



Canadian Senior Market Health Check:

Future Relevancy of the Public Markets at Risk as Operating Public Company Decline Accelerates

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Leaving the Big Canadian Senior Market Health Check:

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EXECUTIVE SUMMARY¹

Since the peak of operating company listings in 2008, the number of operating companies listed on the Toronto Stock Exchange (TSX) has declined by 42.5 per cent. A short COVID-19-era initial public offering (IPO) boom in 2020-2021 offered a brief reprieve in the ongoing operating company decline phenomenon, but the last 2 1/2 years have seen the worst Canadian IPO market over the multiple decades for which data are available. Each passing month now sees a new multigenerational low in the number of operating public companies listed on the TSX.

It has become apparent that the operating public company decline phenomenon in Canada has become systemic and will not be reversed without significant reform in the regulation of capital markets along with other key policy innovations. Academic analysis on the topic of operating public company decline to date in Canada has largely been focused only on the twin headline statistics of total operating company listings and IPO volumes. Significant data gaps remain as to the broader nature of the operating public company decline phenomenon in Canada. Filling in these data gaps is necessary to underpin further academic analysis as to which regulatory reforms and other public policy interventions are most likely to succeed in reversing the tide of public company decline.

This paper picks up the threads of pre-COVID-19 analysis on this important issue, starting with a review of the key reasons why operating public company decline in Canada is a critical public policy issue necessitating intervention. Theories on factors contributing to the phenomenon are also briefly discussed. Finally, this paper presents a variety of key data points examining in more detail the precise nature and extent of the operating public company decline phenomenon in the senior Canadian capital markets.

This is the first paper in a two-part series assessing the state of the public markets in Canada. This paper focuses on the senior public equity markets and the second paper focuses on the junior public equity markets. The two papers together seek to fill in the data gaps to create a more fulsome understanding of the nature and extent of the Canadian public company decline phenomenon and collectively serve as a foundation for upcoming research collaborations and engagement with policy-makers proposing a series of reforms and initiatives offering the prospect of re-energizing the Canadian capital markets.

I. INTRODUCTION

The number of operating public companies listed on the Canadian senior markets has declined precipitously over the past 16 years, currently standing 42.5 per cent below the peak of operating company listings at the end of 2008.² The operating public company decline phenomenon in Canada reflects a similar experience in the United States (Stulz 2018) and Europe (European Commission 2021; Bailac 2022). This issue has been the subject of a significant amount of academic analysis in the United States,³ with many causes posited to explain the phenomenon, but no consensus reached as to the underlying causes (Wilson 2023).

In Canada, the phenomenon of operating public company decline has received limited attention among policy-makers. The issue fell out of our collective consciousness during COVID-19 and the unexpected post-COVID-19 IPO boom. Capital markets observers are only beginning to pick the issue back up despite the IPO market collapse over the last 2 1/2 years. This lack of ongoing public attention is due to a couple of key factors. First, the nature and extent of operating public company decline in the senior Canadian capital markets are obscured by the ongoing proliferation of ETFs on the TSX, allowing the number of reported total TSX listings to appear to be on an upward trend. Second, the phenomenon of operating public company decline in Canada has not yet created financial pain for most of the Canadian retail investing community.⁴ Rather, the S&P TSX Composite Index (TSX Index) has delivered relatively attractive returns over the same 16-year interval in which the number of listed operating companies has been declining.⁵

This fact leads to the key question: If the TSX Index continues to rise, what is the worry? Is the nature and extent of operating public company decline actually an issue of public importance, requiring significant policy intervention? During a period where public crises seem to be in neverending supply, it is difficult to get the attention of the investing public and policy-makers on topics, including operating public company decline, for which the economic ramifications are not fully understood and wide-scale financial pain for investors has not yet manifested.

However, the fact that the financial and economic costs of operating public company decline are not yet widely recognized does not diminish the inherent risk associated with the phenomenon. The proliferation of ETFs means that more capital is being invested in a shrinking pool of operating entities. Intuitively, this fact increases the risk of both market over-valuation and portfolio concentration risk among institutional investors. Should this 16-year trend continue unabated, the infrastructure supporting the public company ecosystem faces increasing risk of continued diminishment to the extent that, even if the demand for new IPOs re-emerged, the independent broker-dealer ecosystem support network that is critical to the junior Canadian public markets will have atrophied beyond repair. If that happens, the range of policy intervention tools available will be significantly diminished. The senior markets' sustainability has become dependent on junior market graduations, a fact underpinned by the data disclosed later in this paper.

Operating companies on the senior markets include those companies that directly make a product or offer a service to customers. Calculation of operating companies starts with all companies listed on the TSX Listed Company summaries provided by TMX Market Intelligence over the relevant intervals and deducts passive investment vehicles such as closed-end funds (CEFs), exchange-traded funds (ETFs) and real estate investment trusts (REITS).

For a detailed summary of the U.S. academic literature on American operating public company decline, see Wilson (2020, 48-71).

Certainly, the reduction in IPO has led to lost revenue for investment banks in Canada, but this impacts a small segment of the population. Investment banks have pivoted to replace the lost IPO revenue with transaction advisory revenue in recent years as fairness opinions and valuations have become widely accepted as a liability shield in business combinations and reorganizations.

See discussion later in this paper that compares TSX Index returns to inflation and other benchmarks.

To avoid disappointment, it is best to understand at the outset that this research paper on the senior markets does not purport to provide solutions to the problem of operating company decline on the Canadian public markets. Certainly, that is the ultimate goal of this extended research program. However, there remain too many gaps in understanding of the phenomenon to safely jump straight through to the endpoint of proposed innovations and interventions offering the prospect of reversing the inexorable tide of decline.

This health check on Canadian senior public markets serves dual objectives. First, this paper fills key data gaps in existing Canadian academic analysis as to the broader nature and extent of the public company decline phenomenon to underpin future analysis of optimal interventions. Second, this paper demonstrates that the senior capital markets in Canada are currently facing more severe headwinds than at any point in recorded history. This paper contains a number of novel datasets generated from source data obtained from TMX Market Intelligence and issuers filings on SEDAR+, comprising new information in the public company decline analysis and better positioning policy-makers to propose market innovations and interventions that could improve the trajectory of the Canadian public markets.

II. WHY CARE ABOUT OPERATING PUBLIC COMPANY DECLINE IN CANADA?

Over the last 16 years, there has been a small but steady annual increase in the total number of operating companies doing business in Canada (Government of Canada 2022). However, the Canadian capital markets have witnessed a sustained movement away from the public capital markets into the private capital markets over this same interval. So, what is the concern with the shift of the Canadian economy away from the public capital markets? There are several compelling reasons to be concerned, including the following:⁷

- Under current Canadian securities rules, direct participation in the private capital markets
 is primarily restricted to high net worth and institutional investors. Middle-class Canadian
 investors are precluded from directly accessing private equity markets except through pooled
 investment structures, under which the most significant financial benefits often accrue to
 financial intermediaries.
- A wide variety of information derived from public company filings is critical for both government and private analysts to assess economic trends, performance and pricing data that drive policy formulation and economic planning. This breadth and depth of information is simply not accessible to the same degree from private entities. Thus, the migration of crucial operating company data into the private domain deprives policy-makers of access to key data that have otherwise gone dark. Jamie Dimon, chairman and CEO of JP Morgan Chase & Co., has sounded an alarm in the U.S. on this issue. Dimon recently stated in his annual shareholder report that American operating public company decline is an issue of serious concern that puts market transparency at risk (Dimon 2024; Goodkind 2024).
- Studies have consistently demonstrated that public operating companies play an important role as drivers of employment growth, out-performing private companies in job creation (Tingle, Robinson and Pandes 2013; Tingle and Pandes 2021).

⁶ Reliable IPO data in Canada exists back to the early 1980s, providing four decades of comparative data (Pandes 2004).

The arguments as to why this phenomenon matters are developed in more detail in Tingle, Robinson and Pandes (2013), Tingle and Pandes (2021, 2022) and Wilson (2020, 2023).

- Access to the public markets reduces the cost of capital for operating companies, driving innovation and productivity across the economy (Tingle, Robinson and Pandes 2013).
- Robust IPO markets serve as eventual outlets for private-stage investor liquidity, encouraging
 early-stage investment. Conversely, terminal IPO markets remove critical liquidity options for
 external investors, leaving only corporate divestiture. In Canada, corporate divestiture most
 often results in ownership shifting to foreign hands, thereby depriving Canadian shareholders of
 post-divestiture corporate growth compared to a company that has undergone a public offering
 (Tingle, Robinson and Pandes 2013).
- Public capital markets offer civil society organizations a significant number of pressure points to lobby for increased corporate social responsibility that do not exist in the private markets. Private companies operate with significantly less formal and informal environmental, social and governance oversight than their public company counterparts (Dimon 2024; Goodkind 2024).
- More public operating companies create better overall corporate governance as evolving best practices are adopted more quickly in public entities and eventually filter through to private companies (Tingle and Pandes 2021).
- A healthy public markets ecosystem is supported by an underlying infrastructure that includes investment dealers, stock analysts and legal and accounting experts with public company compliance expertise. This infrastructure has significantly eroded in the past 16 years as independent broker-dealers consolidate due to lack of IPO activity. Continued operating public company decline increases the risk of further atrophy to the underlying support mechanism (Tingle and Pandes 2021).
- Listed operating companies create economic value in the public markets. Publicly traded ETFs,
 on the other hand, are primarily passively managed investment vehicles creating no direct
 material economic value and requiring a sufficient inventory of operating public companies in
 which to invest. The proliferation of TSX ETFs, corresponding with a significant decline in TSX
 operating companies, raises concerns about market distortions arising from an increasingly large
 pool of passive capital chasing the same declining number of operating company investments.
 Such conditions lead to obvious concentration risks and over-valuation of public stocks.

While the academic literature in Canada, the U.S. and Europe reveals differing opinions as to the degree of concern that declining participation in the public markets should engender, there is an overriding consensus that maintaining robust public capital markets with a strong cross-section of operating companies is critical to a healthy economy (Ritter 2018). Those few academic commentators who express a lack of concern on operating public company decline generally point to the consistently high trading values of the remaining public companies and overall economic growth as evidence that the markets remain healthy. Such an approach is content with the economic shift toward private capital markets but fails to adequately address the concerns raised above. Any market analysis that considers such concerns, however, leads to the conclusion that operating public company decline is soon to become a major macroeconomic issue and that the preservation of robust public markets is a critical public policy objective.

III. THE ROOT CAUSES OF OPERATING PUBLIC COMPANY DECLINE IN CANADA

Two University of Calgary professors, from the disciplines of law and finance, have generated the most thoughtful analyses of operating public company decline on the senior markets in Canada and have published two significant research papers on the topic (Tingle, Robinson and Pandes 2013; Tingle and Pandes 2021). These two papers discuss the general nature of the operating decline issue, consider potential contributing causes as posited by American academics and address the limitations of these explanations in the unique context of the Canadian capital market.

