

Discussion Guide

City of Toronto (Investment Board)

2023 Q4

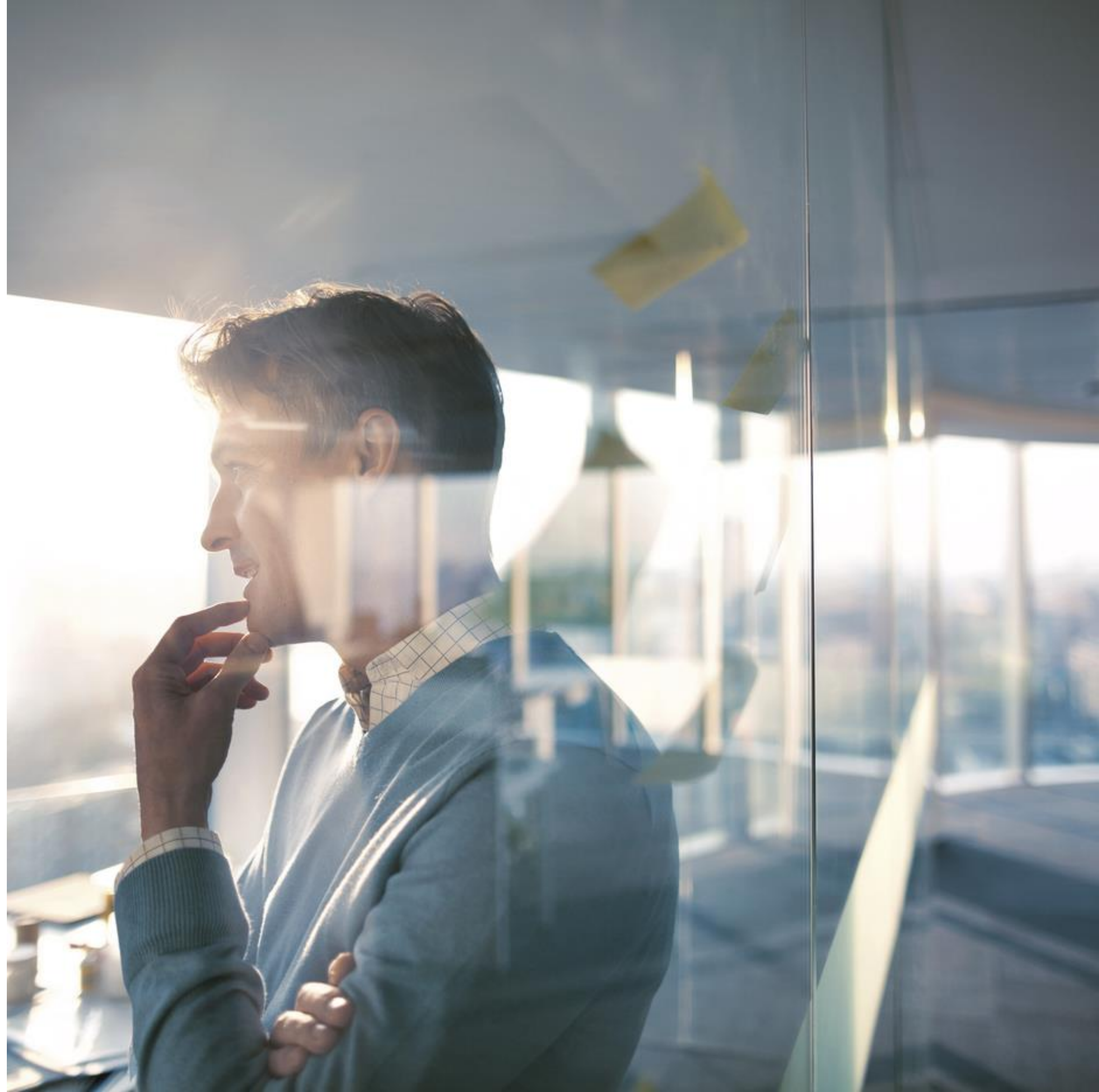


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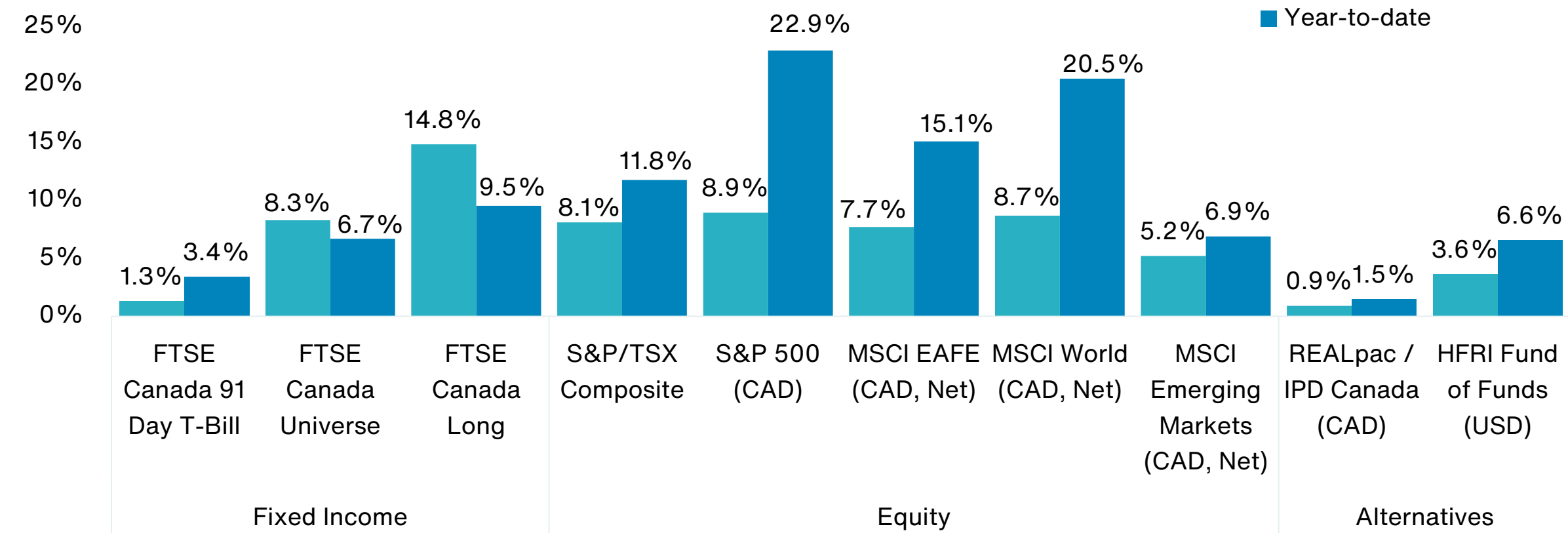
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Thought Leadership



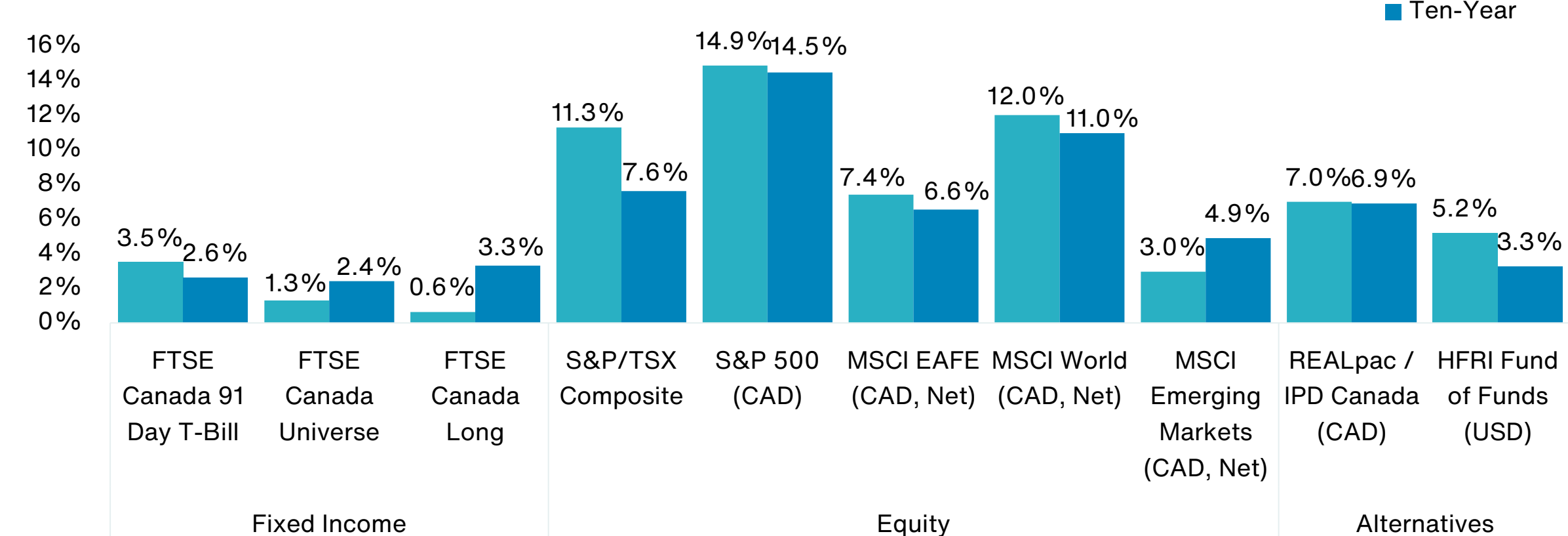
Capital Markets Overview

SHORT TERM RETURNS AS OF 12/31/2023



Sources: S&P, MSCI, IPD, FTSE. Unless it's otherwise stated, gross CAD returns are shown in this report.

LONG TERM ANNUALIZED RETURNS AS OF 12/31/2023

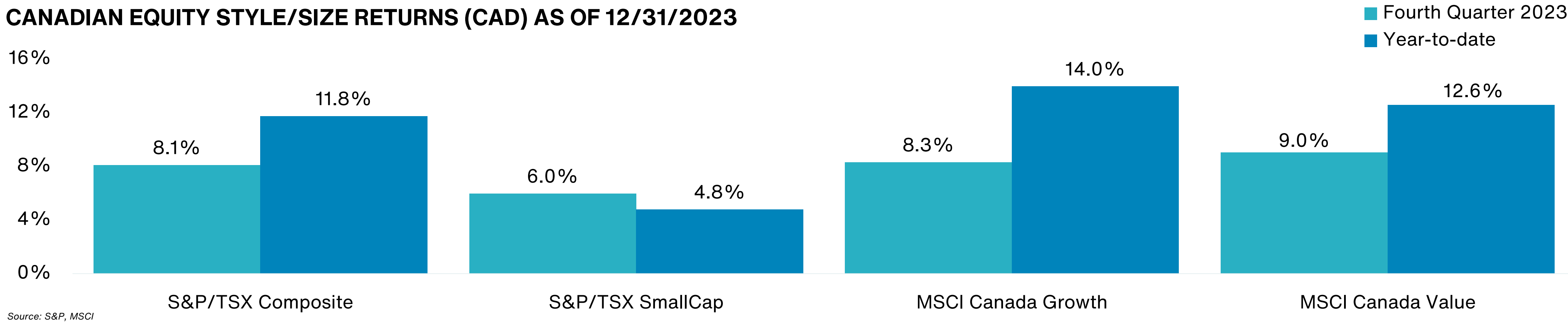
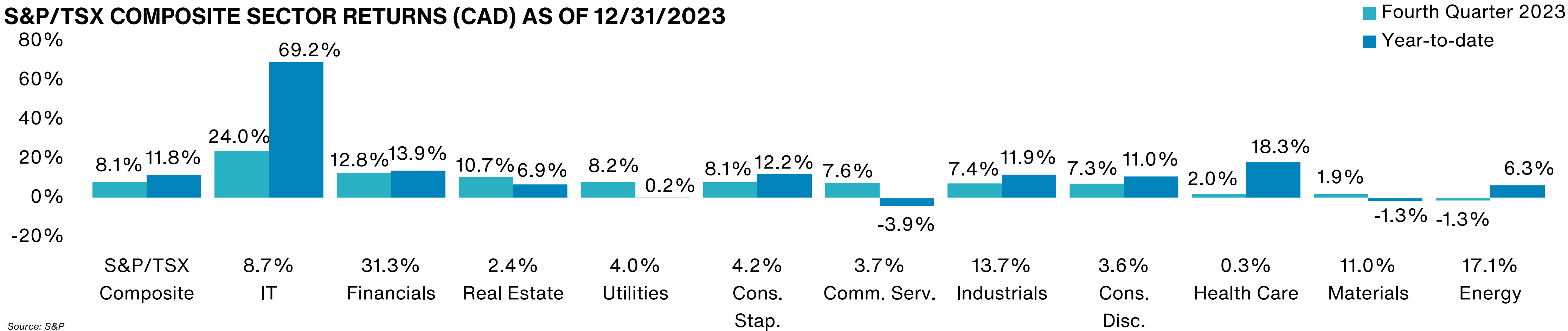


Sources: S&P, MSCI, IPD, FTSE. Unless it's otherwise stated, gross CAD returns are shown in this report.

- In Q4 2023, global equity markets rose due to a strong rally in November and December as market participants expect a greater chance of interest rate cuts in 2024. The MSCI World Index rose 10.0% in local currency terms and 8.7% in Canadian dollar (CAD) terms.
- The Bank of Canada (BoC) held its benchmark interest rate at 5% but continues its policy of quantitative tightening. The Governing Council expects to see a further slowdown in core inflation.
- The U.S. Federal Reserve (Fed) kept its benchmark policy rate unchanged at 5.25%-5.5% for the third consecutive meeting. Fed chair Jerome Powell commented that the interest rate is now “likely at or near its peak for this tightening cycle”.
- The Bank of England (BoE) also kept its interest rate unchanged at 5.25% for the third consecutive meeting. The Monetary Policy Committee (MPC) voted six to three in favour of maintaining the current interest rate, with three members preferring a 25bps increase. The MPC indicated that interest rates would likely need to be kept high for an “extended period of time” and kept the option open for further rate rises “if there were evidence of more persistent inflationary pressures”.
- The European Central Bank (ECB) kept its interest rate unchanged at 4.0% for the second consecutive meeting. ECB policymakers signalled interest rates will be kept at “sufficiently restrictive levels for as long as necessary”. The ECB also announced it would reduce the reinvestments of maturing securities by €7.5B a month from July 2024 before ending the program at the end of next year.
- The Bank of Japan (BoJ) kept its interest rate unchanged at minus 0.1%. BoJ Governor Kazuo Ueda acknowledged that there have been improvements in achieving the inflation target, but the central bank is not yet ready to abandon ultra-loose monetary policy.

