



INSTITUT **C.D. HOWE** INSTITUTE

COMMENTARY

NO. 644

Scaling Up Is Hard To Do: Financing Canadian Small Firms

Canada's small and medium-sized enterprises (SMEs) are the main job generators in the economy. But their growth lags those in other advanced economies and they face hurdles to financing that are damping their prospects. The authors recommend policy actions in both debt financing and equity financing to help remedy the situation.

Miwako Nitani and Aurin Shaila Nusrat

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COMMENTARY No. 644
July 2023

\$12.00

ISBN 978-1-77881-008-4

ISSN 0824-8001 (print);

ISSN 1703-0765 (online)



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SCALING UP IS HARD TO DO: FINANCING CANADIAN SMALL FIRMS

by Miwako Nitani and Aurin Shaila Nusrat

- Canada's small and medium-sized enterprises (SMEs) play an out-sized role in generating jobs and promoting economic prosperity. But Canadian growth-oriented SMEs lag those of other advanced countries and face financing hurdles, whether in raising debt or attracting equity investments.
- Despite Canada's healthy supply of debt financing, access to financing appears to be of particular concern among certain types of firms including those that are young, growth-oriented, and exporters. Plus, Canadian SMEs in general face relatively high borrowing costs compared to those in other OECD countries. As for equity capital – such as angel financing and venture capital (VC) – there appear to be shortages in financing for companies that seek investments of less than \$5 million. Of particular importance, the scale of angel financing in the US dwarfs that which is evident in Canada.
- The authors recommend a number of policy actions. For young and high growth firms, the federal government should consider re-structuring the fee payment schedule on Canada Small Business Financing (CSBF) loans such that fees can accumulate over the loan's life and are repaid by a balloon payment at maturity. This would reduce the annual borrowing costs for the most vulnerable borrowers. For high growth firms, the CSBF program could also be amended to allow it to cover the portion of requested loan amounts that exceed that which financial institutions are willing to provide. For exporters, Export Development Canada (EDC) could help reduce exchange rate volatility through its foreign exchange facility guarantee program.
- To address the gap in the supply of angel and seed/early stage VC financing in Canada, the authors recommend a national co-investment fund that would invest alongside angels to leverage their investment and expertise. One approach might be through expansion of existing programs such as the National Research Council of Canada's Industrial Research Assistance, the Venture Capital Action Plan and the Venture Capital Catalyst Initiative programs.
- The authors also point out the need for policy research on the impacts of foreign funds on the Canadian VC industry.

INTRODUCTION

This *Commentary* provides an overview of the state of financing for small and medium-sized enterprises (SMEs) in Canada.¹ It aims to offer a better understanding of the nature of SME growth, barriers to accessing finance and gaps present in Canadian financial markets. It then provides public policy

1 Small businesses are those with one to 99 employees, medium-sized businesses are those with 100 to 499 employees and large firms are those with at least 500 employees.

The authors thank Jeremy Kronick, Alexandre Laurin, Mawakina Bafale, Daniel Schwanen and Stuart Bergman for comments on an earlier draft. The authors retain responsibility for any errors and the views expressed.

Policy Area: Financial Services and Regulation.

Related Topics: Business Investment; Capital Markets; Venture Capital.

To cite this document: Nitani, Miwako, and Aurin Shaila Nusrat. 2023. *Scaling Up Is Hard To Do: Financing Canadian Small Firms*. Commentary 644. Toronto: C.D. Howe Institute.

C.D. Howe Institute Commentary® is a periodic analysis of, and commentary on, current public policy issues. Michael Benedict 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.

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recommendations that might facilitate access to the kinds of financial capital necessary to increase job-creating growth of Canadian SMEs.

The birth and growth of young firms are key drivers of job creation and economic welfare. The OECD has reported that approximately 72 percent of job creation across 18 OECD countries – including Canada – was attributable to firms with fewer than 250 employees, among which young firms (fewer than five years old) accounted for 40 percent of job creation while more established firms (more than five years old) accounted for the remaining 32 percent (OECD 2018).

However, in Canada, our SMEs do not grow as rapidly as their counterparts in the US or Europe. The proportion of high-growth firms with 10 or more employees in the service-producing sector in Canada is below the OECD average, both when a high-growth firm is defined as one with more than 20-percent growth in employees and when it is defined in terms of revenue growth. The percentage of high-growth firms in goods-producing sectors also lags behind the OECD average when growth is measured in terms of revenues (OECD 2017).² This difference between Canada and peer-advanced countries calls for a better understanding of the trends and factors affecting SME growth in Canada.

A key factor worthy of investigation is financing. Growth requires financing, and there is evidence

Canadian SMEs are falling behind here as well. For example, Plant (2017) finds that when comparing similar tech companies that received venture capital (VC) funding in the US versus Canada, Canadian firms wait longer before they start raising funds, raise funds less frequently and raise less money over time. Moreover, Canadian SMEs face some of the highest borrowing rates among the OECD countries in terms of spreads relative to large firms. The gaps between US and Canada angel financing and a dearth of VC investments at the \$2 million-to-\$5 million³ range also indicate potential pressure points.⁴

This report examines the environment for Canadian business creation and growth, with a particular focus on the availability of financing and provides a series of policy recommendations with the goal of ensuring smooth capital flows to young firms with growth potential.

SME FINANCING: OVERVIEW

Who Seeks Growth?

It is important to acknowledge at the outset that not all SME owners want their firms to grow. The SME population includes numerous “lifestyle businesses”; that is, SMEs whose owners seek only to achieve or maintain a particular lifestyle.⁵ When these businesses seek capital, they are likely to be looking to sustain existing levels of activity

2 The percentage of high-growth firms in Canada is above the OECD average only when those in goods-producing sectors are considered and the growth is measured by the number of employees. Note that service-producing sectors make up two-thirds of Canada’s economy (OECD 2017). In Canada, in 2020 and 2021, the percentage of SMEs with 10 employees or more experiencing more than 20 percent employment growth was 3.2 percent in both years (ISED 2021, 2020); in the UK, it was 3.8 and 4.2 percent. (<https://www.ons.gov.uk/businessindustryandtrade/business/activitysizeandlocation/bulletins/businessdemography/2021>)

3 Unless otherwise specified, dollar figures are in Canadian dollars.

4 One important characteristic of the Canadian venture capital (VC) industry is the significant role played by para-public funds. For example, in 2022 the top four most active VC funds were para-public funds (BDC Capital, Investissement Québec, Export Development Canada and MaRS Investment Accelerator Fund (CVCA 2023).

5 Hurst and Pugsley (2011) report that half of US nascent entrepreneurs (individuals in the process of establishing a new business) cite, as the primary reasons for starting their businesses, such nonpecuniary benefits as “wanting flexibility over schedule,” “to be one’s own boss,” etc.

rather than financing higher growth.⁶ Other SME owners who may not be growth-oriented include “necessity entrepreneurs,” those who are forced into entrepreneurship due to declining opportunities for paid employment (Hacamo and Kleiner 2020). Accounting for approximately 27 percent of new Canadian business owners (Neymotin 2021), necessity entrepreneurs are less apt to be growth oriented (Fairlie and Fossen 2018) and, when seeking capital, are attempting to survive.

To reflect the demography of the Canadian population of small businesses, Table A-1 (in the Appendix) presents a breakdown of the distribution of growth outcomes among Canadian SMEs between 2018 and 2020 (Column A): 16.4 percent of Canadian SMEs grew their revenues more than 10 percent, while almost 40 percent reported either no or negative growth.⁷ Growth was most likely among:

- Larger and younger firms;
- Firms involved in international activities, exporters, and those that intend to expand sales into new markets; and
- Innovative firms,⁸ firms with intellectual property, those that have adopted at least one form of advanced technology and those that use an e-commerce platform or payment system.

Table A-1 in the Appendix also displays the scope of SME owners’ expectations – as of early 2021 – of future growth (Column B). Only 17.3 percent of SME owners in the SFGSME sample expected annualized growth rates to exceed 10 percent. These firms, again, tend to be larger, younger, and be involved in international or innovative activities. One in four SME owners anticipated no or negative growth during 2021–2023.

As noted in the introduction, fast-growth SMEs account for a large share of job creation; however, only a minority of SMEs are fast growing. This phenomenon, known as the “scale-up challenge,” occurs internationally. That is, only a small share of SMEs grow quickly, but it is these firms that make the most substantive contributions to employment creation (OECD 2021a). Scaling-up appears to be particularly challenging for Canadian SMEs, with only 2 percent of mid-sized firms growing into larger ones (Remillard and Scholz 2020) and a noted lag in high-growth services-producing SMEs (OECD 2017).

Growth requires financing.⁹ It is, therefore, important for Canadian policymakers to ensure that firms with high growth potential can obtain the financing they need to nourish their development and contribute to Canada’s economic growth. Having said this, of necessity, we next review the components

6 For example, a firm lacking internal funds may request financing for an investment to adapt itself to an anticipated technological or market change. While not generating incremental cash flows (i.e., growth), firms might need such investments to sustain current levels of profitability and employment.

