RESEARCH PAPER

An Efficient Frontier for Canadian Equities

- *Canada has been trading stocks since the middle of the 19th century and has been home to some of the world's most highly regarded companies over the years.*
- *The Canadian equity market is significantly weighted to Financials and Energy relative to global markets, which could lead to elevated security and sector concentration for passive investors.*
- *Some institutional investors have sought to reduce risk and improve returns through greater geographic diversification, but individual investors have different investment objectives and obligations that support strong allocations to Canada in their portfolios.*
- *While the MSCI World Index's Canada allocation is only ~3%, an efficient frontier analysis of global equities suggests a weighting to Canada of between 9% and 31%.*

Beutel Goodman Investment Counsel

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Advances in technology have made the world a much smaller place. That is certainly true in the investment industry, where global security trading is almost instantaneous, and someone in Canada can buy stocks on the Shanghai, London or Bombay stock exchanges just as easily as the Toronto Stock Exchange.

The ease of international security trading doesn't mean Canadian investors should neglect the domestic market, however. In this paper, we investigate some of the reasons why Canadian stocks remain an important component of many investment portfolios across Canada and detail our own process for selecting companies for the Beutel Goodman Canadian equity strategy.

Canada: Composition of an Export Economy

According to the World Federation of Exchanges, global market capitalization for equities stood at US$101.2 trillion at the end of 2023. Canada, represented by TMX Group (the Toronto Stock Exchange and TSX Venture Exchange), accounts for $4.5 trillion (US$3.3 trillion) in market cap, as at March 31, 2024.

Founded in 1861, the Toronto Stock Exchange (TSX) is the main equity exchange in Canada and has 1,787 issuers, as at March 31, 2024. Its main benchmark, the S&P/TSX Composite Index (S&P/TSX), is commonly used by investors to measure the strength of Canadian stocks.

Canada is a major exporter, with resources (particularly oil and gas) playing a crucial role in the performance of its economy, currency and equity market. With stable political and legal systems and abundant natural resources, Canada has long been an attractive destination for both domestic and international investors.

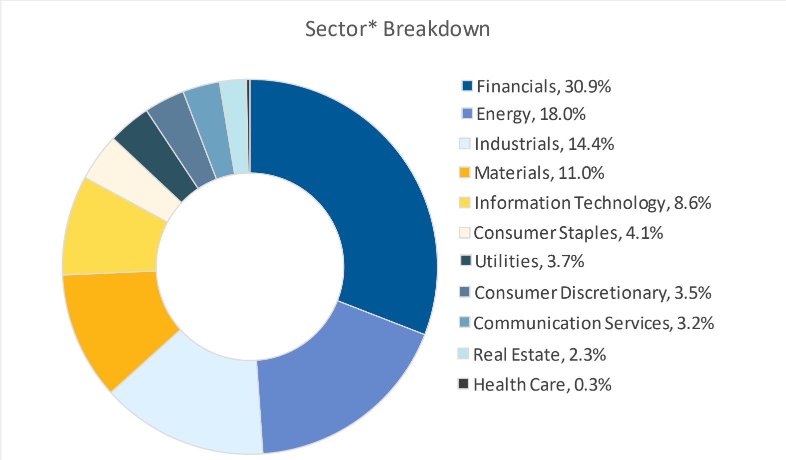
Another important element is Canada's geography — it shares the longest land border on earth with the world's largest economy and preeminent superpower, the United States of America ("U.S."). The U.S. is also Canada's main trading partner, and according to data from the Federal Government of Canada, Canada–U.S. trade exceeded $1.2 trillion in 2022, making Canada the largest trading partner of the U.S. for goods and services.

Data from the World Bank shows that exports of goods and services accounted for 33.8% of Canada's GDP in 2022, compared to 25.4% for Australia, another nation where the resource sector plays a dominant role. It is worth noting that Canada has reduced its dependence on exports in recent years, having peaked at 44.2% of GDP in 2000.