In 2020, the author of this paper picked up the thread and completed the first empirical study testing the relevance of the universe of downside factors widely associated with the Canadian public company experience (Wilson 2020, 2023). The analysis concluded that the operating company decline phenomenon is highly complex, with a host of emergent factors combining to create increased aversion on the part of senior decision-makers to the public markets. Regulatory overreach is a significant factor, though not necessarily the primary cause underpinning the phenomenon. The empirical research also demonstrates that the transformation of the Canadian capital market, wherein private financing alternatives have become more accessible, coincides with a period of new complexities and challenges in the public markets arising from a variety of technological developments. These include the immediate dissemination of competitive information to all competitors around the world, the ability to use artificial intelligence to digest large volumes of disclosure data and the rapid pace of technological change that often make it more attractive to sell out of a company earlier than in past eras before competitive advantages erode. As a result, the public markets have become progressively less attractive to senior business decision-makers, whereas the private markets have become increasingly attractive.

Elsewhere in Canada, two papers from Canadian business leader Pierre Lortie (2019a, b) identify the phenomenon of operating public company decline as a significant issue impacting Canadian competitiveness and innovation. Lortie recommends tax policy interventions that would incentivize growth-stage companies to pursue the public markets.

Tingle and Pandes, along with Wilson, primarily address the phenomenon of operating company decline as a function of supply-side constraints, with Canadian senior business decision-makers becoming more averse to taking their companies public, choosing instead to access increasingly available private capital sources, due to their dissatisfaction with the public markets environment.

Carpentier and Suret, two accounting professors at Université Laval, express another point of view. Adopting a version of a "lemons market" analysis, their approach treats the issue of public company decline primarily as a demand-side issue caused by investors avoiding the Canadian public markets after a string of abnormally poor returns from both IPOs and reverse takeovers over the past 30 years (Carpentier and Suret 2006, 2009, 2010, 2018; Carpentier, Cumming and Suret 2012). Carpentier and Suret's analysis focuses almost entirely on the financial performance of new entrants to junior or senior equity markets. Though they do not focus on operating public company decline, their analysis captures the conceptually linked topic of the reduced number of IPOs on the Canadian markets.

Canadian academic analysis is, therefore, split into two camps, with one camp positing the significant reduction in IPO volume primarily as a supply-side problem and the other camp identifying the issue as being primarily a demand-side problem. Neither group claims that the senior market IPO collapse is exclusively sell-side or buy-side driven, but the competing hypotheses as to the primary underlying cause leads to starkly contrasting proposals for reversing the tide of decline. Carpentier and Suret dismiss proposals intended to induce smaller and earlier

stage companies to access the public markets. Instead, they propose more stringent securities regulations and higher minimum listings requirements in the hopes of bringing investors back to the IPO market by reducing the proportion of lemons issuers pursuing public listings. Conversely, Tingle and Pandes, along with Wilson, favour initiatives to stimulate supply in the markets and draw back new entrants by making the public markets more attractive as an alternative. Streamlined securities regulations, for example, would lower the costs and complexities associated with going public and fulfilling any associated disclosure obligations, thereby reducing the aversion of business leaders to taking their companies public.⁸

The purpose of this paper is not to further debate the degree to which supply-side or demand-side factors drive public company decline in Canada. Although the topic warrants additional analysis when considering potential market interventions, there are other significant gaps in the academic literature that need addressing to provide a more fulsome picture of the nature and extent of Canadian operating public company decline. Those data gaps are the focus of this paper.

As mentioned previously, the phenomenon of operating public company decline has also been documented in the United States and in Western Europe. There is a significant body of American literature hypothesizing as to potential causes, but surprisingly little European literature adding anything meaningful to the analysis. In the U.S., the phenomenon started earlier (1998 in the U.S. vs. 2008 in Canada) and has been even more severe than in Canada. The U.S. only has half as many operating public companies today as existed at the 1998 peak of listings. The U.S. literature postulates many theories as to why this is occurring. Among the potential causes most frequently cited in the U.S. are:

- Increasing complexity of public company disclosure;
- Increasing litigation risk;
- Loosened restrictions around private company fundraising;
- The increased availability of private institutional capital;
- Fundamental economic changes relating to the increased pace of technological change that make it more attractive to sell earlier in the business growth cycle; and
- Economic factors leading to increased merger and acquisition activity.9

It is likely that many of the same factors are at play in the American version of the phenomenon as in Canada, but the Canadian public markets also have several unique elements and one has to be careful to avoid assuming that the underlying causes of the public company decline phenomenon between the two countries are identical.

Lortie does not address the underlying causes of the phenomenon in the same terminology but discusses both supply-side and demand-side challenges. The bulk of the U.S. academic discourse on American operating public company decline focuses primarily on prospective contributing factors arising from the demand side. The shift away from public markets is seen as an evolution in the preferences of senior decision-makers of operating companies. However, the Canadian public markets are foundationally different from their American counterparts. Most Canadian junior markets operate at a level that would be serviced primarily by angel and venture capital financing in the U.S. As such, one cannot exclude the lemons-market hypothesis as a major factor in Canada simply because it is not demonstrably a critical factor in the U.S. version of the phenomenon.

⁹ A detailed review of the U.S. experience with operating public company decline and all of the relevant literature-provided hypotheses as to its causes is contained in Wilson (2020). There has been no equivalent empirical analysis of the root causes in the U.S. to match the effort completed in Canada described in Wilson (2020).

IV. WHAT CONSTITUTES THE 'SENIOR' PUBLIC MARKETS FOR CANADIAN OPERATING COMPANIES?

As a gating question for the remainder of this analysis, how do we properly define what constitutes the "senior" market for operating companies? The Canadian public market is unique in the role that junior public markets play, allowing development-stage and growth-stage companies to go public much earlier, and at a smaller size, than in other developed countries. The junior markets almost certainly play a more important role in Canada's economy than in any other developed country (Tingle, Robinson and Pandes 2013; Tingle and Pandes 2021). However, the junior markets in Canada also present many nuances that make the experience of a public operating company unique and understanding the specific proclivities of the Canadian junior markets requires considerable additional context that is irrelevant (and distracting) in analyzing the senior capital markets. Hence the decision to deal with the status of the Canadian junior markets in a stand-alone companion piece.

For this paper's purpose, it is submitted that the TSX is the only extant senior capital market in Canada from the perspective of analyzing the trajectory of operating public companies. CBOE Canada proponents will object to that exchange's exclusion from the senior market analysis, as the precursor NEO Exchange was portrayed at its launch in 2015 as being a direct competitor to the TSX in the senior markets. However, a detailed analysis of all of the current operating company listings on CBOE Canada demonstrates that those listings have much more in common with operating companies listed on the TSX Venture Exchange (TSXV) and the Canadian Securities Exchange (CSE) in terms of type of business, business maturity and average market capitalization, than with the TSX. The TSXV and CSE both self-identify as junior capital markets. Also, the cumulative market capitalization of all operating companies with their principal listing on the CBOE stands at under \$5 billion, which is less than 0.2 per cent of the value of operating companies listed on the TSX.

CBOE Canada has become a significant player and a direct competitor to the TSX in three different aspects:

- Volume of securities traded across the platform, amounting to approximately 15 per cent of ongoing trading activity as a result of traders being able to trade TSX-listed securities through CBOE Canada;¹⁰
- CBOE Canada has secured a significant number of ETF listings that compete with TSX products, including ETFs operated by top-tier Canadian financial institutions; and
- CBOE Canada competes head-on with the TSX for new listings of special purpose acquisition companies (SPACs), having completed just under half of the Canadian-listed SPACs to date.

Trading volume claim based on CBOE Canada press releases and website data.

¹¹ The author has compiled from different source materials a database of all Canadian-listed SPACs since the program's inception, of which there have been 26 in total, with 12 originally listed on the NEO.

However, this paper is focused exclusively on the trajectory of operating public companies, and in the operating public company space an analysis of the current market data shows that CBOE Canada is more properly considered alongside the TSXV and CSE in the companion paper on junior capital markets. In terms of operating company listings, the TSX represents the only senior market in Canada today.¹² Therefore, the remainder of this paper on the senior markets focuses exclusively on the TSX.

V. POST-COVID-19 TRAJECTORY IN THE SENIOR CAPITAL MARKETS

The COVID-19-era IPO boom between November 2020 and November 2021 saw the largest TSX IPO volume in more than 16 years (Pandes 2023). The business media reported this IPO boom with much fanfare and it drew retail investors off the sidelines in large numbers. It also resulted in an overall annual increase in the number of operating companies listed on the TSX for the first time since the 2008 listings peak. However, the boom was short-lived, lasting for only 12 months, and immediately gave way to the most depressed Canadian IPO market in at least four decades. Only two operating company IPOs were completed on the TSX in 2022. More alarming, not a single true operating company IPO was completed on the TSX in 2023 or in the first four months of 2024. Where, then, does the TSX now stand in terms of listings of operating companies? The TSX lost all the COVID-era gains in terms of total operating companies listed, and that number reached a new historical low by the third quarter of 2023. It has continued to decline in every subsequent month up to the time of the writing of this paper. ETFs now account for 58 per cent of all TSX listings compared to five per cent in 2008, and the rapidly proliferating number of ETFs are investing in a steadily decreasing supply of operating companies.

The senior public market in Canada has not always been synonymous with the TSX alone. For nearly a century after its creation in 1874, the Montreal Stock Exchange (MSE) competed directly with the TSX for paramountcy in the senior public market space. It was not until political instability in Quebec in the 1970s drove several senior Quebec-based issuers to move outside the province that the TSX definitively usurped the MSE for unchallenged paramountcy in the senior public listing sphere. The TSX ownership group acquired the MSE in 2008, leaving the TSX as the sole participant in terms of senior Canadian stock exchanges.

Reliable IPO volume data for the TSX are only available going back to 1984, so generalizations can only be made going back four decades.

¹⁴ Neither 2022 operating company IPO involved a new company choosing to access the public markets for the first time. One of the IPOs, Bausch + Lomb Corporation, was a relisting of a long-time public company that had been previously taken private. The other, Ivanhoe Electric Inc., was a spin-off from a public mining company.

¹⁵ The only non-ETF IPO in 2023 involved Lithium Royalty Corp., whose activities as a passive investor in lithium royalties produced by other companies around the world raise questions as to whether it can be categorized as a true operating company.

¹⁶ The number of operating TSX operating companies stood at 691 as of the last published data to April 30, 2024.

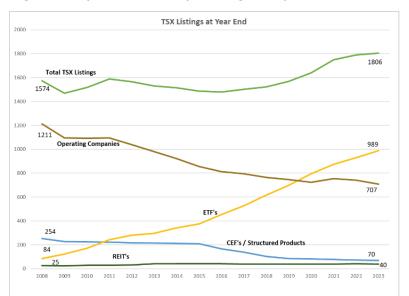


Figure 1. Updated TSX Operating Companies Listed vs. Non-Operating Companies¹⁷

Although the remaining operating companies on the TSX continue to become progressively larger and more profitable, and investors buying ETFs that track broad stock groups continue to enjoy attractive returns, it is inevitable that, if current trendlines continue, at some point the supply of operating companies will become too small to support the ever-growing pooled investing infrastructure (i.e., mutual funds, ETFs and closed-end funds (CEFs)).¹⁸

VI. TSX NEW LISTINGS SOURCES

As mentioned above, most of the academic analysis on new entrants to the Canadian public markets thus far has focused primarily on IPOs, reflecting an implied assumption that IPOs are the most important driver of new senior market listings. Reference to the data shows that this assumption may have been historically accurate up until 2000, but that operating graduations onto the TSX have contributed a higher percentage of new operating company listings than IPOs since the turn of the millennium. A graduation occurs when a public company listed on a junior stock exchange in Canada voluntarily applies, and is accepted, for listing on the TSX. A graduation onto the TSX can occur with or without an accompanying treasury financing.

