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The Great Canadian Oligopoly: A Comparative Approach to Controlling the Shadow Banking Industry

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Introduction

Though the causes of the 2007–2008 financial crisis were numerous, perhaps none were as unprecedented as the rise of the shadow banking industry. Technological innovation, deregulatory trends in domestic and global financial governance, and an unquenchable thirst for yield all contributed to an explosion of credit intermediation that took place outside traditional banking in the United States and elsewhere. Operating outside public oversight, shadow banks drastically increased systemic risk, ultimately undermining the entire global financial system. This trend, however, did not affect all countries equally; some countries, including Canada, found themselves considerably less exposed to the collapse of the shadow market. The United States, by contrast, served as a breeding ground for these institutions.

While Canada is by no means immune to the risks posed by the shadow banking sector, the market structure of its banking system and the centralized nature of its regulatory regime has served to reduce the importance of shadow banking in Canada as compared to other countries, the United

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States in particular. In view of Canada's relatively mild experience during the 2007–2008 crisis, this paper seeks to identify how the oligopolistic nature of banking in Canada, and the concentrated regulatory regime that oversees it, mitigated both the size and scope of the shadow banking sector and reduced the systemic risk posed by such institutions in the lead-up to the crisis. In contrasting this approach with that of the United States, where financial institutions and regulatory agencies are far more decentralized, it is clear that the Canadian approach is better suited to contain the risks posed by shadow banks.

As the crisis unfolded, Canadian banks remained relatively stable. There were no bailouts or government-negotiated takeovers and retail deposits remained stable, allowing banks to maintain a crucial source of liquidity. Canadian banks also did not experience the spike in overnight funding costs seen in other markets, nor did they suffer the heavy losses felt by their American counterparts (Arjani and Paulin 2013, 1–3). Though the market for asset-backed commercial paper collapsed in Canada, as elsewhere, the resilience of other markets blunted the impact of this event.

Given the increasing integration of financial markets and the growing ability of contagion to shift domestic panics into international crises, the nature of domestic markets and regulations necessarily has a significant impact on the international financial system as a whole. As such, attempts to stabilize global financial markets necessarily involve domestic policy reforms and structural change. Thus, this paper seeks to demonstrate a means through which domestic markets may become less subject to certain forms of systemic risk, namely the proliferation of shadow banking, which in turn increases stability of the global financial system as a whole.

The first section provides an overview of shadow banking. It will discuss which institutions can be defined as "shadow banks," the purpose they serve within the financial system and the role they played in the 2007–2008 financial crisis. The second section discusses the role market structure plays in determining the size and scope of the shadow banking sector by contrasting the Canadian and American banking models. Canadian banks are chartered at the federal level and the largest securities dealers are subsidiaries of the largest banks. Thus, nation-wide branching systems have emerged in Canada, providing banks with an enormous deposit base from which to draw funds. The American system, conversely, is much more regional and fragmented, necessitating a more active wholesale funding market.

The third section reviews the regulatory frameworks employed by these two countries and their effectiveness in limiting vulnerabilities caused by

the proliferation of shadow banking activity. In Canada, financial services firms are regulated by the Office of the Superintendent of Financial Institutions (OSFI). With a broad, flexible mandate and a responsibility to ensure the stability of organizations as a whole, OSFI leaves little room for the creative regulatory arbitrage that plagues the United States. The American system, meanwhile, is fragmented into a dozen or more highly specialized agencies, with none overseeing organizations involved in several areas of finance top-down, allowing for banks to "shop" for their regulators and use creative corporate structure techniques to skirt prudential oversight.

The final section discusses the implications these two countries' approaches have for the systemic risks posed by shadow banks in order to identify both factors that insulated Canada from the worst of the financial crisis and aspects that could be adopted by other countries to reduce systemic risk in the global financial system. With a nation-wide branching system and the consolidation of commercial and investment banking, the Canadian system reduces the necessity for a large wholesale funding market, potentially reducing systemic risk in the banking industry. By consolidating oversight, regulators can see the entire "puzzle", allowing them to evaluate the health of entire organizations to better anticipate issues that may arise. Both factors are essential to the relative stability of the Canadian financial system; the interaction between the two increase stability far beyond what would be achieved with just one.

