows that regulations and institutions that enhance competitive forces improve the fragility of the banking system. These two results suggest that market concentration may not be a good measure of competition in the banking industry.

Rather than use market concentration as a proxy measure for competition, measurement of competition can be performed using one of two approaches – either structural or non-structural. The structural approach follows the Structure-Conduct-Performance (SCP) and efficiency hypothesis models in order to measure competitiveness in the market. The SCP model examines whether a market that is highly concentrated causes collusive behaviour among larger banks that results in enhanced market performance, while the efficiency hypothesis seeks to determine whether the greater efficiency of larger banks is the causal factor in improved performance. Non-structural

models for measuring competition were developed in response to the deficiencies of the structural approaches and instead test competition and the use of market power, while focussing the analysis on bank behaviour when these structural measures are not present and ignoring the impact of concentration.

Claessens and Laeven (2004) suggest that being open to entry is the most important competitive pressure facing the financial industry. Their research finds no evidence that concentration in the banking system is negatively associated with competition and instead finds some evidence that a more concentrated banking system is more competitive. These results suggest that having a system that is contestable may be more important to assuring competitiveness than having a less concentrated system.

Addressing the issue of risk, Furfine and Rosen (2006) argue that despite offering substantial opportunities for diversification, consolidation does not appear to move acquirer shareholders into a better risk-return trade-off and that mergers are even associated with increases in default risk. This occurs particularly when the merger is financed by stock, which leads to larger declines in the market value of the acquirer. Other research regarding the issue of risk shows that consolidation in the banking industry could increase the liquidity of bank assets for the post-merger institution. It has been thought that increasing a bank's ability to sell assets should make it less susceptible to liquidity shocks resulting in reduced risk and transference of risk out of the banking industry. However, Wagner (2007) argues that this ignores that banks may alter their behaviour when faced with increased asset liquidity. By making it easier to sell assets in the face of a crisis, increased asset liquidity also makes crises less costly for banks, which in turn could lead to the adoption of new risks. These risks often exceed the benefits of asset liquidity and thus make the financial system less stable.

Consolidation can also result in increased or decreased efficiency. By entering into mergers or acquisitions, banks may be able to achieve economies of scale or scope, or improve their risk-to-expected return. The latter may be of particular importance because of the possibility of diversification gains that can be achieved by investing across varying regions and industries. By reducing the risk of costly problems such as financial distress, bankruptcy and loss of value, shareholders' wealth can be increased by taking advantage of diversification gains. While value gains from market power are achieved by manipulating prices, efficiency gains are achieved by manipulating the input/output mix in order to reduce costs or risks, or to increase revenues.

Campa and Hernando (2006) argue that most of the performance gains achieved post-merger stem from the opportunity to cut costs by eliminating overlapping operations and consolidating backroom operations. Their results support the argument by Pilloff and Santomero (1997) that shows the process of mergers and acquisitions leads to a wealth transfer, from the bidder to the target, rather than shareholder wealth creation. However, other studies of post-merger performance rarely find that increased size through consolidation actually results in the realization of significant efficiency gains (Altunbas and Ibáñez, 2004). It is possible that this is because some efficiency gains, those derived from cost reductions or other scope economies, take time to develop.

In addition to efficiency and market power consequences, consolidation also has an effect on the availability of financial services to small customers. Generally, after a merger or acquisition takes place, the availability of services to smaller customers is reduced. In some cases this could be an additional exertion of market power by the consolidated firm, which directly reduces the availability of services to customers by closing selected branch offices. In other cases this could be the result of efficiency improving motives by closing

branches that have become redundant due to the merging of two branch networks.

Carletti et al. (2002) argue that fears of a collapsing small business credit supply following consolidation seem to be overstated, as competitive forces lead to the partial replacement of lost lending. A similar result is obtained by Craig and Hardee (2007), who suggest that when banking consolidation results in a larger share of banking assets to be held by the largest banks, there is a substantial reduction in access to credit among small businesses, which are then forced to go outside the banking industry to find alternative sources of lending. The reduction in credit supply and accompanying decrease in credit availability to small businesses has harsh implications for new business formation.