A "junior" stock exchange in Canada is an exchange with significantly lower minimum listing requirements than the TSX, focusing on earlier stage companies. Almost all graduations in Canada originate from two junior exchanges: the TSX Venture Exchange (TSXV), a company wholly owned by TSX-owner TMX Group Limited, or from the Canadian Stock Exchange.

¹⁷ Chart constructed by author based on data extracted directly from TSX Listing Company Summary, obtained from TMX Market Intelligence Group. The author's reported totals on operating listed companies varies slightly from the operating listed companies reported by *Ari Pandes*, with the difference attributed to classification of REITs in the two calculations. The differences in reported total listings are so small, however, that they are inconsequential in the overall analysis.

The data in Figure 1 are derived from annual listing data published by the TMX Market Intelligence Group. These data have been published in a relatively consistent format since 2008, which happens to coincide with the high-water mark in TSX operating company listings. Between 2002 and 2007, operating company listing data can be calculated from the annual TSX Group Factbook. During the 2002-2007 interval, the number of operating companies on the TSX vacillated between 1,088 and 1,206 before entering the long period of continual decline in 2008. It is worthwhile noting that the peak in U.S. public listings occurred in 1998, meaning that the period of American public company decline began 10 years before it started in Canada. Earlier growth of the American private institutional capital market is a likely explanation for this differential in timing.

Historically, it's been assumed that Canadian public operating companies listed on junior exchanges that mature to the point where they can list on the TSX will ultimately decide to pursue a TSX listing in order to access greater liquidity, broader analyst coverage, access to institutional investors who only invest on the TSX and, ultimately, higher company valuations²⁰

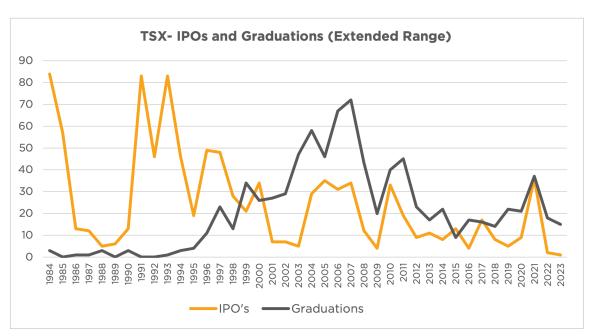


Figure 2. Comparing TSX IPOs and Graduations Since 1984²¹

Figure 2 demonstrates that operating company graduation from junior exchanges was relatively inconsequential for the TSXV up until the middle of the 1990s, at which point it began to increase significantly. Since 2001, company graduations have consistently been a bigger source of TSX new operating company listings than IPOs through more than two decades of capital markets cycles. As such, any fulsome analysis of senior market operating company decline in Canada needs to consider operating company graduations from junior exchanges as a key element of the analysis.

A few other observations can quickly be drawn from Figure 2. First, the volume of operating company IPOs has fallen precipitously from the heights of the 1990s. Even the COVID-19-era IPO boom failed to generate volumes reaching 50 per cent of the IPOs completed on the TSX in 1984, 1991 or 1994. What was considered an exceptional IPO market in 2021 would have only been an average IPO year up until 2000. Second, the peak in operating company graduations on the TSX occurred more than 15 years after the peak in IPO volumes. Third, there is clearly some degree of correlation between IPO volume and operating company graduations throughout different capital

The data in Figure 2 are derived from annual new listings published by the TMX Market Intelligence Group from 2008 to 2023. It combines graduations from both the TSXV and the CSE junior exchanges. Data in this format have only been published by TMX Market Intelligence since 2008. Prior to 2008, the data are taken from annual market data calculated and published by Ari Pandes (2004). No reliable IPO or company graduation data are available in Canada prior to 1984.

Most Canadian operating companies have operated and continue to do so, in accordance with this assumption. However, there have been occasional outliers in which large companies that easily could list on the TSX choose to remain on junior exchanges. Shaw Communications Inc. famously continued to trade on the TSXV for its own strategic reasons, and TSX-listed Constellation Software Inc. spin-offs Lumine Group Inc. and Topicus.com Inc. recently chose in 2023 to list only on the TSXV, notwithstanding multibillion-dollar market capitalizations. Several cannabis companies also have chosen to remain listed on the CSE over the past decade notwithstanding large market capitalizations due to the extra complexities that companies owning American cannabis assets have in meeting TSX compliance requirements.

markets cycles. Unsurprisingly, the same market conditions that see an increased number of IPOs also see an increase in the number of operating company graduations, an indication that the market fundamentals drawing new IPOs also increase the impetus for eligible TSXV companies to make the leap to the senior board.

With respect to IPO volume, we observe that between 1984 and 2007, average IPO volume on the TSX was 30.3 transactions per year (Pandes 2024). The IPO activity from 1984–2007 includes two significant depressed IPO periods — one in 1990–1991 wherein an average of 5.5 IPOs were completed over the two-year period, and another in 2001–2003 where an average of 6.3 IPOs were completed over the three-year period. In comparison, TSX IPO volume averaged 14.7 transactions per year between 2008–2013 and 10.3 transactions per year in the decade from 2014–2023. As such, average transaction volume for TSX IPOs over the past decade equates to only 1/3 of the volume observed in the decades preceding the peak of operating company listings in 2008, based on available statistics.²²

Finally, the abysmal TSX volume over the past 2 1/2 years represents a slump in TSX IPOs to a level beyond anything witnessed in the four decades for which reliable IPO data are available. Nothing in the current market activity suggests when the next TSX IPOs may occur.

Additional detail on the new listings sources is available from source data published by TMX Market Intelligence beginning in 2008. Table 1 shows with greater granularity the sources of all new TSX listings since 2008.

As discussed above, the depressed level of IPO activity over the past decade includes a short-lived post-COVID-19 boom in 2021 that saw 36 completed IPOs. If you exclude the IPO boom of 2021, average annual IPO volume in the decade from 2014–2024 is even lower and drops to 7.4 IPOs per year or less than 1/4 of the average volume between 1984 and 2008.

Table 1. Operating Company Detailed New Listing Sources Since 2008²³

| | IPOs | TSXV Grads ²⁴ | CSE Grads ²⁵ | Other ²⁶ | SPAC QAs ²⁷ | Total OpCo New Listings |
|---------|-------|-----------------------------|----------------------------|---------------------|---------------------------|----------------------------|
| 2008 | 12 | 43 | - | 22 | - | 77 |
| 2009 | 4 | 20 | - | 12 | - | 36 |
| 2010 | 33 | 40 | - | 26 | _ | 99 |
| 2011 | 19 | 45 | - | 27 | _ | 91 |
| 2012 | 9 | 23 | 0 | 9 | - | 41 |
| 2013 | 11 | 17 | 0 | 9 | - | 37 |
| 2014 | 8 | 22 | 0 | 8 | - | 38 |
| 2015 | 13 | 9 | 0 | 4 | - | 26 |
| 2016 | 4 | 16 | 1 | 13 | - | 34 |
| 2017 | 17 | 16 | 0 | 7 | 4 | 44 |
| 2018 | 8 | 12 | 2 | 7 | 1 | 28 |
| 2019 | 5 | 19 | 3 | 2 | 1 | 30 |
| 2020 | 9 | 19 | 2 | 4 | 0 | 34 |
| 2021 | 36 | 35 | 2 | 9 | 5 | 87 |
| 2022 | 2 | 15 | 3 | 4 | 0 | 24 |
| 2023 | 1 | 12 | 3 | 4 | 0 | 20 |
| Average | 11.29 | 21.29 | 1.33 | 10.06 | 2 | 38 |

From Table 1 we observe that, over the past 16 years during the period of operating public company decline, TSXV graduations have accounted for nearly double the number of new operating company listings on the TSX compared to IPOs.

Special purpose acquisition companies (SPACs) are blind capital pools that are listed based on the business skill and reputation of the founding directors, and thereafter complete qualifying acquisitions (QAs) to become operating public companies. SPACs have been hugely popular in the U.S. In 2020, 2021 and 2022, SPACs accounted for over half of new IPOs in the U.S., although SPAC volume has declined precipitously in 2023 and 2024 (McVie 2023). In Canada, SPAC uptake has been much less than in the U.S., which is notable because of Canada's long history with a smaller version of blind capital pools, the capital pool company, on the TSXV.

²³ Chart constructed by author based on data extracted from each annual TSX New Listing Summary, obtained from TMX Market Intelligence Group.

²⁴ The TSX Venture Exchange (TSXV) is the junior market owned and operated by the TMX Group, the owners of the TSX. It is discussed in more detail in the companion paper on Canadian junior capital markets.

²⁵ The Canadian Securities Exchange (CSE) is a junior capital market exchange in Canada that, when created in 2004, was the first new exchange in Canada in over 70 years. It is discussed in more detail in the companion paper on Canadian junior capital markets.

The impact of "Other" transactions in the table may be overstated if one looks at the data without understanding the context. Several different transaction types are lumped by the TSX into the "Other" category of new listings. These include reverse takeovers, plans of arrangement, amalgamations, divisional spin-offs through stock dividends, SPAC qualifying transactions and cross-listings from international stock exchanges. The first three types of corporate transactions do not result in a net gain in TSX-listed operating companies, as there is normally one TSX issuer being delisted for each new listed company created. However, divisional spin-offs may create two new listed operating companies from one existing issuer, and SPAC qualifying transactions and the cross-listings of international companies already public on other stock exchanges abroad add to the total number of listed companies. A manual review of all "Other" new listings on the TSX from SEDAR source documents going back to 2012 demonstrates that approximately 40 per cent of the total new listings attributed as "Other" actually result in an increase in the number of listed operating companies, while 60 per cent result in a replacement of an existing operating company. As such, the number of "Other" transactions that result in a new operating company being added to the TSX roster averages approximately 4.0 per year since 2008 rather than the number shown in the table.

The data in Table 1 disclose that the 2008 peak in operating company listings on the TSX also coincides with the peak in the number of companies graduating onto the TSX. Concerningly, TSXV graduations have slowed materially in the past decade (2014-2023) compared to the previous six years (2008-2013) covered in Table 1. In the six-year period from 2008 to 2013, an average of 31.3 TSXV companies graduated to the TSX each year. Between 2014 and 2023, this number dropped to an average of 17.0 TSX graduations per year, representing a decline of 46 per cent.

Also evident from these data is the fact that the Canadian Securities Exchange (CSE) has not yet become a major factor in the TSXV graduation metric, contributing only an average of 1.33 graduations per year since 2008 (though the rate has doubled to 2.6 graduations per year over the past five years). Considering the increasing number of operating companies listed on the CSE over its history, it is curious that so few CSE companies graduate directly to the TSX. This outcome may be explained by the fact that the majority of larger cap companies listed on the CSE are involved in cannabis operations with U.S. assets. It is more convenient for these companies to remain on the CSE with its more flexible approach to core business illegality.²⁸ The CSE market has a sufficient following to allow companies in this industry vertical to grow very large without the need to graduate to the TSX. Further, the more streamlined disclosure requirements adopted over the last decade for venture issuers provide an incentive for some TSX-eligible CSE issuers to defer or avoid graduation.

