



INSTITUT **C.D. HOWE** INSTITUTE

COMMENTARY

NO. 555

Productivity and the Financial Services Sector – How to Achieve New Heights

The financial services sector can play a bigger role in enhancing Canada's lackluster productivity. Removing regulatory barriers that inhibit productivity gains and innovation would help it do so.

Farah Omran and Jeremy Kronick

THE C.D. HOWE INSTITUTE'S COMMITMENT TO QUALITY, INDEPENDENCE AND NONPARTISANSHIP

ABOUT THE AUTHORS

FARAH OMRAN

is a Policy Analyst at the C.D. Howe Institute.

JEREMY KRONICK

is Associate Director, Research, at the C.D. Howe Institute.

The C.D. Howe Institute's reputation for quality, integrity and nonpartisanship is its chief asset.

Its books, Commentaries and E-Briefs undergo a rigorous two-stage review by internal staff, and by outside academics and independent experts. The Institute publishes only studies that meet its standards for analytical soundness, factual accuracy and policy relevance. It subjects its review and publication process to an annual audit by external experts.

As a registered Canadian charity, the C.D. Howe Institute accepts donations to further its mission from individuals, private and public organizations, and charitable foundations. It accepts no donation that stipulates a predetermined result or otherwise inhibits the independence of its staff and authors. The Institute requires that its authors disclose any actual or potential conflicts of interest of which they are aware. Institute staff members are subject to a strict conflict of interest policy.

C.D. Howe Institute staff and authors provide policy research and commentary on a non-exclusive basis. No Institute publication or statement will endorse any political party, elected official or candidate for elected office. The views expressed are those of the author(s). The Institute does not take corporate positions on policy matters.

COMMENTARY NO. 555
October 2019
FINANCIAL SERVICES AND
REGULATION

\$12.00

ISBN 978-1-989483-19-0

ISSN 0824-8001 (print);

ISSN 1703-0765 (online)



A handwritten signature in black ink that reads 'Daniel Schwanen'.

Daniel Schwanen
Vice President, Research

THE STUDY IN BRIEF

Advanced economies must focus on improving productivity in order to achieve long-term sustainable economic growth. Increases in traditional inputs – labour and capital – can only go so far before generating diminishing returns. These economies, such as Canada’s, must then look beyond traditional inputs and seek to increase their productivity through competition and innovation. Financial services have a vital role to play in these efforts.

Unfortunately, Canada’s productivity growth has lagged behind that of its international peers for the past 15 years. The financial services sector, with its unique ability to improve its own productivity and the overall economy’s, has also fallen short in contributing to Canada’s overall productivity growth over that period. Improving the financial services sector’s productivity would not only boost its performance, but also that of Canada’s economy as a whole. In this *Commentary*, we focus on Canada’s financial services’ regulatory framework and its impact on productivity growth through three different channels: competition, attracting capital, and the allocation of capital.

Canada’s current regulatory framework has improved over the past decade; however, more could be done to remove regulatory barriers that hamper competition, the progress of innovative firms, and better reflect international best practices. Restrictive regulation and policy hinder productivity growth through their effects on competition, the environment they create for attracting foreign capital, and potential distortions in the allocation of capital.

To address these challenges, this *Commentary* recommends the following:

- a flexible regulatory approach that is both function based and proportional to functional risk;
- regulatory mandates that include more explicit references to competition as a way of spurring innovation;
- monitoring the new rules around the flexibility of banks to participate and invest in fintechs and other innovative technology-led institutions;
- improving the collection and sharing of financial market data between federal and provincial regulators;
- improving access for small and medium-sized businesses to affordable capital; and
- changing the incentive structure so that financial institutions move away from a focus on mortgage lending to one on business lending.

C.D. Howe Institute Commentary© is a periodic analysis of, and commentary on, current public policy issues. Barry Norris and James Fleming edited the manuscript; Yang Zhao prepared it for publication. As with all Institute publications, the views expressed here are those of the authors and do not necessarily reflect the opinions of the Institute’s members or Board of Directors. Quotation with appropriate credit is permissible.

To order this publication please contact: the C.D. Howe Institute, 67 Yonge St., Suite 300, Toronto, Ontario M5E 1J8. The full text of this publication is also available on the Institute’s website at www.cdhowe.org.

To achieve long-term sustainable economic growth, advanced economies such as Canada's should look beyond the diminishing returns of labour and capital, and focus on innovation and productivity.

Unfortunately, productivity growth in Canada over the past 15 years has lagged behind that of many member countries of the Organisation for Economic Co-operation and Development (OECD). Moreover, the contribution of the financial services sector to this productivity growth has been underwhelming.

This *Commentary* builds on past work (Kronick 2018) by first comparing Canada's latest productivity indicators to those of other OECD countries. The results show that Canada has room to catch up at both the aggregate and financial services sectoral levels.

How should Canada respond? Among other things, the evidence shows a clear link between productivity and government policy or regulation (see, for example, Competition Bureau Canada 2017; Heil 2017; Levine 1997 2005). Restrictive regulation and policy hinder productivity growth through their effects on competition, the environment they create for attracting foreign capital, and potential distortions in the allocation of capital. As Kronick (2018) shows, and as we suggest here, Canada faces issues on all three of these fronts.

Accordingly, we argue for the continued removal of barriers to the development of financial technology (fintech) through a flexible

regulatory approach that is both function based and proportional to functional risk. We also call for (i) more explicit competitiveness mandates for Canada's financial services regulators to spur innovation; (ii) continued strengthening of the links between regulatory bodies that are fragmented by province and function; and (iii) changes to the incentive structure so that financial institutions move away from a focus on mortgage lending to one on business lending.

THE IMPORTANCE OF THE FINANCIAL SERVICES SECTOR

The financial services sector serves an important role in any well-functioning economy, facilitating essential functions such as payments, transactions, lending, investments and savings. In Canada, the financial services sector employs relatively more people with postsecondary and postgraduate education than do other sectors,¹ and its nonfinancial capital includes more intellectual property and information technology than does the overall economy on average. At the same time, the financial services sector promotes growth and productivity within other services that are complementary (such as accounting) or

The authors thank Alexandre Laurin, Phil Howell, Louis Levesque, David Longworth, anonymous reviewers, and members of the C.D. Howe Institute's Financial Services Research Initiative for comments on an earlier draft. The authors retain responsibility for any errors and the views expressed.