As a consequence of the reduced access to credit, Francis et al. (2008) find that the consolidation of banks in the United States is negatively related to the rate of new business formation in the short-run. When separating the results based on the size of the initiating bank, this negative relationship is largely due to mergers and acquisitions that are initiated by large acquirers, while consolidation among small or medium sized firms actually has a positive impact on new business formation. However, when the long-run effects are examined, consolidation by large, local acquirers has a significant positive impact on new business formation in local markets, which suggests that it takes some time for the benefits of mergers to be passed on to small new customers.

With regards to financial stability, there has been a long held view that market power is necessary to ensure stability, while competition is necessary to ensure efficiency, and consequently economic growth. This gives rise to the traditional view that there is a trade-off between efficiency and stability. Many studies have been conducted to determine whether there exists a trade-off between efficiency and stability, however, it remains ambiguous that such a trade-off exists. By using various models of competition and

financial stability to examine the potential trade-off, Allen and Gale (2004) find that in many cases the assumption of such a trade-off often does not hold.

Koskela and Stenbacka (2000) present the argument that introducing lending rate competition does not exhibit any characteristics of a trade-off between competition and financial fragility. They argue that the introduction of competition into the lending market will lead to lower interest rates. Since enterprises gain access to credit at a lower cost, this would lead to increased project investment. In addition, they contend that lower lending rates will decrease the probability of default – even with the expansion of investment. Based on these two findings, Koskela and Stenbacka (2000) conclude that, given their framework of fully debt-financed projects, there is no trade-off between competition and financial fragility.

There are many arguments regarding the impact of mergers and acquisitions on the stability of the financial sector; however, no absolute relationship has been established between consolidation and bank (or systemic) risk.¹⁸ Carletti et al. (2002) argue that given a certain set of conditions, a consolidated banking sector would lead to a more stable financial sector, while another set of conditions would lead to a more fragile financial sector. For consolidation to be stability enhancing, the result of market concentration must be market power that does not provide any incentives for excessive risks, and leads to diversification gains without causing the bank to compensate by taking on new risks. If consolidation instead leads to more significant “too-big-to-fail” problems, organizational diseconomies, or reduces the costs of risk taking, the result is decreased financial stability.

The motivations and consequences of consolidation provide a foundation for examining the role of bank mergers within the financial sector. During a time of financial

¹⁸ Carletti et al. (2002).

crisis, the role of banks is crucial and consolidation can result in various implications for the economy. The role of mergers and acquisitions among banks when dealing with a financial crisis is discussed in the next section.

5. Dealing with Financial Crisis: The role of mergers and corporate governance

When a financial crisis takes hold, there is often a substantial slowdown (maybe even a recession) in economic growth, which results in significant losses of wealth, decline in asset prices, capital flight and instability in the financial system. When such a situation arises, regulatory authorities must act swiftly to limit the damage and resolve the crisis. If the crisis escalates, the result is often a liquidity crisis in which banks have a significantly reduced capacity to turn assets into cash; or have a portfolio that lacks an adequate amount of assets that have the same capacity. If a liquidity crisis occurs, this often requires restoring confidence in the payments system, and the banking industry as a whole. As the crisis begins to intensify and spread, the weak financial system, significant uncertainty and the limited access to private capital lead to the fear that failure among banks will become a substantial problem. Thus, governments often respond by developing programs for the recapitalization of banks and restructuring of the financial industry, allowing them to counteract the damage to economic growth and wealth. Restructuring policies for dealing with bank failures can be broken down into two broader categories: financial or operating restructuring.