7 Based on the Survey of Financing and Growth of Small- and Medium-sized Enterprises (SFGSME), conducted by Statistics Canada and Innovation, Science and Economic Development Canada (ISED).

8 Firms are defined as innovative if they have introduced either: (1) new or significantly improved goods/services or process/method; (2) a new organizational method in business practices, workplace structure or external relations; or (3) a new way of selling goods or services.

9 The OECD (OECD 2017) reports that the small-business tax rates in Canada are favourable to SMEs from an international perspective: they were the fourth lowest among OECD countries. There is an argument that tax rates applied to firms with a certain level of earnings before tax (EBT) creates incentives for SME owners to maintain earnings just below threshold, thereby limiting their growth. However, Dachis and Lester (2015) found no cluster of SMEs with EBT ranging from \$425,000 to the \$500,000 threshold, arguing that it is high enough not to create a large group of SMEs with EBT just below the threshold. That said, Dachis and Lester contend that the overall Canadian economy might be better off with a lower corporate tax rate applicable to all corporations than a lower tax rate only for small businesses at the expense of large corporations, as small firms tend to be less productive than large firms.

of financing in Canada for both SMEs in general and for those seeking job-creating growth.

Table 1 summarizes the relative frequencies with which SMEs apply for key financing categories.¹⁰ We present these data for both pre-pandemic 2018 and the most recent data from 2021. We note that the number of Canadian SMEs requesting external financing increased significantly from the 2018 to the 2021 surveys – from 47.1 percent to 82.4 percent. This increase relates primarily to the substantially greater reliance on government sources (grants, subsidies or non-repayable contributions) related to COVID-specific interventions. For this reason, 2021 data may be an outlier. We, therefore, present 2018 survey data alongside.

What one observes (excluding government sources during the pandemic) is SMEs' heavy reliance on debt financing.¹¹ Commercial loans and trade credit are, by far, the two primary sources of financing sought by SMEs.¹² In particular, growth-oriented firms – firms that experience more than 10-percent revenue growth over the preceding three years, exporters and innovators (including those with intellectual property) – are relatively more likely to seek external financing.

In general, equity financing is limited to the few SMEs among growth-oriented firms that were relatively large and that exhibited exceptional growth prospects. Accordingly, Table 1 shows that fewer than 1 percent of SMEs requested equity

financing in either 2018 or 2021. Those that sought equity financing were concentrated among exporters and SMEs that experienced at least 20-percent revenue growth during the preceding three years, innovators and owners of intellectual property: that is, among firms that are relatively likely to have exceptional growth prospects.

Table 2 is consistent with Table 1 with respect to SMEs' reliance on bank loans. The average amount of financing per request was much higher for bank loans than for any other source of financing. Accordingly, this paper focuses on commercial loans, the primary financing source for growth-oriented SMEs, and on equity capital, including angel financing and VC. Table 3 indicates the major providers of commercial loans, angel financing, and three types of VC financing based on deal size (according to Remillard and Scholz (2020)).

DEBT FINANCING OF CANADIAN SMEs

Availability of Debt Financing for SMEs

Table 4 summarizes approval rates (proportion of applications that were approved) and authorization rates (proportion of funds sought that were approved) for loan applications from Canadian SMEs in 2018 and 2021, indicating a healthy supply of debt financing. Authorization and application approval rates were both generally

10 Tables 1, 2, 4 and 5 are based on the Surveys of Financing and Growth of SMEs (SFGME) conducted by ISED and Statistics Canada every three years. (See <https://www150.statcan.gc.ca/n1/daily-quotidien/220302/dq220302b-cansim-eng.htm>, various tables).

11 Other observations with respect to company types include:

- Larger firms are more likely to request external financing;
- Immigrant owners are relatively less likely to apply for external financing; and
- Ownership structures that include both men and women are more likely to request external financing.

12 Domestic chartered banks are the primary providers of debt financing to Canadian SMEs, accounting for nearly two-thirds of total SME debt financing in 2021 (70 percent in 2018). Credit unions and Caisses Populaires account for about 20 percent (24 percent in 2018), and government institutions account for about 13 percent (9 percent in 2018). Alternative lenders, crowd sourcing and peer-to-peer lenders provide less than one percent of debt financing (less than two percent in 2018).

Table 1: Percentage of SMEs that Requested External Financing: 2018 and 2021

	External		Bank loans		Lease		Trade credit		Equity		Government	
	2018	2021	2018	2021	2018	2021	2018	2021	2018	2021	2018	2021
All SMEs	47.1	82.4	25.6	16.3	7.2	5.8	25.7	24.3	0.8	1.0	3.7	75.9
Exporting												
Exporter	57.5	82.5	31.5	19.7	9.7	4.5	30.4	27.4	1.9	2.4	8.6	75.2
Non-exporter	45.7	82.4	24.8	15.8	6.8	5.9	25.1	23.9	0.7	0.8	3.0	76
Growth												
> 20%	52.2	83.6	35.6	22.7	9.8	10.2	22.7	24.6	2.2	2.7	6.7	76.5
11 – 19%	50.6		30.7		7.0		24.2		0.2		4.8	
1 – 10%	48.7		25.4		7.9		26.0		0.7		4.1	
0%	38.8	74.8	16.6	12.4	5.5	3.4	25.6	21.2	0.5	0.4	2.4	68.8
< 0%	46.1	86.3	21.0	12.6	4.4	4.6	30.8	28.8	1.6	0.9	2.3	82.2
Innovation												
Innovator	57.1	89.5	33.6	22.3	9.9	7.6	31.3	29.9	1.5	2	5.9	83
Non-Innovator	42.5	79.1	21.9	13.9	6.1	5.1	23.4	22	0.6	0.6	2.8	72.4
Holds IP	57.2	90.7	30.5	21.2	10.6	8.1	32.1	33	2.3	3.8	8.8	85

Figures represent the percentage of Canadian SMEs that formally requested each of key sources of financing: as of early 2018 and, for comparative purposes, as of early 2021.

Source: Survey of Financing and Growth of SMEs, 2017 and 2020, retrieved from <https://ised-isde.canada.ca/site/sme-research-statistics/en/survey-data-and-analysis/survey-financing-and-growth-small-and-medium-enterprises/survey-financing-and-growth-small-and-medium-enterprises-2017> and <https://www150.statcan.gc.ca/n1/daily-quotidien/220302/dq220302b-cansim-eng.htm>.

high.¹³ Indeed, authorization rates were close to, or greater than, 90 percent for all forms of bank loans and leases in both 2018 and 2021. Approval rates ranged between 86 and 96 percent for non-residential mortgages, 89 and 91 percent for term loans and 97 and 99.5 percent for leases and trade credit. Approval rates were somewhat lower for line-of-credit applications: 78 percent in 2018 and 83 percent in 2021.

Table A-2 in the Appendix, which reports the frequency with which business owners identify various perceived barriers to business growth, is consistent with this finding. The table is based on business owners' responses to the 2018 and 2021 Statistics Canada Survey on Financing and Growth of Small and Medium Enterprises (SFGSME) and shows the frequencies of SME owners' responses to the question: "Which of the following are obstacles to the growth of your business?" The data show that obtaining financing is the least frequently mentioned of the obstacles listed.

However, the survey data also suggest the presence of subgroups of SMEs that *might* face relatively higher barriers to accessing debt capital. Citing "obtaining finance" as an obstacle to growth relatively frequently (see Table A-2), these groups include high-growth firms, negative-growth firms, immigrant-owned firms and firms that are majority-owned by women.

- *High-growth firms* (those that experienced at least 20-percent revenue growth during the preceding three years). While loan approval rates for this group are not significantly lower than the overall average, the authorization rates are lower for mortgage and term loans – 80 and 75

Table 2: Average Amount Authorized to SMEs: All SMEs, 2018 and 2021 (\$thousands)

	2018	2021
Non-residential mortgage	845	894
Term loan	276	233
Line of credit	235	226
Credit card	19	19
Lease	106	100
TC	61	79
Equity	1,389	937
Government	26	70

Source: Survey of Financing and Growth of SMEs, 2017 and 2020, retrieved from <https://ised-isde.canada.ca/site/sme-research-statistics/en/survey-data-and-analysis/survey-financing-and-growth-small-and-medium-enterprises/survey-financing-and-growth-small-and-medium-enterprises-2017> and <https://www150.statcan.gc.ca/n1/daily-quotidien/220302/dq220302b-cansim-eng.htm>.

percent in 2018 and 90 and 87 percent in 2021, respectively.

- *Negative-growth firms*. Firms experiencing negative revenue growth during the preceding three-year period are relatively less likely than other SMEs to obtain requested lines of credit.
- *Immigrant-owned firms*. Firms owned by individuals who were born outside of Canada received, on average, only 75 percent of the amounts requested for lines of credit in 2018 (87 percent in 2022). The loan-approval rates were also low for immigrant-owned firms for line-of-credit applications (68 percent in 2018 and 79 percent in 2022).¹⁴

13 There is a possibility that the high authorization and approval rates reflect a practice referred to as "informal turndowns" in which lenders informally discourage firm owners from applying for loans when the likelihood of approval is low. However, among the 47.1 percent of firms that did not request financing in 2018, only 1.3 percent said they did not apply because they "thought the request would be turned down."