- 1 Individuals with postsecondary or postgraduate degrees account for 50 percent of all employees in the financial services sector, but only 30 percent of employment in the entire economy (Forum of Labour Market Ministers, 2016 Labour Market Monitoring Toolkit, Table MTK_T01).

Table 1: Employment Growth in Financial and Related Services and in the Overall Economy, Canada, 2001–18

Industry	Change in Employment (thousands)	Change in Employment (percent)	Average Weekly Earnings (2018 \$)
Overall Economy	3,400	26.4	1,001
Banking	80	27.5	1,222
Insurance	51	29.1	1,293
Investments	38	43.6	1,790
Services Most Related to Financial Services	431	41.8	1,354

Note: “Services most related to financial services” are data-processing hosting and related services, other information services, legal services, accounting services, computer design and related services, consulting services, management of companies and enterprises and administrative and support services.

Sources: Statistics Canada, CANSIM database, table 281-0047, accessed May 1, 2019; and authors’ calculations.

that serve as inputs (such as communications), which are similarly skilled-labour intensive. Table 1 shows that the financial services sector and complementary industries have enjoyed more rapid growth in employment and higher earnings than has the overall economy.

Other factors come into play, however, when determining the success of the financial services sector in supporting the economy’s productivity growth. Two play a key role, and are the focus of this *Commentary*. The first is the sector’s ability to channel funds efficiently into activities that are productive and that lead to sustainable overall economic growth without diverting resources from other productive activities (Cecchetti and Kharroubi 2015). The second is good governance and flexible regulations, which foster competition within the sector and spur innovation. This link connecting regulation and policy to productivity has been

well established in the literature (see, for example, Competition Bureau Canada 2017; de Serres et al. 2006; Heil 2017; Levine 1997, 2005; and Lumpkin 2009).²

IS CANADA EXPLOITING ITS FINANCIAL SERVICES SECTOR POTENTIAL?

Canada’s financial services sector not only generates above-average growth in employment and higher earnings, it also has an international comparative advantage (Kronick 2018). Do these positive characteristics manifest themselves in productivity gains for both the sector itself and its contribution to the aggregate economy?

Although economic growth can be achieved through short-term increases in labour and capital, modern economies such as Canada’s must look

2 Heil (2017, 11) provides a full literature review on the subject and a nice summary of the link.

elsewhere to achieve sustainable long-term growth – specifically, through a focus on technological advancements that improve productivity (Solow 1956). We focus on the financial services sector because of its unique ability to contribute to aggregate productivity: it can both improve its own productivity as well as that of other sectors by providing the necessary intermediation for an optimal allocation of resources within the economy.

Aggregate Productivity

We start by looking at the overall level of aggregate productivity among different OECD countries. We use gross domestic product (GDP) per employed person as our measure,³ and find that Canada falls in the bottom half over the 2001–17 period (Table 2), with the ranking remaining the same before and after the 2007–08 global financial crisis.⁴ With Canada’s aggregate productivity levels low

compared with those of other OECD countries, one might have expected some catch-up activity over this period. This does not appear to have been the case, however, when we look at compound annual aggregate productivity growth rates, as Canada’s is among the lowest over the entire period (Table 3).⁵

The Financial Services Sector’s Contribution to Productivity

Next, we consider the financial sector’s contribution to Canada’s sluggish aggregate productivity growth since 2001. We use the OECD’s measure⁶ of industry contribution to productivity, and find that Canada falls in the middle of the pack over the 2001–17 period,⁷ behind countries to which it is often compared, such as Australia, Norway, and Sweden (Table 4).⁸ Canada fares better on this criterion this year compared with its previous year

-
- 3 Productivity is commonly defined as the ratio of output to input use, and labour productivity (the ratio of GDP to total hours worked or total persons employed) is a widely used measure of productivity (OECD 2008). Although the ideal measure would be based on hours worked, rather than persons employed, we use the employment-based productivity measures for the purpose of consistency, as the hours-worked-based industry contribution data exclude some of the key countries we use in our comparison.
 - 4 To ensure the credibility of the employment-based measures, we also rank countries in Table 2 based on hours worked, and find a strong correlation between employment-based and hours-based rankings.
 - 5 As in Table 2, we rank countries in Table 3 based on hours worked, and again find a strong correlation between employment-based and hours-based rankings.
 - 6 Although the OECD itself has labelled the financial services sector as one of the more “[d]ifficult-to-measure industries” (OECD documentation on measuring productivity), it remains, to our knowledge, the only source for international comparability of productivity by sector. As well, Canada’s need to improve the productivity of its financial services sector is suggested in other papers and research (see, for example, Deloitte 2012, 3), which attribute this in part to “[u]nderinvestment in communications and technology.” This underinvestment in communications and technology is an issue for the economy as a whole, where the decline is pervasive in “finance, insurance, real estate, rental and leasing sector, as well as from information and cultural industries” (see Mollins and St-Amant 2019, 13).
 - 7 We rank the ten countries in Table 4 for which data are available based on hours worked, and find a strong rank correlation between employment-based and hours-based rankings. In both cases, Canada is in the middle of the pack.
 - 8 Canada’s ranking has improved over the post-crisis period, reflecting a combination of regulation and policy changes, as well as a falling of the rankings of some countries including the United States and the United Kingdom. For example, the latter had a contribution growth of 0.6 percent pre-crisis (2001–6), but having taken a big hit from the crisis, its contribution growth dropped to –0.1 percent post-crisis (2010–17). Although the United Kingdom has managed to get itself back into positive territory in the past two years (to 0.22 percent), new geopolitical pressures (Brexit) have slowed down its post-crisis recovery.

Table 2: Aggregate Productivity Levels, GDP per Person Employed, Canada and Selected OECD Countries, 2001-17

	Average
Norway	\$110,691
United States	103,232
France	86,550
Australia	84,875
Netherlands	84,857
Sweden	84,432
Italy	84,093
Canada	79,623
Germany	78,481
United kingdom	77,445
Spain	75,120
Japan	68,512

Note: GDP per person is in \$US constant prices, 2010 purchasing power parity.
Source: Authors' calculations, based on OECD productivity database, accessed May 28, 2019.