Financial restructuring is used to implement policies that focus on immediate relief of the financial crisis by maintaining banks' liquidity and restoring consumer confidence in the banking system. Operating restructuring serves a different purpose that involves policies focused on medium-term changes. These policies generally aim to improve the balance

sheets of banks that remain open, while ensuring that the closure of insolvent banks is done efficiently (Tanaka and Hoggarth, 2006).

When the systemic crisis intensifies and increases in severity, particularly in the case of a liquidity crisis, banks suffer significant and sustained damage to the quality of their capital asset base. As the asset base shrinks and capital ratios become inadequate, banks are essentially left with three potential sources of capital to remedy the situation in an attempt to ensure their survival. Banks can turn to existing shareholders for a major capital infusion, turn to the government's regulatory authority for the provision of public funds, or obtain capital through new shareholders via a sale process.

The government provision of aid through public funds is necessary to strengthen bank capital and re-establish banking and payment services. Along with financial and operational bank restructuring, the provision of public funds serves to restore consumer confidence in the banking system, reduce the presence of uncertainty, expedite the resolution of the banking crisis and promote economic recovery (Enoch et al., 2001). In a time of systemic crisis, public funds are often used to make payouts to depositors of banks that have been closed, to reward banks that agree to accept deposit transfers, to facilitate a merger or an acquisition, to help in the recapitalization of banks, and to restructure their assets.

In times of crisis, capital injections from new shareholders often refers to consolidation by selling assets to banks that have managed to remain healthy. This generally occurs after the government has provided the bank with initial capital support and the bank has been stabilized. The experience of the Asian financial crisis during 1997-1998 demonstrated that small banking institutions are far more vulnerable to liquidity shocks than their larger counterparts, thus requiring them to maintain a high level of capital

(Sufian, 2004). Following a significant escalation in the severity of the financial crisis, governments will undertake stronger measures to increasingly promote (and force) banking institutions to merge in order to reduce the potential impact of bank failure risk. Since the primary goal of the regulatory authority is to maintain the systemic stability of the entire financial sector, bank mergers are often used to resolve situations of financial distress. Thus, mergers and acquisitions in the banking sector can play a vital role in stabilizing the economy and restoring confidence to the banking system.

Elsas (2004) suggests that forcing a merger to recapitalize a bank could result in a decreased likelihood of bank failure, thereby avoiding the risk of a run on bank liquidity. By merging a failing bank with a healthier bank the risk of failure is reduced, and the reorganization of the failing bank may result in greater efficiency. However, research also indicates that consolidation between two failing banks can be beneficial, provided that asset diversification sufficiently reduces credit risk and decreases default risk. The results from examining the German savings and cooperatives sector found evidence of strong diversification gains, which may provide the justification for using bank mergers as a tool to resolve the financial distress of failed or troubled banks and at the very least show no evidence of damaging systemic stability.

Contrary to this, it is also possible that distress mergers might lead to higher deadweight costs and cause the attempted reorganization to fail. Shih (2003) argues that, using a model adopting the characteristics of the Asian crisis, bank mergers in a situation of crisis do not necessarily reduce bankruptcy risk. Regulatory authorities are most likely to force bank mergers during times of crisis and when financial institutions suffer from severe stress. Under these circumstances, when a failing bank is merged into a healthier bank, the resultant post-merger institution is often more likely to fail and the banking sector

crisis could escalate, as diversification could actually result in worsening default risk.

One example of a government-led, post-crisis reform can be found by turning to Indonesia. After the Asian financial crisis of the 90s, in early 1998 the minister of finance established the Indonesian Bank Restructuring Agency (IBRA). The objective of this agency was to restore banks' financial health by taking over non-performing loans and to restructure the banking sector. By examining the capital adequacy ratios for all banks, IBRA classified each commercial bank into one of three categories: either a bank to be closed, a bank to be restructured, or a bank that will continue to operate as it was. For banks that needed to be restructured, two options were considered – capital injection by the government or nationalization. For banks that received capital injections, 80% of the necessary capital was provided by the government with the remaining 20% coming from bank owners.¹⁹

It was feared that the closure of some major private banks would have severe consequences on the entire financial sector, and as a result, these banks were nationalized by government. These nationalized banks were merged into a fewer number of banks to reduce the number of insolvent banks and to lessen the burden of recapitalization on government. After the mergers of these banks were completed, the government provided the newly consolidated banks with a fresh injection of capital. All state-owned banks were also subjected to the consolidation process and provided with new capital from the government.