14 Immigrant-owned firms tend to be small (Cukier 2017). Therefore, barriers to debt financing faced by these firms might be attributable to their smaller size. However, the SFGSME data do not suggest that small firms are disadvantaged in accessing debt capital. More definitive answers to these issues require access to the survey data and the use of multivariate methods.

Table 3: Primary Financing Suppliers for Each Source*

	Financing type	Type of SMEs	Suppliers
Debt	Bank loans	Both growth-oriented and non-growth-oriented SMEs	Chartered banks, credit unions. Usually in the form of operating loans (to finance cash flow) or term loans (mainly to finance growth).
Equity	Angel	Growth-oriented SMEs that seek \$100~200k	Angel investors (wealthy individuals).
	Low Tier VCs	Growth-oriented SMEs that seek \$2~5M	Crown corporations (BDC, EDC), exempt market dealers, family offices, specialty debt funds, bank-related investment firms, domestic private independent VCs, and corporate VCs.**
	Medium Tier VCs	Growth-oriented SMEs that seek \$6~10M	Domestic private independent VCs, corporate VCs, bank-owned investment firms, government-controlled institutions, and family offices.
	High Tier VCs	Growth-oriented SMEs that seek \$20M or more	US VC funds, large Canadian public pension funds (e.g., Ontario Teachers' Pension Plan), domestic private independent VCs, corporate VCs, and domestic growth equity funds that have developed out of preceding VC entities (e.g., Georgian Partners, Inovia Capital).

* As seen in Table 3, and following most academic papers and industry reports (see, for example, Remillard and Scholz (2020) and PWC (2020)), this paper defines venture capital as a form of private equity provided to young private companies with growth potential, supporting them until they attain successful exits (IPOs and acquisitions). We do not use the term “private equity” as it is also used for transactions involving publicly traded companies (those that support further growth of relatively young public companies and buyout transactions, which are often for mature public companies to go private).

** The exempt market comprises investors who qualify to invest in businesses without requiring the issuing firm to provide a prospectus. Investors in the exempt market include individuals who, by dint of their income and wealth, fall within the “accredited investor exemption,” as well as institutional investors and investors who invest in issuers headquartered outside of Canada, and crowdfunding. (See BLG (2022) and Ontario Securities Commission (2021)).

Source: Authors and Remillard and Scholz (2020).

Table 4: Debt Financing Request Approval and Authorization Rates

	Approval Rates		Authorization Rates	
	2018	2021	2018	2021
Non-residential mortgage	86.2	95.5	92.5	98.1
Line of credit	77.9	83.1	93.3	93.3
Term loan	91.1	89	92.7	88.8
Lease	99.5	98.5	97.4	95.2
Trade credit	98.9	96.8		
Government	76.6	98.2		

Source: Survey of Financing and Growth of SMEs, 2017 and 2020, retrieved from <https://ised-isde.canada.ca/site/sme-research-statistics/en/survey-data-and-analysis/survey-financing-and-growth-small-and-medium-enterprises/survey-financing-and-growth-small-and-medium-enterprises-2017> and <https://www150.statcan.gc.ca/n1/daily-quotidien/220302/dq220302b-cansim-eng.htm>.

- Women-owned firms.* Top-line results suggest that firms that are majority owned by women (those with 51 to 100 percent women ownership) tend to receive smaller amounts of bank loans, lease financing, trade credit, equity and government financing. However, simple comparisons may mask other features of women-owned firms that account for such differences. Women-owned firms, for example, differ systemically from those owned by men in terms of firm size, sector, firm age, etc. Huang and Rivard (2021), who used multivariate analyses of Statistics Canada data to account for such systemic differences, report, "...[a]nalysis of alternative metrics for access to financing – the likelihood of seeking external financing or of reporting that obtaining financing is an obstacle to growth – yields no evidence of gender differences."

Costs of SME Debt Financing

The previous section revealed that the supply of debt financing doesn't appear to be a macro issue in terms of loan approval and authorization rates – although there may be important groups that face constraints. However, if the cost of debt is high, it may yet be a barrier despite its ready availability.

Kronick and Omran (2021), as well as Kronick and Bafale (2022), report that Canadian SMEs face relatively higher interest rates than large firms compared to SMEs in such key trading partners as the US, the UK, France and other OECD countries (Table 5). In Table 6, we review average interest rate spreads broken down by salient attributes of SME borrowers.

Table 5 reveals that spreads are high among:

- Younger firms.* Firms less than two years old face relatively higher spreads for all three types of bank loans (mortgages, term loans and lines of credit).
- Growth-oriented firms.* Firms whose owners anticipate higher revenue growth are subject to higher spreads for lines of credit and term loans.
- Exporters.* Exporters face relatively higher spreads for mortgages and term loans.

Table 5: Interest Rate Spread, Large vs. Small Business, Canada and Selected OECD Countries, 2011–19

Country	Average (percentage points)
United States	0.28
France	0.58
Sweden	0.65
United Kingdom	1.00
Spain	1.24
Netherlands	1.37
Italy	1.63
Australia	1.68
Canada	2.26

Source: Kronick and Omran (2021), updated in Kronick and Bafale (2022).

- Negative growth firms.* Firms whose owners anticipate negative growth in future are subject to higher spreads for term loans.

For the sake of brevity and clarity, we refer to these types of firms as "YGEN" firms. Note that, as we saw earlier, high-growth and negative-growth firms also face, on average, lower levels of loan approval and authorization rates.

Meanwhile, Table A-2 in the Appendix shows that "obtaining financing" is the least frequently cited obstacle to business growth among Canadian SME owners, yet these same SMEs appear to face higher borrowing costs than counterparts in other OECD countries. While what might explain this contradiction is unclear, what is clear is that high debt costs squeeze free cash flows. As well, debt's contractually fixed costs increase the volatility of firms' residual cash flows. The higher costs and greater volatility may increase firms' exposure to financial distress, especially during periods of low demand. This argument is consistent with the relatively high frequency with which SME owners cite cash flow/debt management as an obstacle

Table 6: Interest Rate Margins Above Prime Rate, Canada, 2018 & 2021

	Mortgage		LoC		Term loan	
	2018	2021	2018	2021	2018	2021
All employer SMEs	1.3	1.45	2.2	2.85	2.0	1.95
Age						
Less than 2 years	2.1	1.85	2.4	3.65	2.6	3.25
3 to 10 years	1.8	1.55	2.1	3.45	2.4	1.85
11 to 20 years	1.1	1.75	2.2	2.85	2.0	2.25
more than 20 years	1.2	1.15	2.1	1.95	1.5	1.55
Exporting						
Exporter	2.1	1.75	2.1	2.35	2.2	2.25
Non-exporter	1.2	1.45	2.2	2.95	2.0	1.95
Growth						
> 20%	1.2		2.1		3.1	
11 – 19%	1.0		2.1		1.3	
1 – 10%	1.3		2.2		1.9	
0%	1.3		1.7		1.3	
< 0%	1.4		2.4		2.6	
Anticipated annual growth rate						
20% or more		1.65		2.65		2.65
16% to 19%		1.15		1.95		4.25
11% to 15%		2.05		2.35		2.05
6% to 10%		1.55		2.95		2.15
1% to 5%		1.05		2.65		1.65
No growth		1.05		2.85		1.25
Negative growth		3.35		3.15		1.45
Female ownership						
0%	1.3	1.65	2.2	2.85	2.2	2.05
1 to 49%	1.5	1.45	1.5	2.25	1.7	1.75
50%	1.2	1.25	2.3	2.45	1.6	1.55
51 to 99%	1.3	0.85	3.3	3.35	3.9	1.75
100%	1.7	1.05	2.2	3.85	1.7	2.25

Source: Survey of Financing and Growth of SMEs, 2017 and 2020, retrieved from <https://ised-isde.canada.ca/site/sme-research-statistics/en/survey-data-and-analysis/survey-financing-and-growth-small-and-medium-enterprises/survey-financing-and-growth-small-and-medium-enterprises-2017> and <https://www150.statcan.gc.ca/n1/daily-quotidien/220302/dq220302b-cansim-eng.htm>.

to growth (Table A-2).^{15,16} High debt costs may therefore contribute to business failure, consistent with the fact that more than half (54 percent) of Canadian SMEs are no longer in business 10 years after launching. Meanwhile, nearly one-third (31 percent) are not in business five years post launch (ISED 2023).¹⁷

Policy Actions Needed

Government interventions in markets have historically been guided by an understanding that they should only address identified market imperfections, such as capital market gaps. Interventions may be costly to taxpayers: accordingly, those that seek to facilitate access to financing should be efficient and without unreasonable exposure to risk.¹⁸ As noted, access to financing appears to be of particular concern among firms that are young, growth-oriented, exporters and those experiencing negative growth (YGEN) SMEs.