Capital Markets Overview

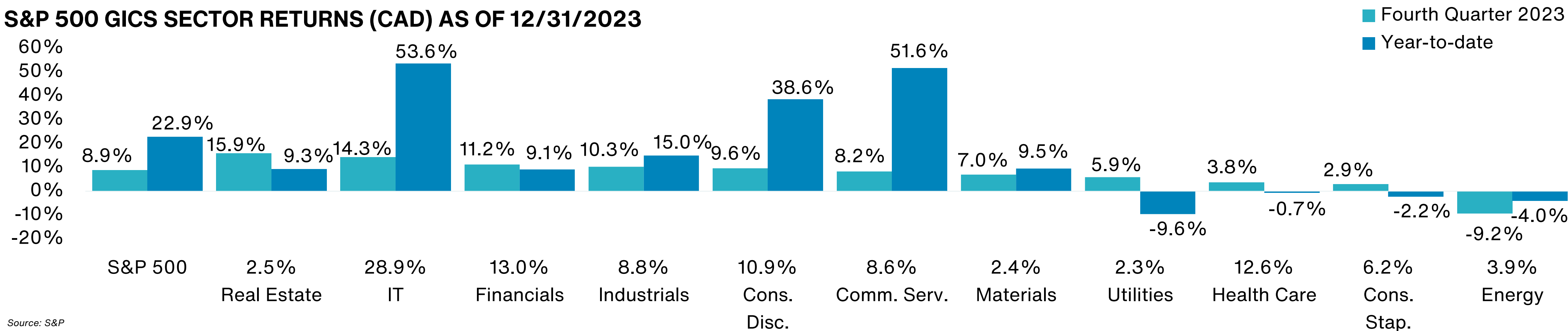
Canadian Equity



Capital Markets Overview

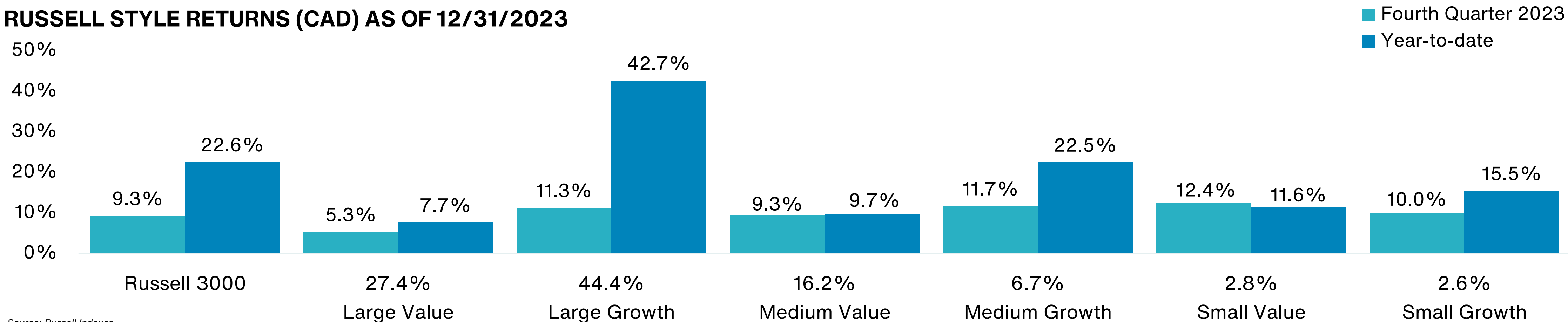
U.S. Equity

S&P 500 GICS SECTOR RETURNS (CAD) AS OF 12/31/2023



Source: S&P

RUSSELL STYLE RETURNS (CAD) AS OF 12/31/2023

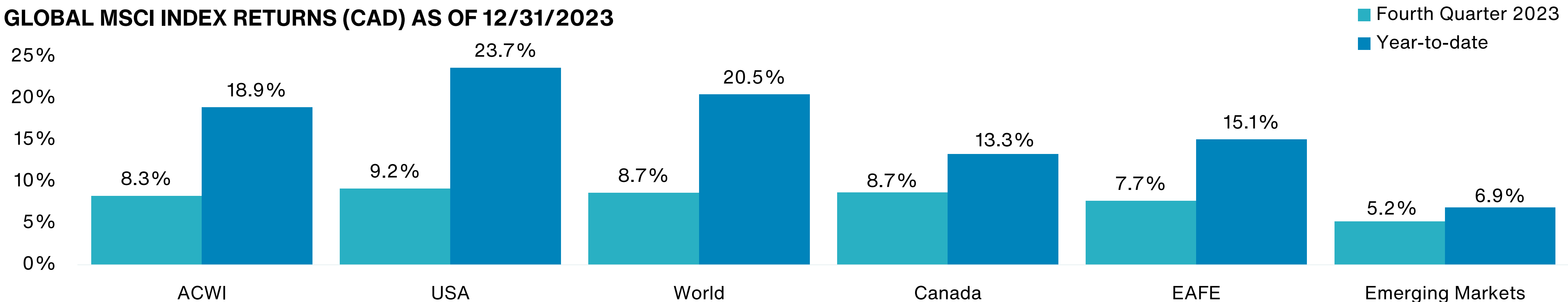


Source: Russell Indexes

Capital Markets Overview

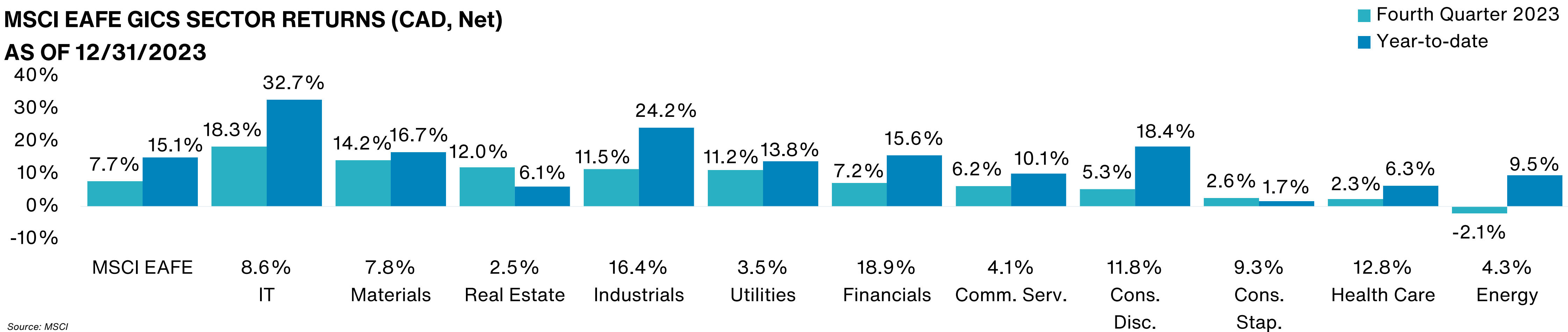
Global Equity

GLOBAL MSCI INDEX RETURNS (CAD) AS OF 12/31/2023



Source: MSCI. Gross returns shown for the MSCI Canada and USA indices, whilst net returns are shown for the other indices.