Shadow banks, or rather the activities generally undertaken by shadow banks, do not *in themselves* pose a major systemic risk to the financial system,[1] but allowing these activities to take place predominantly outside the scope of regulators is highly problematic. By expanding the scope of activity undertaken by conglomerates primarily engaged in commercial banking and both broadening and consolidating the authority of the agencies that oversee them, the systemic risk posed by the shadow banking sector can be contained. Though strengthening explicit regulations is no doubt important, this paper aims to demonstrate that market and regulatory concentration can reduce systemic risk irrespective of the rules imposed upon institutions. There remain substantial questions regarding moral hazard and accountability given an oligopoly of systemically important financial institutions as well as the economic value of certain forms of derivatives trading undertaken by these institutions (and their shadow counterparts), but these are beyond the scope of this paper.[2]

What Are Shadow Banks and What Purpose Do They Serve?

In a 2012 speech, former U.S. Federal Reserve Chairman Ben Bernanke defined shadow banks as institutions or markets that provide financial intermediation much like banks, but do so outside the scope of traditional regulation. Among his examples were money market mutual funds, asset-backed commercial paper (ABCP) markets, investment banks, and mortgage dealers.[3] Much like traditional deposit-taking banks, these institutions provide credit intermediation services, making loans and borrowing short-term to fund long-term investments. The essential difference is that the former does so under clearly-defined supervisory structures and with the guarantee of government-sponsored deposit insurance, while the latter is pursued either through off-balance sheet activities of regulated banks or by institutions that are subject neither to explicitly prudential regulation nor insurance for their creditors. In essence, "banks" are financed primarily through *retail* funding, while "shadow banks" are financed primarily through *wholesale* funding.

Banks traditionally borrow short-term by using their clients' liquid deposits and lend long-term to finance mortgages, business investment, consumption etc., charging interest on these loans to generate profit. The originate-to-distribute model, which emerged in the 1970s, began to break this pattern down. Under this model, banks create loans which are then securitized and distributed. Investment dealers or off-balance sheet structured investment vehicles (SIVs) pool these loans and sell them to investors or other SIVs with varying risk appetites (Pozsar 2008, 13). In theory this system should distribute risk to those with the greatest appetite for it, though as the recent crisis demonstrates, the complexity of the securities and the opaqueness of the institutions that sponsor them pose challenges to properly evaluating their risk. In June 2007, shadow bank liabilities stood at $22 billion USD compared to $14 billion USD for traditional banks (Pozsar et al 2013, 6).[4]

In addition, as Adrian and Shin (2009) point out, the majority of these risks were not necessarily passed on to final investors leading up to the crisis, but rather were contained within the banking system itself. Loans were securitized by non-bank financial institutions and sold to other non-bank institutions, who could purchase credit default swaps (a form of insurance against the default of assets underlying asset-backed securities) from a third set of non-bank financial institutions to insulate themselves

from any perceived risk. These non-bank intermediaries, shadow banks, were operating outside the reach of regulators and, as such, could borrow on extremely short-term ABCP markets to fund illiquid long-term investments, with asset-liability ratios far beyond the capital requirements imposed on deposit-taking banks.

Prior to the financial crisis this activity was often undertaken through conduits and structured investment vehicles (SIVs) (Pozsar 2008, 16). A conduit is an entity that purchases or creates loans, generating profit by pooling these loans and selling them to investors (Elmer 1999, 27). An SIV is a pool of assets, typically financed short-term, designed as an off-balance sheet entity (Das and Kim 2016, 1–2). Many of these entities were sponsored by banks, but as they were off-balance sheet, the risk they posed to the financial system went unnoticed in the lead-up to the crisis. In addition, the credit default swaps purchased by SIVs and other entities to hedge against their securities were likewise often produced by such off-balance sheet entities.