Table 3: Aggregate Productivity Growth, Canada and Selected OECD Countries, 2001-17

	Compound Annual Growth Rate (percent)
Sweden	1.26
United States	1.17
Australia	0.82
United kingdom	0.74
France	0.70
Netherlands	0.68
Spain	0.65
Canada	0.60
Japan	0.60
Germany	0.56
Norway	0.42
Italy	-0.33

Note: We calculated growth rates using GDP per person employed, US\$ constant prices, 2010 purchasing power parity.
Source: Authors' calculations, based on OECD productivity database, accessed May 28, 2019.

ranking (Kronick 2018). Some of that change is due to the financial sector's positive contribution in the additional years of data, but for the most part the improved ranking is a result of statistical revisions to the OECD's "Productivity and ULC by main economic activity" database.⁹

REGULATION AND POLICY: DO THEY MATTER?

With these results in mind, we now turn to the regulatory and policy changes that could improve

the financial services sector's contribution to productivity growth. A central finding in the literature is that robust productivity growth occurs when regulations and policies foster competition for, and spur innovation in, the delivery of financial services, and attract and efficiently allocate capital (see, for example, Heil 2017).

Although regulations are necessary to protect consumers and maintain the stability of the financial system, they should be balanced between protecting against potential risks and ensuring

⁹ Significant changes affecting Japan's National Accounts took place when that country adopted the System of National Accounts 2008; also, a change of reference year for volumes occurred in many countries, including Canada, the United States, Australia, France and Italy.

appropriate competition (often from niche new entrants), which is crucial for the generation of innovative ideas and, in turn, productivity growth.¹⁰ At the same time, regulations that ensure an efficient financial system with optimal credit allocation will enable innovative firms to access the necessary capital for their growth, both domestically and from abroad (see Egger and Keuschnigg 2010; Schwanen 2017).

In the following sections, we assess the effect of Canada's regulations and policies on productivity through the three main areas mentioned above: competition within the financial services sector, attracting capital through foreign direct investment, and the efficient allocation of capital. We also report improvements that have occurred in these areas, and highlight where there is still room for further progress.

Competition

Competition is undoubtedly necessary for innovation and productivity. But finding the optimal level of competition is not that simple. Evidence suggests the lowest levels of innovation occur either in sectors where there is no competition and, therefore, no incentives to innovate, or in sectors where there is too much competition and the returns to innovation are minimal (see Howitt 2015). Although evidence is mixed on the level of competition in Canada's financial services sector (see Kronick 2018 for more detail), there is agreement regarding the significant barriers to entry that remain across crucial

Table 4: Employment-based Contribution of Financial Sector to Productivity Growth, Canada and Selected OECD Countries, 2001–17

	Average (percentage points)
Australia	0.45
Norway	0.27
United States	0.20
Sweden	0.20
United kingdom	0.19
Canada	0.18
Netherlands	0.15
Spain	0.13
Italy	0.10
France	0.07
Japan	0.01
Germany	(0.07)

Note: The most recent data for the United States are from 2016.

Source: Authors' calculations, based on OECD productivity database, accessed May 28, 2019.

areas, including the lending and payments space (Competition Bureau Canada 2017).

As we will show, Canada lags international peers in capital allocated to small and medium-sized enterprises (SMEs). This market opportunity, and innovation in the financial services sector, have given rise to new technology-driven financial services providers, commonly referred to as

10 Jason (2016) discusses the costs that regulatory tightening has imposed on smaller financial institutions trying to compete in the banking sector. Indeed, as Jason references, both the federal government and the Office of the Superintendent of Financial Institutions (OSFI) have acknowledged that the current regulatory framework, influenced to a great degree by the financial crisis, puts an outsized burden on smaller financial institutions.

fintechs.¹¹ These innovative companies, however, suffer from being either under or overregulated.

In the case of lending fintechs, they often face regulations that are similar to those of their traditional bricks-and-mortar counterparts, although they might pose a different, often lower, level of risk to the overall stability of the financial system (Competition Bureau Canada 2017). This creates a difficult playing field for smaller players, such as fintechs, attempting to tap into the market with innovative ideas.

In a 2017 study, the Competition Bureau recommended that the regulatory burden should be less entity based and more function based. We agree, so long as regulations are adaptable to new technology advancements, offering consumers of the same service the same protection, and are proportional to the risks the function poses. If the function's failure does not pose a risk to the entire financial system, oversight need not be as strict as where failure puts the entire system in jeopardy.

In the case of payments fintechs, regulations often focus on traditional payments service providers, resulting in regulatory gaps for fintechs that create uncertainty and add to the costs of firms attempting to enter this space, which tend to be smaller, with limited resources (Competition Bureau Canada 2017).

Movements have been made to level the playing field. For example, in the new retail payments oversight framework, rules have been adapted to

match the level of risk at every stage of the payment process, from the moment consumers tap or insert their bank card to the moment vendors receive the money (see Canada 2019). Another example is the proposed amendments in 2018 to the *Bank Act*, which allow non-bank entities that perform bank-like activities, such as credit unions and trust companies, to promote their products using words such as “bank” and “banking” (Competition Bureau Canada 2018).¹²

More, however, needs to be done. Although one could argue that Canada's relative resilience to the aftermath of the 2008 financial crisis strengthened Canadians' confidence in their financial institutions, thus dampening incentives to seek alternative options and subduing demand for innovative service providers such as fintechs, the scale to which Canada continues to fall behind in the fintech space is notable.

Investments of just \$263 million were recorded in the Canadian fintech market space in the first half of 2018, compared with \$14.2 billion in the United States and over \$16 billion in the United Kingdom (KPMG 2018). Granted, those economies and populations are much larger than Canada's, but more than 60,000 people work in the United Kingdom fintech sector, which has a total market of more than \$10 billion, while New York State alone has 55,000 fintech workers and a market in excess of \$9 billion, both dwarfing, by a factor of ten, Canada's approximate investment of \$1 billion since 2010 (Deloitte 2017).

11 For the purposes of this *Commentary*, we define fintechs as service delivery platforms, where a standalone provider, a regulated financial institution, or both, provide financial services, such as lending and payments processing, through an electronic platform (a similar definition to that found in TFSA 2017).

12 The 2017 Competition Bureau Canada market study made 30 recommendations to enhance Canada's technology-led innovation in the financial services sector, calling for, among other things, regulations that are technology neutral and device agnostic, principle and function based and proportional to risk. Along with some resulting developments mentioned in this *Commentary*, other progress includes the British Columbia's Securities Commission's consultation in 2018 on its Securities Law Framework for Fintech Regulation, which considered automation for “know-your-client” assessments. See Competition Bureau Canada (2018, 2019) for a full account of the progress in fintech and the developments emerging from the recommendations in its 2017 study.