Mergers are often thought to play a key role in crisis recovery, as they can be used to consolidate with institutions that have been victimized by bank runs but would otherwise survive given some reorganization or infusion of capital, and also allow banks to diversify

¹⁹ Sato (2003).

their asset base. Provided that diversification leads to efficiency gains or risk reductions, mergers could serve to provide stability to the financial system and dampen the severity of crisis. Diversification of capital removes the dependence of a bank's assets on any single industry, region, or country and makes their portfolios less susceptible to localized shocks. Second, by being more diverse across regions and borders, banks can reduce their vulnerability to bank runs by using unaffected branches in non-local regions as a lender of last resort. In order to ensure that this improves the stability of the financial sector, it is essential that a strong environment for institutions is in place, prudential regulation and supervision is well-developed, and the macroeconomic environment is relatively stable (Montreevat and Rajan, 2001).

Financial sector reform is essential to a country's recovery from a financial crisis, however financial sector restructuring alone is not always sufficient. After the credit boom and bust led to the collapse of the baht, the arrival of the IMF in Thailand prompted the process of both financial and corporate sector restructuring. The plan to restructure the financial sector involved three key objectives (Kawai and Takayasu): to heal struggling financial institutions, to strengthen the structure of the financial sector, and to enhance the regulation and supervision of institutions in the sector. In addition to these financial sector reforms, the plan also focussed on the corporate sector to help restore financial sector health. Thailand's corporate reform sought to accelerate the restructuring of corporate debt, strengthen corporate insolvency procedures, and reform corporate governance.

In October 1997, Thailand's plan for restructuring the financial sector was announced, aimed at bringing the country's financial system closer to international standards. The first measure included in the strategy was the establishment of the Financial Sector Restructuring Authority (FRA) and the Asset Management Corporation

(AMC) in order to provide a framework for dealing with non-performing loans held by financial companies and for rebuilding the financial system. More specifically, the role of FRA was to order the recapitalization or merger of institutions suffering from inadequate equity or cash flow problems, to provide guarantees for deposits and loans, to stabilize the payments system by investing in finance companies, to ease the restrictions regarding foreign ownership of financial institutions, and to liquidate the assets of institutions that are unsalvageable. The role of AMC, on the other hand, was to deal in the assets of failed financial companies. This involved purchasing, managing, restructuring and selling these assets and to acquire the assets that went unsold through the FRA bidding process.

With the hopes of restoring stability to the banking sector, the Bank of Thailand decided to mandate the recapitalization of undercapitalized financial institutions and fully liberalized foreign equity investment in financial institutions. The regulatory authorities later also announced that they would introduce international standards for loan classification and provisions rules, establish a policy for deposit insurance and amend bankruptcy law for expediting foreclosures; with the goal of strengthening the financial system.²⁰ However, the financial system continued to deteriorate and in 1998 a new plan was established involving the accelerated consolidation of banks and financial companies through additional interventions from the Bank of Thailand and proposed mergers.

During this time, the financial position of the corporate sector also deteriorated. The crisis in Thailand was largely driven by the private sector and thus corporate debt restructuring became a necessity. Charoenseang and Manakit (2002) argue that corporate debt restructuring was essential for dealing with the excessive amount of non-performing loans, as the lack of good governance practices among debtors was the main cause of this

²⁰ Kawai and Takayasu.

problem. In order to restructure corporate debt, several legal, regulatory and supervisory reforms needed to be implemented.