MSCI EAFE GICS SECTOR RETURNS (CAD, Net)
AS OF 12/31/2023

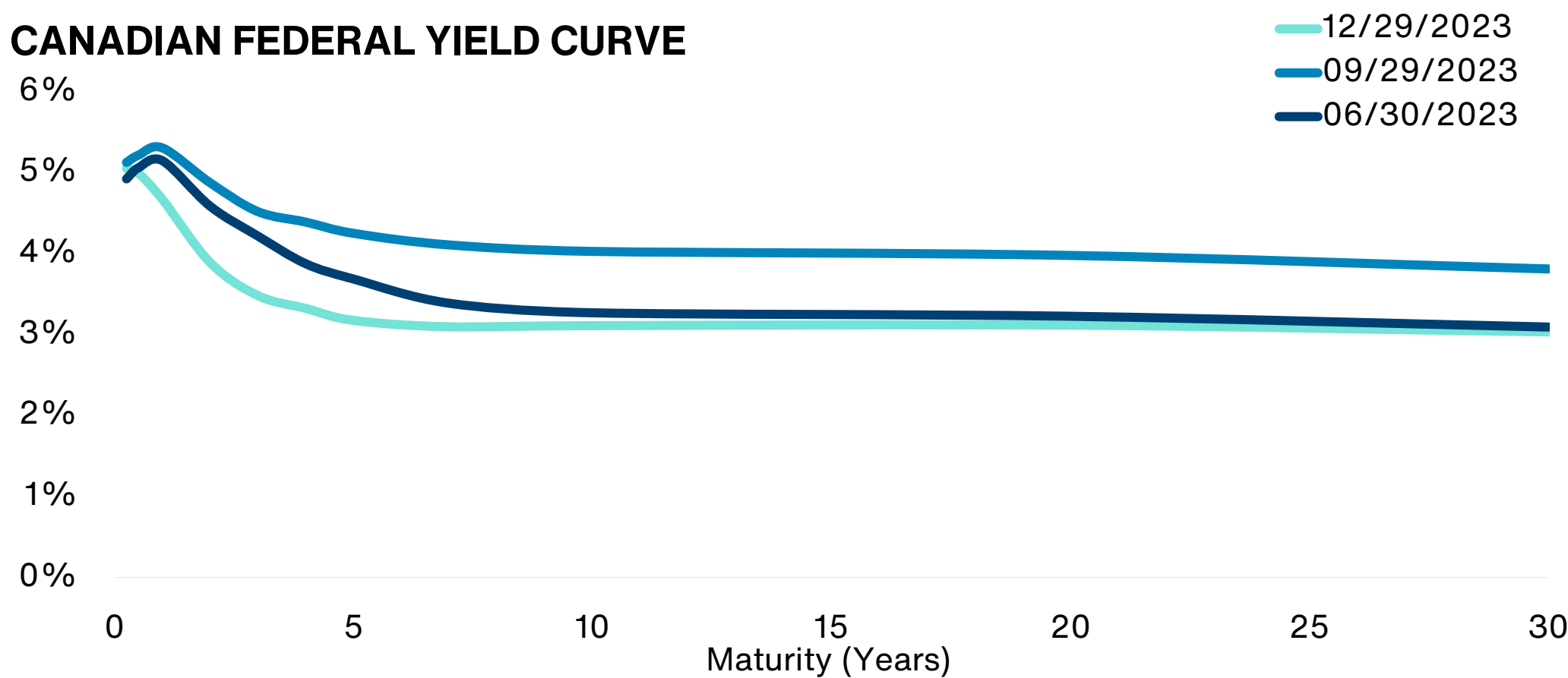


Source: MSCI

Capital Markets Overview

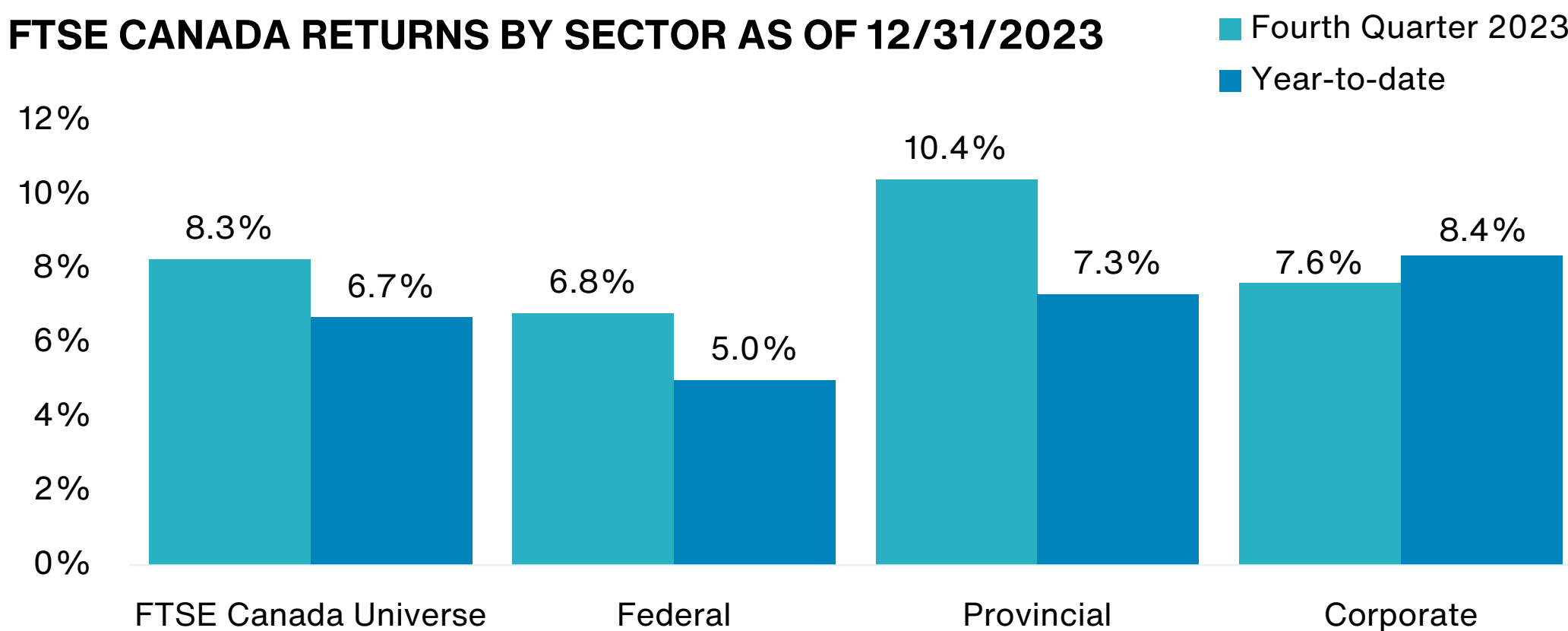
Fixed Income

CANADIAN FEDERAL YIELD CURVE



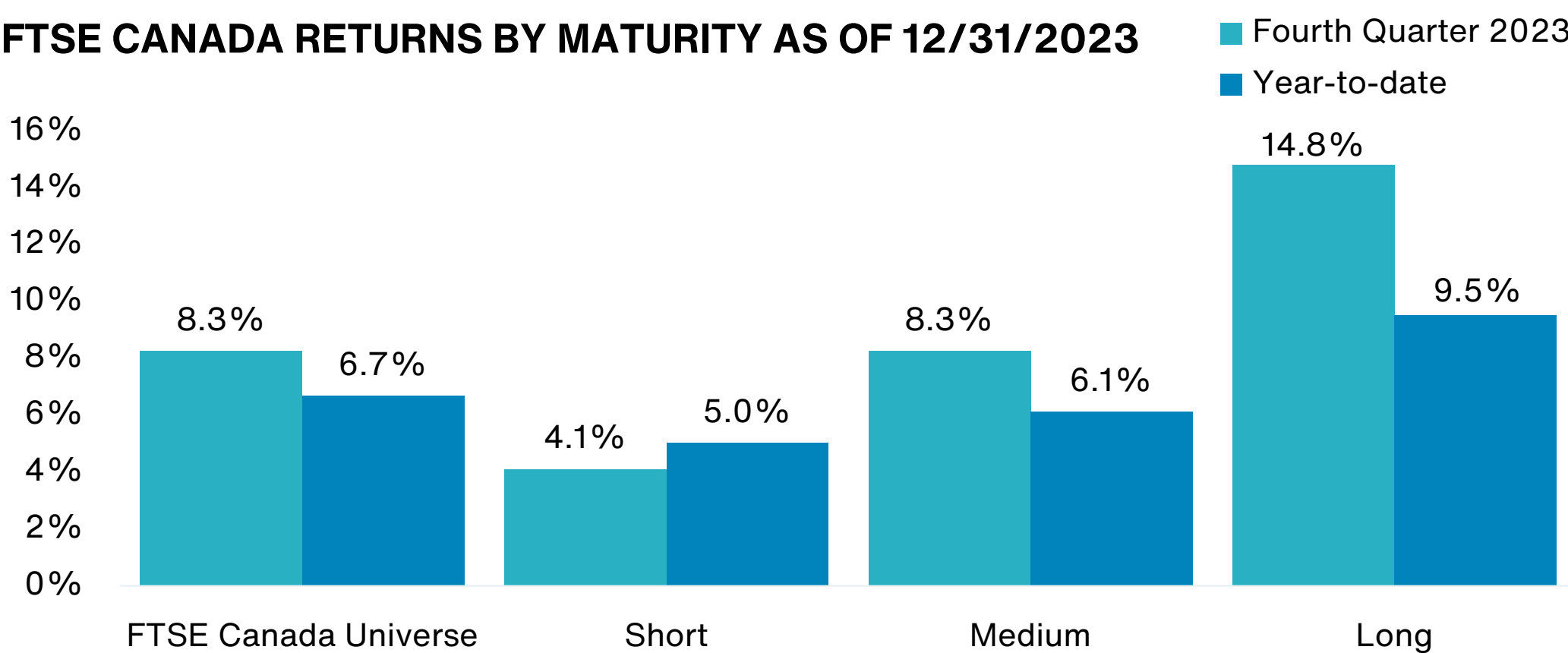
Source: Bloomberg

FTSE CANADA RETURNS BY SECTOR AS OF 12/31/2023



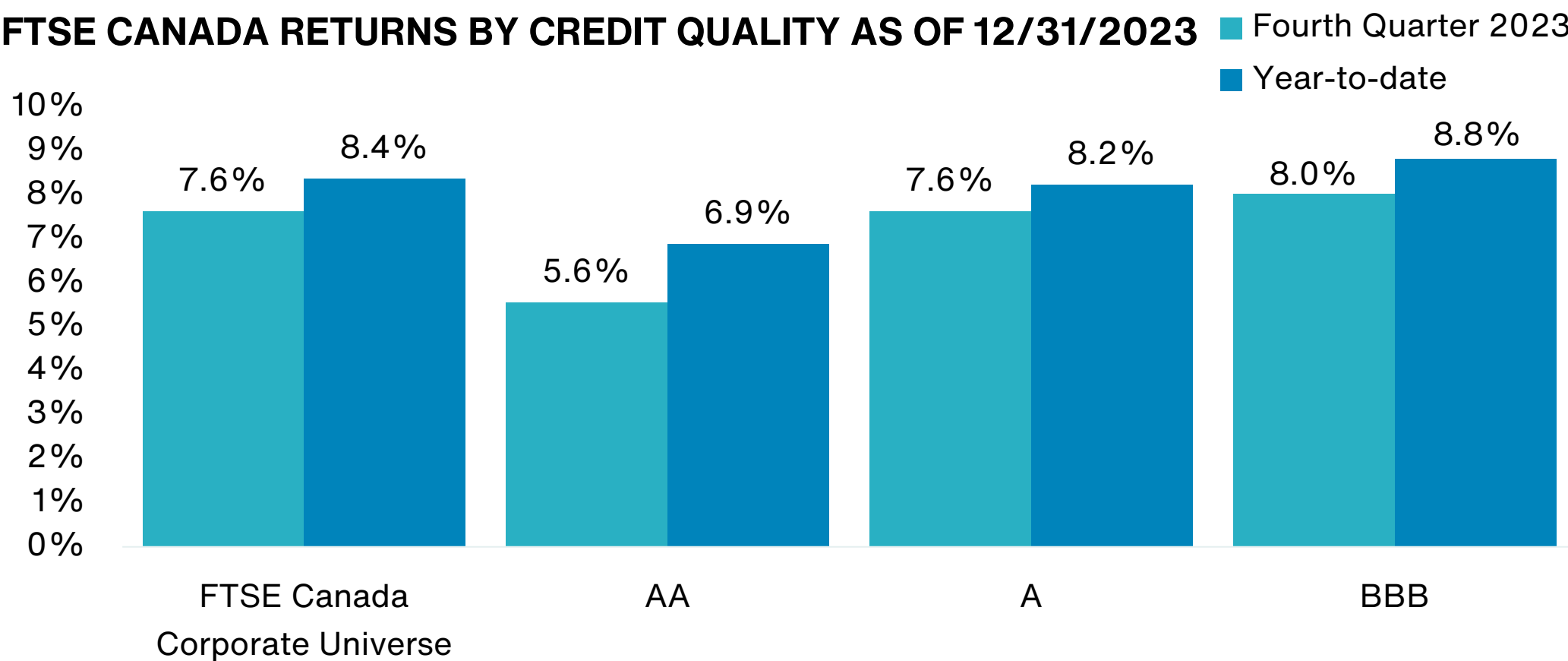
Source: FTSE

FTSE CANADA RETURNS BY MATURITY AS OF 12/31/2023



Source: FTSE

FTSE CANADA RETURNS BY CREDIT QUALITY AS OF 12/31/2023



Source: FTSE

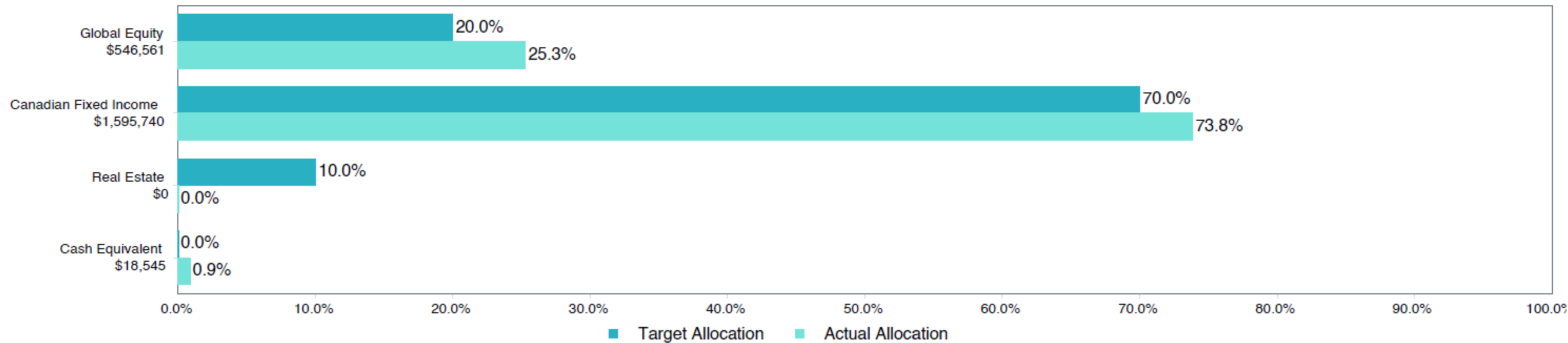
Executive Summary – Sinking Fund and Long-Term Fund

	Performance (%)			Market value (\$000)	Fees (bps)	Objective Met	Action Required
	Quarter	1 Year	5 Year				
Sinking Fund Return	12.1	11.0	-	2,160,846	12.6	N/A	No
Sinking Fund Benchmark	10.5	10.5	-				
Value Added	1.6	0.5	-				
Long Term Fund Return	8.4	9.3	-	3,505,661	16.1	N/A	No
Long Term Fund Benchmark	7.6	9.4	-				
Value Added	0.8	-0.1	-				

Asset Allocation Compliance

As of 31 December 2023 (\$000)

Total Sinking Fund

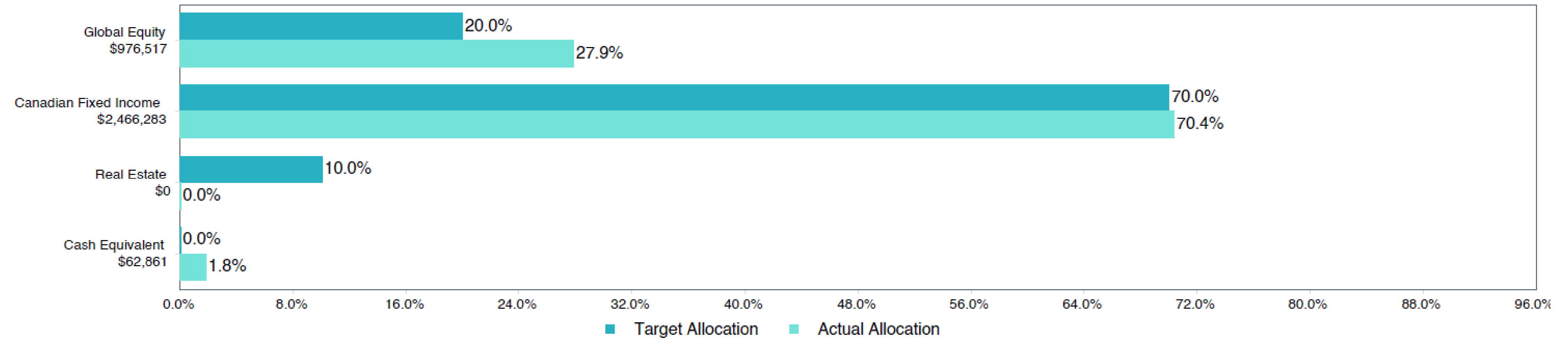


	Market Value (\$000)	Market Value (%)	Target Allocation (%)	Differences (%)	Minimum Allocation (%)	Maximum Allocation (%)	Within Range
Global Equity	546,561	25.3	20.0	5.3	0.0	30.0	Yes
Canadian Fixed Income	1,595,740	73.8	70.0	3.8	50.0	100.0	Yes
Real Estate	-	0.0	10.0	-10.0	0.0	10.0	Yes
Cash Equivalent	18,545	0.9	0.0	0.9	0.0	5.0	Yes
Total Fund	2,160,846	100.0	100.0	0.0			

Asset Allocation Compliance

As of 31 December 2023 (\$000)

Total Long Term Fund



	Market Value (\$000)	Market Value (%)	Target Allocation (%)	Differences (%)	Minimum Allocation (%)	Maximum Allocation (%)	Within Range
Global Equity	976,517	27.9	20.0	7.9	0.0	30.0	Yes
Canadian Fixed Income	2,466,283	70.4	70.0	0.4	50.0	100.0	Yes
Real Estate	-	0.0	10.0	-10.0	0.0	10.0	Yes
Cash Equivalent	62,861	1.8	0.0	1.8	0.0	5.0	Yes
Total Fund	3,505,661	100.0	100.0	0.0			

Strategy Performance

Strategy	Rating	Value Added (%)		Objective Met	Above Median 5 Years	Action Required
		Quarter	SI*			
Addenda LDI	Buy	1.1	0.1	n/a	n/a	No
Fiera LDI	Buy	0.6	0.2	n/a	n/a	No
CC&L Core Fixed Income	Buy	0.0	0.6	n/a	n/a	No
Leith Wheeler Core Fixed Income	Buy	0.1	0.7	n/a	n/a	No
Pier 21 Global Equity	Buy	2.7	0.3	n/a	n/a	No
Oakmark Global Equity	Buy	-3.2	-2.7	n/a	n/a	No
Fiera Global Focused Equity	Buy	-0.4	1.1	n/a	n/a	No
LGIM Multi-Factor Global Equity	Buy	-0.3	-1.9	n/a	n/a	No

*Since Inception Dates:

- Addenda LDI: 7/1/2019
- Fiera LDI: 7/1/2019
- CC&L Core Fixed Income: 7/1/2019
- Leith Wheeler Core Fixed Income: 7/1/2019
- Pier 21 Global Equity: 11/1/2019
- Oakmark Global Equity: 11/1/2019
- Fiera Global Focused Equity: 2/19/2020
- LGIM Multi-Factor Global Equity: 12/14/2020

Manager Updates

Manager Name	Quarterly Update	ESG Rating
Addenda	• Ian McKinnon is promoted to Chief Investment Officer • John Stilo is promoted to Vice President, Core Fixed Income • Charles Leblanc is promoted to Chief Operating Officer • Yanick Desnoyers is promoted to Chief Economic Strategist • Aon has no concerns regarding these personnel changes	Integrated
CC&L	• No significant updates impacting City of Toronto	Integrated
Leith Wheeler	• No significant updates impacting City of Toronto	Advanced
Pier 21 (C. Worldwide)	• No significant updates impacting City of Toronto	Integrated
LGIM	• No significant updates impacting City of Toronto	Advanced
Fiera	• There were several personnel changes in Q4 2023, no significant updates impacting City of Toronto	Integrated

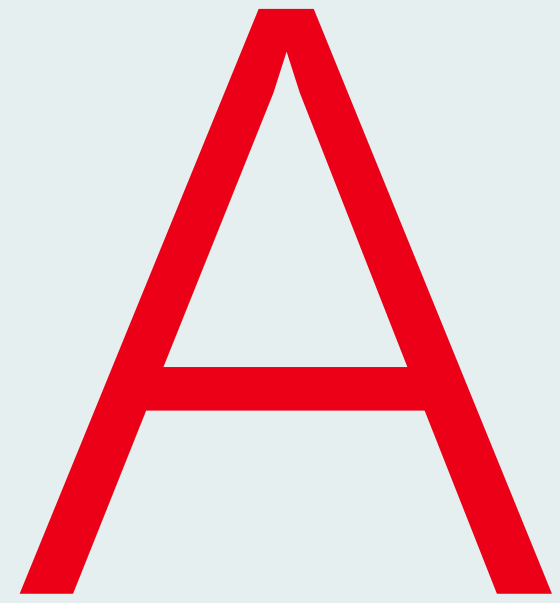
ESG Rating Scale

The rating assesses the integration of financially material ESG risk factors into the investment decision-making process.