YGEN SMEs

Young firms. Young firms are often considered risky due to severe information asymmetry. Nevertheless, young firms are more likely to grow (see introduction and Table A-1), warranting consideration of policies designed to support such growth. In this regard, loans to these firms are often extended under the Canada Small Business Financing (CSBF) program, where the federal government guarantees the repayment in the event of default. The CSBF program requires borrower firms to pay fees in addition to lenders' fees and interest charges – the higher payments associated with young firms might be an outcome of these additional fees. Since the program has a mandate to “increase the availability of financing to establish, expand and modernize Canadian small businesses,” it might be useful for CSBF to consider reducing the periodic fee payments.¹⁹ For example, the federal government might consider re-structuring the fee payment schedule on CSBF loans such that fees can accumulate over the loan's life and are

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- 15 There are, of course, other factors that cause cash-flow problems. These include poor financial management skills, rising costs of inputs and fluctuations in consumer demand. While higher interest rates tighten free cash flows, the reverse could also be possible. That is: insufficient or volatile cash flows may prompt lenders to charge higher rates, especially when owners display questionable financial management skills, or to deny the loan application.
- 16 Note also that YGENs (and women-owned firms) cite “obtaining financing” and “maintaining sufficient cash flow or managing debt” relatively more frequently than other SMEs.
- 17 The business failure rates in Canada appear to be lower when viewed from the international perspective. Approximately 68 percent (50 percent) of firms fail within 10 years (five years) in the US. (<https://www.sba.gov/sites/default/files/Business-Survival.pdf>); approximately 50 percent fail within five years in EU countries (https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Business_demography_statistics); and about 62 percent within five years in the UK. (<https://www.ons.gov.uk/businessindustryandtrade/business/activitysizeandlocation/bulletins/businessdemography/2021>).
- 18 Interestingly, Mazzucato (2018, 264-269) argues that potential positive externalities might result from spillovers arising from publicly funded interventions, thereby enhancing the common good.
- 19 The CSBF program is a Canadian government initiative to facilitate SME access to financing by guaranteeing the unpaid portion of loans in the case of defaults (in such a case, the lender receives 85 percent of the outstanding loan balance up to a maximum of 12 percent of the value of the lender's CSBF loan portfolio). The maximum chargeable interest rate is the lender's prime rate plus 3 percentage points. In addition, the borrower must pay an initial registration fee of 2 percent of the total loan amount (can be part of the loan) and an annual 1.25 percent administration fee (payable quarterly on the outstanding loan balance. <https://ised-isde.canada.ca/site/canada-small-business-financing-program/en/find-loan-your-small-business/canada-small-business-financing-program-guidelines>).

repaid by a balloon payment at maturity. This would reduce the annual borrowing costs for the most vulnerable borrowers.

Growth-oriented. High-growth firms might be regarded as risky because: (1) they are growing, requiring investments. In addition, they are small and thus less likely to enjoy economies of scale and more likely to be left short of cash for debt obligations; (2) they are subject to more intense information asymmetry due to the rapidly changing environment in which they operate (Binks and Ennew 1996); (3) the assets they hold are more likely intangible and, therefore, difficult to collateralize (see Section 1 and Table A-1); and (4) they are likely to engage in international trade, entering new markets (see below).

Nevertheless, as discussed in the Introduction, since the birth and growth of firms is a key driver of job creation and economic welfare, it is important to ensure their smooth access to financing to sustain their growth. In particular, it is important to address their relatively higher debt costs compared to firms they must compete with in other jurisdictions. To facilitate easier access to financing for growth-oriented firms (similar to the case of young firms), the early debt burden could be reduced by allowing fees to accumulate until maturity, thereby creating a balloon payment due at maturity to be paid by the then-grown firm. The CSBF program could also be amended to allow it to cover the portion of requested loan amounts that exceed that which financial institutions are willing to provide.

Exporters. Relatively higher interest rates charged to these firms might be due to international factors that create additional cash-flow volatility (such as fluctuations in exchange rates and more severe information asymmetry resulting from long distances to suppliers, distributors, and customers). Export Development Canada (EDC) might be

well-positioned to help exporter firms reduce this volatility, which, in turn, might lower the interest rate. For example, EDC has a platform to assist SMEs with identifying appropriate hedging strategies, offers a foreign exchange facility guarantee program, and maintains publicly available databases on foreign countries and markets.²⁰

We encourage further dissemination of data and information on these useful tools and collaborations among the three parties – banks, EDC and SMEs.

Environmental and social issues also challenge exporters, who must comply with ever-changing regulations related to sustainable development goals (SDGs) in countries to which they sell their products. This implies additional costs and risk that exporter SMEs must manage and absorb. To the authors' knowledge, there is no policy support in this respect.

Negative-growth firms. Firms experiencing negative revenue growth are likely to be facing cash-flow issues. For these firms, it is important to identify, first, the reasons for declining revenues and whether providing (additional) lines of credit would help them recover. Only those deemed likely to return to more sustainable growth should be considered for policy intervention. Negative growth firms arguably require remedial non-financial support that might include educational programs to enhance entrepreneurs' financial knowledge (and to prevent them from relying on such high-cost sources of borrowing as payday loans). For example, the Financial Consumer Agency of Canada offers a variety of educational programs to boost financial literacy among Canadians. It might be efficient to expand such programs for entrepreneurs. Further expanding the Business Development Bank of Canada's (BDC) advisory capacity might also be a well-suited means of assisting these firms. Again,

20 See <https://www.edc.ca/en/solutions/working-capital/foreign-exchange-facility-guarantee.html#free-guide>, <https://www.edc.ca/en/country-info.html>.

the CSBF program and its loans – with suggested amendments – could be applied here.

Cost of Debt

In general, and for YGEN firms in particular, the higher interest rates our SMEs face relative to their international peers increase business exit rates, leading to broader negative impacts on the Canadian economy.

We need to encourage greater competition that could further improve access to affordable capital for SMEs. One example is to encourage further business lending activity to SMEs among cooperative lenders already present within the Canadian SME sector (Nitani and Legendre 2021) through policies aimed at helping co-op lenders scale. Another might be to implement open banking, which would increase competition in the financial sector and which has lagged in Canada compared with other countries (Koepl and Kronick 2020).

EQUITY-RELATED INVESTMENTS IN GROWING FIRMS

The previous section suggests that growth-oriented SMEs may, with respect to debt financing, face lower authorization rates or higher interest rates (or both) than non-growth-oriented counterparts. This might be because the amount of financing required for growth often exceeds that which banking institutions are able to provide, and the risks associated with growing enterprises may exceed that which banks can bear. Equity capital – such as angel financing and venture capital (VC), is more risk tolerant, and its investors are usually willing to provide larger amounts of financing (especially

VC). Thus, equity capital constitutes a particularly important financing source for growth-oriented SMEs. This section considers these sources of financing.

Business Angel Financing²¹

Business angels are individuals who make risk capital investments directly in new and growing businesses.²² The three elements of business angels are, according to Harrison and Mason (1992):

- Compared to venture capitalists, they tend to concentrate on the startup and early stages of business enterprises (i.e., when access to capital is most difficult).
- Business angels are relatively accommodating to the needs of SME owners with lower rejection rates than VC funds and long-exit horizons (patient capital). Yet, their target rates of return are not dissimilar to those of institutional venture capitalists.
- They usually invest within their respective local economies.

Business angel investors typically provide financing of \$100,000 ~ \$200,000 (median values) to growth-oriented SMEs: exporters, innovators and firms in the information and communication technology (ICT) and healthcare sectors. Typically, angels invest at stages that are complementary to those on which VC firms focus. They are often early investors in firms that subsequently obtain VC financing. They fulfill accreditation roles and help these firms prepare for future investment stages. Madill, Haines and Riding (2005) note that a high proportion of SMEs that had received venture capital had previously benefitted from business angel investment. Like VCs, business angels mentor entrepreneurs, serve on boards of directors and

21 This section draws from Madill, Haines, Jr. and Riding (2005), Haines Jr, Madill and Riding, (2003) and the National Angel Capital Organization (NACO 2022).

22 Risk capital includes equity capital invested in startup companies. Its other types include VC and “love money” (financing provided by family, friends and relatives), if provided in a form of equity.

provide advice, networking opportunities, hands-on assistance and business intelligence.

Business angels typically rely on three forms of financial instruments to structure their deals: preferred shares (32 percent), convertible debentures (25 percent) and Simple Agreement for Future Equity (SAFE) notes²³ (15 percent). Pure debt instruments are uncommon.