At the time of the crisis, corporate debt in Thailand had been characterized by many small loans to small and medium-sized enterprises. In order to deal with this debt and facilitate voluntary corporate restructuring, the government established the Corporate Debt Restructuring Advisory Committee (CDRAC) and developed the Framework for Corporate Restructuring. This process allowed debtors and creditors to engage in voluntary negotiations to restructure debt. To encourage both debtors and creditors to take part in negotiations, the Bank of Thailand worked with several other departments and agencies to provide tax exemptions and to reduce land-transfer fees for those who successfully restructured their debt.²¹

This was not limited to Thailand, as poor governance was largely attributed for the weaknesses in the financial and corporate sectors throughout the East Asian economies. Evidence of poor governance could be found in the relationships between governments, financial institutions, and corporations; the inadequate disclosure requirements; and the spread of corruption and cronyism (Haley, 2000). As a result, reform plans included anticorruption and competition policies to improve market discipline and corporate governance. The ultimate goal remained to transform the entire corporate culture by increasing transparency of economic and financial data, strengthening corporate disclosure requirements, improving accountability to shareholders, privatizing public corporations and removing state-supported monopolies and cartels.²²

There are essentially three broad approaches for engaging corporate debt

²¹ Charoenseang and Manakit (2002).

²² Haley (2000).

restructuring: centralized, decentralized, and London. The centralized approach is most effective when dealing with small debts and simple institutional structures. Since this approach involves significant intervention driven by government, it is necessary that stakeholders have a high level of confidence in the government. The decentralized approach is quite the opposite as it revolves around voluntary restructuring agreements reached by the relevant stakeholders. This approach is most effective when debts are large and the corporate structures are complex. Finally, the London approach falls between these two extremes, and involves indebted firms collaborating with a government institution. In order to employ the London approach and to achieve the desired agreements, all stakeholders must have strong confidence in the mediating institutions.

The approach taken by the Asian countries in response to the financial crisis most closely resembles the London approach. As described above, Thailand established an out-of-court system to restructure large corporate debts; a system that was similarly implemented across all of the other Asian countries dealing with the crisis. Tax incentives were introduced, while policy makers improved conditions to facilitate mergers. All the countries also improved their domestic bankruptcy laws to protect creditors' rights and to discipline managers. Policies also aimed to reduce ownership concentration, increase market competition, reduce government monopolies, improve minority shareholders' rights, and increase the transparency of financial reports and transactions.²³ The problem for the Asian countries, however, was that they lacked a government institution that was considered to be highly credible along with that absence of mutual trust between financial institutions. Recent years have seen improvements in this situation as financial institutions and corporations have both become more confident in the government's ability to

²³ Haley (2000).

orchestrate the corporate debt restructuring effort.

The research presented in this section demonstrates that the traditional approach to relieving financial crisis is no longer sufficient. Both financial system restructuring and improvements to corporate governance are necessary to further a country's recovery from financial crisis. In the case of the Asian crisis, several changes need to be made to improve corporate governance. Governments must focus on reforming regulation and supervision to transform the entire corporate culture among both financial institutions and indebted corporations. To eliminate the negative corporate governance practices, steps must be taken to improve transparency and disclosure requirements, and ensure that there is a clear accountability among institutions to shareholders.

Together with the causes and consequences of mergers and acquisitions, the roles of consolidation and corporate governance in dealing with financial crisis provide a basis for determining the optimal regulation policy for the banking sector, which is discussed in the next section. Section 6 addresses how the banking sector in Canada should be regulated based on the current characteristics of the market. Following a discussion of the optimal regulatory structure for the Canadian financial system, this paper addresses how regulatory reform should be used to stabilize the current financial crisis.