Canada may be the second-largest country in the world by land mass, but with a population of just over 41 million (as of March 2024), access to the U.S. and other international markets is crucial for many of its most successful businesses. These include global leaders in their field, such as Magna International Inc. in the automotive industry and Canadian Pacific Kansas City Limited in railways, as well as the Big Five banks, which are highly regarded internationally for good governance (this reputation was enhanced during the Global Financial Crisis, when unlike the U.S. or U.K., Canada did not have to bail out any of its banks).

On the S&P/TSX, Financials is the dominant sector, with Energy next in terms of size, followed by Industrials, Materials and Information Technology.

Exhibit 1: S&P/TSX Composite Sector Concentration.



**Based on GICS® sectors. The weightings for each sector of the index are rounded to the nearest tenth of a percent; therefore, the aggregate weights for the index may not equal 100%. Source: S&P Dow Jones Indices LLC. As at March 31, 2024.*

When looking at the top 10 individual companies (measured by market cap) in the S&P/TSX, the Financials sector has the largest representation, while Shopify's success has been a material factor in the growth of the Information Technology (IT) sector.

The S&P/TSX is significantly overweight in Financials and Energy compared to global markets, and underweight in IT, Health Care and Consumer Discretionary. For a passive investor, these factors could lead to elevated security and sector concentration.

Exhibit 2: S&P/TSX Top 10 Holdings by Index Weight.

Company	Ticker	Sector*
Royal Bank of Canada	RY	Financials
Toronto-Dominion Bank	TD	Financials
Shopify Inc.	SHOP	Information Technology
Canadian Pacific Kansas City Limited	CP	Industrials
Canadian Natural Resources Limited	CNQ	Energy
Enbridge Inc.	ENB	Energy
Canadian National Railways	CNR	Industrials
Bank of Montreal	BMO	Financials
The Bank of Nova Scotia	BNS	Financials
Brookfield Corporation	BN	Financials

Source: S&P Dow Jones Indices LLC. As at March 31, 2024.

Amid a World of Choice, Factors for a Canadian Allocation

An important development in recent decades has been the movement away from Canadian stocks by domestic institutional investors. Up until 1990, Canadian pension plans were required to invest 90% of their assets in Canada, but this allocation was gradually reduced, and in 2005, the Foreign Property Rule was eliminated altogether. This change resulted in the allocation to Canadian equities among defined benefit pension plan sponsors falling from approximately 23% in 1990 to 4.3% by 2022 (source: Pension Investment Association of Canada).

Pension plans and other institutional investors have sought to reduce risk and improve returns through greater geographic diversification. This change has been a major driver toward investing in U.S., international and emerging markets, and more recently, diversifying investments in alternative asset classes (source: Kumar, Arun A.: "The World Is Not Enough? Expanding the Boundaries of International Equity Indices for International Investing", MSCI Barra Research Insights, July 2008). It is worth noting, however, that typically there are significant differences in the investment objectives and obligations of institutional investors compared to individual investors.

Diversification is undoubtedly an important element of any portfolio, but it is also important for investors to fully understand the risks of investing abroad, as well as the benefits of maintaining an investment allocation in Canada.

Understanding the Risks

There are certain risks associated with investing abroad, including:

- **Potential hidden costs —** Some stock markets (South Korea and India are examples) impose a tax on equity transactions.
- **Currency risk —** Volatility in foreign exchange markets can hinder an investment portfolio's return potential (regardless of the performance of its underlying holdings).
- **Geopolitical or economic instability —** Some countries may not have fully developed or stable political, legal or regulatory systems, which can contribute to volatility and risk; for example, in emerging markets.
- **Taxation —** Tax policies often encourage domestic investment. For example, for Canadian residents using a non-registered investment account, dividends paid by Canadian stocks are taxed more efficiently than those from a foreign company, which are not eligible for a dividend tax credit.