According to the National Angel Capital Network (NACO 2022),²⁴ angels affiliated with regional angel networks collectively invested \$262.1 million in 635 firms in Canada in 2021 (\$102.9 million in 416 firms in 2020). These investments averaged \$346,024 per company (\$289,792 in 2020, see Table 6). During the 2010-2021 period, angels affiliated with NACO partners invested \$1.12 billion, of which 80 percent were initial investments and 20 percent were follow-on. Most investments were to early-stage firms in ICT (31 percent), healthcare (21 percent) and consumer discretionary (14 percent) sectors.²⁵

Despite these numbers, there appears to be a financing gap at this early stage of firm development. According to Remillard and Scholz (2020), approximately 10 percent of medium-sized SMEs

hope to achieve high growth and become large firms; that is, approximately 2,257 growth-oriented medium-sized SMEs.²⁶ Approximately 2,257 growth-oriented medium-sized SMEs. Assuming that: (1) it takes an average of five years for a small firm to grow into a medium-sized business;²⁷ and (2) 68.8 percent of small businesses survive the first five years (ISED 2022), we estimate there are currently approximately 3,280 growth-oriented early-stage firms in Canada. Among those, only 19 percent (635) received angel financing in 2021.

This gap is even more apparent when one compares Canadian angel investment activity with that in the US, where 69,060 companies collectively obtained US\$29 billion of angel financing in 2021 (Table 7).²⁸ Even taking the size of the US market into consideration, the gap is notable. The Centre for Venture Research (CVR) at the University of New Hampshire estimates that more than 363,000 US angel investors were active in 2021. Conversely, the BDC estimates there are between 20,000- to-50,000 angel investors/groups in Canada. This implies that an angel is available for every 24- to-60 Canadian SMEs, while in the US it is available for every 17 SMEs.²⁹ Furthermore, the BDC reports

23 A SAFE note is a type of convertible security, i.e., a “form of investment contract between startups and investors wherein investors, in return for contributing capital, obtain the right to receive equity shares in the startup, following the occurrence of pre-determined trigger events” (<https://digital.builtbyangels.com/link/751568/9/>).

24 NACO (<https://nacocanada.com>) is a national network comprising 145 regional and local angel networks.

25 These estimates, however, only represent angel activity among those investors who are members of the formal angel syndicates that are members of, and which responded to, NACO’s survey. As noted by Tu et al. (2022), a “large but unknown percentage of angel investment remains invisible, occurring directly between private individuals and companies.” However, this is true of both the US and Canada.

26 Total number of SMEs times the percentage of SMEs with 100-499 employees, i.e., $1,187,658 \times 0.019 \times 0.1 = 2,257$. The values employed here are taken from ISED (2022).

27 See footnote 1 for the definitions of a “small firm” and a “medium-sized business.” Growth from a small-sized to a medium-sized business means that a firm with less than 100 employees grows into a firm with 100-499 employees.

28 Note that these are rough comparisons, as Canadian data do not include business angel activity beyond that monitored by NACO. Nevertheless, the gap is notable.

29 There are 1.2 million employer SMEs in Canada (<https://ised-isde.canada.ca/site/sme-research-statistics/en/key-small-business-statistics/key-small-business-statistics-2022#>). Dividing this number by 20,000 and 50,000 yields 60 and 24. Likewise, there are 6.1 million SMEs in the US (<https://sbecouncil.org/about-us/facts-and-data/>), which we divide by 323,000 to get 17.

that only 6 percent of entrepreneurs who initially approached structured angel groups for investment received funding.³⁰

Policy Actions Needed

Business angels are key participants in SMEs' early-stage growth. They provide not only growth financing but mentorship, contacts and experience as well. Business angel investment bridges the gap between early-stage, growth-oriented SMEs and firms that would be attractive to institutional VC investment. The NACO (2021) advanced several possible measures to address this gap in the supply of angel financing in Canada. We summarize them here, focusing on their advantages and disadvantages, successes and failures.

Tax incentives. The NACO has advocated for the national level front-end tax relief to stimulate business angel financing.³¹ However, evidence on the efficacy of such tax incentives is mixed and it remains unclear whether tax incentives are effective with respect to increasing the quantum of business angel investment (Gompers and Lerner 2003, Harrison, Bock and Gregson 2020). Moreover,

Carpentier and Suret (2016, p.327) conclude that there is “very limited evidence that tax incentives for [business angels] are effective, with tax expenditures ... generally being higher than the tax revenues that are generated by the investments.”^{32,33}

A national co-investment fund. Such a fund would invest alongside angels to leverage their investment and expertise. One approach might be through expansion of existing programs such as the National Research Council of Canada's Industrial Research Assistance Program. Such programs could focus on early-stage deep tech companies that may be too risky for private fund (angels and VC)-only investments, yet might become future unicorns.³⁴ A parallel to such approaches are the successful arrangements for co-investment of private independent VCs and para-public (BDC, EDC) funds.

Relaxation of accredited investor requirements. On the one hand, this approach could increase the number of potential angel investors. However, this might provide risky early-stage investments to individuals who do not possess sufficient knowledge, experience and contacts to make well-informed early-stage investments or to provide

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- 30 See <https://www.bdc.ca/en/articles-tools/start-buy-business/start-business/angel-investors-how-find-them>. However, the level of angel activities in Canada is comparable to (or higher than) that of other OECD countries (https://www.oecd-ilibrary.org/sites/fin_sme_ent-2016-6-en/index.html?itemId=/content/component/fin_sme_ent-2016-6-en).
- 31 Front-end tax relief is the most common form of tax incentive employed internationally (Carpentier and Suret 2016) as it reduces the real cost of the investment. In Canada, most provinces, except for Alberta, Saskatchewan, Ontario and Quebec, provide investors with tax credits when they invest in local companies. For example, BC residents get a 30-percent tax credit when investing in an eligible business corporation (<https://www.vantec.ca/blogs/raise-more-money-faster-enable-investors-to-invest-in-your-ebc-company-using-their-rrsps-or-tfsa-investors-get-significant-tax-benefits-too-1>), New Brunswick residents receive a 50 percent tax credit on investments of up to \$250,000 (<https://entrevestor.com/home/entry/naco-eyes-federal-tax-credit>). However, these credits are applicable only when the investor and the investee company reside in the same province.
- 32 Tax expenditures refers to the amount of tax revenues forgone by a policy initiative or incentive.
- 33 Tax treatment of capital gains and losses on angel investment is an alternative form of tax-based incentive to business angel investment. According to the European Commission (2015) “... tax treatment of capital gains or losses realized on disposal of an investment will influence the risk preference and decision-making process of a prospective investor. ...tax relief for capital gains or the provision of tax relief on a more favourable basis ... could support the de-risking of investments in young, growing and innovative businesses.”
- 34 A unicorn is a privately held, pre-IPO, enterprise with a value of more than US\$1 billion.

Table 7: Business Angel Investments in Canada

	Total \$ value of angel investment (in millions)	# of investments	Average investment per company (\$)	Median \$ investment
2018	\$142.8	583	\$282,167	\$120,000
2019	\$163.9	299	\$1,482,948	\$190,000
2020	\$102.9	416	\$289,792	\$100,000
2021	\$262.1	635	\$346,024	\$84,000

Source: National Angel Capital Organization (2022, p. 110). 2022 Report on Angel Investing in Canada, <https://nacocanada.com>.

the mentoring that guides enterprise growth. It is essential to consider not only increasing the pool of angel capital but also the quality of investors and investor protection. Extensive debates held in the US and Canada regarding the participation of retail investors in equity crowdfunding exemplifies this point.³⁵ In this regard, the Alberta Securities Commission and Saskatchewan’s Financial and Consumer Affairs Authority have adopted, on a trial basis until April 1, 2024, a new prospectus exemption. This exemption qualifies individuals as “self-certified investors” if they possess certain academic degrees or industry certifications (e.g., a Business/Commerce degree with finance or investment specialization, a Chartered Financial Analyst designation), or, alternatively, meet certain educational requirements and a minimum annual net-income requirement of \$75,000 (note that the qualification of an accredited investor requires a minimum annual income of \$200,000 or net assets of \$1 million), and allows these “self-certified investors” to invest in young growing companies through prospectus-exempt offerings up to \$10,000 per company and \$30,000 per year, if they make investments alongside (at least) one

Table 8: Business Angel Investments in the US

	Total \$ value of angel investment (in millions \$US)	# of companies in which angels invested
2018	\$23,100	66,110
2019	\$23,900	63,730
2020	\$25,300	64,480
2021	\$29,100	69,060

Source: Angel Market Analysis Reports, CVR, University of New Hampshire: <https://Paulcollege.Unh.Edu/Resource-Category/Analysis-Report>.

accredited investor. Similarly, the Ontario Securities Commission has introduced, on an 18-month trial basis, a prospectus exemption for investors who can demonstrate they have the necessary education or experience to make an informed investment decision. Under this new exemption, which does not include a minimum annual income requirement, investors who certify that they meet certain educational or relevant business experience can

35 See National Instrument 45-110 (Start-up Crowdfunding Registration and Prospectus Exemption) for Canada and US *Jumpstart Our Business Startups Act*.

invest up to \$30,000 per year.³⁶ It will be instructive to monitor the impacts of these amendments.