6. Optimal Banking Structure: Summary and Conclusions

With the financial system in crisis, questions on how to regulate the financial sector have rushed to the forefront of research. Dale and Wolfe (2003) state that any framework for the regulation of financial institutions must take several issues into consideration: consumer protection, moral hazard, market integrity and systemic risk. Regulatory policies must take special care to avoid restricting bank competition, which means staying away

from regulation that acts as barriers to foreign participation, and directly control banking resources. Bhattacharya et al. (1998) argue that there should be no regulations that restrict the size of banks directly, only regulation that limits market power. Benston (2000) and Benston and Kaufman (1996) argue that the only justification for regulation of the banking sector is to deal with the moral hazard created by deposit insurance. The use of deposit insurance distorts the behaviour of lending institutions, resulting in greater bank risk and taxpayer liabilities, and allows banks to hold insufficient levels of capital. This makes minimum capital requirements the only acceptable form of regulation.

Vives (2001), in the context of the European monetary union, argues for complete restructuring of the financial sector in order to preserve financial stability. This involves the creation of a central bank to act as lender of last resort and an optimal regulatory policy for merger control that involves both the banking regulatory authority and the competition authority making joint decisions on merger proposals. This essentially breaks down to the adoption of a regulatory framework that resembles what has already been established in the Canadian banking industry.

In Canada, the Bank of Canada has been established for decades, following the Bank of Canada Act in 1935, and has long been serving as the lender of last resort; the Office of the Superintendent of Financial Institutions (OSFI), whose authority is established under the Bank Act, serves as the regulatory authority for banking; and the Competition Bureau of Canada (CBC) acts as the competition authority. For any merger proposals that arise, it is the responsibility of OSFI to examine the implications on the safety and soundness of the financial system, while the CBC examines the potential changes in market power, and their impact on Canadians.

Due to the limited number of major banks in Canada, and the fact that all of

Canada's major banks operate in a large, overlapping nationwide branch banking system, the problem of market concentration and market power is of a particular concern. It was this concern that provided the basis for the Minister of Finance's decision in 1998 to block two megamerger proposals among four of Canada's *Big Five* banks. An examination by the Competition Bureau of Canada determined that these mergers could not be accepted for three reasons. First, allowing these mergers to be completed would have resulted in a significant reduction in competition, as the Canadian market would have been left with only three major national banks. The second reason the merger was unacceptable was because it would have resulted in the significant concentration of economic power among few, very large banks. Finally, the third reason for rejecting the proposed mergers was based on the government's concern that these mergers would reduce the government's policy flexibility to resolve any potential future crises.²⁴ It was determined that these merger proposals were not in the best interests of the Canadian public, and had to be rejected in order to ensure that the market remained competitive and that the financial system remained sound and stable.

Domestically, the Canadian banking industry has reached very high levels of market concentration, among the highest in the world, while still functioning efficiently. At the same time, the Canadian financial sector has remained highly competitive and the banking industry has been a standard for soundness. Canada's history of a branch banking system has provided banks significant opportunities to diversify their portfolios and attain higher levels of efficiency through reductions in risk. As a result, the Canadian banking system could serve as a model for other systems.

The optimal regulatory structure for the banking system must ensure that the system

²⁴ Department of Finance Canada (1998).

maintains both a high level of efficiency and competition while remaining stable. The research above shows that market concentration is not necessarily attached to anticompetitive pressures, thus it may not be necessary to regulate against the consolidation of banks and other financial institutions. However, in the case of Canada, where market concentration is already so high, any further consolidation among the largest financial institutions (*Big Five*) may lead to substantial increases in market power, and could allow banks to capture monopoly rents. Thus, it remains optimal to prevent mergers among the largest banks; however, consolidation among other smaller financial institutions should be allowed to continue. It is also important that the banking system remain contestable by allowing foreign bank participation. This is a more recent trend in Canada, which has served to increase competition throughout the financial sector. There is no perfect model for how the banking system should operate, but the ideal system would ensure the presence of competition, regardless of market concentration; curb moral hazard, through the necessary regulations; and ensure the stability of the entire financial sector.