The data on new listings sources also show that the volume of new listings resulting from "Other" transactions (i.e., takeovers, plans of arrangement, amalgamations and divisional spin-offs through stock dividends) is on a downward trend. From 2008–2013, the average new listings from "Other" transactions were 17.5 per year. In the last decade from 2014–2023, this number dropped to 6.5 per year.

The final potential contributing source to new listings on the TSX — SPACs — turned out to be a relative disappointment in Canada. Only 26 SPACs have been completed in Canada (14 on the TSX and 12 on the CBOE Canada Exchange) since the program was adopted by Canadian regulators in 2008. Comparatively, the SPAC program in the U.S. generated 861 new listings in 2020 and 2021 alone and 1,369 new listings since the program was created in 2003 (SPAC Analytics 2024). The Canadian SPAC market amounts to less than one per cent of its American counterpart. This is significantly lower than the relative size of Canada's economy to the U.S. economy, and also significantly below the relative size of the two countries' public markets. As the capital pool company program in Canada (in essence, a smaller version of the SPAC program) boasts a long and illustrious history, and Canadian investors have extensive experience with blind capital pools, it is particularly noteworthy that Canadian SPAC uptake has been so limited. Admittedly, an analysis of the 26 SPAC transactions completed in Canada to date evidences a disastrous performance record for both promoters and investors. The reasons behind that outcome are worthy of further analysis but are outside this paper's scope.

In summary, analysis of the detailed data on new TSX listings sources indicates the phenomenon of operating public company decline in Canada cannot simply be put down as an IPO volume problem, but rather must be understood as reflecting a broad-based new listings problem attributable to disappointing contributions from each of the five different sources of new listings. From 2008-2013, the TSX averaged 63.5 total new operating companies listings a year. This number dropped to an average of 36.5 new operating company listings per year in the last decade.²⁹ Only 24 new

See the companion paper on junior capital markets for a more detailed analysis of the core business illegality issue for American cannabis companies listed on Canadian exchanges.

²⁹ These numbers are calculated on total new listings, including all "Other" listings.

operating companies were added to the TSX in 2022, a record low up to that point. 2023 then set a new low-water mark, with only 20 new operating companies added to the TSX. The first four months of 2024 saw only six new operating companies added, leading to the possibility that the TSX will set a new record for fewest operating companies added for the third year in a row in 2024. These demonstrate a significant and persistent deficit in new listings on the TSX compared to what is needed to prevent further atrophy in the senior capital markets resulting from systemic attrition of operating public companies.

VII. TRACKING CHANGES IN TSX INDUSTRY COMPOSITION

It is widely known that the 2020-21 IPO boom was heavily weighted towards technology companies, but what has been the change in industry composition over the past 16-year period? The following table summarizes the industry composition of TSX operating companies at two points in time, the first point corresponding to the late-2008 peak in TSX operating company listings and the second being December 31, 2023.

Table 2. Comparison of TSX Composition 2008 to 2023

| | | Decembe | er 31, 2008 | | December 31, 2023 | | | | | | |
|----------------------------------------------|-------------------|---------------------|----------------------|-------------------|-------------------|---------------------|----------------------|-------------------|--|--|--|
| | #OpCo Listings | % Total Listings | MktCap (Millions) | % Total MktCap | #OpCo Listings | % Total Listings | MktCap (Millions) | % Total MktCap | | | |
| Cleantech/Renewables | 42 | 3.5% | 5,759 | 0.5% | 35 | 5.0% | 45,421 | 1.2% | | | |
| Communication & Media | 39 | 3.2% | 105,451 | 8.6% | 19 | 2.7% | 219,067 | 6.0% | | | |
| Industrial & Consumer Products & Services | 345 | 28.6% | 217,415 | 17.7% | 175 | 24.8% | 851,981 | 23.3% | | | |
| Financial Services | 82 | 6.8% | 319,516 | 26.1% | 71 | 10.1% | 1,050,639 | 28.7% | | | |
| Life Sciences | 79 | 6.5% | 8,304 | 0.7% | 53 | 7.5% | 24,627 | 0.7% | | | |
| Mining | 353 | 29.2% | 206,669 | 16.9% | 193 | 27.3% | 477,434 | 13.1% | | | |
| Oil and Gas | 138 | 11.4% | 260,039 | 21.2% | 59 | 8.4% | 355,970 | 9.7% | | | |
| Real Estate | 16 | 1.3% | 8,264 | 0.7% | 19 | 2.7% | 30,161 | 0.8% | | | |
| Technology | 88 | 7.3% | 42,587 | 3.5% | 67 | 9.5% | 312,967 | 8.6% | | | |
| Utilities and Pipelines | 25 | 2.1% | 51,212 | 4.2% | 15 | 2.1% | 288,125 | 7.9% | | | |
| Totals | 1,207 | 100.0% | 1,225,216 | 100.0% | 706 | 100.0% | 3,656,845 | 100.0% | | | |

Beyond the evident decline in the number of operating companies listed in multiple industry categories, the table shows that most of the industry segments on the TSX have maintained a relatively consistent overall weighting over the past 16 years. Financial services continue to be the biggest sector of the TSX by value, accounting for more than a quarter of the overall TSX market capitalization currently. The industrial/consumer products and services sectors experienced a significant decrease in the number of constituent companies, but gained a material increase in the total weighting of the sector on the TSX by market capitalization. Clean tech and renewables have more than tripled their overall weighting on the TSX, but this sector still only accounts for 1.6 per cent of the TSX market capitalization. Technology, as one would expect, has more than doubled its overall weighting, but remains at less than 10 per cent of the total market capitalization as a sector.³⁰

³⁰ The fact that the overall weighting of technology on the TSX is not higher than 10 per cent has been a blessing for broad index investors in the past two years as technology stock valuations have collapsed.

Most glaring from the data in Table 2, however, is the precipitous decline in oil and gas as a key driver of the TSX. Across the 16-year period, the overall weighting of oil and gas companies by market capitalization declined from 21.2 per cent to 9.7 per cent, and the total number of operating oil and gas companies on the TSX dropped from 138 to only 59. What has historically been the third-largest sector on the TSX is poised to become the ninth-largest industry sector if current trendlines continue over the next couple of years. The following figure demonstrates that the bulk of oil and gas operating company decline occurred during the low pricing cycle that persisted between 2014 to early 2021.

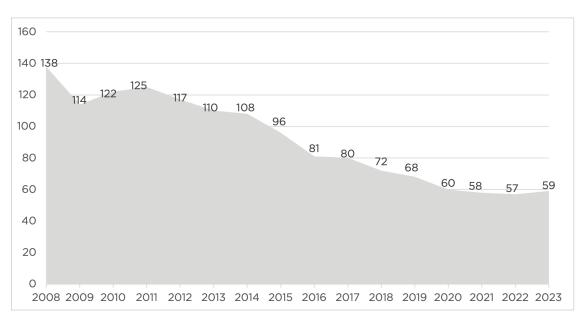


Figure 3. Oil and Gas Issuers Listed on the TSX Since 2008

Other than one oil and gas passive royalty-based investor, Topaz Energy Corp. (which completed a TSX IPO in 2020), the last oil and gas producer completing an IPO on the TSX was in 2014. Even more telling, the last three to four years of heightened oil and gas commodity prices in Canada mark the first instance in Canadian capital markets history where a buoyant oil and gas commodity market failed to generate any new oil and gas IPO volume on the senior markets.

Key reasons for this major shift may be obvious to those following the industry. Oil and gas companies, and the institutions that continue to invest in them, have become targets for activist shareholder groups with pro-environmental mandates. These activist investors use mechanisms available only in the public markets to increase pressure on public oil and gas companies to operate in a manner that is not necessarily aligned with maximizing profitability (Sorokin 2024). Among these pressure tactics are shareholder proposals demanding oil and gas companies immediately divest themselves of all oil and gas assets. In response to these demands, oil and gas companies have amended their constating documents to establish minimum shareholding prerequisites for advancing shareholder proposals at meetings. However, activist investors in Europe have increasingly turned to the courts to bring actions directly against corporations, along with their officers and directors, for their continued involvement in oil and gas extraction. Should these litigation pressure tactics find their way into Canadian courts, the legal outcome remains uncertain, meaning that a near-term resurgence in TSX IPOs in the oil and gas sector is unlikely, even as such offerings (along with mining) have served as the historical backbone of the TSX for nearly a century. Senior decision-makers of private oil and gas companies are likely to exhaust

every private financing alternative available to them before considering an IPO in such a political environment. Only those existing public oil and gas producers who have the budget and expertise to operate within this fraught public company space will remain in the public domain. Unless foundational policy changes are implemented that are designed to protect public operators in this sector from detrimental shareholder activism, an increasing percentage of oil and gas production in Canada could foreseeably migrate into the domain of private capital.

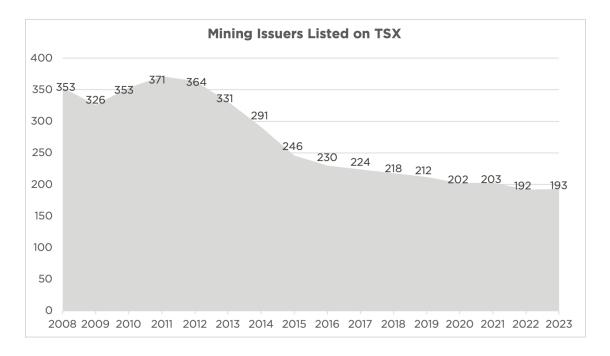
Although the number of oil and gas issuers has dropped, the total market capitalization of the remaining oil and gas issuers has increased materially. Average market capitalization of a TSX-listed oil and gas issuer increased from \$1.89 billion to \$6.03 billion between 2008 and 2023, more than tripling in size. This expanded scale affords the remaining publicly traded oil and gas companies greater fiscal and personnel resources to comply with increasingly complex environmental, social and governance (ESG) reporting requirements in the public markets.

The large increase in average market capitalization of oil and gas issuers also points to another factor that has contributed to a decline in total sector listings, namely consolidation due to robust merger and acquisition activity. Many senior industry players disappeared during the multi-year period of low commodity prices that began in 2014, the 2020 Russian-Saudi price war and the global economic challenges arising from COVID-19. Yet, oil and gas has always been a sector with a relatively high degree of consolidation during challenging economic cycles. The major recent decline in senior public listings is a result of the paucity of new listings over the past three years in which commodity prices have been buoyant, breaking the traditional cycle in which significant new oil and gas listings accompanied extended periods of high oil prices.

The other significant extractive sector industry in Canadian public capital markets — mining — has fared somewhat better on the TSX. Although the total number of TSX-listed mining issuers decreased 45.3 per cent between 2008 and 2023, the overall weighting of mining by market capitalization only decreased from 16.9 per cent to 13.0 per cent. Although mining issuers have experienced similar ESG pressures as their oil and gas counterparts, mining is not subject to the same existential threat in the public markets given the foundational role of critical minerals in governmental and civil society decarbonization mandates. Whereas many environmental special interest groups actively pressure institutions to divest their oil and gas holdings, no similar broad-based pressure is placed on mining companies (other than coal producers).