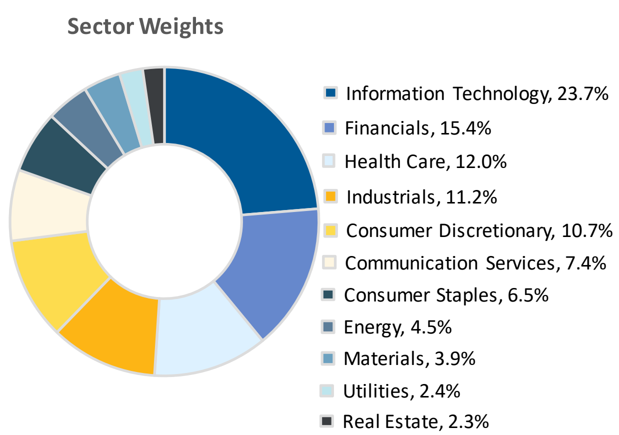
Canada is also generally regarded as a safe place to do business, owing to its developed rule of law and stable political and regulatory environment. There are also many leading Canadian companies that provide global exposure and diversification through their business activities. It is our view that considering the risks outlined above and the relative benefits in Canada, there are many reasons for investors to maintain a significant investment allocation to Canada.

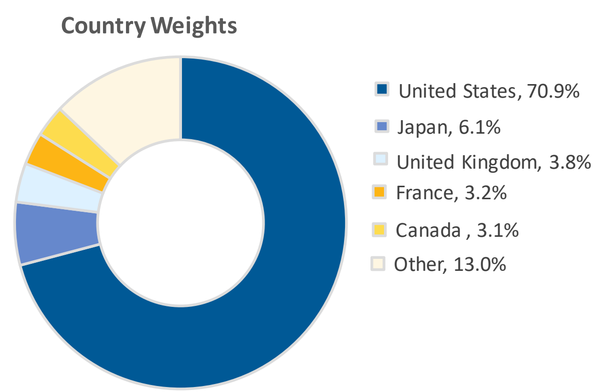
The Efficient Frontier

Given the variety of investment options available, many investors may ask what the most efficient geographical mix is for a diversified investment portfolio and what the optimal weight should be to Canadian equities.

We live in a global marketplace, and Canada is a small piece of the pie available to investors, accounting for only 3.1% (as at March 31, 2024) of the MSCI World Index. This index captures large- and mid-cap representation across 23 developed market countries. Not surprisingly, the U.S. dominates, with 70.9% of the index. Among sectors, the global tech sector at 23.7% reflects the influence Silicon Valley has over equity markets worldwide.

Exhibit 3: MSCI World Index Breakdown (US$).





Source: *[MSCI World Index Factsheet](). As at March 31, 2024.*

To help explore what the most efficient geographical mix is, we optimized two hypothetical portfolios using the underlying components of the MSCI World Index to see if the portfolios could have a better risk-return profile than the index. The foundations of the analysis come from modern portfolio theory, which was introduced by American economist Henry Markowitz in 1952 as a method to help investors minimize market risk while maximizing returns. The basis of the theory is to use security, sector and country diversification to create more "efficient" portfolios.