One obstacle to investment and productivity and the scaling up of fintechs in Canada is legislation that until recently restricted the extent to which banks could invest and participate in fintechs and other technology-related activities. Specifically, under the *Bank Act* and the *Insurance Companies Act*, banks and insurance companies were prohibited from making a substantial investment in fintechs if these companies performed activities outside the financial services space – even if financial services remained their core function. These rules made sense in a historical context, but less so at a time when technology-based companies often offer complementary services to their core function. Although recent amendments to these acts raised the investment limit based on the asset value of the entity being acquired, the government has yet to provide sufficient clarity regarding these changes and set a date for enforcing them.

Canada, of course, does have policies in place to support innovative firms, such as the Canadian Securities Administrators' regulatory "sandbox," the Ontario Security Commission's LaunchPad and in Quebec the Autorité des marchés financiers' FinTech Group. All these initiatives are meant to create an experimental and competitive environment for innovative firms with a lower regulatory burden. Despite their success, the evidence suggests that Canada is not reaching its potential.

Other jurisdictions offer lessons and practices that Canada might adopt to encourage more competition and innovation. In the United Kingdom, for example, and unlike many of Canada's financial sector regulators, the Financial Conduct Authority (FCA) has an explicit mandate to promote competition, and has established a clear link between competition and productivity.¹³ The FCA also has a mobilization option to authorize

prospective entrants into the banking sector. This program separates essential regulatory requirements from the non-essential, giving new entrants operational authorization but with restrictions on the types of activities they may perform while further regulatory evaluations are proceeding.

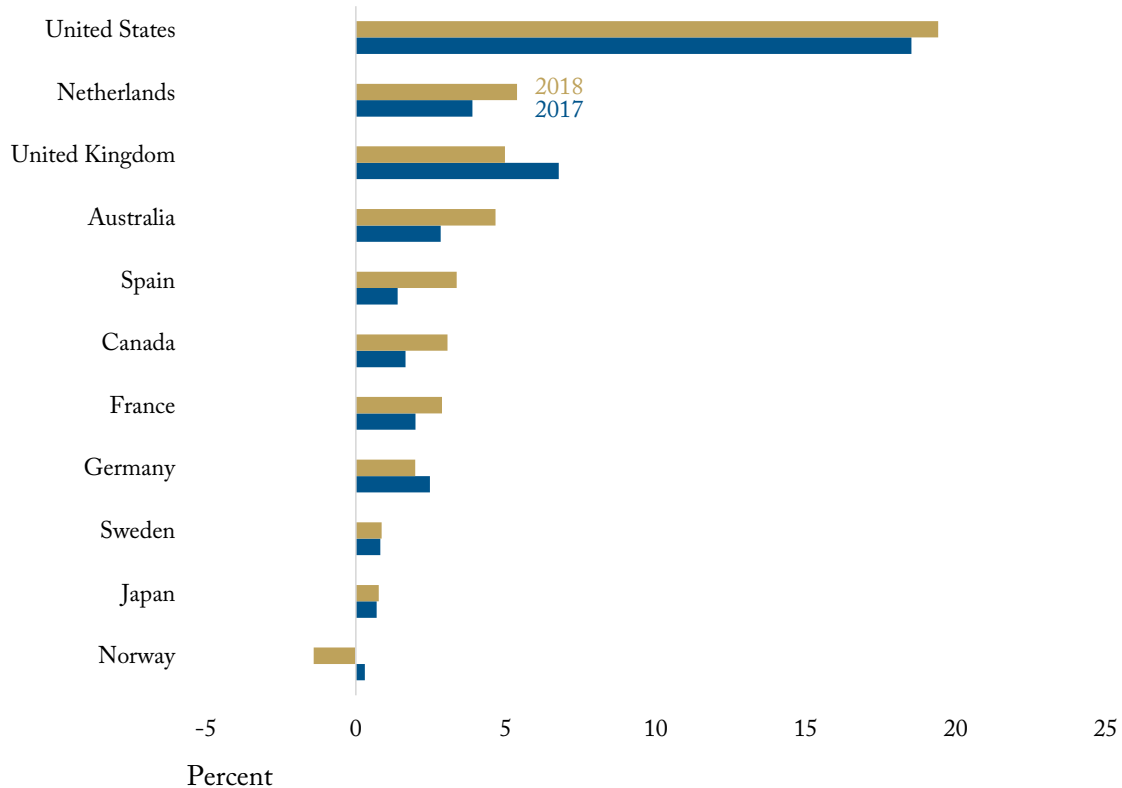
Attracting Capital

Another critical element of a productive economy is its ability to attract foreign capital. One way of investigating Canada's international attractiveness in this regard is to see how it compares with its peers in net foreign direct investment (FDI) inflows. Unfortunately, Canada lags behind countries it is often compared to, such as Australia, as well as behind global leaders: the United States, the Netherlands and, although hampered recently by the Brexit issue, the United Kingdom (Figure 1).

Many factors affect foreign investment decisions, including government policy and regulatory structure. At the economy-wide level, Canada's regulatory system has undergone much change over the past ten years, moving toward more liberal and transparent regulations regarding foreign investment. Canada continues, however, to be significantly more restrictive with respect to FDI than are many of its counterparts, mainly due to stringent screening mechanisms on foreign acquisitions that require the investor to show a net benefit to Canada, as well as restrictions on equity ownership. As Schwanen (2018) argues, attracting more FDI involves eliminating share ownership restrictions, except in cases of a clear public policy objective, such as national security or fair competition. Moreover, the net benefit test for investments above a given threshold should be eliminated, and the onus should be on the government to show that a particular investment would not be in the national interest.

13 There are references to competition with reasonable risks in OSFI's mandate.

Figure 1: Net Inflows of Foreign Direct Investment as a Percentage of World Stock, Canada and Selected OECD Countries, 2017 and 2018



Source: UNCTAD, FDI/MNE database (www.unctad.org/fdistatistics).

Honing in on Canada's financial services regulatory framework, the International Monetary Fund (IMF) has recognized it as "strong, and is complemented by a credible federal system of safety nets" (IMF 2014a, 6).¹⁴ More, however, could be done to conform with international best practices that would increase foreign capital flows into Canada.¹⁵ As the IMF recommends, cooperation

could improve among Canada's different regulatory bodies, and be "better articulated for financial groups spanning federal and provincial regulatory boundaries" (IMF 2014a, 7). This includes investors and institutions looking to invest capital in Canada.