With respect to average market capitalization, public mining issuers have also seen an approximate tripling in average market capitalization, rising from \$0.87 billion to \$2.47 billion over the past 16 years.

Figure 4. Mining Issuers Listed on the TSX Since 2008



VIII. GEOGRAPHIC COMPOSITION OF TSX-LISTED OPERATING COMPANIES

Turning briefly to the geographic composition of TSX-listed operating companies, what changes can be observed by looking at the data from 2008 and 2023?

Table 3. Head Office Location Comparison of TSX-Listed Companies December 31, 2008 and December 31, 2023³¹

| | | TSX- | -2008 | | TSX-2023 | | | | | |
|-------------------------------|------------|--------|---------------------------|-------|------------|--------|---------------------------|-------|--|--|
| | # Listings | % | Market Cap Millions \$ | % | # Listings | % | Market Cap Millions \$ | % | | |
| International | | | | | | | | | | |
| South Africa | 12 | 0.99% | 2,278 | 0.19% | 2 | 0.28% | 238 | 0.01% | | |
| Australia ³² | 25 | 2.06% | 13,367 | 1.09% | 7 | 0.99% | 14,212 | 0.39% | | |
| Latin America | 3 | 0.25% | 606 | 0.05% | 7 | 0.99% | 3,135 | 0.09% | | |
| China | 17 | 1.40% | 3,144 | 0.26% | 7 | 0.99% | 3,301 | 0.09% | | |
| Caribbean/ Channel Islands | 6 | 0.50% | 400 | 0.03% | 7 | 0.99% | 31,377 | 0.86% | | |
| Europe/U.K. | 11 | 0.91% | 5,244 | 0.43% | 11 | 1.56% | 5,381 | 0.15% | | |
| U.S. | 79 | 6.52% | 26,300 | 2.15% | 39 | 5.52% | 177,498 | 4.85% | | |
| Israel | 0 | 0.00% | 0 | 0.00% | 3 | 0.42% | 69 | 0.00% | | |
| | 153 | 12.63% | 51,338 | 4.19% | 83 | 11.74% | 235,210 | 6.43% | | |

Data compiled from annual company listing data provided by TMX Market Intelligence.

³² Also includes two companies with headquarters in Papua New Guinea.

| | | TSX- | 2008 | TSX-2023 | | | | | |
|----------|------------|--------|---------------------------|----------|------------|--------|---------------------------|--------|--|
| | # Listings | % | Market Cap Millions \$ | % | # Listings | % | Market Cap Millions \$ | % | |
| Canada | | | | | | | | | |
| ВС | 207 | 17.09% | 78,875 | 6.44% | 133 | 18.81% | 247,190 | 6.76% | |
| AB | 253 | 20.89% | 351,215 | 28.67% | 120 | 16.97% | 711,271 | 19.45% | |
| SK | 7 | 0.58% | 36,886 | 3.01% | 5 | 0.71% | 63,337 | 1.73% | |
| МВ | 21 | 1.73% | 35,323 | 2.88% | 13 | 1.84% | 69,365 | 1.90% | |
| ON | 403 | 33.28% | 514,497 | 41.99% | 259 | 36.63% | 1,746,131 | 47.74% | |
| QC | 142 | 11.73% | 142,302 | 11.61% | 80 | 11.32% | 532,764 | 14.57% | |
| NB | 2 | 0.17% | 370 | 0.03% | 2 | 0.28% | 896 | 0.02% | |
| NS | 19 | 1.57% | 9,385 | 0.77% | 9 | 1.27% | 22,531 | 0.62% | |
| NFLD/LAB | 4 | 0.33% | 5,025 | 0.41% | 3 | 0.42% | 28,907 | 0.79% | |
| | 1,058 | 87.37% | 1,173,879 | 95.81% | 624 | 88.26% | 3,422,391 | 93.57% | |

This table reinforces the well-known fact that Alberta has historically played an outsized role in the senior Canadian markets, largely because of the critical role oil and gas companies have played on the TSX over the decades. For several decades, Alberta has represented the second-largest senior capital markets jurisdiction, trailing only Ontario. In fact, in 2008 Albertan issuers constituted a significantly higher percentage of the TSX market capitalization than B.C. and Quebec combined. The fact that Alberta's percentage of TSX listings and market capitalization has dropped significantly over the past 15 years is a natural consequence of the ongoing decline in public oil and gas companies discussed in the previous section of this paper. Most of the gains over this interval have accrued to Ontario-based issuers, with Quebec issuers also seeing a significant gain in contribution. Perhaps unexpectedly, Table 3 shows that B.C.'s percentage of senior public company listings has only increased marginally over the past 15 years. This is quite a different result than is observed in the junior capital markets, where B.C.'s contribution to the markets has increased by a much greater rate over the same interval. Moreover, although B.C. now has more TSX issuer head offices than Alberta, the market capitalization of B.C.-based issuers is only 1/3 of Alberta-based issuers. The most obvious observation from these data is that, while oil and gas has diminished in importance on the TSX over the past 15 years in terms of number of listings, it is still an important contributor to the TSX in total market capitalization. The second obvious observation is that the senior public market in Canada is becoming increasingly concentrated in Ontario and Quebec, even as the pace of economic growth in the West continues to outpace growth in Central Canada.

Another obvious fact from Table 3 is that the decline in the number of operating companies accessing the Canadian senior public markets is broad-based across the entire country. There is not a single jurisdiction in which the number of companies listed on the TSX has increased between 2008 and 2013. While the decline in listed issuers is steepest in Alberta, the phenomenon of operating public company decline cannot be explained on a geographic basis.

A similar observation can be made with respect to the trajectory of international listings on the TSX over the 15-year period. In particular, the critical U.S. and Australian markets have seen a significant reduction in operating companies listed on the TSX.

A topic related to the evolution of geographic composition of the TSX is the evolution of internationally cross-listed companies. At December 31, 2008, 257 out of 1,211 TSX-listed issuers (21.2 per cent) also maintained listings on other international stock exchanges. Internationally based issuers had a significantly higher percentage of cross-listings, with 66 out of 153 (43.1 per cent) maintaining at least one international listing. Most notably, 22 out of the 25 Australian-based issuers maintained a listing on the Australian Stock Exchange. Half of the South African issuers (six out of 12) maintained a listing on the Johannesburg Stock Exchange. Surprisingly, only two out of 17 Chinese-based issuers maintained an Asian listing (both on the Hong Kong Stock Exchange). Six of the 11 European-based issuers maintained a listing on either the London Stock Exchange (LSE) or on the AIM market in London. Thirty out of 70 American-based issuers maintained a dual listing on one of NASDAQ, AMEX or the NYSE. A significantly lower proportion of Canadian-based TSX issuers (18.9 per cent) maintained cross-listings abroad. For domestic Canadian issuers, 154 out of 1,058 Canadian-based TSX issuers maintained a listing on one of NASDAQ, AMEX or the NYSE. Another 32 Canadian-based issuers maintained a listing on the LSE or the AIM market in London. There were also two Canadian-based companies cross-listed in Oslo and one in Peru.

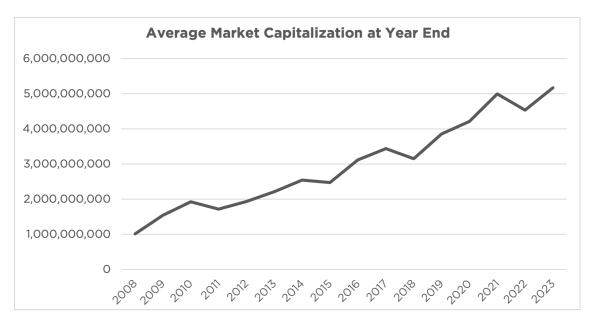
Over the last 15 years, the percentage of Canadian-based issuers maintaining international cross-listings on recognized foreign stock exchanges has increased. At December 31, 2023, a total of 158 out of 624 Canadian-based TSX issuers (25.3 per cent) maintained an international stock exchange listing. Of the Canadian-based issuers, 143 maintained a listing on either NASDAQ or the NYSE. The remaining 15 Canadian cross-listed issuers maintained an additional listing on at least one of multiple different exchanges around the world, with the largest representation being on the LSE, AIM and NASDAQ Nordic. An even higher percentage of internationally based TSX issuers (54.2 per cent) maintained an international listing, with the three major American exchanges still accounting for the largest number of cross-listings. Of 39 American-based issuers, 24 (61.5 per cent) maintained a listing on NASDAQ or the NYSE.

Finally, in the 2023 data, the TSX now tracks TSX-listed companies that also trade over-the-counter in the U.S. As at December 31, 2023, 16 out of 83 internationally based issuers (19.3 per cent) and 121 out of 624 (19.4 per cent) of Canadian-based issuers traded on one of the American over-the-counter structures.

IX. MARKET CAPITALIZATION GROWTH OF TSX-LISTED OPERATING COMPANIES

Having discussed that the average market capitalization of extractive-sector TSX companies has tripled between 2008 and 2023, what has happened to the average market capitalization in other sectors? Although the number of operating public companies on the TSX is progressively diminishing, the average size of the remaining operating companies continues to grow larger. Between 2008 and 2023, the average market capitalization of a TSX-listed operating company increased from approximately \$1 billion to \$5 billion, as shown in Figure 5.

Figure 5. Average TSX Operating Company Market Capitalization at December 31³³



This 400-per-cent increase in average market capitalization occurred over an interval in which Canada's national gross domestic product increased by 28 per cent and the cumulative effect of inflation totalled only 39.7 per cent.³⁴ Consequently, only a fraction of the market capitalization growth for senior listed companies can be explained by inflation or overall GDP growth.

A significant body of academic literature discusses the critical role that small and medium-sized growth-stage companies play in a healthy economy, particularly in terms of economic innovation. This paper does not propose to review those authorities. Although larger public companies are better equipped to meet the financial costs and resources required to comply with increasingly complex securities regulations, depriving investors in the public markets of access to an adequate pool of higher growth opportunities is problematic. Without access to growth-stage public issuers with significant upside potential, retail investors may seek higher yields from sources that are generally riskier than Canadian equity markets. Recent experience has shown that the search for higher yields includes the highly speculative and poorly regulated cryptocurrency markets, in which massive amounts of capital have been invested (and frequently lost) by unsophisticated investors seeking higher returns (Kiladze 2022).

It is widely understood that elimination of growth-stage companies from the public markets is inherently problematic from a variety of public policy and economic perspectives. Yet, that is precisely what we can observe on the TSX over the past 15 years.

³³ Calculated from TMX listed company data published by TMX Market Intelligence.

³⁴ GDP growth calculated from source information obtained online from Bank of Canada published data.