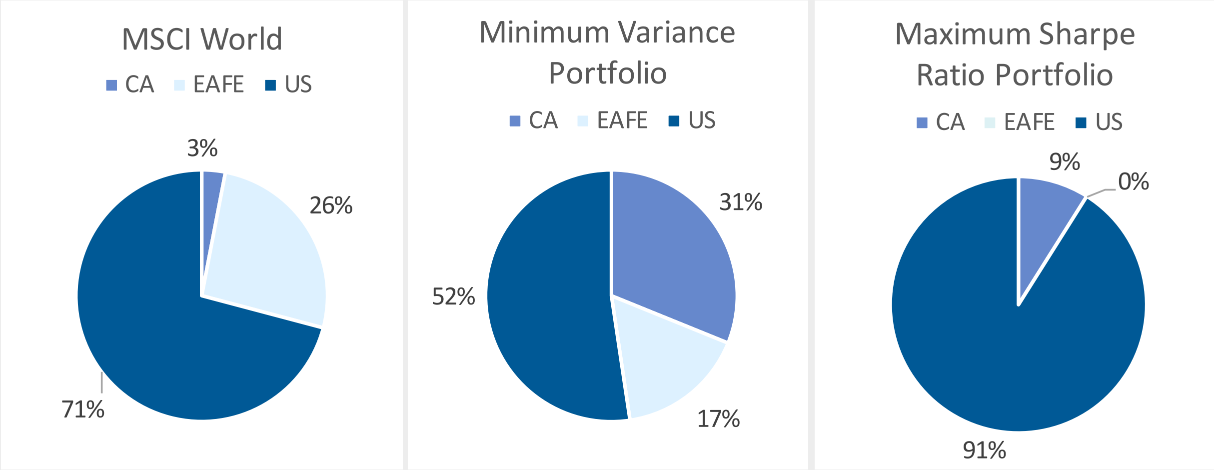
Our "optimized portfolios" are comprised of three parts: U.S. equity (proxied by the S&P 500 Index), Canadian equity (S&P/TSX Composite Index); and Europe, Australasia and the Far East, collectively known as EAFE (MSCI EAFE Index) over a 20-year period ending March 31, 2024.

The results generated the two optimized portfolios shown in Exhibit 4:

1. The portfolio that minimizes risk, called the Minimum Variance Portfolio, which consists of 52% U.S. equity, 31% Canadian equity and 17% EAFE; and
2. The portfolio that maximizes risk-adjusted returns, called the Maximum Sharpe Ratio Portfolio, which consists of 91% U.S. equity and 9% Canadian equity.

As detailed in Exhibits 4 and 5, both optimized portfolios have a higher weight in Canadian equity compared to the MSCI World Index and show a marked improvement over the risk-return profile of the MSCI World Index. They both have superior 20-year historical returns, lower standard deviation (which measures risk) and higher Sharpe ratios (which measures risk-adjusted performance) than the MSCI World Index.

Exhibit 4: Portfolio Geographic Breakdowns of the MSCI World Index and the Efficient Portfolios.



Sources: Beutel, Goodman & Company Ltd., Bloomberg L.P. As at March 31, 2024.

Exhibit 5: Index Performance and Risk (20-Year Period: January 2004 to December 2023). This table shows the performance and associated risk of the MSCI World Index, the Minimum Variance Portfolio and the Maximum Sharpe Ratio Portfolio and over the 20-year period to December 31, 2023. The Minimum Variance Portfolio and Maximum Sharpe Ratio Portfolio compare favourably in terms of risk and returns with the MSCI World Index.