Education systems for both investors and entrepreneurs. According to Thornhill and Amit (2003), poor financial decisionmaking is the primary cause of failure among young Canadian SMEs. Accordingly, education to enhance entrepreneurs' and investors' managerial and financial knowledge could potentially further the creation and survival of a larger pool of angel investors and promising investment-ready young firms.³⁷

Institutional Venture Capital in Canada

Historical Background and Current Figures

VC comprises professionally managed capital invested in high-potential, early-stage private companies, often in the form of equity-related financing. In addition to making financial investments, VC investors typically provide multiple tranches of follow-up financing and various forms of non-financial value-added.

Until relatively recently the supply of VC to young growing Canadian companies was heavily reliant on government and tax-incented Labour-Sponsored Venture Capital ("Retail") funds. Canadian private independent VC funds were small

compared to their international counterparts and fund managers were relatively inexperienced (Nitani and Riding 2013).

In the last decade, however, we have witnessed important changes in the Canadian VC landscape. First, most provincial jurisdictions are phasing out tax-incented retail funds. These funds were introduced in the 1990s as an initiative to facilitate the growth of the Canadian VC industry but have been criticized with respect to their effectiveness (Cumming and MacIntosh 2006).³⁸ Second, governments and para-public financial institutions have re-allocated funding from direct investments to indirect investments, often by means of a form of "fund-of-funds" approach. That is, large government and para-public funds invest in either: (1) private independent VC funds, thereby investing indirectly in start-up companies; or (2) in start-up companies together with private funds, mitigating issues associated with the small fund sizes of Canadian private independent funds.³⁹ Third, the evolution of the sector has grown a larger cadre of experienced VC fund managers. Fourth, governments have reduced tax impediments to foreign VC investors. Finally, and more recently, initiatives such as the federal government Venture Capital Action Plan (VCAP) and Venture Capital Catalyst Initiative (VCCI) have promoted the growth of the Canadian

36 See <https://www.asc.ca/-/media/ASC-Documents-part-2/Events-and-Presentations/2023/Feb-9-Self-Certified-Investor-Prospectus-Exemption-Presentation.ashx> and <https://www.osc.ca/en/securities-law/instruments-rules-policies/4/45-507/ontario-instrument-45-507-self-certified-investor-prospectus-exemption-interim-class-order>. In addition, the CSA (Canadian Securities Administrators) has amended National Instrument 45-106 Prospectus Exemptions and Companion Policy 45-106CP Prospectus Exemptions relating to the Offering Memorandum Prospectus Exemption. Effective on March 8, 2023, the amendments may assist SMEs in raising capital from a broader range of potential investors by increasing market confidence in these investments. However, some commenters are concerned that the disclosure requirements, enhanced by the amendments, may make it even more difficult and costly for early stage small businesses to raise capital (see <https://www.osc.ca/en/securities-law/instruments-rules-policies/4/45-106/csa-notice-amendments-national-instrument-45-106-prospectus-exemptions-and-changes-companion>). There is a need to monitor closely the impacts of these regulatory amendments on access to equity financing for viable Canadian companies.

37 NACO has "academy digital modules" to train the next generation of angel investors.

38 Nevertheless, retail funds remain active in Quebec and Saskatchewan.

39 For example, small fund sizes often hinder VC funds in providing an amount of financing necessary for the investee firm to grow to attain its optimal exit.

Table 9: VC Investments in Canada, 2012 to 2021

Year	Annual Investments (\$billions)	Number of Investments	VC Investment (percent of GDP)
2015	2.4	314	0.13
2016	2.5	377	0.13
2017	3.6	453	0.15
2018	3.8	508	0.20
2019	6.2	560	0.31
2020	4.5	513	0.24
2021	14.7	752	0.71
2019	6.2	560	0.31
2020	4.5	513	0.24
2021	14.7	752	0.71

Sources: BDC (2022).

VC sector.⁴⁰ Collectively, these measures have stimulated domestic institutional investments and have encouraged participation of foreign VC funds, which, together, have led to increased levels of VC investment (Tables 9-11).

Bradley (2019) et al. observe:

VC investment in Canada has surged. Foreign investment now represents more than 50 percent of total VC investment in Canada. VC inflows to Canada are larger than outflows. Top international funds and fund-of-funds (mostly from the US) have opened offices in Canada. A group of leading Canadian VC managers is now emerging, the size of their funds is growing, and they are becoming increasingly recognized

in the US and beyond. Importantly, returns in the Canadian VC industry have improved, and leading Canadian funds are now able to raise most of their funding from private sector investors.⁴¹

Both the BDC (2022) and the Canadian Venture Capital Association (CVCA 2022) report that deal volumes have reached previously “unprecedented” levels (BDC, p. 4), particularly among large (more than \$50 million) deals. Likewise, the BDC notes that exits have also reached historical peaks and, for example, “12 VC-backed Canadian companies [recently went] public at home or abroad, generating exit values of \$6.5 billion.”

40 The federal government’s \$390 million VCAP program provides incentives for institutional investors to invest in VC funds by committing an additional \$1 for every \$2 committed by the private sector, up to a maximum of \$100 million per fund (<https://www.bdc.ca/en/articles-tools/entrepreneur-toolkit/templates-business-guides/glossary/venture-capital-action-plan>). Meanwhile, the VCCI program invests up to \$450 million in funds-of-funds, in VC funds focusing on the life-sciences sector and in funds focusing on underrepresented groups such as women and minority communities (<https://ised-isde.canada.ca/site/sme-research-statistics/en/venture-capital-catalyst-initiative>).

41 The internal rate of return improved from -9 percent in 2012 to 14 percent in 2021 (BDC 2022).

Table 10: Recent Venture Capital Investment, Totals (2017-2021)

	Stage							
	Seed		Early		Late		Growth-Equity*	
	<i>Deals</i>	<i>Investment (\$millions)</i>	<i>Deals</i>	<i>Investment (\$millions)</i>	<i>Deals</i>	<i>Investment (\$millions)</i>	<i>Deals</i>	<i>Investment (\$millions)</i>
2017	154	236	232	1,953	59	1,422	8	14
2018	194	310	192	1,584	98	1,545	24	258
2019	177	251	263	2,742	79	1,368	41	1,806
2020	158	305	242	1,702	86	2,028	30	445
2021	312	652	292	5,134	91	5,314	48	3,557

* Growth equity is defined as significant minority investment to drive growth and scale that can be combined with a secondary transaction to facilitate liquidity for existing VC investors (BDC 2022, p.19).

Source: BDC (2022).

Table 11: VC Activity: Percent of Total Investment, Canada (2017-2021)

	Stage							
	Seed		Early		Late		Growth-Equity	
	<i>Deals</i>	<i>Investment</i>	<i>Deals</i>	<i>Investment</i>	<i>Deals</i>	<i>Investment</i>	<i>Deals</i>	<i>Investment</i>
	<i>Percent</i>							
2017	34.0	6.5	51.2	53.9	13.0	39.2	1.8	0.4
2018	38.2	8.4	37.8	42.8	19.3	41.8	4.7	7.0
2019	31.6	4.1	47.0	44.5	14.1	22.2	7.3	29.3
2020	30.6	6.8	46.9	38.0	16.7	45.3	5.8	9.9
2021	42.0	4.4	39.3	35.0	12.2	36.3	6.5	24.3

Source: BDC (2022).

VC investments in Canada tend to be highly concentrated in the information technology sector (\$9.5 billion in 2021), with somewhat less investment allocated to the healthcare (\$1.7 billion) and environment/cleantech (\$0.75 billion) sectors. All other sectors combined accounted for approximately \$2.7 billion during 2021. The latter category includes enterprises in primary sectors (energy, mining and forestry), which had positive

earnings and above-average growth prospects but which do not seem to be as attractive to VCs.

Overall, VC investments in Canadian entrepreneurial companies increased sharply in 2021 over 2020. The median exit values and the 10-year horizon annual internal rate of returns also increased during the 2020-to-2021 period (from \$31.5 million to \$89.4 million and from 6 to 14 percent respectively (BDC 2022)). However,

given a 10X approximate population multiple, Canadian VC activity still lags behind that in the US in terms of: (1) total dollar value (\$14.7 billion versus US\$332.8 billion) and the number of deals (752 versus 15,855);⁴² (2) percent of GDP (0.71 versus 1.48 percent); (3) exit values (median \$89.4 million versus \$790.6 million); and (4) internal rate of return (14 versus 21 percent) (BDC 2022; NVCA 2022).⁴³ In addition, it appears that growth lost momentum in the second and the third quarters of 2022 (CVCA 2022), perhaps because of a technology sector downturn and heightened macroeconomic risks coupled with high inflation and geopolitical uncertainty.⁴⁴

VC demand and supply

In this subsection, we draw from Remillard and Scholz's (2020) recent canvas of participants active in the Canadian VC marketplace as well as from recent reviews by the BDC (2022) and the CVCA (2022).

Remillard and Scholz provide a useful characterization of the supply side of the Canadian VC deals as comprising three "tiers":

- *The low tier*: deals that fall in the \$2 million-to-\$5 million range;
- *The medium tier*: deals between \$6 million and \$10 million; and
- *The high tier*: deals worth \$20 million or more.