Conforming to international best practices in financial services regulations is complex in Canada's case due to constitutional divisions of authority,

14 The IMF has also noted that Canada's "framework for the regulation and supervision of securities markets demonstrates a high level of implementation of the [International Organization of Securities Commissions] principles" (IMF 2014b, 5).

15 According to a Conference Board of Canada report, "In choosing locations for foreign direct investment, investors largely look at the quality of legal and regulatory governance, physical and communications infrastructures, and the workforce's education and training level" (Conference Board of Canada 2010, ii).

which cause fragmentation both at the functional and geographical levels (see, for example, Kronick 2018). Unlike other jurisdictions, Canada has both federally and provincially regulated deposit-taking institutions and insurance companies. There is neither a market-conduct authority at the federal level in the insurance space or a national regulator for securities – instead, regulation is the purview of the provinces.¹⁶ Finally, there is no formal statutory body (or twin bodies) in charge of prudential and market-conduct regulation, including systemic risk, at the comprehensive financial-sector level. By contrast, Australia, the Netherlands and the United Kingdom each has a national dual authority system, one for prudential and one for market conduct.¹⁷

Previous studies have recommended ways Canada's financial regulatory environment could better meet international best practices without losing sight of pragmatic issues and differences (see IMF 2014b; Le Pan 2017). These include expanding the collection and sharing of financial-sector data and sharing across regulators, developing an open and consistent regulatory approach to group-wide insurance supervision, focusing on business-conduct concerns (for which there is no federal presence) and subjecting any financial institution deemed systemically important to clearly defined cooperative supervision.

The Efficient Allocation of Credit and Equity Financing

One way to judge the efficiency of the lending behaviour of Canada's financial institutions is to compare them with their international peers. Canada, in fact, ranks last among our sample OECD countries in small business lending as a share of total business lending, and near the bottom in overall business and small businesses lending as a percentage of GDP (Table 5).¹⁸ Not surprisingly, Canada also has the largest spread between interest rates on loans to SMEs and those to large firms (Table 5). This higher spread in Canada is consistent with earlier findings, including those of Leung, Meh, and Terajima (2008), that Canadian SMEs are more likely than their United States counterparts to rely on credit from informal channels, such as family and friends, which could be an indication of lower access to formal debt financing. Credit to SMEs is both less available and less affordable in Canada – a critical gap to be addressed given the strong link between SMEs and productivity growth (see, for example, Decker et al. 2014).

The OECD's Financing SMEs and Entrepreneurs 2019 Scoreboard (OECD 2019) further highlights the lack of credit for Canadian small businesses. It reports that, in 2017, debt

16 Although the Canadian Securities Administrators exists to coordinate securities regulation, provinces are not obliged to adopt these rules, since securities matters are under provincial jurisdiction in constitutional law. The Capital Markets Regulatory Authority, a system designed to improve coordination and integrate markets within and outside Canada, to date has signed up only six provinces and one territory.

17 Although the United States is at the top in attracting FDI and is a leader in productivity, while also having a fragmented regulatory system – separate federal and state securities regulators – we do not conclude therefore that a fragmented system is good for productivity. Regulatory structure matters, but the United States has certain advantages in attracting capital that other countries do not, one being that it is the largest and arguably most important economy in the world.

18 One caveat to the data is the role of real estate-supported lending for small businesses. Given high home ownership in Canada compared with that in other OECD countries (see OECD Affordable Housing database), these data might underestimate Canada's small business lending ranking. Additionally, the outstanding credit to SMEs in Canada is restricted to authorizations under \$1 million, which might also underestimate the total. That said, total authorizations at this \$1 million threshold in 2017 alone represented nearly 30 percent of all SMEs in Canada (assuming one credit authorization per SME).

Table 5: Business Lending Data, Canada and Selected OECD Countries, Average 2010–17

	Small Business Lending		Total Business Lending (% of GDP)	Interest Rate Spread, Large vs Small Business (percentage points)
	(% of Total Business Lending)	(% of GDP)		
Japan	66.20	49.45	74.71	N/A
Spain	52.22	24.18	59.27	1.45
Norway	38.74	15.72	40.58	N/A
Netherlands	38.33	19.09	50.54	1.94
United kingdom	37.29	9.36	25.11	1.17
Sweden	36.46	25.69	70.56	0.68
Australia	31.74	15.45	48.69	1.90
United States	21.97	3.56	16.34	0.42
France	20.83	10.28	49.36	0.66
Italy	18.30	11.75	64.11	1.65
Canada	14.98	4.87	32.95	2.48

Note: Business lending data for Germany are unavailable. Countries are ranked according to small business lending's share of total lending data. In small business lending as a percentage of GDP, Canada ranks 10th out of 11; in total business lending as a percentage of GDP, 9th out of 11; in interest rate spread, 9th out of 9.

Source: Authors' calculations, based on OECD financing SMEs database, accessed May 28, 2019.

outstanding to all businesses in Canada grew by 6.6 percent, while lending to SMEs grew by 3.3 percent. At the same time, the share of SMEs in total outstanding loans declined to its lowest level since 2000, despite SMEs' low 90-day loan delinquency rate, which returned to pre-recession levels in 2017, reaching 0.47 percent for small businesses and 0.04 percent for medium businesses. In comparison, in the United States, SMEs' 31-to-90-day delinquency rate ranged from 1.0 to 1.5 percent.

What then might explain the lower level of SME credit in Canada?

One obvious link, as Table 5 shows, is the different rates financial institutions charge large firms versus SMEs, which is most pronounced in Canada. In the literature, the explanation for offering different rates to firms of different sizes often focuses on informational inefficiencies: lending institutions view SMEs as informationally more opaque (see, for example, Berger and Udell 1998), and charge them a higher rate to make up for the associated increased risk. More recent research suggests that, in addition to these information inefficiencies, both the larger operational costs lending institutions face when providing credit to

SMEs and SMEs' lower negotiating power also play a significant role (see Dietrich 2012). The argument is that, as a percentage of the loan value, costs related to the application, screening and monitoring of loans are higher for SMEs than for large businesses. Similarly, SMEs have less negotiating power than large businesses, due in part to their lack of access to public debt markets, meaning they rely more on bank-intermediated capital.