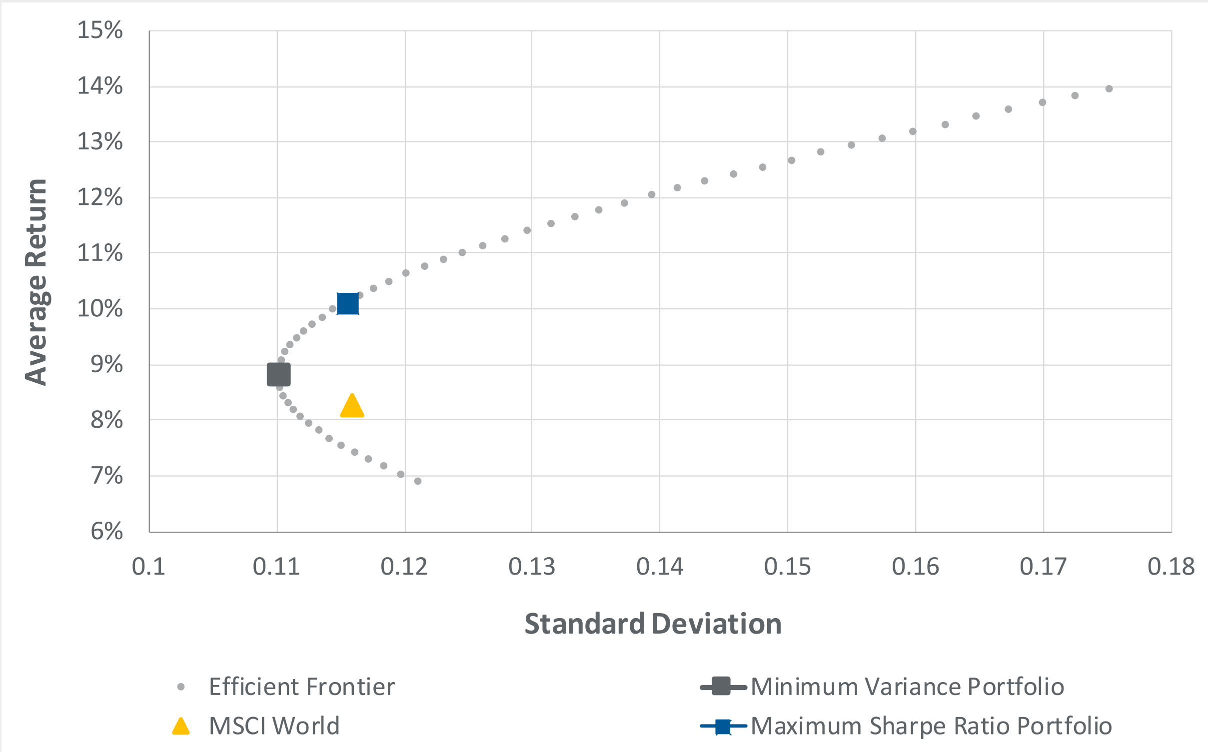
	MSCI World	Minimum Variance Portfolio	Maximum Sharpe Ratio Portfolio
Average Returns	8.26%	8.81%	10.09%
Standard Deviation	0.116	0.110	0.115
Sharpe Ratio	0.59	0.67	0.75
**For the 20-year period, from March 2004 to March 2024. Assumed risk-free rate is 1.41%; the average of the FTSE Canada 91 Day T-Bill rate during the historical period.*			

Source: Bloomberg L.P. As at March 31, 2024.

Another way to visualize the effect of how efficient portfolios can improve on the risk-return profile of the MSCI World is illustrated by the efficient frontier graph in Exhibit 6. This shows the set of optimal portfolios that offer the lowest level of risk for a given level of return. The resulting shape is typically a hyperbola, with a line curving upwards from left to right, which is the efficient frontier.

An investment portfolio that finds itself on that line and towards the right can be considered optimal, with the highest possible return for a certain level of risk. The MSCI World Index (with only a ~3% allocation to Canadian equity) finds itself well below the line, indicating its inefficient risk-return characteristics, while the Minimum Variance Portfolio and Maximum Sharpe Ratio Portfolio, with Canadian equity allocations of 31% and 9%, respectively, fall on the efficient frontier.

Exhibit 6: The Efficient Frontier. This graph shows the risk-return profile of optimal portfolios based on an asset mix of Canadian, international and U.S. equities over the 20-year period to March 31, 2024. The graph also shows points indicating the risk-return profile of the MSCI World Index, the Minimum Variance Portfolio and the Maximum Sharpe Ratio Portfolio.



Sources: Bloomberg L.P. As at March 31, 2024.

Further to the efficient frontier analysis and based on our review of the last 20 years, a low allocation to Canadian stocks (such as in the MSCI World Index at ~3%) is likely not optimal for investors. The results of the analysis show that an allocation to Canadian equity of between 9% to 31%, depending on specific investor risk tolerance, has improved the efficiency of a world-focused portfolio.

In our view, Canadian equities have demonstrated solid risk-adjusted returns over the long term, including in the Beutel Goodman Canadian equity strategy, and continue to have positive long-term potential.