US-based VC funds dominate the high tier.⁴⁵ Other high-tier investors include large Canadian public pension funds (e.g., Ontario Teachers' Pension Plan) and domestic growth equity funds that have developed out of preceding VC entities (e.g., Georgian Partners, Inovia Capital). Remillard and Scholz conclude that "there is an abundance of capital" for companies seeking high-tier deals, which are typically in the technology sector with more than \$5 million in annual revenues.

In the medium tier, the supply side primarily comprises domestic VCs, bank-owned investment firms, government funds and family offices. Remillard and Scholz conclude that the supply of capital at this level is sufficient to "meet the needs of companies that are worth backing and that the only ones complaining are companies that should not be financed in the first place."

Conversely, a financing gap appears to exist in the low tier. To make investments in this segment, VCs face a combination of low capital requirements, relatively high risks and the consequent high fixed costs (relative to deal size) of legal and due diligence fees. Deal sizes are typically beyond the range of interest to business angel investors, even if they accept the high risk (see Table 6), too risky for banks and too small and too risky for VC funds. While Crown corporations (BDC, EDC) are active in this tier, private funds tend to shy away. Active investors also include exempt market participants (see footnote 12), family offices, specialty debt

42 Canada lags the US also on a per-capita basis—\$117 versus \$357 in 2022 (Hodgson 2022), as well as on a per-GDP basis. However, per-capita/per-GDP basis comparisons may not be meaningful as Canadian companies backed by Canadian small VC funds must compete with firms backed by large US VC funds in international markets.

43 The figures are, however, comparable to other OECD countries. See https://stats.oecd.org/Index.aspx?DataSetCode=VC_INVEST#.

44 The total dollar value of Canadian VC investments in 2022 was \$10 billion (in 706 deals), compared to \$14.7 billion (in 752 deals) in 2021 (CVCA 2023, BDC 2022). However, these figures are still higher than those in the 2012-2020 period.

45 See various years of the "Canadian Venture Capital Market Overview" issued by the CVCA. US funds participated in almost all top 10 Canadian VC deals. BDC (2022) reports, "In 2021, 46 percent of the investor transactions in the Canadian VC space came from foreign investors, primarily those based in the U.S."

funds, junior stock exchanges⁴⁶ and bank-related investment firms such as Roynat.

The availability of US funds provides Canadian investors with international networks and sector-specific expertise, factors that might facilitate further the development of the Canadian VC sector. Nonetheless, Remillard and Scholz (2020 p.12) report industry participants' concern that in today's technology-driven world, "Canada risks losing its future high-potential, job-creating and export-oriented champions." Bradley et al. (2019 p.10) also make a similar argument: "There is a growing concern that very few Canadian VC-backed companies scale up in Canada and that the large role played by foreign investors may increase the probability of promising companies moving South of the border or being acquired (too early) by foreign companies."

In addition, the small size of Canadian VC funds (relative to US counterparts) may limit Canadian funds' and entrepreneurs' negotiation powers. This is because a small fund size may imply the VC has limited ability to provide the quanta of financing sufficient for their investee firms to reach successful exits (an IPO or an acquisition) without relying on US funds.^{47,48} Another concern is that reliance on US funds might bring about additional risk

for Canadian unicorn-potential firms because future economic downturns may result in US funds prioritizing their domestic over foreign investments.⁴⁹

In all tiers, domestic VC funds make significant value-added to investee firms, while monitoring them closely (often as a lead investor in the syndicate). They do so by taking advantage of their expertise on, and networks within, the local market, as well as their proximity to investee companies, which allows them to give hands-on advice.

Policy Actions Needed

Low-tier deals:

To sustain the healthy growth of the Canadian VC industry observed in 2021, it is essential to add further to the supply of equity capital, taking into consideration that the supply issues are most severe at the low-tier capital level (investment deals in the \$2 million-to-\$5 million range). Ensuring sufficient capital supply for entrepreneurial firms at this stage is also critical to cultivating attractive deals for the subsequent tiers.

Government initiatives, such as the VCAP and VCCI programs, should focus their attention on

46 Remillard and Scholz note a concern that firms raising early-stage funds using Canadian public stock exchanges can become what they refer to as "orphan stocks" – securities that are not well-followed, "excluded from indices...[or] thinly traded and dependent upon meeting quarter-over-quarter earnings expectations."

47 Kong et al. (2016) document a relationship between foreign VCs' participation and lower payments at exit per dollar of VC investment.

48 When a syndication comprising US funds invites another US fund to participate, negotiation power discrepancy is unlikely to occur because: (1) the incumbent funds are likely to be also large and to have capital resources to take the firm to an IPO by themselves; and (2) the competition among US funds for viable entrepreneurial firms is high.

49 Whether reliance on US funds creates additional volatility in Canadian VC investments is unclear. Consulting.ca reports that, on the one hand, "US investors recoiled due to the pandemic" in 2020 and on the other "US investors continued to drive the Canadian VC market, investing approximately \$4 billion," even amid a technology sector downturn and heightened macroeconomic risks in 2022 (<https://www.consulting.ca/news/3267/canadian-vc-investment-drops-to-819-billion-in-2022>).

ensuring sufficient supply of low-tier capital.⁵⁰ For example, the VCAP program could include a mechanism that creates an additional incentive for institutional investors to invest in VC funds that focus on early-stage companies by committing an additional \$1.50 for every \$2 committed by the private sector (currently the program commits \$1 for every \$2 contribution to any qualified VC funds). Moreover, the funds-of-funds VCCI invests in should include those specialized in early-stage companies, and the underrepresented groups the VCCI supports should include early-stage firms seeking low-tier capital. Collaborations with the NACO to establish co-investment funds might also be fruitful as the NACO also seeks early-stage risk capital.

One potential barrier to VCs making these kinds of low-tier investments is the administrative, professional, regulatory and personnel costs associated with a VC investment, which is in large part fixed, regardless of the investment size. These fixed costs make it very hard for most VCs to commit themselves to investment deals in the \$2 million-to-\$5 million range and generate sufficiently high returns. One possible policy recommendation to deal with this concern is for the government and para-public to cover some portion

of the due diligence costs incurred by private VC funds in association with low-tier deals.⁵¹

Foreign VC domination in high-tier deals:

With respect to the domination of US funds among top-tier deals and their impact, there is a lack of consensus and scarcity of empirical evidence. Complex questions that remain include:

- To what extent does the presence of US funds provide Canadian investors with international networks and sector-specific expertise?
- Does the presence of US funds risk Canada losing future high-potential, job-creating and export-oriented businesses?
- For what reasons do Canadian VC funds include US funds within later-stage financing syndicates? Are Canadian VCs capable of providing the quanta of financing sufficient for their investee firms to reach successful exits (an IPO or an acquisition) without reliance on US funds? If not, and if this is why US funds are involved in late-stage Canadian deals, does this weaken Canadian investors' negotiation power?

At present, these critical questions are difficult to answer conclusively without analyses of detailed deal-level data, which we do not have. Nevertheless, consistent with Bradley et al. (2019), we argue that

50 Consulting.ca's report suggests that the current technology sector downturn and heightened macroeconomic risks have made Canadian VC investors more shy than their US counterparts (<https://www.consulting.ca/news/3267/canadian-vc-investment-drops-to-819-billion-in-2022>). This implies that the shortage of low-tier capital became even more serious in the current macro setting.

51 In addition, practitioners' perceptions, reported by Remillard and Scholz (2020) and private correspondence from members of the C.D. Howe Institute SME Working Group, suggest potential shortage of the supply of VC financing among subgroups of Canadian young, growth-oriented entrepreneurial firms, which include:

- Non-high-technology firms, such as those in the oil and gas, hard-rock mining and forestry sectors (Remillard and Scholz 2020).
- Firms outside of the main urban centres of Toronto, Vancouver and Montreal, due to insufficient local ecosystems to support faster growing companies and the costs of travelling to and from these regions. These companies might also be disadvantaged due to the lack of access to human resources.
- Firms that want to keep growing, thus seeking financing (especially a medium tier, \$6-10M, investment) while maintaining control of their businesses.

it remains critical to support the growth of domestic funds for all tier deals, which expand Canadian companies' sufficient scale-up opportunities before foreign investors are involved.⁵²

CONCLUSIONS

This *Commentary* has reviewed the scope of access to financing among Canadian SMEs. This is an especially critical area of research given the fact that Canadian SMEs appear to face difficulties with respect to scaling up.

Overall, there appears to be a healthy supply of debt capital for Canadian SMEs. However, the data suggest that growth-oriented firms may not be able to obtain the size of bank loans they require. Moreover, compared to the borrowing costs SMEs enjoy in other OECD countries, the interest rates faced by Canadian SMEs are relatively high, especially for growth-oriented enterprises. To address this issue, it would be useful to consider a redesign of the CSBF program through which many young growth-oriented firms obtain loans. Encouraging greater competition among commercial lenders through scaling up of cooperative lenders and implementing open banking could further improve access to affordable capital.