This is where the American banking system failed. Deregulation of the banking sector led to massive waves of consolidation, and as a result bank holding companies began rapidly increasing in size, leading to the perception among managers that some financial institutions had become “too-big-to-fail.” As a consequence of this perception, these financial institutions began to pursue riskier lending practices. Many banks and other financial institutions opted to significantly increase their leverage ratios in order to increase their return on equity by taking advantage of increasing asset prices.²⁵ Lenders proceeded to facilitate the lending process, making it easier for consumers to borrow funds. The

²⁵ The Economist (2008).

increased ability to access new credit slowed the flow of money and adversely affected new economic growth and the market for assets. As a result, many financial institutions were left holding mortgage-backed assets that had lost a significant amount of their value, while being unable to earn the funds necessary to pay for the loans. This caused a severe depletion in their reserves, and further restricted their credit and their ability to extend new loans.

In particular, the cheap availability of credit led many consumers to take on significant mortgages, which they would otherwise be unable to afford, so that they could make purchases based on speculation. The increased demand led to substantial inflationary pressures.

This type of pressure, however, does not last forever. Thus, when the housing market lost value, both households and investors were no longer able to turn around and sell homes for quick profits and adjustable rate mortgages adjusted upward. When consumers' adjustable mortgages finally adjusted, many borrowers defaulted on their loans, and banks were faced with a liquidity crisis. It was noted earlier that banks serve as the driving force behind economic growth via its role in providing credit and capital allocation. When a liquidity crisis strikes, this process not only halts, but reverses as banks see their capital bases shrink and banks are forced to tighten their lending practices in order to save their capital reserves. The process leads to the downward spiral evidenced in the United States, where the crisis now takes the form of a liquidity problem, a solvency problem, and a macroeconomic problem.

The question then, is how to fix the system and correct for these problems. Stiglitz (2008) suggests a five-step approach for dealing with the crisis. The first step involves the recapitalization of banks. With most banks riddled with losses, there is insufficient equity in

the system. Thus, banks need government help to raise equity levels; however the government should only provide this service in exchange for a controlling stake in the firms that receive aid. Secondly, the government needs to take measures to reduce foreclosures. The third step requires a stimulus package that helps the entire economy in the face of a recession. This requires providing aid to financial institutions and stopping foreclosures, as well as massive investments in infrastructure – to stimulate the economy in the short-run, and foster long-run economic growth. The fourth step involves a restoration of confidence to the banking system through regulatory reform. This involves changing how the financial system is regulated, as well as revising flawed management reward structures. Finally, the fifth step involves the creation of a single multilateral regulatory agency for the global banking industry.

The financial sector and the banking industry in particular, will always be subject to institutional failure, panics and systemic crises. The objective of regulation is to reduce the likelihood of such crises, and to limit their impact when they do occur. The research conducted in this paper shows that complete deregulation of the financial sector leads to a competitive and efficient system, but that it also results in a banking system that suffers from problems of moral hazard leading to practices that are excessively risky. In some cases, the consolidation wave has led to institutions that have become “too-big-to-fail,” thereby perpetuating the problem of moral hazard by further allowing these institutions to engage in riskier behaviour. By opening itself to excessive risk, the banking industry becomes far too vulnerable and financial stability begins to degrade. Thus, the goal of the regulator should be to use regulation to reach a balance between competitiveness and stability. Regulation needs to focus on mitigating the risks taken by financial institutions and protect stakeholder finances and interests, while staying away from restrictive

regulation that limits competition. In addition, regulators need to provide an institutional framework that ensures good governance practices that reduce problems of excessive risk-taking behaviour are followed. By reducing risk, financial institutions are forced to remain more judicious, and regulations can serve to protect financial institutions from another crisis, rather than simply allowing banks to rely on the provision of a significant financial bailout package in the aftermath of crisis.

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