As these institutions operate through wholesale, and not retail, funding, they pose a substantially greater risk to the financial system than traditional deposit-taking banks. Retail deposits are insured and, as such, if a bank begins to falter there is little incentive for its creditors to withdraw their funding. Wholesale funding does not have this luxury; if a shadow bank begins to falter, creditors have an immediate incentive to withdraw their funds or refuse to roll over loans. The result is much like a traditional bank run. Thus, when investment banks such as Bear Stearns or Lehman Brothers start to appear shaky, a domino effect occurs where creditors pull their money from these institutions, forcing them to pull their loans to other such institutions and so on. Without insurance to insulate against these runs and oversight to prevent shadow banks from accumulating too much risk or debt, their activity poses a grave threat to financial stability.

The Effects of Market Structure

Canada's banking sector is dominated by the so-called Big Six.[5] These financial conglomerates have controlled roughly 90 percent of the banking sector in Canada for the past twenty years (McKeown 2016, 2) and, unlike many of their American counterparts, operate nation-wide branching networks. While much of the post-crisis policy discussion has been centered around the too-big-to-fail nature of the United States' largest banks, the Canadian banking sector is far more concentrated than its counterparts to the south. Indeed, while organizational separation between the largest commercial and investment banks still exists in the United States, in

Canada the largest securities and investment companies are in fact arms of the Big Six.

Though a full historical overview of the divergent paths of banking in North America is beyond the scope of this paper, it is important to note that these differences in market structure are not a recent phenomenon. Banks in Canada are chartered federally, whereas in the United States federal authority over banking has historically been an ambiguous and highly contentious issue (Bordo, Redish and Rockoff 2011, 4). Canadian banks were free to establish nation-wide branching systems while the United States fostered a mix of state-chartered regional banks. The result was a major divergence in the relative stability of each country's financial sector. As Calomiris and Gorton (1991, 116) note, Canada has never experienced a systemic banking crisis and the bank failures it has experienced have been both fewer in number and less severe than those in the United States.

Prior to the 1980s, the Canadian banking system was characterized by the "four pillars" of financial institutions: chartered banks, trust companies, life insurance firms, and securities dealers. Canada, however, was not immune to the deregulatory trends that began to emerge in this period. By the mid-1990s, the Big Five (as they were then) had each purchased or, in the case of TD Bank, created the country's largest securities dealers and mortgage brokers. They also began sponsoring the largest pools of mutual funds.

Brean, Kryzanowski, and Roberts (2011, 263–265) identify two key, interconnected benefits from this difference in concentration. The first is that it allowed Canadian banks to finance themselves through less risky avenues. As bank deposits are insured, they are less susceptible to runs than money markets or other forms of credit intermediation. As a result, a bank (or bank-like institution) lending against a higher percentage of insured deposits is necessarily safer than a similar institution lending against other forms of funding at the same ratio. The second benefit is that it drastically reduced the necessity for a secondary funding market for banking activity; banks could remain highly profitable without drastically increasing their risk exposure. Indeed, as Pauly (2014, 163) notes, leverage ratios for Canadian institutions averaged 18-to-1, while American and European banks were between 25- and 35-to-1.[6]

There is a third important benefit from this market convergence; bringing the largest investment banks under prudential supervision. As Chang et al. (2016, 25) note, bank-owned investment dealers in Canada are subject to supervision by OSFI. This distinction is essential to understand the relative importance of shadow banking in Canada vis-à-vis the United States. In

Canada, non-bank investment dealers have a small and declining share of the investment banking market (Chang et al. 2016, 35), while the same cannot be said of the United States. For example, though Royal Bank of Canada's Dominion Securities and Goldman Sachs serve similar market functions, the former is subject to greater prudential regulation due to its direct linkage with RBC's retail banking business.

More than a decade after the four pillars were removed in Canada, the United States passed the Financial Services Modernization Act in 1999, removing the separation between commercial and investment banking that had been in place since the Great Depression. Though this repeal did lead to mergers and consolidation within the American banking system, and thus an increase in the systemic risk posed by individual institutions (Korotana 2012, 629–630), nation-wide branching networks did not develop to nearly the same extent. As a result, the too-big-to-fail institutions that developed in the United States were primarily investment banks like Bear Stearns and Lehman Brothers that were subject to far less regulation than commercial banks and were far more exposed to the risks associated with the shadow banking market.