The ESG factor is assigned a rating and can be interpreted as follows.

ESG Rating	Description
Advanced	The fund management team demonstrates an advanced awareness of potential ESG risks in the investment strategy. The fund management team can demonstrate advanced processes to identify, evaluate and potentially mitigate these risks across the entire portfolio.
Integrated	The fund management team has taken appropriate steps to identify, evaluate and mitigate potential financially material ESG risks within the portfolio.
Limited	The fund management team has taken limited steps to address ESG considerations in the portfolio.
Not Applicable (N/A)	ESG risks and considerations are not applicable to this strategy, for example, on the grounds of materiality or asset class relevance.





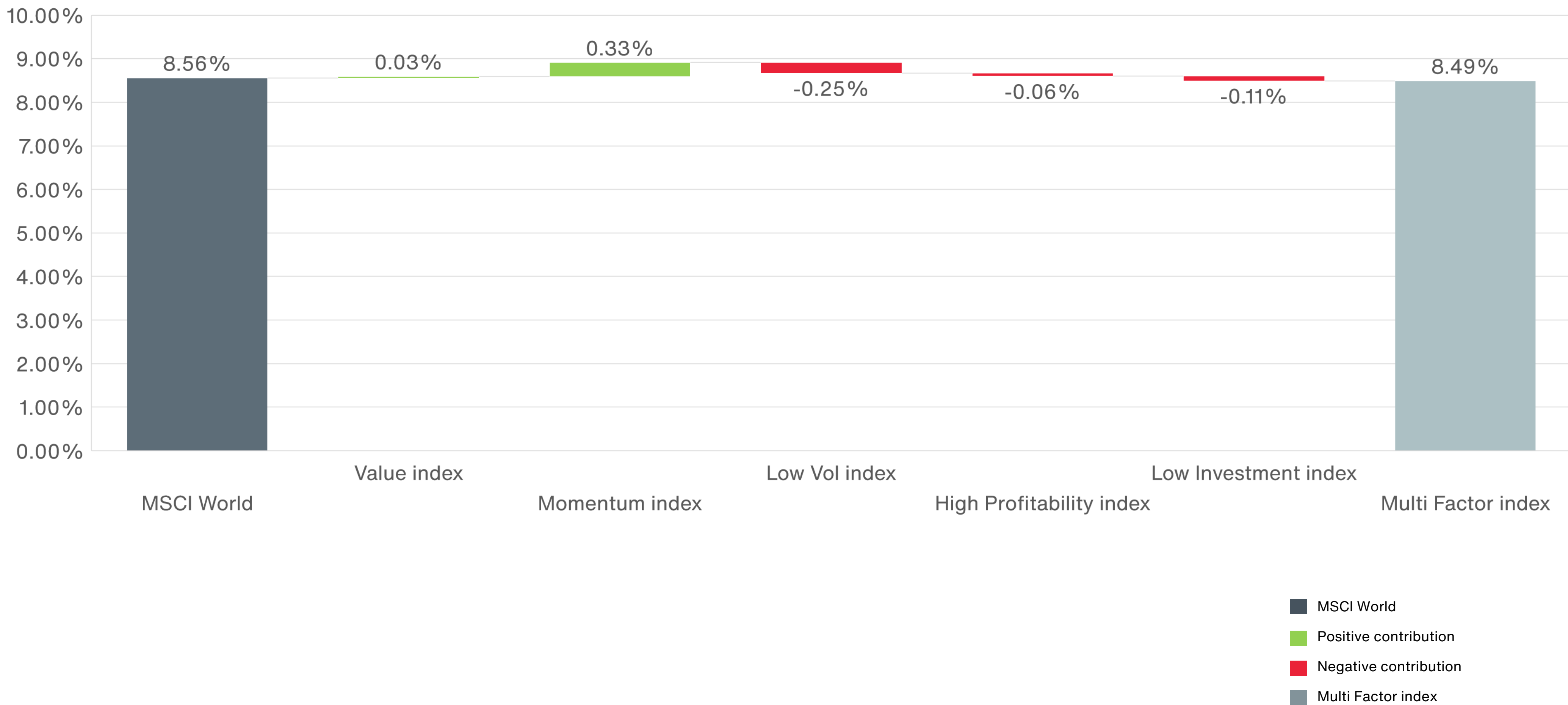
Appendix SciBeta Multifactor Benchmark Performance Attribution

AON



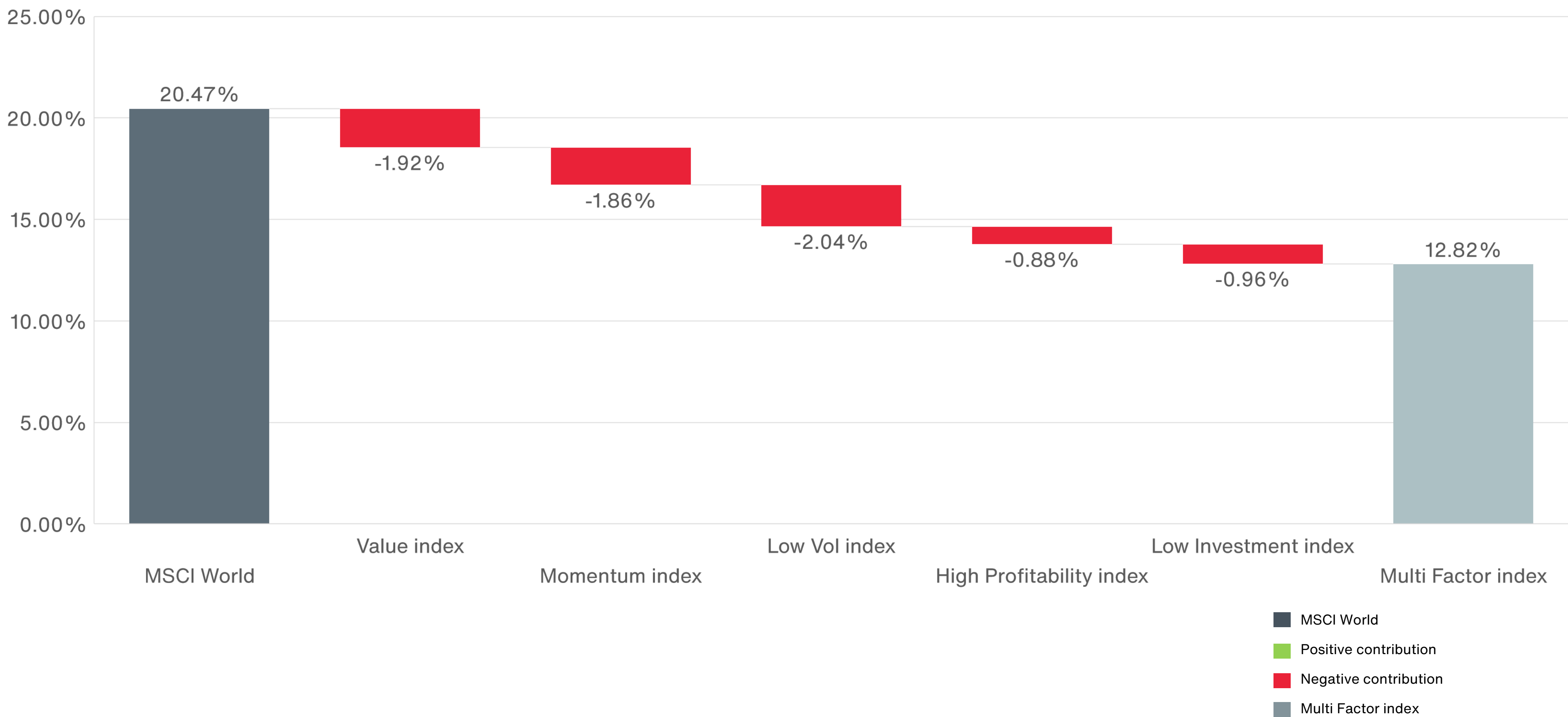
Performance attribution – Scibeta Multi-factor benchmark

1 Quarter – As of December 31, 2023



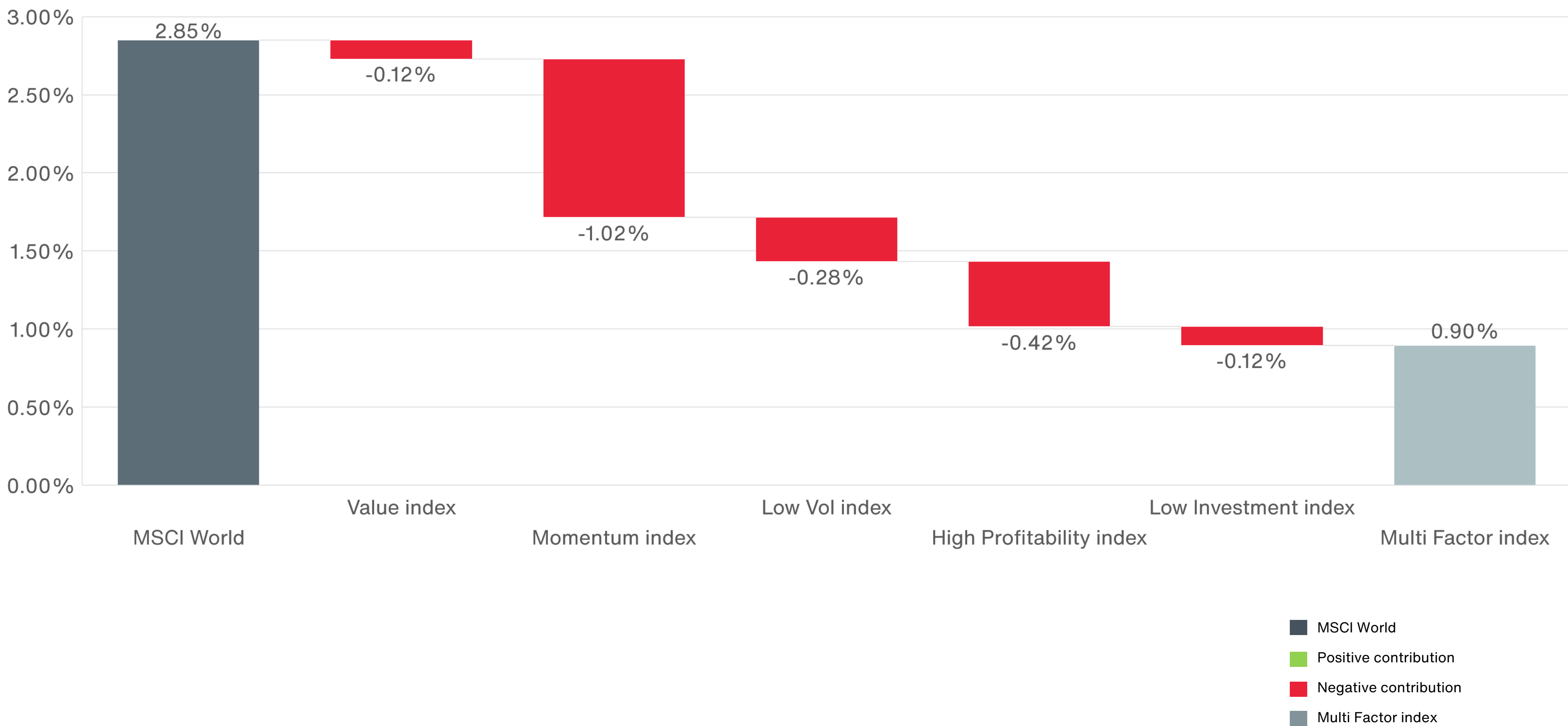
Performance attribution – Scibeta Multi-factor benchmark