Table 4. Market Capitalization Comparison of TSX-Listed Operating Companies 2008 and 2023

| Market Capitalization Range | # of TSX- Listed Operating Companies as at December 31, 2008 | % Listings | # of TSX Listed Operating Companies as at December 31, 2023 | % Listings |
|-----------------------------------------|--------------------------------------------------------------------|------------|-------------------------------------------------------------------|------------|
| Below \$10 million | 226 | 18.66% | 29 | 4.11% |
| Between \$10 million and \$25 million | 179 | 14.78% | 32 | 4.53% |
| Between \$25 million and \$50 million | 148 | 12.22% | 55 | 7.79% |
| Between \$50 million and \$100 million | 163 | 13.46% | 65 | 9.21% |
| Between \$100 million and \$250 million | 192 | 15.85% | 118 | 16.71% |
| Between \$250 million and \$500 million | 90 | 7.43% | 73 | 10.34% |
| Between \$500 million and \$1 billion | 72 | 5.95% | 83 | 11.76% |
| Between \$1 billion and \$5 billion | 91 | 7.51% | 143 | 20.26% |
| Between \$5 billion and \$10 billion | 16 | 1.32% | 43 | 6.09% |
| Above \$10 billion | 34 | 2.81% | 65 | 9.21% |
| Total | 1,211 | 100.00% | 706 | 100.00% |

The data point to a massive decline in companies with market capitalizations below \$50 million on the TSX³⁵ The number of operating companies valued below \$50 million dropped from 553 to 113 in the past 16 years, a decline of almost 80 per cent. The percentage of companies on the TSX with market capitalizations below \$50 million dropped from 45.7 per cent in 2008 to only 16.4 per cent at the end of 2023. The number of operating companies valued between \$50 million and \$100 million on the TSX decreased by 52 per cent, and the number of operating companies valued between \$100 million and \$250 million dropped by 43 per cent over the same 16-year period.

On the other end of the spectrum, between 2008–2023 the number of operating companies valued between \$1 billion and \$5 billion increased by 58 per cent, the number of operating companies valued between \$5 billion and \$10 billion increased by 163 per cent and the number of operating companies valued above \$10 billion grew by 103 per cent. Companies with market capitalizations above \$1 billion increased from 11.64 per cent of total listings in 2008 to 35.6 per cent of total listings in 2023.

What led to this huge increase in larger capitalization companies on the TSX? One fear is that much of the increase is attributable to an increase in trading multiples, making TSX-listed companies more expensive and leaving less room for future upside for Index investors. In other words, the fear is that one of the potential risks discussed previously, arising from the decline in the number of operating public companies, has already come to fruition. However, although trading multiples have fluctuated significantly during various market cycles, the increase in market

Public companies with market capitalizations below \$50 million are considered "nano-cap" stocks in the U.S. and are generally traded only through the OTC markets. However, they have historically represented a significant component of TSX-listed companies.

capitalization cannot be explained solely by comparing average price-earnings ratios from the beginning of 2008 to the current time.



Figure 6. Historical Trading Prices on the TSX as Multiple of Earnings Per Share³⁶

Evident from Figure 6 is that increasing trading multiples is not the predominant factor contributing to the growth of average market capitalizations on the TSX. Although the average TSX operating company trading multiples have ranged from 15x normalized earnings per share (EPS) to 35x EPS between 2008 and 2023, the average trading multiple was roughly the same (i.e., 20x EPS) in early 2024 as it was in early 2008. TSX-listed firms have increased their profitability over the 2008–2023 interval at a rate similar to their market capitalization growth.

Financial industry insiders have pointed out that we have operated in — up to inflation becoming an issue post-COVID-19 — an extended period where access to debt financing to fund acquisitions has been at historically low rates. Public company acquisition of private companies over this interval has been robust. Intuitively, growth through acquisition as a result of low borrowing costs is one of the factors that has contributed to the rapid market capitalization expansion.

The good news for investors is that TSX-listed stocks have not become consistently more expensive over the past 16 years from an earnings-per-share basis. The bad news is that the pool of small-cap listed companies on the TSX in which one can invest at an earlier stage of maturity to participate in the significant growth phase has shrunk significantly, leaving few small-cap options available on the senior markets. The TSX is clearly evolving into a stock exchange of the few and the large operating companies.

Historical equity pricing data supplied by Interactive Data Pricing and Reference Data LLC. Summary obtained from S&P Capital IQ Reports. Generously contributed by J. Ari Pandes.

X. TSX ATTRITION ANALYSIS

Up to this point, we have quantified the various sources of new operating company listings on the TSX, along with the evolution of the TSX composition by industry mix and company size. We now turn to a third critical element in the data analysis which has thus far remained unexplored, namely the nature and source of attrition of operating companies on the TSX. Table 5 provides a summary of the cause of each TSX delisting over the decade between 2014 and 2023.

Table 5. TSX Operating Company Attrition Analysis by Delisting Cause 2014–2023³⁷

| TSX Listing Attrition Analysis 2014-2023 | | | | | | | | | | |
|----------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Reason for Delisting | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
| Following acquisition/merger/conversion ³⁸ | 50 | 33 | 35 | 38 | 38 | 27 | 34 | 40 | 25 | 33 |
| At the company's request ³⁹ | 20 | 28 | 18 | 10 | 10 | 9 | 9 | 14 | 4 | 10 |
| Following redemption/expiry/ termination | 4 | 1 | 3 | 4 | 2 | 0 | 1 | 2 | 0 | 0 |
| Failure to meet listing requirements or after suspension | 24 | 28 | 17 | 13 | 9 | 7 | 14 | 1 | 6 | 12 |
| Total Annual OpCo Delistings | 98 | 90 | 73 | 65 | 59 | 43 | 58 | 57 | 35 | 55 |
| % OpCo's Delisted During Year | 10.0 | 9.8 | 8.5 | 8.0 | 7.4 | 5.6 | 7.7 | 7.9 | 4.6 | 7.4 |

Merger and acquisition activity is the largest contributing factor to public company attrition on the TSX, representing 55.8 per cent of all TSX delistings over the past decade. Annually, merger and acquisition activity has resulted in delistings of between 3.4 per cent and 5.4 per cent of total TSX-listed operating companies each year.

The two other main sources of attrition — delisting at the company's request and failure to meet minimum listing requirements — each account for approximately 20 per cent of TSX delistings. Delisting at the company's request includes both going-private transactions and voluntary delistings from companies that move to exchanges in other countries, principally American exchanges. Failure to meet listing requirements and suspensions are generally associated with significant business contractions or overall business failure. Approximately 50 per cent of the TSX delistings for failure to meet listing requirements are listed on the TSXV as "come-downs," while the other 50 per cent did not secure a replacement listing.⁴⁰

The principal value in the delisting data is in quantifying the trajectory of systemic attrition in TSX listings. The rate of overall operating company attrition appears to be trending downwards. While the number of new TSX operating company listings each year has been insufficient to offset the annual attrition in each of the past 16 years (apart from the 2021 IPO boom), the data show that the absolute number of operating companies departing the TSX each year is not, at least, increasing.

Of Chart constructed by author based on data extracted from TSX Annual Delisting Summary, obtained from TMX Market Intelligence Group. The detailed delisting data maintained by the TMX Market Intelligence Group go back only to 2014, providing 10 years of data on this topic rather than the 16 years of data available on most other elements considered in this paper.

Includes both third-party acquisitions and management-leveraged buy-outs.

³⁹ These delistings normally resulted from the issuer moving to another exchange or eliminating a dual listing.

 $^{^{\}rm 40}$ $\,$ Source: TSXV listing data provided by TMX Market Intelligence Group.

After 16 years of TSX ongoing operating company decline, one likely explanation for the slowing rate of attrition is that a greater percentage of those operating companies remaining on the TSX at this stage are those that perceive definitive benefits in remaining listed and traded on an exchange. Companies that could gain a net benefit by going private in response to heightened disclosure obligations and shifting dynamics in the area of public company ESG compliance have already had ample time to do so. Also, with few recent new listings, those companies that remain listed have demonstrated that they have the economic staying power to remain viable in the public markets over a longer time span, through fluctuations in the markets. The reduction in the rate of attrition also likely reflects the significant reduction in the number of micro-cap and nano-cap issuers listed on the TSX highlighted earlier in this paper.

While the rate of mergers and acquisitions as a percentage of listed operating companies has remained relatively consistent over the past decade, the rate of voluntary delistings and companies being delisted for failure to meet minimum listing requirements has declined materially in the past five years. Consequently, there appears to be little imminent risk that large numbers of the remaining operating companies will rush to the exits in going-private transactions, thus counterbalancing concerns raised by the fact that there are progressively fewer private companies looking to join the public club.

Combining the delisting data with the new listing data, the average operating company TSX listings deficit is 26.8 per year over the past decade.⁴¹ Only 2021 saw the number of operating companies increase during this interval, underscoring the magnitude of the challenge in reversing the tide of operating public company decline. To stem further decline, the policy reforms adopted need to be sufficient to induce approximately 30 additional companies each year to pursue a senior markets public listing compared to what the Canadian financial markets generate under the current structure. To stabilize the number of senior operating public companies listed in Canada, the new listing market would have to effectively double the average new listing volume over the past decade, excluding the 2021 IPO boom.

We have already inferred that a significant number of delistings over the past years stem from oil and gas and mining companies. What about the other sectors? Table 6 tracks TSX attrition over the years by industry sector.

⁴¹ The average number of TSX operating company delistings over the past decade is 63.3 per year. The average new TSX listings are 36.5 per year.

Table 6. TSX Operating Company Attrition Analysis by Industry Group 2014-2022⁴²

| TSX OpCo Listing Attrition Analysis 2014-2023 | | | | | | | | | | | |
|-----------------------------------------------|------|------|------|------|------|------|------|------|------|------|--|
| De-listing by Sector | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | |
| Clean Technology | 2 | 3 | 3 | 5 | 4 | 2 | 1 | 7 | 1 | 3 | |
| Comm and Media | 3 | 3 | 2 | 3 | 2 | 1 | 2 | 1 | 1 | 1 | |
| Consumer Products | 10 | 3 | 6 | 4 | 4 | 1 | 2 | 4 | 4 | 6 | |
| Financial Services | 4 | 1 | 0 | 4 | 4 | 7 | 1 | 5 | 2 | 3 | |
| Industrial Products | 5 | 7 | 6 | 6 | 9 | 4 | 8 | 4 | 4 | 5 | |
| Life Sciences | 5 | 2 | 6 | 5 | 5 | 2 | 4 | 9 | 2 | 17 | |
| Mining | 49 | 48 | 27 | 22 | 17 | 13 | 19 | 12 | 16 | 10 | |
| Oil and Gas | 10 | 14 | 19 | 3 | 8 | 4 | 12 | 5 | 1 | 2 | |
| Real Estate | 2 | 3 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 0 | |
| Technology | 7 | 5 | 4 | 9 | 3 | 5 | 7 | 6 | 4 | 8 | |
| Utilities and Pipelines | 1 | 1 | 0 | 1 | 2 | 3 | 1 | 3 | 0 | 0 | |
| Total Annual OpCo De-listings | 98 | 90 | 73 | 65 | 59 | 43 | 58 | 57 | 35 | 55 | |

Attrition of resource-based issuers has certainly been the highest of any industry vertical over the past decade, a result one could have anticipated based on the earlier analysis of the evolution in the industry composition of listed issuers. Interestingly, while both mining and oil and gas show high rates of attrition as a percentage of the issuers listed in each category, mining has retained a relatively consistent number of listed companies on the TSX over the past 16 years. This is because mining has been the sector that has contributed the most consistent IPO volume, whereas oil and gas IPOs have essentially disappeared from the TSX.