One avenue for policy, then, is to investigate whether it is necessary to deepen Canada's capital markets beyond domestic bank debt financing, which, according to OECD data, was 60 percent of all SME financing in 2017 (approximately 80 percent if we include foreign banks, credit unions and caisses populaires).

In addition to debt financing, small businesses and startups make use of private equity financing. Canada has boosted efforts to enhance SMEs' access to this form of financing. For example, the federal Venture Capital Catalyst Initiative made available \$400 million in 2017 through the Business Development Bank of Canada (BDC) to increase the availability of late-stage venture capital. But more is needed. A recent BDC study found that only 2 percent of mid-sized Canadian businesses grew into large businesses with more than 500 employees (Ratté 2016).

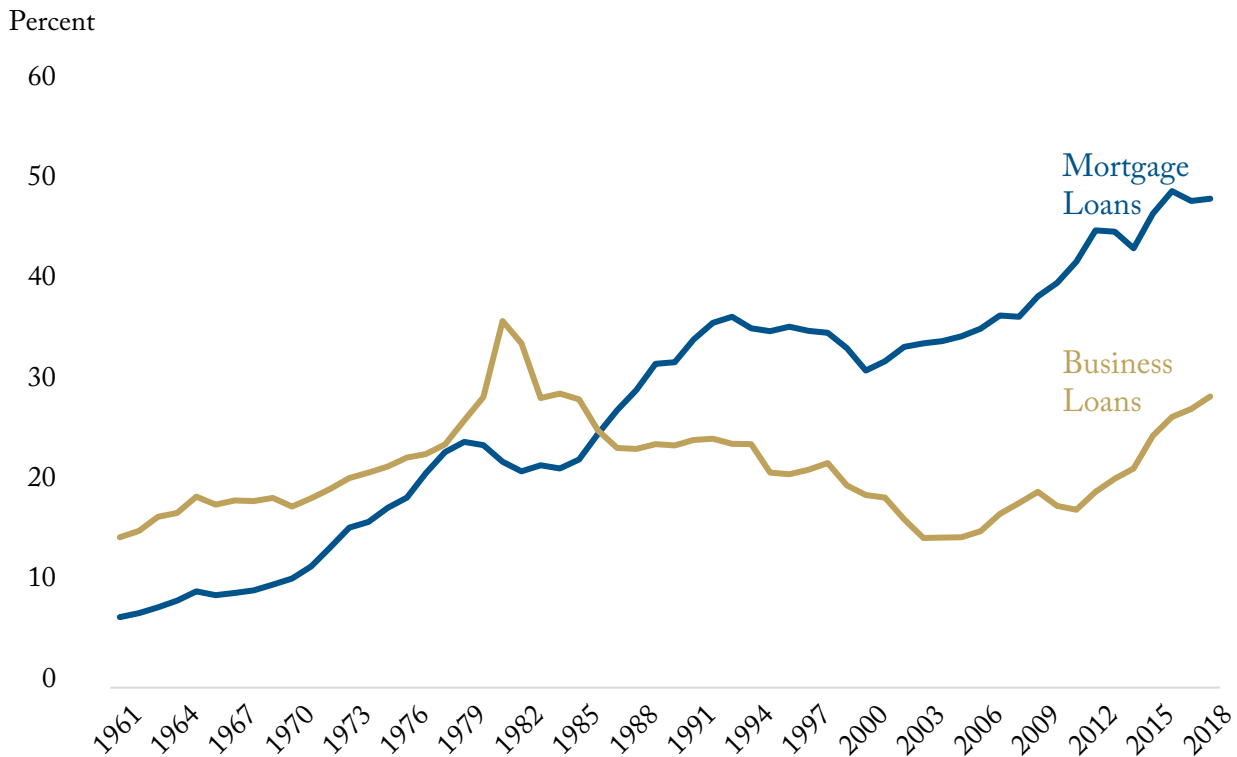
We recently argued for a suite of policies aimed at enhancing investment opportunities in Canada, as well as creating an environment for deeper, more patient equity capital (see Schwanen, Kronick, and Omran 2019). One option the Department of Finance should consider is exempting from taxation capital gains realized on the sale of the shares of certain small businesses, similar to a measure adopted under the *US Small Business Jobs Act of 2010*.¹⁹

Another role for policy should be to focus on high operational costs. In Canada, where the alternative to business lending – less productive residential mortgage lending – is risk free, SME operational costs might be more binding, thus crowding out SME credit. This risk-free mortgage lending is a result of the 100 percent insurance that Canada Mortgage and Housing Corporation (CMHC) provides lenders of insured mortgages. Indeed, the crowding-out effect of business bank lending as a result of profitable mortgage lending is well established – see, for example, Bezemer, Collins, Lerven, and Zhang (2018); Chakraborty, Goldstein, and MacKinlay (2018). This appears to be true in Canada as well: in the lead-up to the financial crisis, mortgage loans increased as a percentage of GDP while business loans actually decreased. During the post-crisis housing boom, although both mortgage and business loans are growing at a similar rate (as a percentage of GDP), the gap between them, favouring mortgage loans, remains quite large (Figure 2).

This crowding-out effect can occur when banks are constrained in their choice of lending channels. For instance, banks can find themselves constrained in raising new capital, and must choose one form of lending over the other. In periods of house price booms, mortgage lending emerges as the more attractive lending option. Banks can also face a personnel constraint, whereby eventually they find it difficult to further expand their workforce to deal with increases to aggregate demand and volume of lending activity. As such, they again are forced to choose one form of lending over another, with mortgage lending again likely to win out during house price booms. Both these constraints are naturally exacerbated when mortgage lending is risk free.

19 For investors to qualify for the capital gains tax exemption, they must have held qualified shares for at least five consecutive years.

Figure 2: Mortgage and Business Loans as a Percentage of GDP, Canada, 1961–2018



Note: In order to account for International Financial Reporting Standards (IFRS) accounting changes in 2011, which affected the reporting of Asset backed securities (ABS) and other receivables, we followed the estimation formula used in the Jordà-Schularick-Taylor Macrohistory database, available online at <http://www.macrophistory.net/data/>.

Source: Statistics Canada CANSIM database, table 378-0121; authors' calculations.

Paradoxically, however, at least some of the effect of these constraints is offset by the 100 percent CMHC guarantee, which effectively makes mortgage loans' risk weights – used in the banks' calculations of their capital adequacy ratios – zero. In theory, this opens up room for more bank business lending. Which effect dominates *ex ante* is unclear, but the evidence suggests the crowding-out effect plays a significant role.