1 Year – As of December 31, 2023



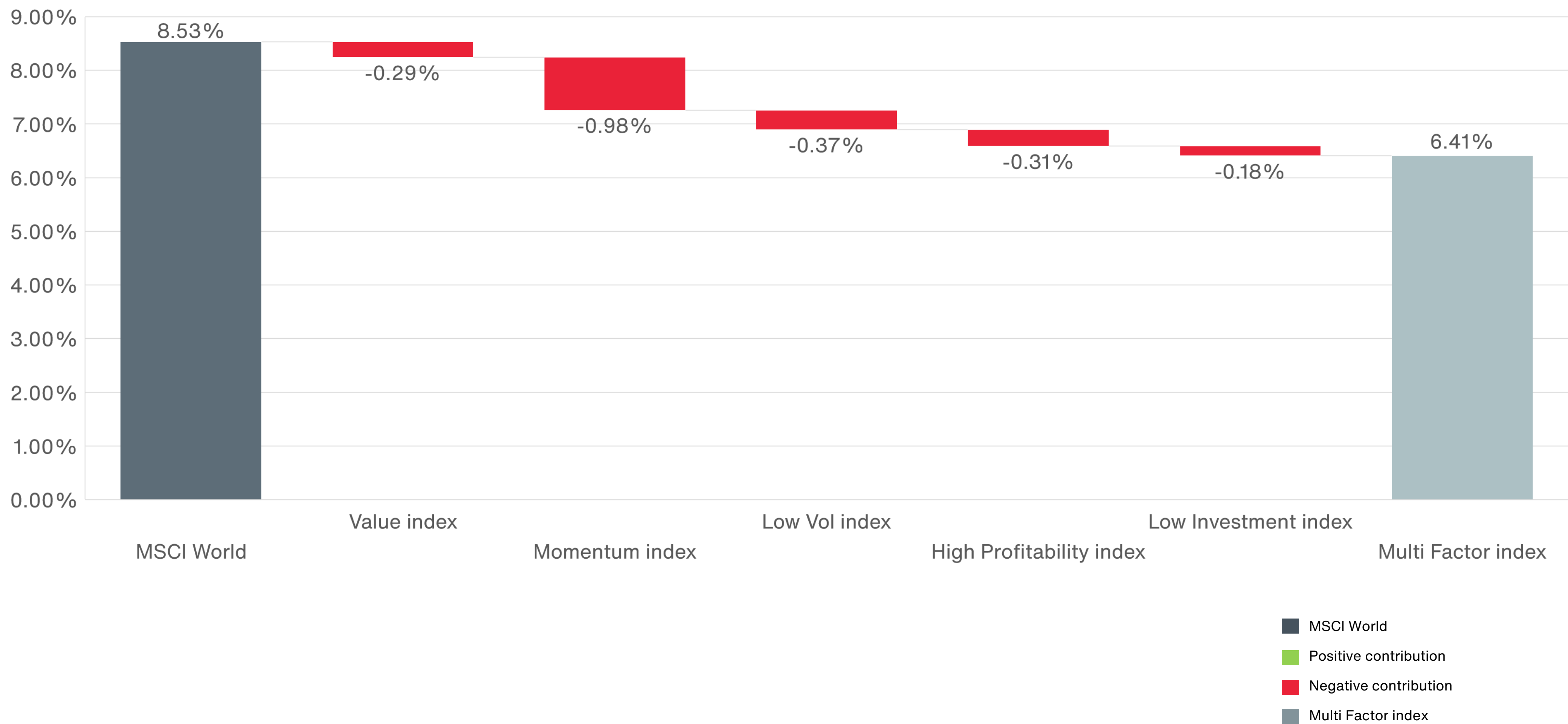
Performance attribution – Scibeta Multi-factor benchmark

2 Year – As of December 31, 2023



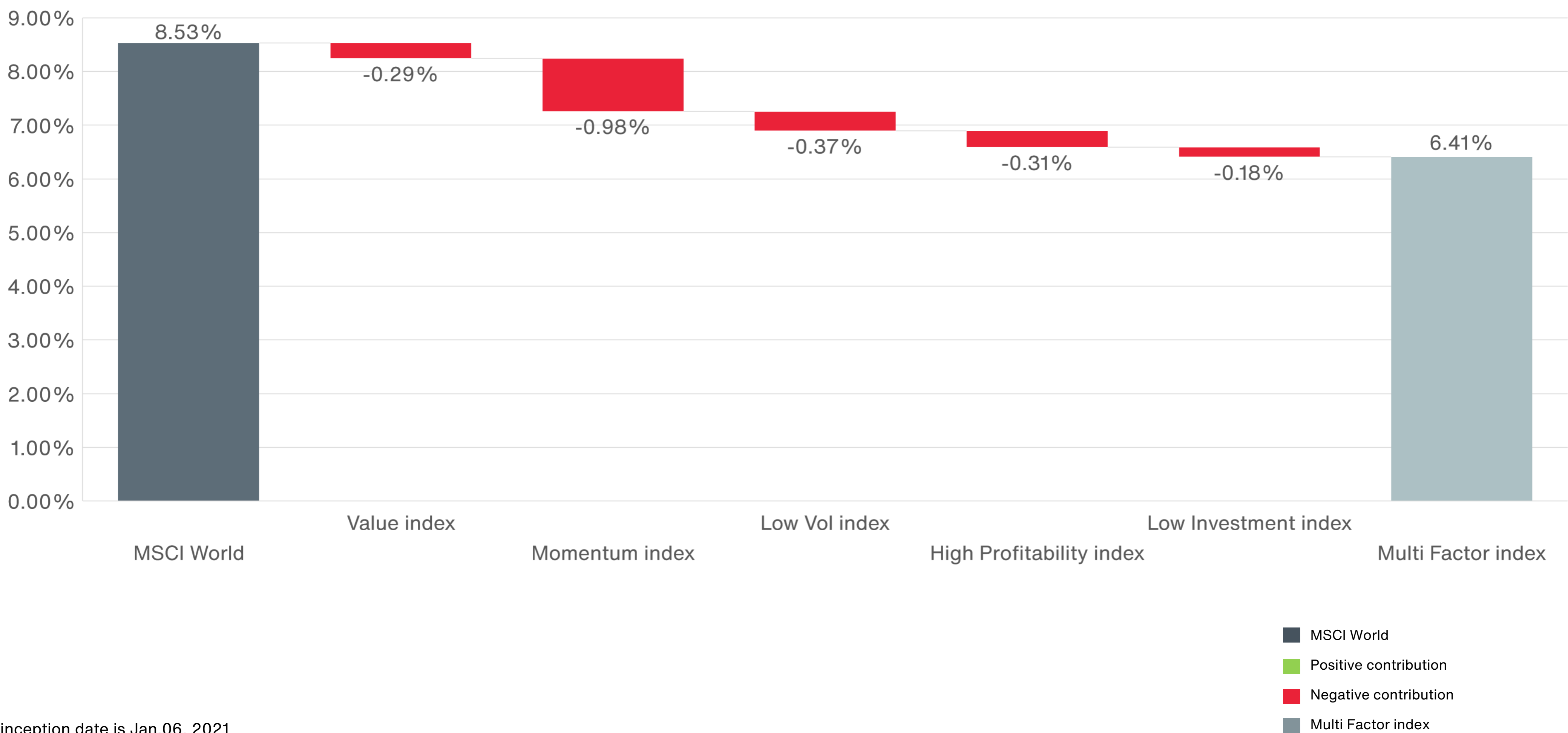
Performance attribution – Scibeta Multi-factor benchmark

3 Year – As of December 31, 2023



Performance attribution – Scibeta Multi-factor benchmark

Since Inception* – As of December 31, 2023



The since inception date is Jan.06, 2021

B

Appendix Asset Allocation Views

AON



Key Market Issues

Is it plausible for policy rates to be slashed if economic growth can hold up?

Money markets are pricing the former, but equities and credit are pricing the latter.

Will rollercoaster swings in bond yields continue?

Yields fell considerably in Q4 but have rebounded so far in Q1. What's next?

Can the 'Magnificent Seven' continue to pull up global equity returns?

These companies are priced to be an ever-dominant part of the global economy – is this realistic?

For more information on Aon's Views

[Market outlook \(aon.com\)](https://aon.com)



Core Views

2024 economic slowdown

We have a weaker than market-consensus confidence in the global economy. Economic activity is already slowing even in the U.S. which was resilient last year, and we expect that pressures on companies and consumers will build.

Inflation and GDP growth slowdowns make U.S. treasuries still attractive

Our view is that government bond yields will fall over the next year or two as inflation and policy rates fall. However, another rollercoaster ride, after the big moves over the last year, looks entirely possible. We suspect that policy interest rates will fall slower than market expectations. High government bond issuance in the U.S. and other countries will be a headwind.

Credit spreads are too tight

We expect credit spreads to widen from current tight levels as the default cycle plays out although high yield levels remain a support to outright holdings. Higher quality credit is a better choice in this environment.

Equity challenges remain

The effects of monetary and liquidity tightening and less valuation support from a falling equity risk premium, will keep challenging equities. These drags were prominent through market weakness in 2022 but seemed to fade last year with the strength of the 'Magnificent Seven' and reduced worries over the global economy. We expect these drags to start to be felt yet again over the medium-term.

Actions

View Shifts

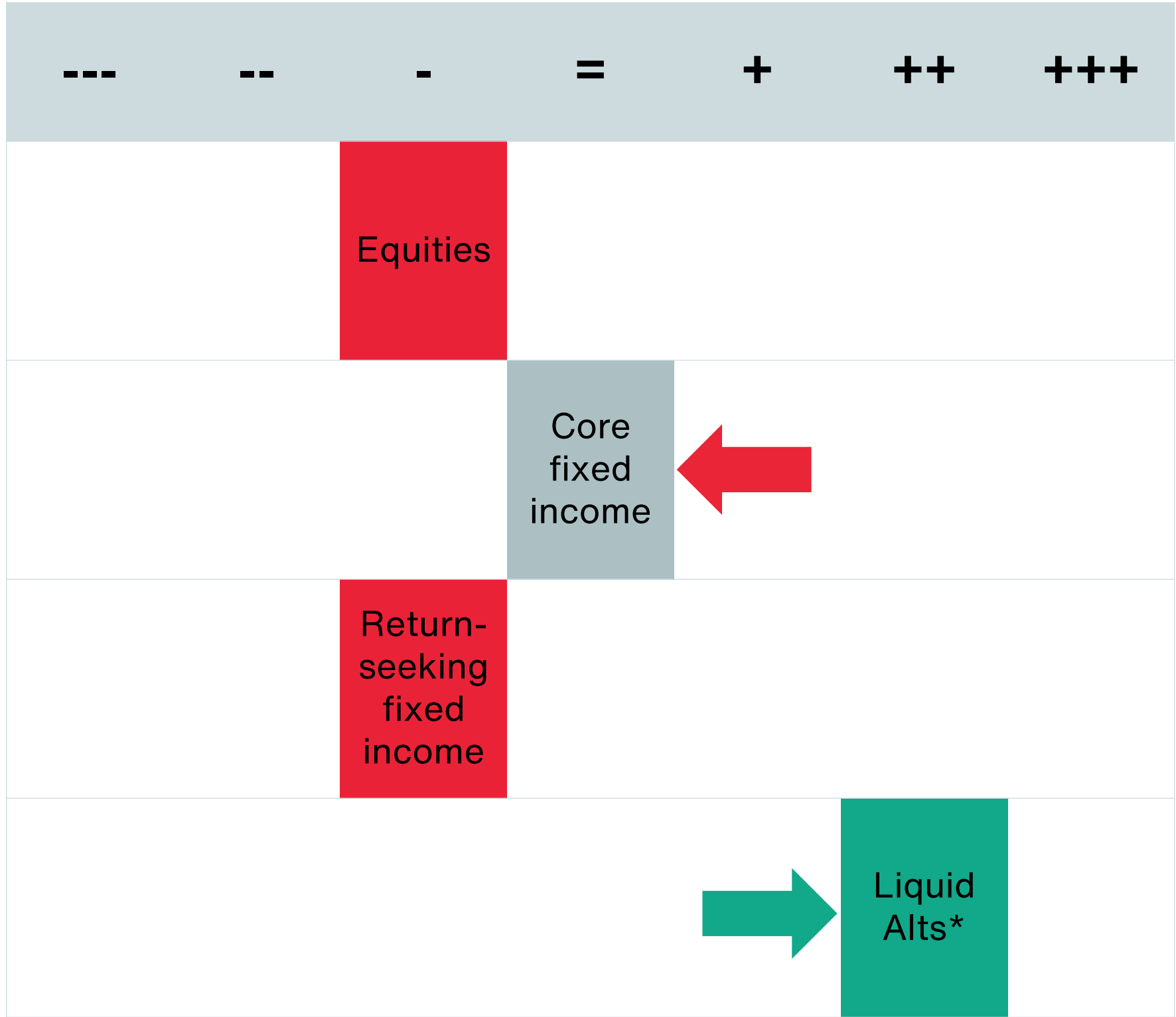


Upgrade to our liquid alternatives view to ++ based on the need for diversification as bond and equity performance is likely to be choppy against an uncertain economic and geopolitical backdrop.



Downgrade to our Core Fixed Income view to neutral. Federal bonds are also moved to neutral relative to provincial bonds, while our corporate bond view is downgraded to - as credit spreads have now become too compressed, especially if we are correct that economic growth will continue to slow.

Cross Asset Views



- We maintain our preference for core fixed income over equity and return-seeking fixed income. However, lower yields have reduced the gap to equities, hence our downgrade. Additionally, narrower credit spreads have reduced the attractiveness of corporate bonds relative to government bonds within core fixed income.
- We have upgraded our liquid alternatives view given the risk that the close correlation between equity and bond market performance could continue against the likelihood of increasing geopolitical risk.
- We continue to think that equities will face important headwinds this year, keeping us cautious. The key reasons are the big increase in policy interest rates that have yet to be fully felt by companies and the threat to earnings from weaker economic activity and sticky wages.

Relative Asset Class Views*

Regional views

---	--	-	=	+	++	+++
			USA			
			Canada			
		EAFE				
			Emerging			

Core Fixed Income

---	--	-	=	+	++	+++
			Federal			
		Corporate				
			Provincial			

Alternatives

---	--	-	=	+	++	+++
			Active commodities			
			Alternative Risk Premia			
					Insurance-linked securities	
			Diversifying hedge funds			
		Return seeking hedge funds				

Factor views

---	--	-	=	+	++	+++
				Low Vol.		
			Quality			
			Value			
			Growth			

Credit

---	--	-	=	+	++	+++
			USD EMD			
			Local EMD			
		Bank Loans				
				Selected ABS		
			US High Yield			

Currency views vs CAD

---	--	-	=	+	++	+++
				EUR		
				USD		
					JPY	
				EM		

*Asset class views are relative to others within the asset class and not relative to other asset types. There should be no read-across from equities to credit, for example.

Equities

High interest rates and economic slowdown remain key risks

Equity markets renewed their rally over Q4, meaning 2023 ended up being a strong year for the asset class overall. A major reason for the resurgence was monetary policy pauses by the major central banks and increasing expectations of rate cuts in 2024.