The role that the failures of Bear Stearns and Lehman Brothers played in the crisis highlights the importance of this distinction. By being primarily investment banks, these institution's creditors were not covered by deposit insurance. This left them much more susceptible to runs, and therefore more systemically risky, than traditional commercial banks. Canada's too-big-to-fail institutions, by contrast, are covered by deposit insurance which serves to better insulate them from creditor panics. Thus, the consolidation of commercial and investment banks, and the establishment of nation-wide branching networks, can be seen as means of limiting banks' exposure to and reliance on shadow banking markets.

It should be noted, however, that this extreme concentration is not without trade-offs. For one, the Big Six are able to extract oligopoly rents from consumers through higher fees and lower interest rates on deposits. While this increased profitability could also reduce the need for banks to take risky investment positions, it is inherently regressive insofar as it represents a "tax" on society to maintain financial stability. In addition, the too-big-to-fail nature of the Big Six, and the fact that their operations draw funds from an enormous insured deposit base, contribute to greater moral hazard within the Canadian system.

The Centralization of Regulation

Financial regulation in Canada is consolidated into a small number of

agencies with broad mandates. The Office of the Superintendent of Financial Institutions (OSFI) is responsible for all banks, insurance companies and other non-bank financial institutions. It is likewise responsible for monitoring the systemic health of both individual conglomerates and the system as a whole, with the authority to take over insolvent or systemically important institutions if the agency deems it in the public interest to do so.[7] It may also set and adjust different standards for different banks as it sees fit. In addition, the Canadian Deposit Insurance Corporation (CDIC) and the Financial Consumer Agency of Canada (FCAC) are responsible for overseeing the federal deposit insurance program and consumer protection, respectively. Securities are regulated at the provincial level.

In contrast, the American regulatory system is highly fragmented, composed of many agencies with overlapping mandates. The main federal regulators consist of the Federal Reserve, which regulates a variety of bank and non-bank holding companies and state banks that are members of the Federal Reserve system, the Federal Deposit Insurance Corporation (FDIC), which regulates federally-insured depository institutions and state banks that are not members of the Reserve system, and the Office of the Comptroller of the Currency (OCC) which regulates federally chartered banks. The Securities and Exchange Commission (SEC) oversees securities markets and investment banks, and the Commodity Futures Trading Commission (CFTC) regulates derivatives markets and related firms. Insurance companies are regulated at the state level.

To illustrate the consequences of these differences in approaches to financial regulation, consider the failure of American International Group (AIG) in the summer of 2008. An enormous financial conglomerate, AIG was subject to a $182.5 billion USD bailout (Sjostrom 2009, 945) at the height of the financial crisis as a result of its position as a primary issuer of credit default swaps. AIG was primarily an insurance company and, as such, its insurance subsidiaries were subject to oversight by individual state insurance regulators. However, as Sjostrom (2009, 988) notes, AIG's purchase of a savings and loan bank in 1999 put its non-insurance businesses under the regulatory purview of the Office of Thrift Supervision (OTS).[8] Among the institutions under OTS supervision was AIG Financial Products (AIGFP), whose main activity was the issuance of credit default swaps.

The credit default swap market, however, was explicitly exempt from prudential regulation as a result of the Commodities Futures Modernization Act of 2000 (CFMA). Despite existing as a tradable financial instrument (and therefore a "security," subject to regulation by the SEC) and a

financial derivative (and therefore subject to oversight by the CFTC), the CFMA amended existing laws to exclude derivatives contracts between large institutional investors and firms (Sjorstom 2009, 984). Thus, the CFMA left AIGFP as a *de facto* shadow bank and the organization as a whole subject to a dozen or more regulatory agencies, each examining an incomplete section of the puzzle, with the most systemically important piece outside any oversight at all.

Though the state-level insurance regulators were responsible for ensuring the solvency of AIG's subsidiaries, as Schwarcz and Schwarcz (2014, 1633) point out, these regulators did not focus their attention on the holding companies that own these and other financial services firms. Indeed, as these holding companies cross a number of legal jurisdictions, insurance regulators did not require aggregate financial reporting for the parent companies of the firms they oversaw. Schwarcz and Schwarcz suggest this issue within the insurance industry contributes strongly to the potential for systemic risk. Given the highly fragmented nature of regulation over the entire financial industry in the United States, this argument can be applied to banking regulation as a whole.