Given that mortgage insurance is an effective tool to insulate the system from a housing crash (see

Koepl and MacGee 2017), how can the incentive structure be changed at the margins?

One option is to focus on mortgage insurance premiums, which do not take into account the differences in default risk across mortgages with the same loan-to-value ratio. CMHC charges a flat percentage based on loan-to-value regardless of the characteristics of individual borrowers. As in every other form of lending, risk-based pricing ensures a more efficient allocation of capital. In the case of mortgage insurance premiums, charging lenders

different premiums based on different risk profiles would better allocate credit in the mortgage space arising from the 100 percent CMHC guarantee and perhaps free up more lending for productivity-enhancing businesses in Canada.²⁰

CONCLUSION

Innovation and productivity are key for the generation of long-term sustainable economic growth in developed economies, where labour and capital have reached the stage of diminishing returns. Financial services, a sector in which Canada exhibits an international comparative advantage, should be a priority for policymakers and regulators alike. In our annual ranking of Canada relative to its peers on several productivity criteria, we are happy to report an improvement in the financial sector's contribution to overall productivity, yet Canada still lags behind.

Policy and regulatory challenges remain that hamper competition, Canada's ability to attract foreign investment and achieve an efficient, optimal

allocation of capital. To address these challenges, we recommend:

- a flexible regulatory approach that is both function based and proportional to functional risk;
- regulatory mandates that include more explicit competition mentions as a way of spurring innovation;
- monitoring the new rules around the flexibility of banks to participate and invest in fintechs and other innovative technology-led institutions;
- improving the collection and sharing of financial market data between federal and provincial regulators;
- improving SMEs' access to affordable capital; and
- changing the incentive structure so that financial institutions move away from a focus on mortgage lending to one on business lending.

²⁰ See Koepl and MacGee (2017) for more detail on this solution, which for the purposes of their paper, was built around the problem of moral hazard.

REFERENCES

- Berger, A.N., and G.F. Udell. 1998. "The Economics of Small Business Finance: The Roles of Private Equity and Debt Markets in the Financial Growth Cycle." *Journal of Banking & Finance* 22 (6–8): 613–37.
- Bezemer, D., J. Ryan-Collins, F.V. Lervén, and L. Zhang. 2018. "Credit where it's due: A historical, theoretical and empirical review of credit guidance policies in the 20th century." Institute for Innovation and Public Purpose Working Paper IIPP WP 2018-11. December. Available online at https://www.ucl.ac.uk/bartlett/public-purpose/sites/public-purpose/files/iipp-wp-2018-11_credit_where_its_due.pdf.
- Canada. 2019. Department of Finance. *Report on the Review of the Canadian Payments Act*. Ottawa. Available online at <https://www.fin.gc.ca/activty/consult/rcpa-elcp-report-rapport-eng.pdf>.
- Cecchetti, S., and E. Kharroubi. 2015. "Why Does Financial Sector Growth Crowd Out Real Economic Growth." BIS Working Papers 490. Basel: Bureau for International Settlements. February.
- Chakraborty, I., I. Goldstein, and A. MacKinlay. 2018. "Housing Price Booms and Crowding-Out Effects in Bank Lending." *Review of Financial Studies* 31 (7): 2806–53.
- Competition Bureau Canada. 2017. *Technology-led Innovation in the Canadian Financial Services Sector – A Market Study*. Ottawa. December.
- . 2018. "Canada's Progress in FinTech: Regulatory highlights following the Competition Bureau's Market Study." Ottawa. Available online at <https://www.competitionbureau.gc.ca/eic/site/cb-bc.Nsf/eng/04392.html>.
- . 2019. "Competition Bureau Submission to OECD: Digital Disruptions in Financial Markets." Ottawa. June 7. Available online at <https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04466.html>.
- Conference Board of Canada. 2010. "Best Policy Practices for Promoting Inward and Outward Foreign Direct Investment." Ottawa. October.
- Decker, R., J. Haltiwanger, R. Jarmin, and J. Miranda. 2014. "The Secular Decline in Business Dynamism in the U.S." Mimeo. Available online at http://econweb.umd.edu/~haltiwan/DHJM_6_2_2014.pdf.
- Deloitte. 2012. *The Future of Productivity*. Available online at <https://www2.deloitte.com/content/dam/Deloitte/ca/Documents/insights-and-issues/ca-en-future-of-productivity-092812-aoda.pdf>.
- . 2017. "Closing the Gap: Encouraging Fintech Innovation in Canada." Available online at <https://www2.deloitte.com/content/dam/Deloitte/ca/Documents/financial-services/CA-2017-FSI-EN-Closing-the-gap-AODA.PDF>.
- de Serres, A., S. Kobayakawa, T. Sløk, and L. Vartia. 2006. "Regulation of Financial Systems and Economic Growth in OECD Countries: An Empirical Analysis." OECD Economic Studies 43. Paris: Organisation for Economic Co-operation and Development.
- Dietrich, A. 2012. "Explaining Loan Rate Differentials Between Small and Large Companies: Evidence from Switzerland." *Small Business Economics* 38 (4): 481–94.
- Egger, P., and C. Keuschnigg. 2010. "Innovation, Trade and Finance." Paper prepared for the conference on Trade and Finance, organized by GEP, University of Nottingham; CESifo, University of Munich; and the Murphy Institute, Tulane University; Munich, April 21–22.
- Heil, M. 2017. "Finance and Productivity: A Literature Review." OECD Working Papers 1374. Paris: Organisation for Economic Co-operation and Development.
- Howitt, P. 2015. *Mushrooms and Yeast: The Implications of Technological Progress for Canada's Economic Growth*. Commentary 433. Toronto: C.D. Howe Institute. September.
- IMF (International Monetary Fund). 2014a. *Canada Financial Sector Stability Assessment*. IMF Country Report 14/29. Washington, DC. February.