As for equity financing, there appear to be shortages in financing for companies that seek investments of less than \$5 million. Of particular

importance – and while estimates are not as reliable as might be hoped – the scale of business angel financing in the US dwarfs that which is evident in Canada. Given the importance of business angels in providing entrepreneurs with various forms of non-financial value added (mentoring, advice, contacts, etc.),⁵³ which contributes significantly to the creation of deals attractive to later-stage VC funds, this is problematic. As for VC financing, the scale of VC investment in Canada has increased dramatically in the recent past. However, there remains a gap at the lowest tiers of financing (\$2 million to \$5 million). To encourage more participation at this important tier, we suggest further expansion of the VCAP and the VCCI programs. Their recent initiatives appear to have successfully stimulated Canadian VC investments.

The OECD (2021b, and Williams 2021) indicates that Canada will have the lowest economic growth among OECD countries for the next 40 years, largely due to its low productivity. One of the key drivers for productivity growth is faster innovation adoption (Williams 2021) and growth-oriented firms are most likely to be the providers. Yet, as this paper has shown, growth-oriented firms are disadvantaged in accessing debt financing, and early stage equity financing is limited. Time for that to change.

52 As mentioned, para-public funds play significant role in the Canadian VC market. This may add stability in the market as the supply of para-public funds are likely more stable than that of private funds, especially in a low-interest rate environment where private investors tend to shy away from risky equity investments. With this, plus the presence of foreign funds, one might think that there is no urgent need for the growth of domestic private independent VC funds in Canada, especially for high tier deals. However, we argue that it is still necessary. Studies indicate that government funds work more effectively when collaborating with private funds, which allows the former to leverage expertise of the latter (e.g., Lerner et al., 2021). Collaborations with domestic VCs are also essential for foreign funds, through which they can rely on domestic funds' proximity to investee firms and local markets.

53 See, for example, Madill, Riding and Haines (2005) and Politis (2008).

Table A-1: Growth Records and Expectations, Employer SMEs (percentage of firms)

	Column A: Actual revenue growth, 2018 to 2020					Column B: Anticipated revenue growth, 2021 to 2023				
	< 0%	0%	1~10%	11~20%	> 20%	< 0%	0%	1~10%	11~20%	> 20%
All employer SMEs	20.9	17.5	45.1	9.4	7.0	7.1	17.5	58.1	10.4	6.9
1 to 4 employees	20.5	22.6	41.7	9.0	6.2	8	21.5	54.4	9.5	6.5
5 to 19 employees	20.5	12.2	49.6	9.9	7.7	6	14.2	60.9	11.4	7.5
20 to 99 employees	23.7	8.8	48.8	10.2	8.5	5.9	8.3	67.5	10.9	7.3
100 to 499 employees	22.7	5.5	49.8	10.5	11.4	5.8	5.4	70	13.6	5.2
2 years or younger						4.6	12.6	54	16.1	
3 to 10 years old	16.3	13.6	47.5	11.9	10.7	5.9	15.9	56.2	12.3	9.6
11 to 20 years old	23.4	17.1	44.0	9.1	6.5	7.5	17.1	60.1	9.7	5.5
more than 20 years old	23.1	21.4	43.9	7.6	4.1	8.5	20.3	59.2	7.8	4.2
Exporter	25.7	13.1	37.6	13.0	10.6	6.3	11.9	59	13	9.8
International business activity	21.8	13.1	45.5	9.7	9.9	4.6	10.8	62.9	11.3	10.3
Intends to expand sales into new markets	20.6	15.1	46	10.2	8.1	5.7	14.5	60	11.9	8
Innovative firms	20.8	13.1	45.1	10.6	10.4	5.8	11.5	60.3	12.7	9.8
Holds IP	26.7	13.4	36.2	11.5	12.1	5.5	11.1	59.6	13.1	10.7
Advanced technology adoption	20.9	16	45.9	8.8	8.4	6.4	13.6	60.4	11.3	8.3
E-Commerce	22.5	12.6	42.1	11.7	11.1	6.2	9.7	59.6	12.7	11.8

Source: Statistics Canada. Table 33-10-0446-01 Yearly growth in sales and revenues for small and medium enterprises: <https://www150.statcan.gc.ca/t1/tb11/en/tv.action?pid=3310044601>.

Table A-2: Obstacles to Business Growth 2018 & 2021

	Labour shortage		Lack of skilled employees		Fluctuations in consumer demand		Obtaining finance		Government regulations		Rising cost of inputs		Increasing competition		Tax rate		CF/debt mgmt.		Other		
	2018	2021	2018	2021	2018	2021	2018	2021	2018	2021	2018	2021	2018	2021	2018	2021	2018	2021	2018	2021	
All SMEs	18.0	25	18.9	27.9	15.7	23.4	7.7	9.5	18.9	16.6	20.0	30.6	16.8	17.2	16.7	18	14.6	17.7	9.5	5.2	
Age																					
< 2 years	16.0	22.2	16.9	27.3	15.6	28.4	9.1	14.7	18.5	14.5	20.6	31.7	17.3	18.6	16.4	23	16.4	23.8	6.5	6.3	
3 to 10 years	17.2	26	18.1	27.5	14.7	22.5	9.5	12.4	17.1	17	20.1	31	17.5	19.4	17.3	19	16.3	19.3	8.3	5.5	
11 to 20 years	17.9	23.8	18.9	28.1	16.9	23.6	7.0	9.3	19.9	14.5	19.5	29	16.4	16.5	18.1	15.6	13.6	16.8	9.9	4.3	
> 20 years	19.7	25.7	20.2	28.2	15.8	22.9	6.0	5.7	20.0	18.5	19.9	31.3	16.3	15.4	15.0	17.9	13.0	15.5	11.3	5.5	
Exporting																					
Exporter	14.8	19.8	15.8	23.8	16.5	29.3	7.7	10.1	16.6	15	16.9	30.2	15.9	24.2	14.6	15.2	15.2	19.9	12.3	4.7	
No-export	18.5	25.7	19.3	28.5	15.6	22.6	7.7	9.4	19.1	16.8	20.4	30.6	16.9	16.2	16.9	18.4	14.5	17.4	9.1	5.3	
Growth																					
> 20%	19.6	26.7	18.8	29.6	12.1	19.5	9.9	11.6	17.5	11.8	15.6	23.5	13.8	14.2	20.2	12.9	16.5	19.6	10.3	5.3	
11 - 19%	22.8	30.3	23.8	32.3	14.3	20.7	6.5	9.0	16.8	18.9	16.1	35.8	14.8	14.7	15.1	17.4	12.9	14.0	12.0	3.7	
1 - 10%	18.5	26.3	19.0	29.3	13.3	19.6	6.1	8.5	17.4	15.8	19.9	31.0	14.3	16.2	16.0	18.8	11.3	15.0	8.5	4.7	
0%	15.1	19.8	17.4	20.8	15.2	22.8	7.5	8.6	18.8	15.7	20.0	26.5	19.5	17.2	17.3	17.4	17.3	18.4	8.5	4.7	
< 0%	16.9	24.7	17.3	28.2	28.0	32.4	11.4	9.5	27.0	20.5	25.5	32.3	24.1	20.7	17.3	16.7	19.6	20.8	13.6	6.8	
Immigration																					
In Canada	18.0	25.6	18.6	28.3	15.0	21	7.1	7.3	18.9	16.5	18.6	28.1	14.3	12.4	15.4	16.7	14.0	15.8	10.1	4.9	
Outside	18.2	23.4	19.6	26.8	17.8	29.4	9.5	14.8	18.7	16.9	23.9	36.7	24.4	29.1	20.4	21.3	16.2	22.4	7.5	6.2	
Female ownership																					
0%	18.5	25.5	18.6	27.8	15.1	22.4	7.6	9	18.9	16	19.7	31.3	16.4	16.8	17.2	18.8	14.3	17.5	9.4	4.9	
1 to 49%	15.6	30.8	15.5	34	17.2	23.3	6.3	10.9	19.7	17.9	20.0	33.9	16.4	16.8	15.3	18.7	16.4	18.7	10.8	6.4	
50%	18.4	25.2	19.6	25.8	18.7	24.3	8.6	8.7	19.5	16.8	20.7	31.6	18.1	17.7	15.4	16.4	15.4	18.4	10.1	4.8	
51 to 99%	28.4	24.1	24.1	27.1	8.9	21.7	9.7	14.9	17.1	18.1	19.6	25.2	14.4	19.1	19.6	17.1	17.5	20.8	6.0	5	
100%	15.2	19	20.2	26.2	13.2	27.1	7.4	10.2	17.5	17.9	20.1	25.2	17.2	18	17.1	16	12.1	16.4	8.4	6.4	
Rejected borrowers	25.9	29.8	24.2	40.1	15.4	23.7	43.8	51.6	23.1	20.3	27.2	36.7	21.0	16.3	16.9	23.4	44.7	37.2	13.3	1.6	

Source: Statistics Canada. Table 33-10-0447-01 Obstacles to business growth for small and medium enterprises: <https://doi.org/10.25318/3310044701-eng>

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