Beutel Goodman Canadian Equity Strategy

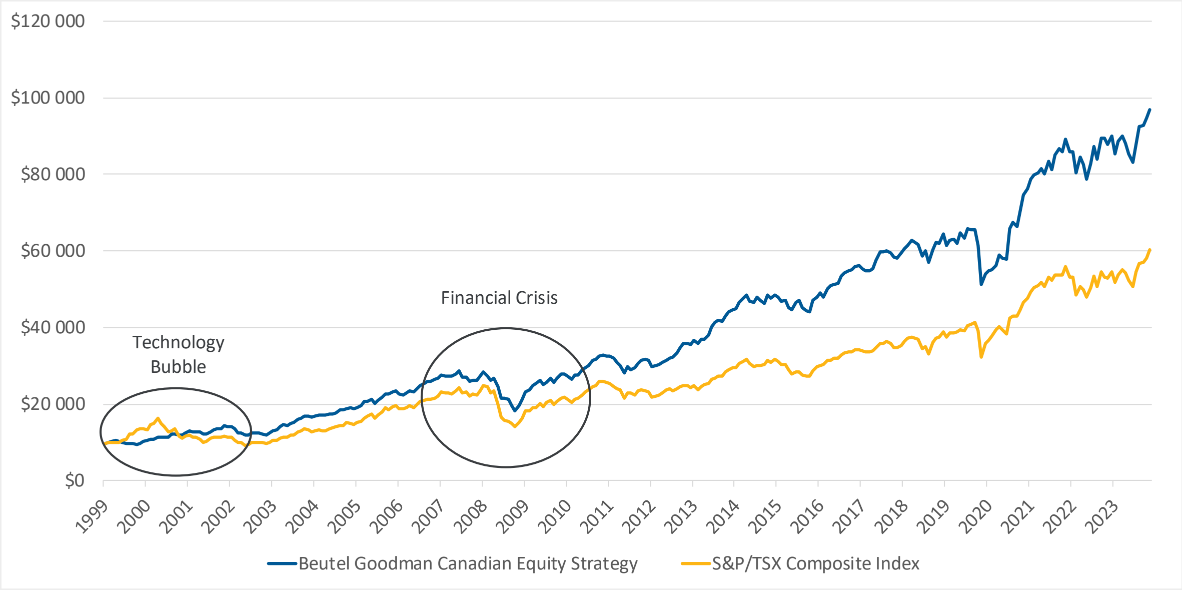
At Beutel Goodman, we are bottom-up value investors. We conduct fundamental research and look for stable companies with strong balance sheets that are trading at a discount to our estimate of intrinsic business value. We also set a target upside and downside price for each stock. We believe this approach can help provide a margin of safety and mitigate against the potential for capital loss in declining markets. Our approach also includes a process-driven sell discipline with a one-third sale (one-quarter for small cap companies) of securities that achieve our target price, and a secondary review by a different analyst for stocks that breach their downside targets.

Quality companies can be found across sectors on the S&P/TSX and tend to have either a strong international focus or a leading position in the domestic market.

While sector and security diversification are somewhat of an issue for the S&P/TSX, in our strategy we implement single-holding and sector weight limits to enhance diversification. Typically holding between 30 and 40 mid- to large-cap companies, the Canadian equity strategy is a concentrated portfolio with a high threshold for inclusion. The portfolio is not a proxy for the benchmark; rather, we conduct extensive fundamental research to select high-quality companies with attractive valuations with the potential for delivering strong risk-adjusted returns over the long term. Our sector diversification therefore stems from this bottom-up, benchmark-agnostic approach.

Our investment process is based on the belief that risk is absolute and the avoidance of capital loss is key to compound growth, and this has helped this strategy outperform the S&P/TSX in each of its negative-return years since 2000, as shown in Exhibit 7 below.