- . 2014b. *Canada Financial Sector Assessment Program*. IMF Country Report 14/73. Washington, DC: March.
- Jason, J. 2016. *Swimming with Whales: How to Encourage Competition from Small Banks*. Commentary. Toronto: C.D. Howe Institute. October 4.
- Koepl, T., and J. MacGee. 2017. *Mortgage Insurance Deductibles: An Idea Whose Time Hasn't Come*. Commentary 485. Toronto: C.D. Howe Institute. July.
- KPMG International. 2018. "The Pulse of Fintech 2018." Global Analysis of Investment in Fintech. Available at: <https://home.kpmg/content/dam/kpmg/co/pdf/2018/07/pulse-of-fintech.pdf>.
- Kronick, J. 2018. *Productivity and the Financial Sector – What's Missing?* Commentary 508. Toronto: C.D. Howe Institute. May.
- Le Pan, N. 2017. *Opportunities for Better Systemic Risk Management in Canada*. Commentary 491. Toronto: C.D. Howe Institute. September.
- Leung, D., C. Meh, and Y. Terajima. 2008. "Are There Canada–U.S. Differences in SME Financing?" Bank of Canada Working Paper 2008–41. Ottawa.
- Levine, R. 1997. "Financial Development and Economic Growth: Views and Agenda." *Journal of Economic Literature* 35 (2): 688–726.
- Levine, R. 2005. "Finance and Growth: Theory and Evidence." in *Handbook of Economic Growth*, eds., P. Aghion, and S. Durlauf, 1A, pp. 865–934, NorthHolland Elsevier, Amsterdam.
- Lumpkin, S. 2009. "Regulatory Issues Related to Financial Innovation." *OECD Journal: Financial Market Trends* 2009 (2): 91–121.
- Mollins, J., and P. St-Amant. 2019. "The Productivity Slowdown in Canada: An ICT Phenomenon." Bank of Canada Staff Working Paper 2019-2. Ottawa.
- OECD (Organisation for Economic Co-operation and Development). 2008. "Labour Productivity Indicators." Paris: OECD Publishing. June. Available online at <http://www.oecd.org/employment/labour-stats/41354425.pdf>.
- . 2019. "Financing SMEs and Entrepreneurs 2019: An OECD Scoreboard." Paris: OECD Publishing. Available online at https://www.oecd-ilibrary.org/sites/fin_sme_ent-2019-en/1/2/3/index.html?itemId=/content/publication/fin_sme_ent-2019-en&csp_=d95445dab35fcd2d4b065dd056316ffa&itemIGO=oecd&itemContentType=book.
- Ratté, S. 2016. "The Scale Up Challenge: How Are Canadian Companies Performing?" Ottawa: Business Development Bank of Canada, September.
- Solow, R. 1956. "A Contribution to the Theory of Economic Growth." *Quarterly Journal of Economics* 70 (4): 537–62.
- Schwanen, D. 2017. *Innovation Policy in Canada: A Holistic Approach*. Commentary 497. Toronto: C.D. Howe Institute. December.
- . 2018. "Foreign Direct Investment in Canada – The Case for Further Openness and Transparency." E-Brief. Toronto: C.D. Howe Institute. July 26.
- Schwanen, D., J. Kronick, and F. Omran. 2019. "Growth Surge: How Private Equity Can Scale Up Firms and the Economy." E-Brief. Toronto: C.D. Howe Institute. May 30.
- TFSA (Toronto Financial Services Alliance). 2017. *Seizing the Opportunity: Building the Toronto Region into a Global FinTech Leader*. Toronto. Available online at <https://tfsa.ca/storage/reports/BuildingTheTorontoRegionIntoAGlobalFintechLeader.pdf>.

RECENT C.D. HOWE INSTITUTE PUBLICATIONS

- October 2019 Bishop, Grant. *Decision Time: The Alberta Shadow Budget 2019*. C.D. Howe Institute Commentary 554.
- October 2019 Bauslaugh, Randy. "A Tale of Two Pension Plans: My Experience with a Contingent Pension Plan and the Lessons Learned." C.D. Howe Institute Verbatim.
- September 2019 Gros, Barry, and Barbara Sanders. *The Quest for Sustainability in Contingent Pension Plans*. C.D. Howe Institute Commentary 553.
- September 2019 Usher, Alex. "Funding for Results in Higher Education." C.D. Howe Institute E-Brief.
- September 2019 Mahboubi, Parisa. *Bad Fits: The Causes, Extent and Costs of Job Skills Mismatch in Canada*. C.D. Howe Institute Commentary 552.
- September 2019 Blomqvist, Åke, and Rosalie Wyonch. *Health Teams and Primary Care Reform in Ontario: Staying the Course*. C.D. Howe Institute Commentary 551.
- August 2019 Robson, William B.P. *Thin Capitalization: Weak Business Investment Undermines Canadian Workers*. C.D. Howe Institute Commentary 550.
- August 2019 Laurin, Alexandre. "The Paycheck Blues: Why Extra Work is often Not Worth the Effort for Lower-income Families." C.D. Howe Institute E-Brief.
- August 2019 Bishop Grant. "Too TIER-ed? Alberta's Proposed Re-design of Carbon Pricing for Large Emitters." C.D. Howe Institute Verbatim.
- July 2019 Ciuriak, Dan, Ali Dadkhah, and Jingliang Xiao. "Quantifying CUSMA: The Economic Consequences of the New North American Trade Regime." C.D. Howe Institute Working Paper.
- July 2019 Jenkins, Paul. *Into the Unknown: Reflections on Risk, Uncertainty and Monetary Policy Decision-making*. C.D. Howe Institute Commentary 549.
- July 2019 Robson, William B.P., and Farah Omran. *Big Spenders: Canada's Senior Governments Have a Bad Budget Habit*. C.D. Howe Institute Commentary 548.
- July 2019 Kronick, Jeremy, and Farah Omran. "Inflation after the Crisis: What's the Story?" C.D. Howe Institute E-Brief.

SUPPORT THE INSTITUTE

For more information on supporting the C.D. Howe Institute's vital policy work, through charitable giving or membership, please go to www.cdhowe.org or call 416-865-1904. Learn more about the Institute's activities and how to make a donation at the same time. You will receive a tax receipt for your gift.

A REPUTATION FOR INDEPENDENT, NONPARTISAN RESEARCH

The C.D. Howe Institute's reputation for independent, reasoned and relevant public policy research of the highest quality is its chief asset, and underpins the credibility and effectiveness of its work. Independence and nonpartisanship are core Institute values that inform its approach to research, guide the actions of its professional staff and limit the types of financial contributions that the Institute will accept.

For our full Independence and Nonpartisanship Policy go to www.cdhowe.org.



C.D. HOWE
INSTITUTE

67 Yonge Street, Suite 300,
Toronto, Ontario
M5E 1J8

Canadian Publication Mail Sales
Product Agreement #40003848