Another important factor to consider is the strong leadership of a handful of U.S. technology stocks that have been boosted by the Artificial Intelligence theme. Not only has this driven the performance of the U.S. market, but it also skewed results for the MSCI World index. Furthermore, it has pushed U.S. valuations well into expensive territory. Once these companies are adjusted for, however, valuations and performance are less eye-catching. At the same time, valuations relative to bonds will likely continue to present a challenge for equities this year.

We don't currently think this AI theme is in bubble territory as the firms in question are highly profitable, but thematic rallies can change quickly and are unpredictable. Meanwhile, earnings growth has slowed significantly in other stocks globally over the past year and is indicating corporate stress.

We remain cautious on equities overall, based on our view that higher yields and a weaker economic trend, coupled with unattractive valuations will present headwinds.

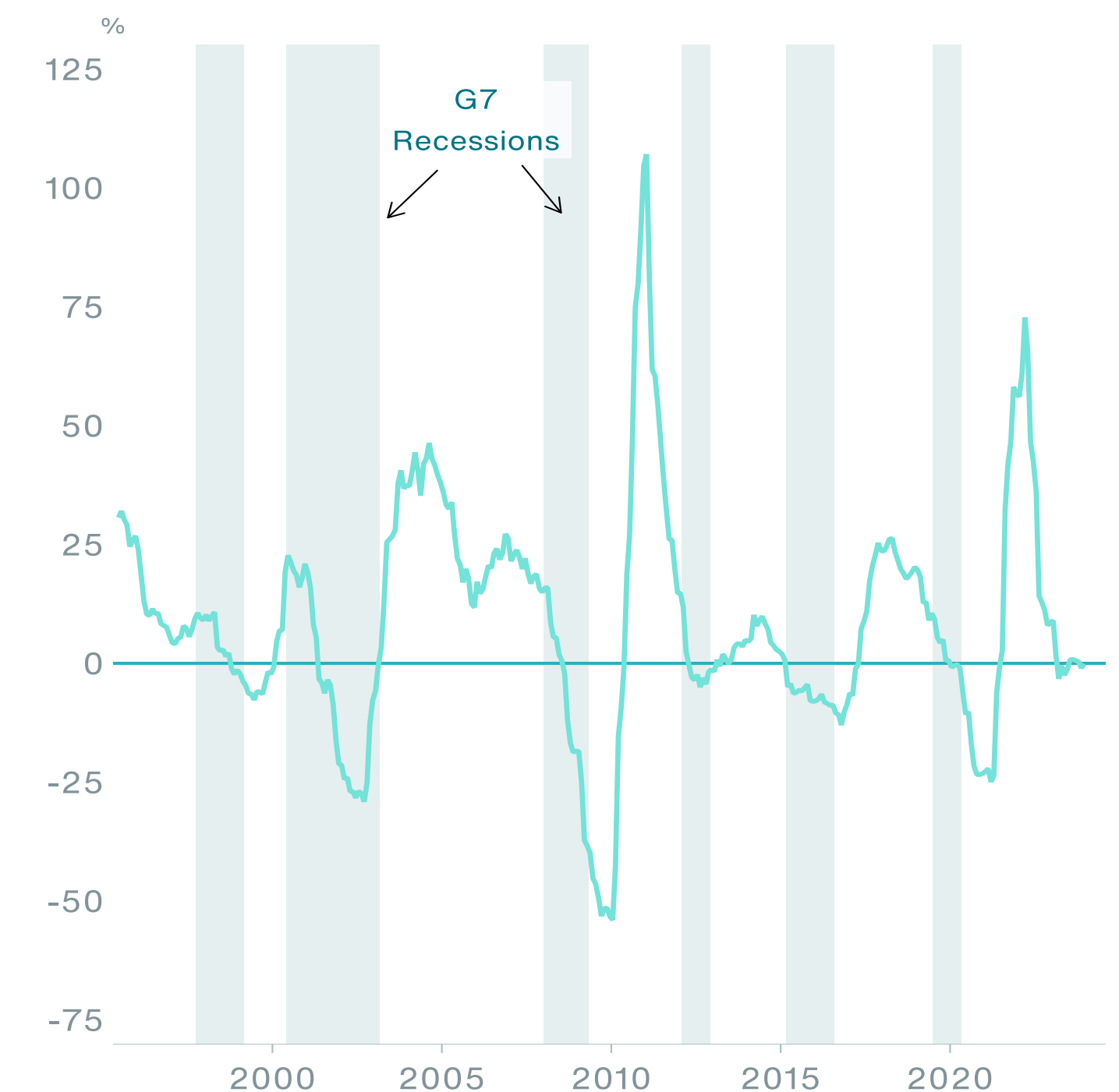
Expensive U.S. valuations are skewed by the performance of a handful of megacap firms



Source: Factset

MSCI World earnings per share growth has fallen to zero – does this indicate a recession?

12m growth in earnings per share, shaded areas are G7 recessions



Source: Macrobond

Equities

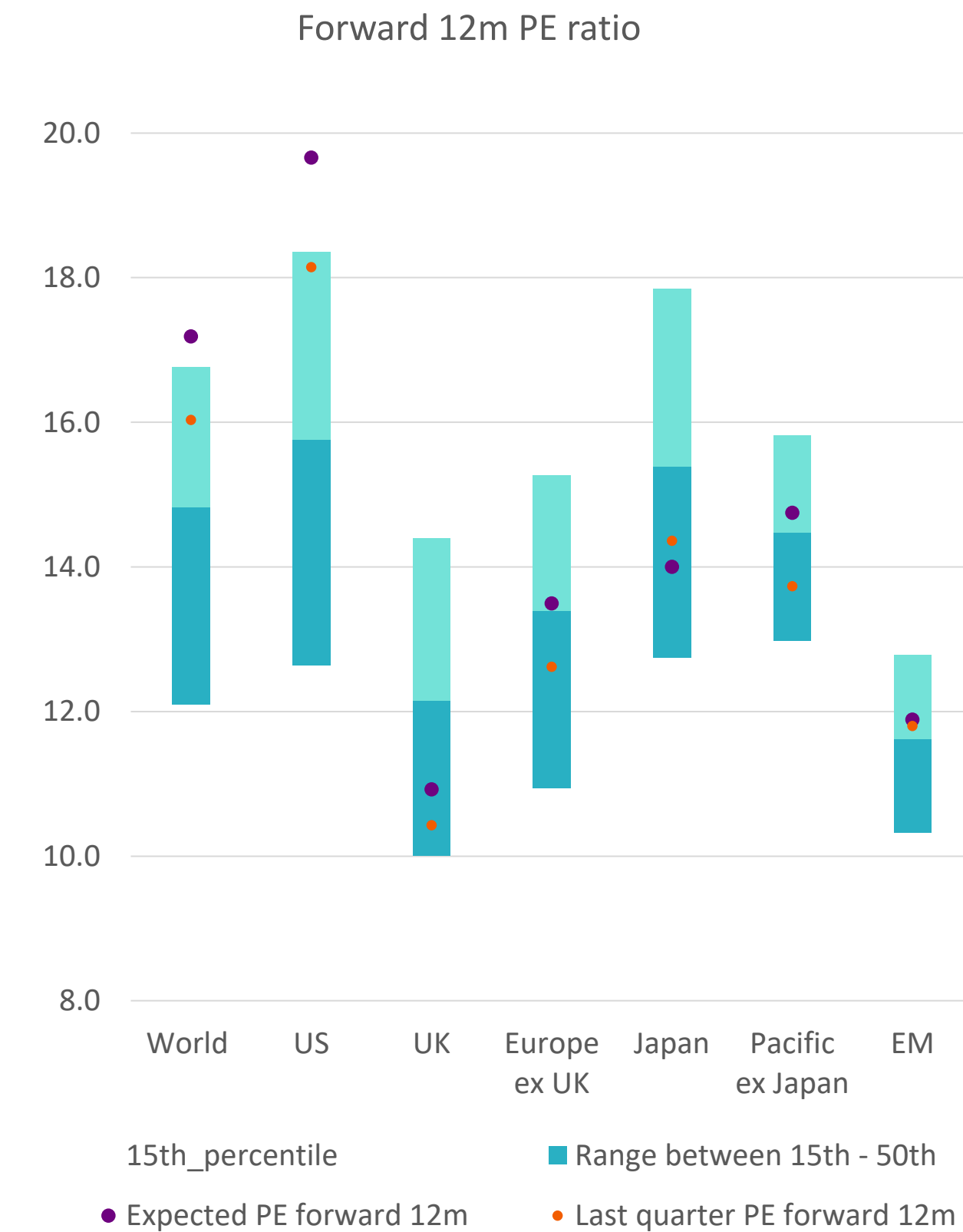
Remaining neutral on U.S. vs non-U.S. regions and leaning towards low volatility equities

The outperformance of U.S. equities could persist in the coming months should the AI-theme continue, but this is inherently unpredictable. Elsewhere, European equities performed relatively well over Q4 as expectations of lower interest rates boosted the more value-oriented markets.

Looking ahead over the coming 12 months, we think that yields will be volatile and remain relatively elevated, even as economic growth slows in developed countries. Since yields have been an important driver of equities outside of the well-known megacap companies, we expect volatility in market leadership between the U.S. and non-U.S. developed markets this year. Consequently, we do not expect marked outperformance between the two key regions in 2024 once the AI-boosted companies are accounted for.

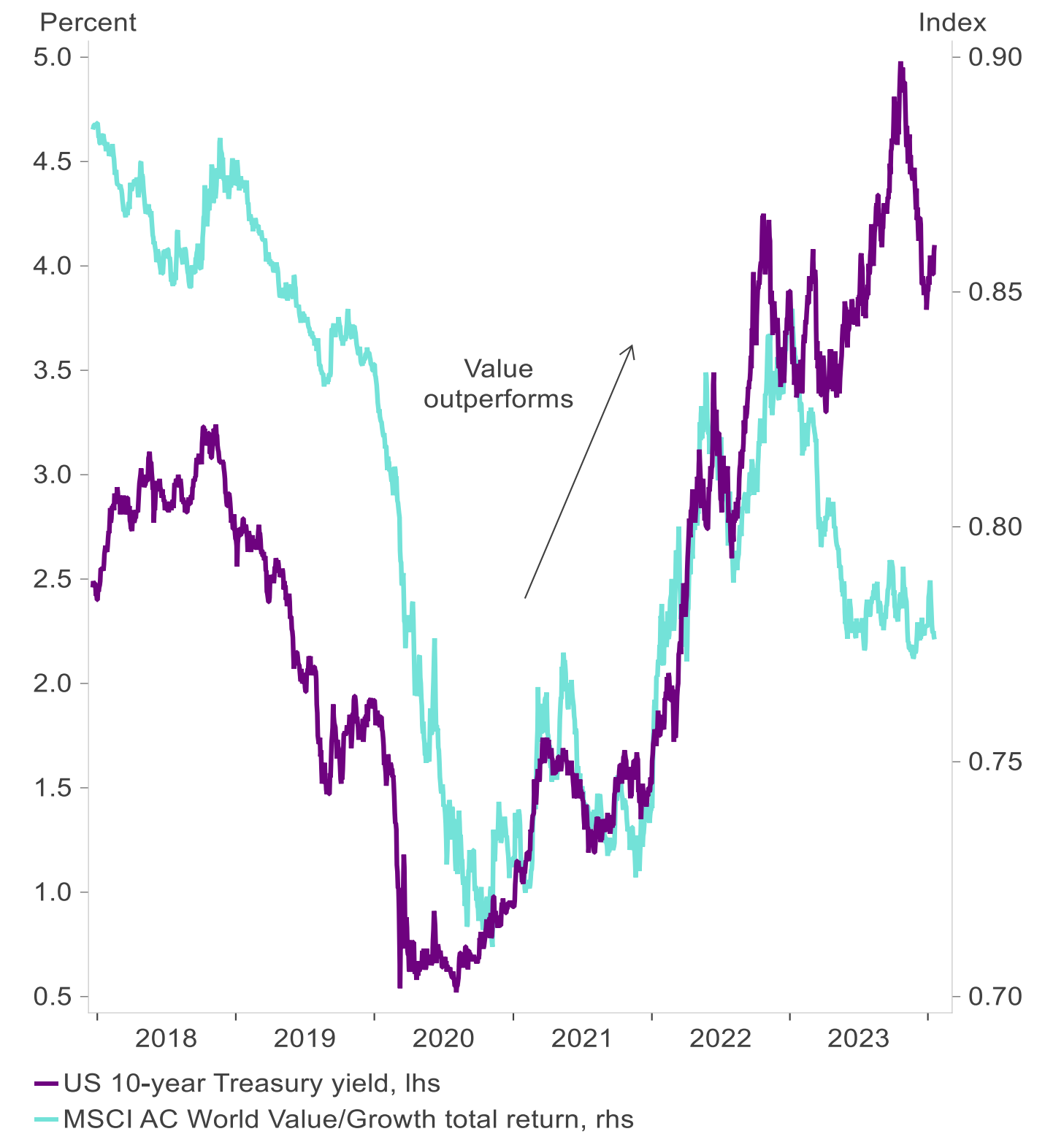
In terms of the factors, low volatility stocks made a bit of a comeback in Q4 as yields started to fall back, but value stocks have continued to struggle, barely keeping up with the wider index. Additionally, the first half of the year saw sharp value underperformance as yields surged, reflecting the independent AI-theme pushing primarily growth stocks higher. Given the unpredictability of the AI-theme, and our view that yields will stay relatively high, we remain agnostic between growth and value style equities, whilst having a moderate preference for low volatility stocks in anticipation of wider market struggles.

Valuations have jumped up particularly in the U.S. just over the last quarter



Source: Factset and Aon

Which way now for value? Higher yields have not translated into outperformance



Source: Macrobond

Core fixed income

Moving to neutral duration view as near-term yields reverse sharply. Downgrade to overall view, whilst preferring Federal to Corporate Bonds

The surge in Canadian Federal yields came to a decisive end in Q4 as a pause by the Bank of Canada in its monetary tightening policy and increased expectations of rate cuts, especially by the U.S. Federal Reserve, triggered a rapid change in market direction. The biggest moves were seen in shorter durations.