XI. TSX INDEX AND IPO FINANCIAL ANALYSIS

Next in our analysis, it is useful to delve into the outcomes associated with TSX IPOs over the 15-year period of operating public company decline and compare those results to the economic returns generated by the broader market over the same period. Have investors purchasing IPOs on the TSX achieved better or worse returns than the rest of the market?

Starting with the TSX Index since 2008, the overall economic return for long-term investors on the TSX has generally been positive. Using the TSX Index as the best view of financial performance of the broader market, investors buying on the TSX Index have enjoyed a cumulative return of 133 per cent over the 15-year period between December 31, 2008 and December 31, 2023. With the exception of the short-term panic at the outset of COVID-19 followed by the 2021 technology boom, the TSX Index has also been relatively stable, rarely moving up or down by more than 10 per cent in a given year. Market panic that resulted in sharp drops in the TSX Index resulting from the global financial crisis in 2008 and the onset of COVID-19 in 2020 was short-lived, with the TSX Index regaining its pre-crisis levels in relatively short timeframes. Even the bursting of the 2020–2021 technology bubble did not radically affect the broader TSX Index, which continues to trade at or near all-time highs at the time of writing.

⁴² Chart constructed by author based on data extracted from TSX Annual Delisting Summary, obtained from TMX Market Intelligence Group.

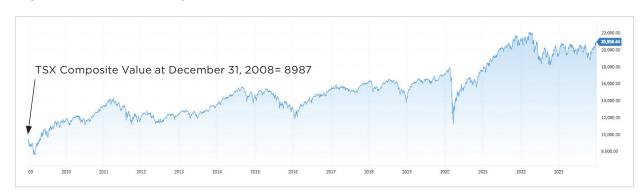


Figure 7. S&P TSX Composite Index (2008-2015)

Between December 31, 2008 and December 31, 2023, the TSX Composite Index increased from 8,987 to 20,958, representing an average annual increase of 8.8 per cent (TMX Market Statistics). Over the same period, the Canadian Consumer Price Index increased by 39.7 per cent, representing an average annual increase of 2.65 per cent (Bank of Canada inflation online calculator). As such, index funds holding the TSX Composite Index would have enjoyed an average 6.15 per cent annual return above the rate of inflation during the period of operating company decline.

It is obvious, therefore, that the ongoing phenomenon of operating public company decline has not yet materially impacted the overall economic returns of shareholders investing broadly in the TSX market. In fact, as was suggested above, one wonders whether the reduction in the number of operating public companies listed on the TSX has contributed to the increase in overall investor returns to this point, with an ever-increasing number of ETFs investing in a declining pool of operating companies. No one in academia has yet focused on the critical issue, asking at which stage the phenomenon of public operating company decline reaches the critical threshold where it fails to support the market infrastructure. However, everyone intuitively realizes that there must be some minimum threshold below which the lack of a sufficient inventory of operating stocks in which to invest fundamentally distorts trading values. Moreover, at some point the declining pool of available operating companies in which to invest becomes a simple portfolio concentration risk for institutional investors in the Canadian market.

Although the TSX Index has generated reliable positive returns over the past 15 years, it is interesting to compare the TSX Index performance to American capital markets counterparts. Figure 8 below demonstrates that the U.S. indices have generated significantly higher returns than the TSX Index over the interval of operating public company decline. The U.S. capital markets have also seen an even greater decline in the percentage of operating public companies listed since the peak in listings. Again, the decline in the number of operating companies has clearly not yet resulted in reduced trading values.

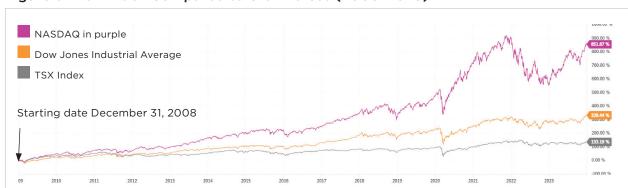


Figure 8. TSX Index Compared to U.S. Indices (2008-2023)

Carpentier and Suret (2018, 156) concluded in their last paper on the topic of Canadian IPOs from 1986 to 2016 that large issuers with significant profits at the time of IPOs were the only cohort analyzed that demonstrated fair returns. In order to test whether this analysis holds over the more recent time period analyzed throughout this paper contemporaneous with the period of operating public company decline, data were gathered from source documents on all operating company TSX IPOs going back to the beginning of 2008. The original IPO price and the current trading value were determined, along with the total revenue and operating profits of each newly listed entity in the last completed financial year prior to the IPO.⁴³ No statistically significant correlation was determined to exist between post-IPO stock performance and pre-IPO revenue or profitability.

The headline numbers arising from this analysis show that, of the 154 operating company IPOs completed on the TSX between the start of 2008 and May 31, 2024, 51 (representing 1/3 of all IPOs during this interval) are currently trading at or above their IPO price, and 103 (representing 2/3 of all IPOs during this interval) are currently trading below their IPO price. Twenty-five different issuers who completed IPOs during this interval have lost more than 90 per cent of their original IPO value. However, 25 different issuers who completed IPOs during this time have more than doubled their original IPO value. Ultimately, you can only lose 100 per cent of your original investment in any one deal, but the upside is unlimited. Four different issuers are trading at more than 500 per cent of their original IPO price. As such, even though the losers significantly outnumber the winners in simple deal count, the impact of the big winners in a portfolio strategy of IPO investing outweighs the losses and provides an overall positive return. To wit, if an investor had invested equally in all of the 156 operating company TSX IPOs since the start of 2008, they would have made an overall gain on their portfolio of 31 per cent.⁴⁴

This datapoint is significant in analyzing the decline of operating company IPO volume on the TSX. It shows that, although the TSX returns on IPOs have been lower than the TSX Index overall, they have not exhibited the characteristics of a lemons market. There is no reason based on the returns generated by IPOs for investors to have abandoned the IPO market on the supply side. This suggests that the analysis of this phenomenon should continue to focus on the supply-side linked explanations of public company decline (i.e., shifting preferences of company decision-

⁴³ Pricing, revenue and profit data were gathered from the original filings of each issuer on SEDAR at the time of the IPO; stock trading values taken from Google Finance updated to May 31, 2024. For companies that are no longer traded on the TSX, in place of current trading value the implied transactional value that the shareholders received at the time of the transaction leading to delisting was used.

Calculated as a simple mean average of current trading value or proceeds received without applying any cost-of-capital adjustments or other adjustments related to the time value of money from the date of the investment or return of capital.

makers away from the public markets) to determine why the TSX IPO market has declined so precipitously over this interval.

XII. FUNDRAISING ON THE TSX

As a final topic in our analysis, what has been the trajectory of operating companies raising money on the TSX during the period of operating public company decline? Figure 9 leads to some interesting observations.

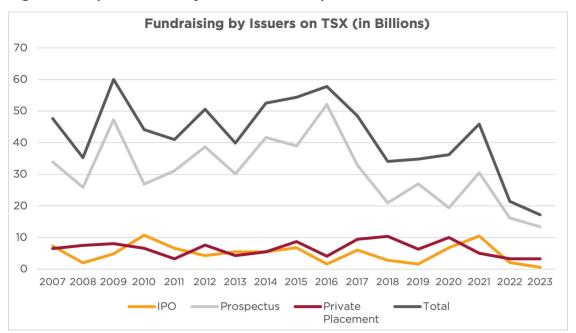


Figure 9. Capital Raised by TSX-Listed Companies⁴⁵

From these data, it is clear that the senior market in Canada primarily generates new capital through follow-on prospectus financings by listed issuers. IPOs and private placements generate only a fraction of the total capital raised annually for senior operating company issuers. Figure 9 also discloses that the beginning of the decline in the number of operating companies in 2008 did not immediately lead to a decrease in overall capital being raised on the TSX. However, since 2016, the total capital raised annually for TSX-listed companies has been declining significantly., with the sole exception of the COVID-19-era boom of 2020–2021. The total amount of capital raised by TSX-listed companies in 2023 was 71.7 per cent below the amount raised in 2009 (without accounting for inflation). In addition to the decline in the number of operating companies, the ongoing decline in total capital raised in the senior public markets appears to be another serious area of concern.

An important question for further research beyond the scope of this paper is the question of whether the current decline in TSX fundraising is primarily attributable to a reduced supply of available investment capital, or whether it is more linked to a reduced need for capital by listed operating companies as they have grown in size and profitability. Based on the tremendous

Data manually compiled from TMX Market Intelligence Group MIG reports at December 31 for each year indicated in the figure. This analysis goes back one year earlier (i.e., 2007) than most of the other data in this paper because 2008 was a known aberration in public capital raising due to the onset of the global financial crisis. As such, the 2007 fundraising data provide a better reference point for "normal" fundraising levels in that era.

increase in funds that have flowed into institutional investors over this same interval, one would assume that the phenomenon is more influenced by the demand for equity capital than it has been by the supply of investment capital on the TSX.

Further detail on the TSX fundraising landscape can be had by looking at the data in Table 7. The data show the breakdown of total fundraising on the TSX according to the three sources: IPOs, prospectus financings and private placements.

Table 7. TSX Fundraising by Constituent Piece (in billions)

| | IPO | | Prosp | ectus | Private P | Total | |
|---------|--------|------------|--------|------------|-----------|------------|------|
| Year | Amount | % of Total | Amount | % of Total | Amount | % of Total | |
| 2007 | 7.3 | 15.4% | 33.8 | 71.1% | 6.4 | 13.5% | 47.6 |
| 2008 | 1.9 | 5.5% | 25.9 | 73.3% | 7.5 | 21.3% | 35.3 |
| 2009 | 4.8 | 7.9% | 47.3 | 78.7% | 8.0 | 13.4% | 60.0 |
| 2010 | 10.7 | 24.2% | 26.8 | 60.8% | 6.6 | 15.0% | 44.1 |
| 2011 | 6.6 | 16.1% | 31.1 | 75.9% | 3.3 | 8.0% | 41.0 |
| 2012 | 4.3 | 8.4% | 38.7 | 76.6% | 7.6 | 15.0% | 50.6 |
| 2013 | 5.5 | 13.7% | 30.1 | 75.6% | 4.3 | 10.7% | 39.9 |
| 2014 | 5.4 | 10.3% | 41.7 | 79.3% | 5.5 | 10.4% | 52.5 |
| 2015 | 6.7 | 12.4% | 39.0 | 71.7% | 8.7 | 15.9% | 54.4 |
| 2016 | 1.5 | 2.7% | 52.1 | 90.2% | 4.1 | 7.1% | 57.8 |
| 2017 | 6.0 | 12.5% | 32.9 | 68.0% | 9.5 | 19.5% | 48.4 |
| 2018 | 2.7 | 8.0% | 21.0 | 61.6% | 10.3 | 30.4% | 34.0 |
| 2019 | 1.6 | 4.5% | 27.0 | 77.5% | 6.3 | 18.0% | 34.8 |
| 2020 | 6.8 | 18.7% | 19.4 | 53.7% | 10.0 | 27.6% | 36.2 |
| 2021 | 10.5 | 22.8% | 30.4 | 66.3% | 5.0 | 10.8% | 45.9 |
| 2022 | 2.0 | 9.4% | 16.2 | 75.6% | 3.2 | 15.0% | 21.4 |
| 2023 | 0.5 | 3.2% | 13.4 | 77.8% | 3.3 | 19.1% | 17.2 |
| Average | 5.0 | 11.5% | 31.0 | 72.6% | 6.4 | 15.9% | 42.4 |

From this table, we see that percentage of the total TSX capital raised annually from IPOs is consistently declining. Even the IPO boom of 2020–2021 resulted in IPOs contributing barely over 10 per cent of total financing volume at the peak. Perhaps most obvious from these data is the fact that any analysis of the health of the Canadian senior public capital markets needs to go far beyond the IPO market, as that market is consistently a minor part of the narrative.