In contrast, consider the regulatory structure AIG would have faced in Canada.[9] As an insurance company, AIG would have been overseen top-down by OSFI. Its insurance, banking, and investment subsidiaries would all have been under the microscope of one agency with the authority to pre-emptively intervene if necessary. While its securities dealings would be regulated at the provincial level, the impact of those dealings on the health of the organization as a whole would nonetheless have been under scrutiny. Breydo (2015, 1028) draws a similar comparison with JP Morgan's Chief Investment Office; in either example it is clear that OSFI's access and mandate to review organization-wide data could have better foreseen potential overexposure. In this view, OSFI's more comprehensive mandate would have eliminated AIGFP's status as a *de facto* shadow bank.

This is not to say Canada avoided any of the issues associated with shadow banking during the global financial crisis. In 2007, the market for asset-backed commercial paper[10] in Canada (and elsewhere) froze, jeopardizing upwards of $30 billion CAD, or roughly one-third of the market, for investors in ABCP notes (Chant 2008, 4), a proportion similar to the ABCP crisis in the United States (Covitz, Liang and Suarez 2013, 12). Chant (2008) describes how the issuers of ABCP notes were exempted from issuing a prospectus to provincial securities regulators and investors. They needed only an approved rating from a credit rating agency, agencies that themselves are not subject to oversight. Beyond this, the sponsors of

the conduits issuing ABCP notes were subject to little or no regulation; sponsoring banks used SIVs to skirt capital requirements, while a large number of issuers were sponsored by firms that were not involved in financial services themselves and thus not subject to oversight by regulators. While the Canadian regulatory structure certainly improved oversight and stability in Canadian financial markets, the ABCP crisis shows it is far from a perfect model.

Implications for the Oversight of the Shadow Banking Sector

At the onset of the 2007–2008 financial crisis, the liabilities of the shadow banking sector stood at over one and a half times the liabilities of the traditional banking sector in the United States. In Canada, however, the relative size of the shadow banking sector peaked at around 60 percent of the traditional banking sector in 2007 (Arjani and Paulin 2013, 5). This enormous difference can be explained in part by the differences in market and regulatory structure between the two countries.

First, through consolidating financial services into a small number of extremely large firms, Canadian financial markets had fewer incentives to search for alternative forms of financing or to engage in creative regulatory arbitrage to gain a competitive advantage. Additionally, the acquisition or creation of Canada's dominant investment dealers by the Big Six brought the bulk of the investment banking industry under the prudential supervision of OSFI. The American system, on the other hand, encouraged rapid innovation both in the types of assets and derivatives available on the market and in accounting and corporate structure techniques that skirted effective regulation. The result was a thriving shadow banking sector in the United States leading up to the crisis, with a comparatively weaker sector in Canada.

Historical legal structures no doubt play an important role. Since Canadian banks are chartered at the federal rather than the provincial level, commercial banks can easily establish nation-wide branching systems that afford both stability and broader deposit bases to draw from. Canada's dominant financial conglomerates can thus function primarily as commercial banks. By contrast, commercial banks in the United States must navigate different legal requirements in each state, making it enormously costly and difficult to establish branching networks across states. As a result, the United States has seen many of its systemically important financial institutions operate primarily as investment banks. Both the Canadian and U.S. models can contribute to moral hazard within the financial system,

but the latter model is subject to much looser regulation and is far more susceptible to runs on its core activities.

Second, the concentration of regulatory authority and the broad, principles-based approach embedded in OSFI severely hampered the ability of Canadian financial institutions to engage in regulatory arbitrage. By encompassing a far larger spectrum of financial institutions under its regulatory regime than its American counterparts and having the authority to evaluate systemic risk on an organization-wide level, OSFI brought markets and firms under the microscope in Canada that existed in the shadow of regulated banks in the United States. The regulatory regime in the United States, by contrast, is highly fragmented into dozens of agencies with specific mandates; as such, markets and firms were created outside of the scope of regulation, in whole or in part, vastly increasing systemic risk.