In January, however, we have seen a rebound in longer duration yields as inflation progress has seemingly stalled and rate cut expectations have been tempered as well. In the case of Canadian data, inflation ticked higher in the latest update, while Governor Tiff Macklem has previously stated that he would like to see inflation on a sustained downward track towards the 2% target before cutting rates, something that the markets are currently expecting to occur towards the summer. In the meantime, economic growth has weakened over the past year, but Canada has not entered a recession.

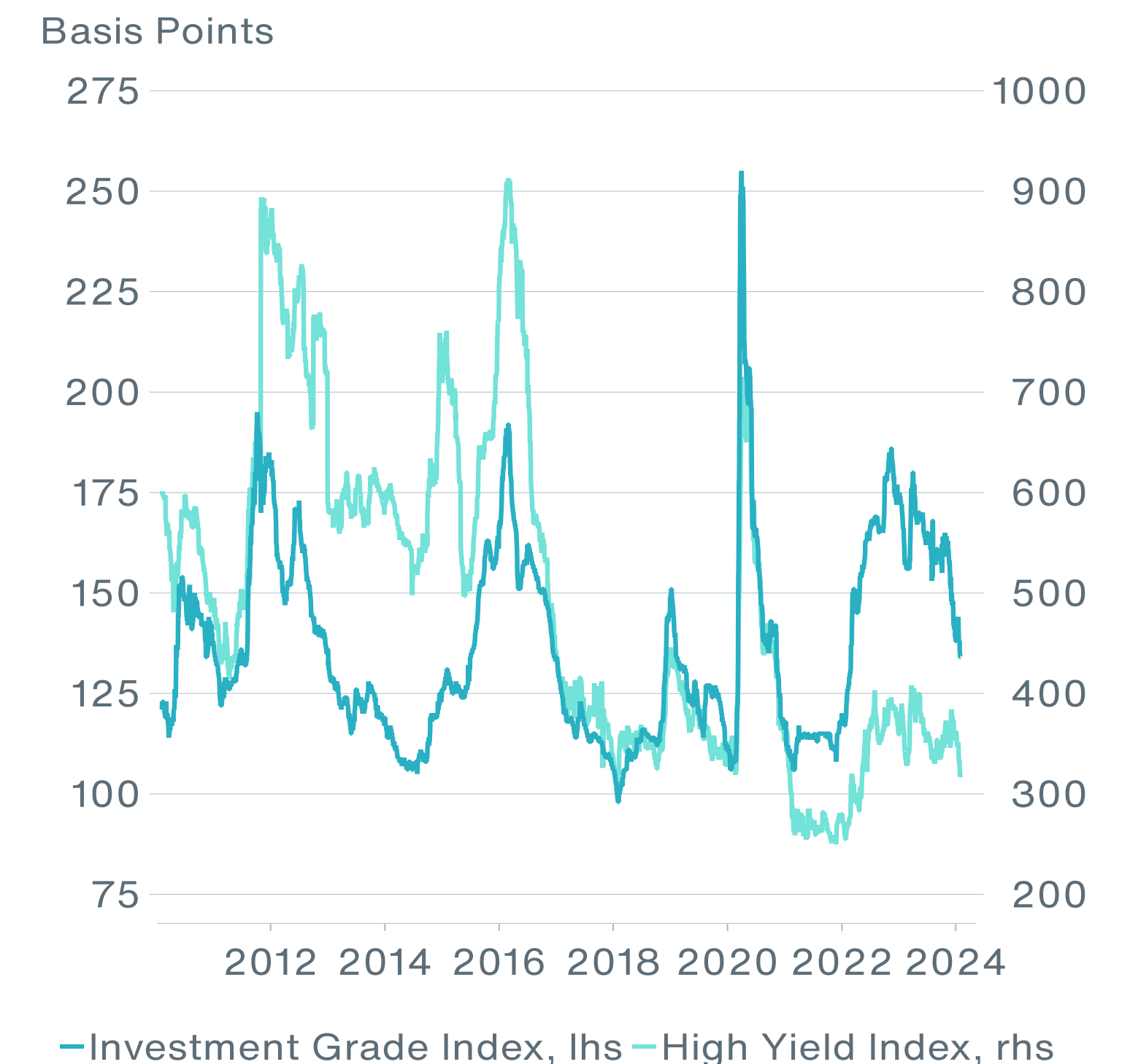
Overall, we expect volatility in yields to continue in the coming months, but the reversal has also prompted a change in our duration view, **moving to being neutral between Universe and Long-Bond Indices**. Meanwhile, in terms of return-seeking view, we have moved back to **neutral between Federal and Provincial bonds, whilst downgrading our Corporate view as spreads have tightened too much in our opinion**.

Canadian yields reverse sharply over Q4, especially in shorter durations



Source: Macrobond

Investment Grade corporate spreads tighten significantly



Source: Macrobond

Return-Seeking Credit

Credit spreads are too tight

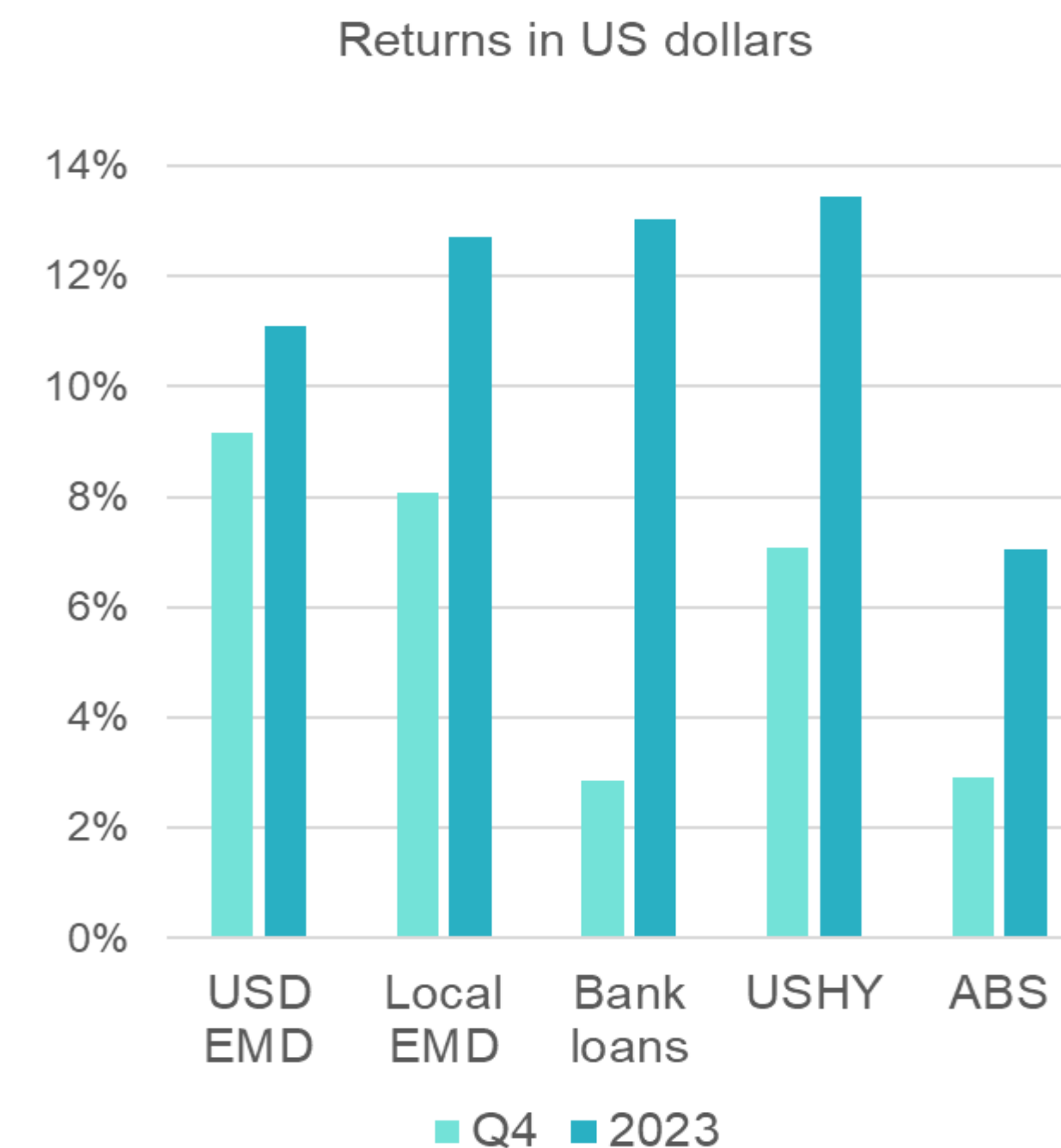
We expect the U.S. economy to slow and liquidity pressures to build this year, resulting in an increase in defaults in weaker, more indebted companies and widening credit spreads from their current tight levels. We therefore remain relatively cautious on credit and are keeping our preference for high quality sectors.

The weaker credit quality of bank loans was one reason we downgraded them relative to HY bonds last quarter. With the rate hiking cycle most likely at its end, we think loan returns will now continue to underperform HY bonds.

Our preferred sector is asset-backed securities. Their credit spreads look attractive relative to other sectors given their higher credit rating and greater security from their collateral backing.

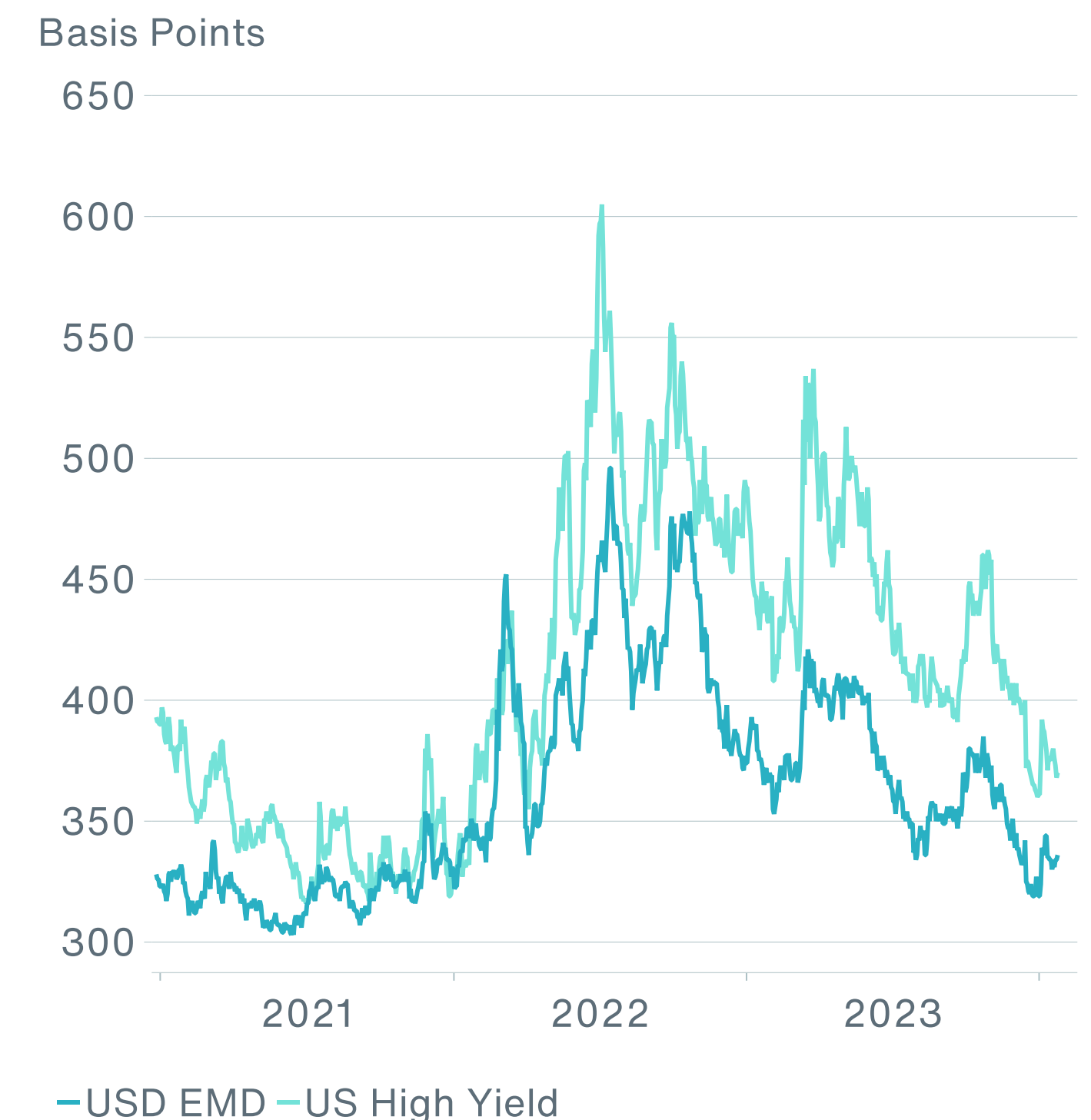
We decided to move neutral in local and U.S. EM debt last quarter on the back of high U.S. EMD yields and their longer duration. This worked well last quarter as U.S. yields moved sharply lower, favouring U.S. EMD. We are maintaining our neutral view for the time being. However, EM growth and inflation prospects look decent and we will look to return to our more positive view on local EM debt especially if the U.S. dollar starts to weaken as we expect.

Q4 returns were very strong as government bonds and credit spreads both fell in November and December



Source: JP Morgan EMBI Global Diversified and JP Morgan GBI-EM Global Diversified (both a mix of investment grade and high yield credits), JP Morgan ABS, ICE BofA U.S. HY, Credit Suisse Leveraged Loan.