A final takeaway reinforced by these capital-raising data, although not evident on its face, is how distinct the junior capital markets in Canada are from the senior capital markets. Over the 17 years of data available for the TSX: i) private placements accounted for an average of 15.9 per cent of total financing proceeds; ii) prospectus financings from existing listed issuers accounted for an average of 72.6 per cent of total financing proceeds; and iii) IPOs account for an average of 11.5 per cent of total financing proceeds. In comparison, on the TSXV over the same interval: i) private placements accounted for an average of 72.7 per cent of total financing proceeds; ii) prospectus

financings from existing listed issuers accounted for an average of 24.8 per cent of total financing proceeds; and iii) IPOs account for an average of just 2.4 per cent of total financing proceeds.⁴⁶

XIII. CONCLUSION

This inquiry into the senior public market malaise has highlighted Canadian operating public company decline as a critical concern, emphasizing the need for immediate attention and meaningful policy intervention by business, government and securities regulators. What key observations on the trajectory of the senior public markets in Canada are relevant to understanding the underlying causes of the decline in operating public companies and the proposed interventions to reverse the phenomenon?

- The short-lived COVID-19-era TSX technology-fuelled IPO boom of 2020–2021 was clearly an aberration in the market. It did not usher in a reversal in operating public company decline.
- Although the attrition of operating public companies has slowed over the last number of years, the rate of new listed companies on the TSX via IPO or graduation has slowed to an even greater degree. As traditional IPOs have become essentially non-existent in the market over the past two years, it is expected that the TSX will continue to reach new operating company lows progressing throughout 2024. This outcome is fundamentally concerning, as the ETF fund infrastructure that relies on operating companies for its investment product continues to proliferate. More investor dollars in an ever-increasing pool of ETFs are investing in an ever-decreasing supply of operating public companies. This imbalance may, at some point, cause significant disruption to the operation of the senior capital markets.
- TSXV graduations have become the principal lifeblood of new listings on the TSX, but the pace
 of the TSXV graduations is insufficient to offset systemic attrition and stem the tide of operating
 company decline on the TSX. To prevent further net loss in the operating public companies
 listed on the senior capital markets, an additional 30 new senior listings per year in Canada
 are needed beyond the average rate of new listings achieved over the past decade.
- The historical role of the extractive sector as a key driver of the Canadian public markets is eroding. Oil and gas companies are largely avoiding the senior public markets in Canada and becoming progressively less relevant in the public markets. Mining companies continue to retain their importance to public markets, but their position also continues to erode compared to non-resource extraction companies.
- Although fewer operating public companies are listed on the senior markets in Canada, the
 remaining issuers have experienced substantial growth over the past 16 years, driven by
 increases in revenue and profitability. However, nano-cap and micro-cap companies are rapidly
 disappearing from the TSX. Evolving into a market of the few and the large companies, the
 senior public markets are becoming the exclusive preserve of established industry players
 with fewer opportunities for investors to gain access to smaller growth-stage enterprises.
- Financings on the Canadian senior markets occur primarily through follow-on prospectus
 financings of listed issuers. Private placements play a far less important role in the senior
 markets than they do in the junior markets. In addition to the continuing decline in the number
 of operating companies listed on the TSX, the amount of capital being raised annually by senior
 operating companies in Canada has also begun to decline significantly.

⁴⁶ On the junior markets, data distinguishing the three sources of operating company equity fundraising are published only available for the TSXV, not for the CSE or CBOE Canada.

Are there potential policy interventions that could induce growth-stage private companies to pursue public listings in sufficient numbers to reverse the tide of operating company decline? Provincial securities regulators, provincial governments and the federal government have tools at their disposal to implement a suite of regulatory reforms and policy inducements that would fundamentally alter the public/private calculus for Canadian business leaders. However, the phenomenon of operating public company decline has become so entrenched and widespread that half-measures are unlikely to have any effect. It will take a concerted and collaborative effort from securities regulators and the two levels of government to implement meaningful reforms.

The big question is whether sufficient political will exists among Canadian regulators and governments to expend the necessary political capital on a topic that is not yet a major priority of Canadian voters. Although the investing public may not yet recognize the risks associated with unabated operating public company decline, the proper role of government is to anticipate significant economic risks and to act to preserve the viability and relevance of the public capital markets.

REFERENCES

- Bailac, Francesc Martinez. 2022. "Where Have All the Public Companies Gone?" IE University. April 25. https://www.ie.edu/insights/articles/where-have-all-the-public-companies-gone.
- Burkinshaw, Sarah, Yaz Terajima, and Carolyn A. Wilkins. 2022. "Income Inequality in Canada." Bank of Canada Staff Discussion Paper. https://www.bankofcanada.ca/profile/sarah-burkinshaw/.
- Carpentier, Cécile, and Jean-Marc Suret. 2006. "Bypassing the Financial Growth Cycle: Evidence from Capital Pool Companies." *Journal of Business Venturing* 21, 1: 45–73. https://doi.org/10.1016/j.jbusvent.2005.01.001.
- --- . 2009. "The Survival and Success of Canadian Penny Stock IPOs." *Small Business Economics* 36: 101. https://link.springer.com/article/10.1007/s11187-009-9190-x.
- ——. 2010. "Entrepreneurial Equity Financing and Securities Regulation: An Empirical Analysis." *International Small Business Journal* 30, 1. https://doi.org/10.1177/0266242610383790.
- ---. 2018. "Three Decades of IPO Markets in Canada: Evolution, Risk and Return." *Accounting Perspectives* 17, 1: 123-161. https://doi.org/10.1111/1911-3838.12160.
- Carpentier, Cécile, Douglas Cumming, and Jean-Marc Suret. 2012. "The Value of Capital Market Regulation: IPOs Versus Reverse Mergers." *Journal of Empirical Legal Studies* 9, 1: 56. https://doi.org/10.1111/j.1740-1461.2011.01247.x.
- CPE Analytics. 2022. "Canadian IPO Report, An Overview: 2021." CPE Analytics Publications. January 12. https://www.financings.ca/reports/.
- Dimon, Jamie. 2024. "Chairman & CEO Report to Shareholders." JP Morgan Chase & Co. April 8. https://reports.jpmorganchase.com/investor-relations/2023/ar-ceo-letters.htm#competitive.
- European Commission Directorate-General for Financial Stability, Financial Services and Capital Markets Union. 2020. "Primary and Secondary Equity Markets in the EU Final Report." https://op.europa.eu/en/publication-detail/-/publication/54e82687-27bb-11eb-9d7e-01aa75ed71a1/language-en.
- Goodkind, Nicole. 2024. "The Stock Market is Shrinking and Jamie Dimon is Worried."

 Before the Bell, cnn.com. April 9.

 https://www.cnn.com/2024/04/09/investing/premarket-stocks-trading/index.html.
- Government of Canada. 2022. "Key Small Business Statistics." Innovation, Science and Economic Development Canada, Small Business Branch, Research and Analysis Directorate. https://ised-isde.canada.ca/site/sme-research-statistics/en/key-small-business-statistics/key-small-business-statistics-2022.
- Kiladze, Tim. 2022. "How the Crypto Crash Exposed the Sector's Lies And Left Retail Investors in the Lurch." *Globe and Mail*. June 13. https://www.theglobeandmail.com/business/article-crypto-market-crash-bitcoin/.
- Lortie, Pierre. 2019a. "Entrepreneurial Finance and Economic Growth: A Canadian Overview." C.D. Howe Institute Commentary No. 536. February 28. https://www.cdhowe.org/public-policy-research/entrepreneurial-finance-and-economic-growth-canadian-overview.

- ——. 2019b. "Nurturing Global Growth Companies: Time for a New Toolkit." University of Calgary School of Public Policy. September. https://doi.org/10.11575/sppp.v12i0.68430.
- McVie, Cameron. 2023. "The State of the SPAC Market." Blog. Russell Investments. https://russellinvestments.com/us/blog/state-of-spac-market.
- Pandes, J. Ari. 2004. "Canadian Initial Public Offerings and Public-Market Statistics." http://www.aripandes.com.
- ——. 2023. "Canadian Initial Public Offerings and Public-Market Statistics." Accessed May 31, 2024. http://www.aripandes.com/wp-content/uploads/2023/04/Initial_Public_Offerings_Statistics.pdf.
- ---. 2024. Canadian Initial Public Offerings and Public-Market Statistics." Accessed May 31, 2024. http://www.aripandes.com/wp-content/uploads/2023/04/Initial Public Offerings Statistics.pdf.
- Ritter, Jay. 2018. L. D. Wilson interview with Jay Ritter, Joseph B. Cordell Eminent Scholar in Finance, University of Florida; interview held at Haskayne School of Business, University of Calgary, September 15.
- Sorokin, Andrew Ross, Ravi Mattu, Bernhard Warner, et al. 2024. "Big Oil's Winning Streak Forces Activist Investors to Regroup." *New York Times*. May 28. https://www.nytimes.com/2024/05/28/business/dealbook/oil-chevron-exxon-activist-investors.html.
- SPAC Analytics. n.d. "SPAC and US IPO Activity." Accessed January 15, 2024. https://spacanalytics.com/.
- Stulz, René M. 2018. "The Shrinking Universe of Public Firms: Facts, Causes and Consequences."

 National Bureau of Economic Research Reporter. https://www.nber.org/reporter/2018number2/shrinking-universe-public-firms-facts-causes-and-consequences.
- Tingle, Bryce C., and J. Ari Pandes. 2021. "Reversing the Decline of Canadian Public Markets." University of Calgary School of Public Policy Publications. April. https://doi.org/10.11575/sppp.v14i1.69444.
- ———. 2022. "There's Only Been One Company IPO This Year on the TSX, and That's a Problem." Globe and Mail. October 17. https://www.theglobeandmail.com/business/commentary/article-stock-market-ipo-decline-tsx/.
- Tingle, Bryce C., Michael J. Robinson, and J. Ari Pandes. 2013. "The IPO Market in Canada: What a Comparison with the United States Tells Us About a Global Problem." *Canadian Business Law Journal* 54, 3: 321. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2460324.
- Watling, Callum. 2021. "A Tale of Two Cities: The Rise and Fall of Listings." Oxera: Insights. January 28. https://www.oxera.com/insights/agenda/articles.
- Wilson, L. Daniel. 2020. "Can Regulatory Reform Reverse the Decline of Public Markets in Canada?" Western Libraries. Electronic Thesis and Dissertation Repository. 6869. https://ir.lib.uwo.ca/etd/6869/#:~:text=The%20decline%20in%20the%20number%20of%20operating%20 public,decline%20is%20particularly%20concerning%20for%20Canadian%20policy%20makers.
- ——. 2023. "Assessing the Key Factors Contributing to Canadian Public Company Decline: An Empirical Analysis." *Canadian Business Law Journal* 67, 3: 340.

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