Exhibit 7: Canadian Equity Portfolio versus S&P/TSX Composite Index. This graph is for illustrative purposes to demonstrate the hypothetical growth of $10,000 invested in the Beutel Goodman Canadian equity strategy in June 1999 compared to the S&P/TSX over the same period.



Source: eVestment. Returns are for the representative account of the Beutel Goodman Canadian equity strategy and are gross of fees and expenses. As at March 31, 2024.

The rate of return is used only to illustrate the effects of the compound growth rate and is not intended to reflect future values of the investment fund or returns on investment.

The Case for Canada

At Beutel Goodman, we conduct fundamental research to make informed investment decisions in accordance with our disciplined equity investment process. We focus on absolute risk and downside protection.

Value is at the forefront of our philosophy — overpaying for stocks limits potential returns.

After a challenging 2023, earnings expectations for 2024 and 2025 are also picking up for companies in the S&P/TSX, as shown in Exhibit 8.

Exhibit 8: S&P/TSX Bottom-Up Earnings. This table shows the earnings expectations for the S&P/TSX Composite Index, as well as each of the 11 GICS sectors.

	Index Close	Consensus Earnings			% Growth			P/E Multiples		2023 Revision		2024 Revision	
		2023	2024	2025	2023	2024	2025	2023	2024	1m	3m	1m	3m
Energy	2960.78	216.89	221.07	253.17	-31.0%	1.9%	14.5%	13.7	13.4	-1.0%	-0.9%	-2.5%	-7.7%
Materials	3064.70	138.65	143.77	184.65	-39.4%	3.7%	28.4%	22.1	21.3	-2.4%	-5.2%	-3.3%	-18.0%
Industrials	5809.04	233.75	243.50	283.41	24.9%	4.2%	16.4%	24.9	23.9	0.0%	4.9%	0.0%	-0.6%
Consumer Discretionary	3036.91	178.41	195.04	229.22	4.2%	9.3%	17.5%	17.0	15.6	0.2%	-1.3%	-0.4%	-5.8%
Consumer Staples	8253.91	435.77	484.11	544.21	2.3%	11.1%	12.4%	18.9	17.0	-4.9%	-5.9%	-3.6%	-5.0%
Health	112.19	13.81	17.53	18.33	19.7%	27.0%	4.5%	8.1	6.4	-0.7%	4.6%	0.0%	10.7%
Financial	3674.35	311.15	331.77	361.09	1.9%	6.6%	8.8%	11.8	11.1	-0.1%	-2.9%	2.2%	0.3%
Technology	892.80	15.62	24.69	29.26	26.1%	58.1%	18.5%	57.2	36.2	-21.5%	-20.7%	-3.3%	-4.3%
Communications	1297.13	86.70	88.34	95.98	-1.4%	1.9%	8.6%	15.0	14.7	0.0%	1.2%	-0.3%	-3.9%
Utilities	2358.93	123.30	131.37	144.37	-0.8%	6.5%	9.9%	19.1	18.0	-0.2%	-12.6%	3.5%	-5.8%
Real Estate	3304.27	209.79	216.68	233.71	-9.5%	3.3%	7.9%	15.8	15.2	0.2%	-1.3%	-0.3%	-0.8%
TSX Composite	22167.03	1369.10	1458.75	1648.09	-10.5%	6.5%	13.0%	16.2	15.2	-1.3%	-2.7%	0.0%	-4.0%

Sources: Bloomberg Consensus Estimates, TSX Weights, TD Securities Inc. As at March 31, 2024.

The Canadian equity market tends to be more cyclical than some of its international peers, and there may be some economic headwinds facing Canada in the future. However, we believe the counter to this is using our disciplined investment process and fundamental research to invest in high-quality companies that historically have shown that they can overcome unfavourable market conditions and emerge on the other side stronger.

We believe in the long-term prospects for Canadian equities and that they should be an important component of investors' diversified portfolios in the years to come.

BEUTEL GOODMAN
Investment Counsel