The spectacular collapse of AIG Financial Products demonstrates this difference. Its parent company was subject to dozens of different regulatory agencies and many of its activities were explicitly exempt from supervision. As such, there was no singular authority reviewing the financial health or systemic risk of the organization as a whole. The centralized regime AIG would have faced in Canada could perhaps have prevented its collapse.

It is thus the interaction between market and regulatory concentration that could serve as a model for reducing the systemic risks posed by the proliferation of shadow banking and financial innovation. In a highly concentrated market, it becomes more difficult for significant financial intermediation to occur outside the institutions under scrutiny. Nationwide branching gives banks a much larger retail deposit base from which to draw funds, reducing the incentive to create and sustain vibrant wholesale funding markets. Under consolidated regulatory agencies that have broad and flexible mandates, large organizations have much more difficulty hiding activity off of their balance sheets or engaging in activities that pose serious systemic risks to the system as a whole. Without different prudential regulatory agencies, regulatory arbitrage becomes difficult if not impossible.

While each of these forms of consolidation on their own would likely improve stability, their effectiveness at limiting systemic risk would be reduced significantly in the absence of the other. Under a consolidated financial market but with a highly fragmented regulatory regime, regulatory gaps within large financial conglomerates can dramatically increase the likelihood and consequences of a firm's failure, as seen with the collapse of AIG. The opposite arrangement, regulatory consolidation with a

highly fragmented banking market, would also pose challenges. Though it would reduce the ability of financial services firms to engage in regulatory arbitrage, such an arrangement would also force regulatory agencies to monitor a significantly higher number of firms, which would strain the agencies' resources more than if they were tasked with monitoring fewer, larger conglomerates. The wider market incentivizes regulatory agencies to issue blanket rules rather than taking the tailored, principles-based approach that has made OSFI so effective and adaptable vis-à-vis its more legally-focused American counterparts.

This is not to imply that the Canadian banking system is without risk, nor that the trade-off of financial stability over competition in banking is necessarily ideal. Some scholars, such as Russell (2012) and Boone and Johnson (2010), are more pessimistic about the health of the financial system in Canada, and with good reason. Issues of moral hazard, conflicts of interest and high fees for consumers persist. Nonetheless, it is clear from the fallout of the financial crisis that the banking system in Canada is better protected against the risks posed by shadow credit intermediation. Its market and regulatory model could be emulated in other countries to help bring an enormous part of the global financial system out from the shadows.

Notes

[1] An assumption not without debate, to be sure.

[2] Though having fewer systemically-important institutions, even if they are larger and more systemically important, could prove easier to regulate.

[3] For the full speech, see Ben S. Bernanke, "Some Reflections on the Crisis and Policy Response" (Speech, New York, New York, April 13, 2012).

[4] This discrepancy has decreased since the crisis, though shadow bank liabilities remain a significant portion of total bank debt.

[5] In order of size, the Royal Bank of Canada (RBC), Toronto-Dominion Bank (TD), the Bank of Nova Scotia (BNS), the Bank of Montreal (BMO), the Canadian Imperial Bank of Commerce (CIBC) and the National Bank of Canada (NB).

[6] Though Wells Fargo and JP Morgan, the two most sustainability run large American banks, had ratios substantially lower than the Big Six average (Boone and Johnson, 2010).

[7] See *Guide to Intervention for Federally Regulated Deposit-Taking Institutions,* OFSI, http://www.osfi-bsif.gc.ca/Eng/fi-if/rai-eri/sp-ps/Pages/gid.aspx

[8] An agency formerly responsible for supervising savings and loan institutions whose responsibilities were divided between existing regulators and the newly created Consumer Financial Protection Bureau as a result of the Dodd-Frank Act.

[9] Perhaps the best Canadian equivalent would be the Manulife Financial Corporation, an insurance giant with a large banking subsidiary, the Manulife Bank of Canada.

[10] A short-term loan (typically 90 days or under) backed by an underlying asset or group of assets.

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