Credit spreads have narrowed significantly since summer 2022 highs



Source: Macrobond

Illiquid Alternatives

Medium-Term Opportunities

Private assets do not lend themselves to medium-term tilts as typically allocations will be locked in for many years, and exit-points are not discretionary. Private asset programs are best determined by your consultant, using Aon capital market assumptions, together with stochastic and deterministic risk analysis, to create a portfolio that we would anticipate should achieve investment objectives. That said, market conditions do vary, and investors may want to prioritise areas where we think opportunities may not be as long-lived and postpone deployment to asset classes where better entry points may be available in later years. The list below includes asset classes where we think vintages over the next couple of years could be particularly attractive (in alphabetical order).¹

Strategy	Market Tailwinds
Asset-Based Finance	Banks exiting the space and a difficult environment to execute public securitizations.
Bank Capital Relief	Increasing regulation is driving banks to pay up for capital efficiency solutions.
Direct Lending	Returns have increased in line with higher rates as well as increased spreads and now offers equity-like returns with fixed income volatility.
Infrastructure Equity	Contracted revenue and escalation clauses continue to support valuations and solid performance during times of economic volatility.
Litigation Finance	Fundamentally uncorrelated return drivers and very few other sources of capital for law firms.
Mortgage Servicing Rights	Significant selling from cash poor originators and natural holders exiting the space combined with a buyer pool that is highly constrained by regulatory requirements.
Real Estate	Valuations bottoming out. Further, select sectors like housing, data centers, and logistics have limited supply, and the demand is rising.
Real Estate Debt	Select opportunities higher in the capital structure in senior commercial and single asset single borrower as well as multifamily residential loans.
Secondaries (Venture Capital and Private Equity)	Continued investor portfolio repositioning keeping discounts higher.

¹ In alphabetical order as relative level of attractiveness may depend on individual client circumstance.

Currencies

We expect some Canadian dollar weakness

Canada's economy is weaker than the U.S. and is more vulnerable given its high level of household debt. Canadian mortgage interest payments have increased with higher interest rates and higher property prices also mean higher debt levels. The Bank of Canada will take this economic backdrop into account and may cut policy rates before the U.S. Federal Reserve. This will put downward pressure on the Canadian dollar and we think it could fall into the lower half of its 16-month trading range against the U.S. dollar. We think that U.S. rate cuts are over-anticipated so that will also cause the U.S. dollar to strengthen.

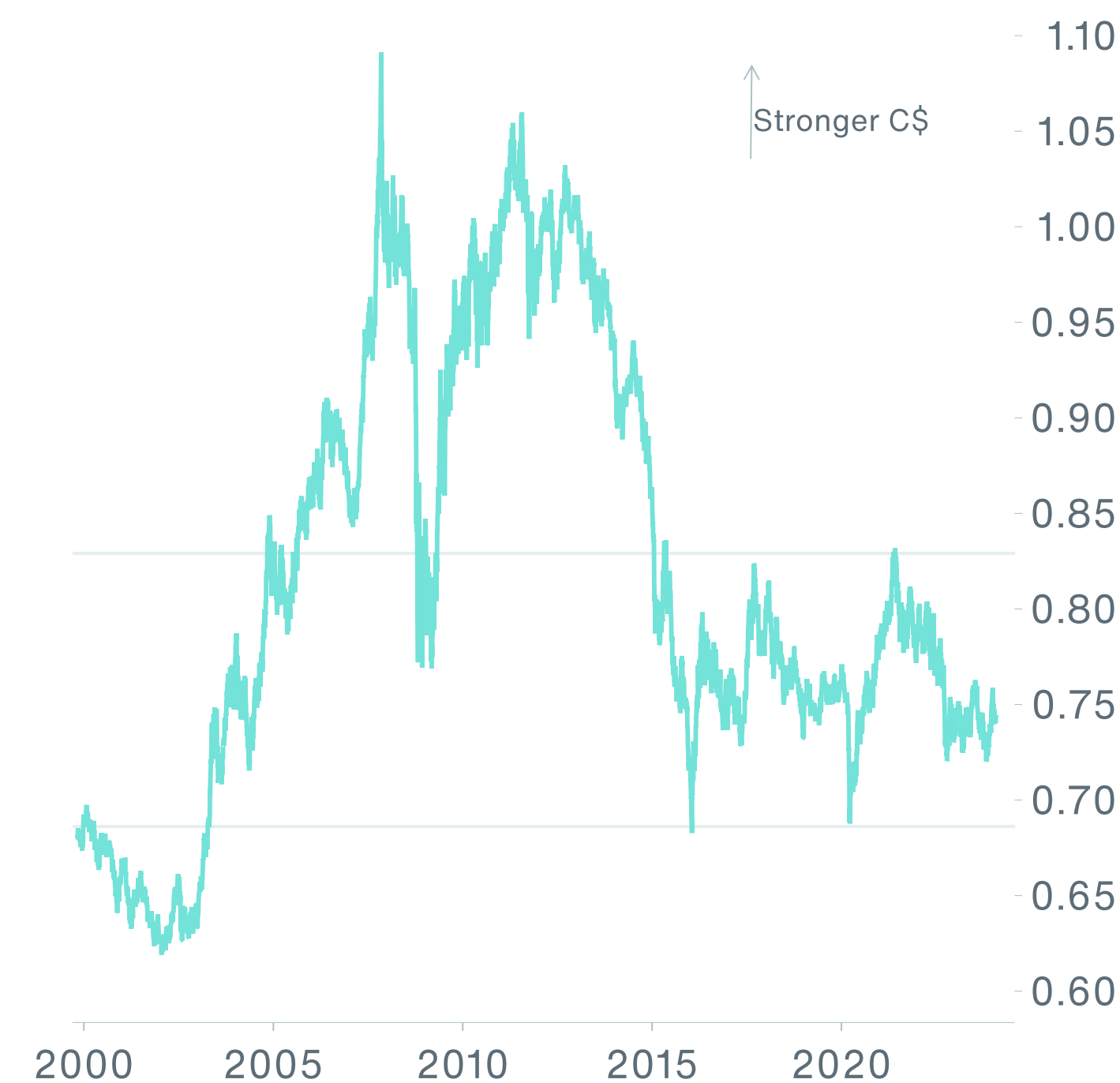
Our view that global growth will slow this year is a further headwind for the Canadian dollar against the U.S. dollar given that it tends to be a pro-cyclical currency.

We are maintaining our view that other currencies will appreciate against the Canadian dollar too. Although the euro and EM currencies are also cyclical currencies, they benefit from undervaluation. The yen weakened by 10% in 2023 but we expect the outlook of higher Japanese rates and lower Canadian rates to be positive for the yen.

On the other hand, upward risks to the oil price from an escalation in geopolitical conflicts as well as low global inventory levels would provide some support for the Canadian dollar. This could keep the Canadian dollar from depreciating that much.

The Canadian dollar has moved sideways over the last 16 months

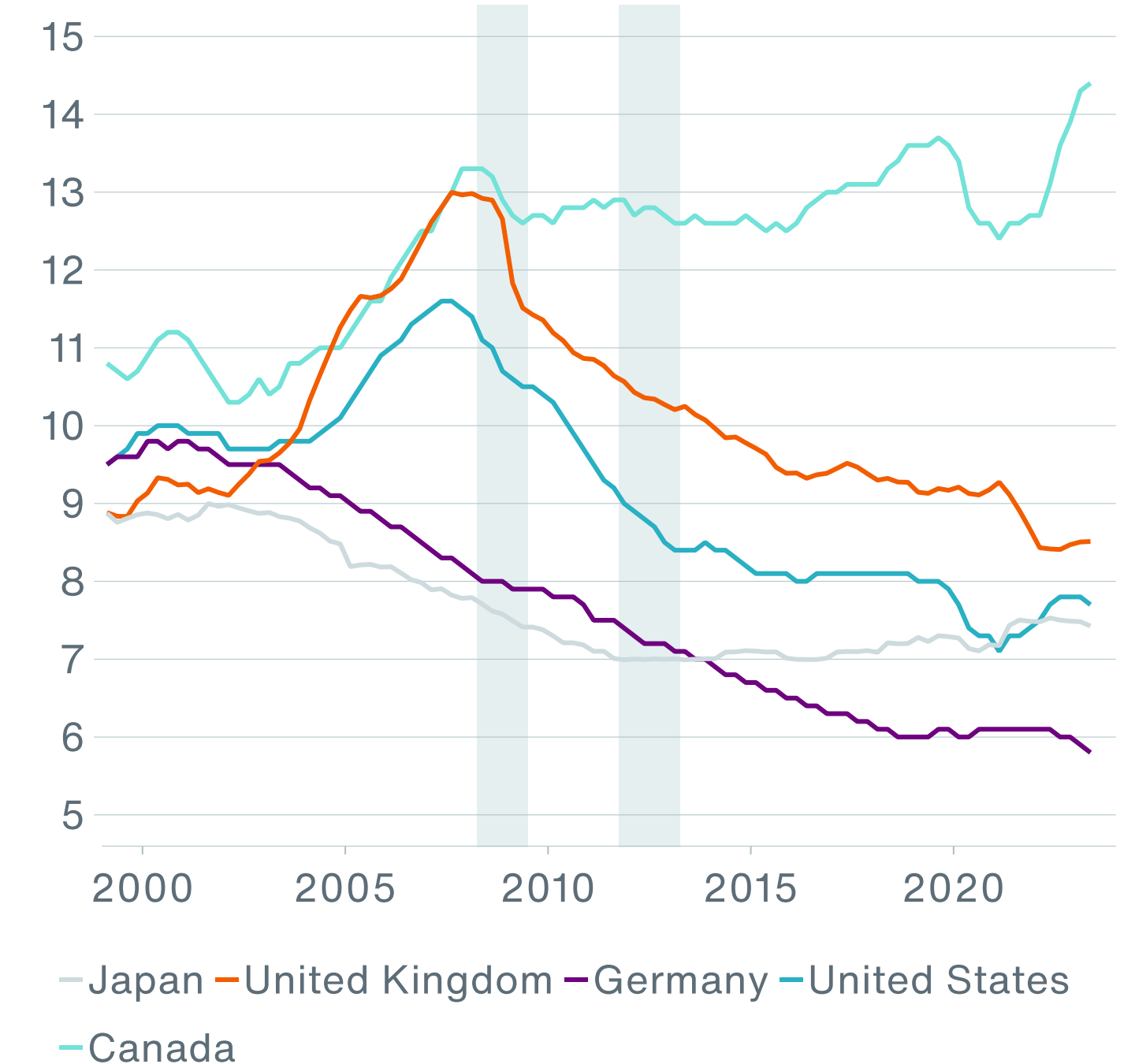
USD per CAD



Source: Macrobond

High household debt makes Canada's economy vulnerable in an economic slowdown

Households Debt Service (% of incomes)



Source: Macrobond. Recession periods, as defined by CEPR, are shaded

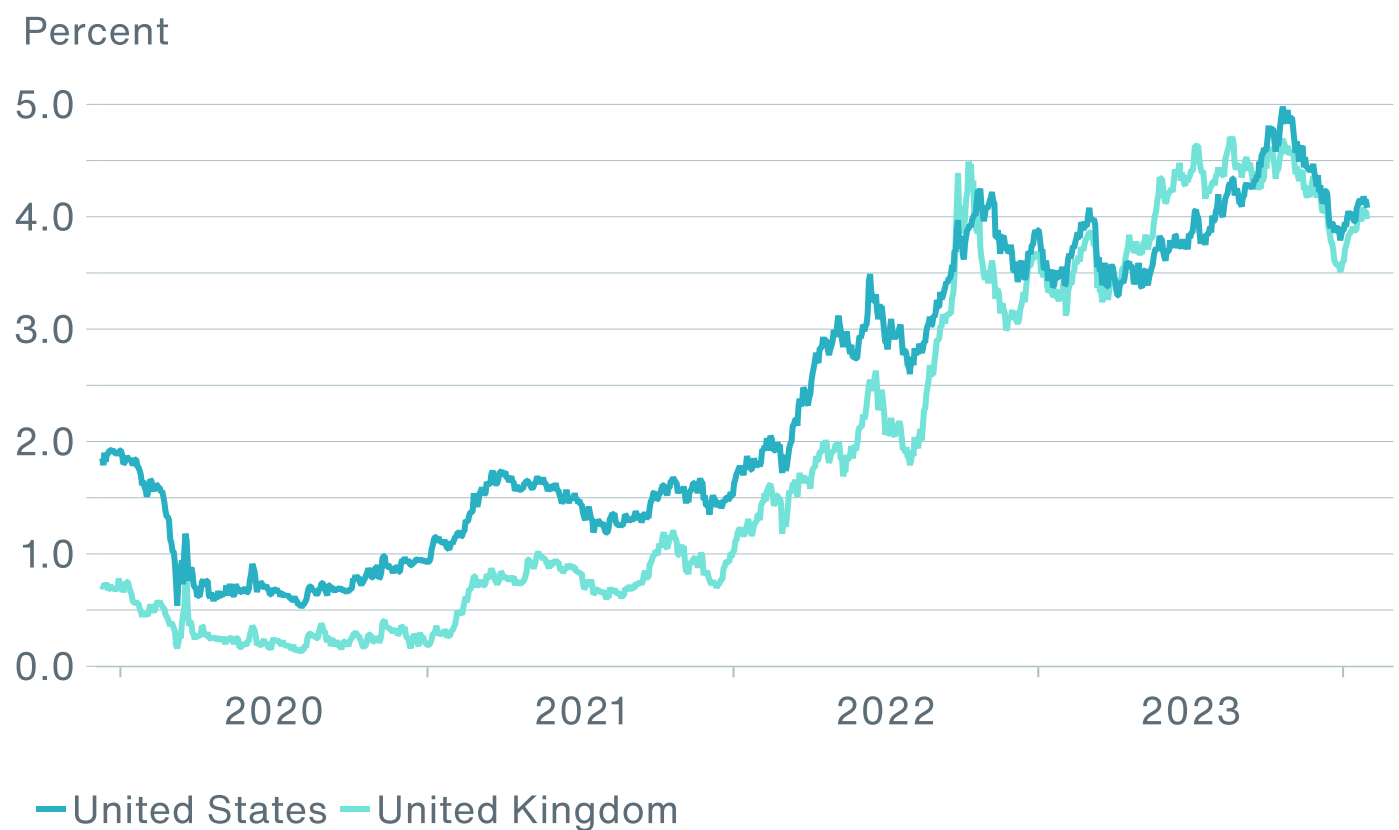
Economic Highlights

Key central banks paused their monetary policy tightening and started to hint at rate cuts in 2024. An important driver of this change was the continued declining trend in inflation figures, although it was apparent by the end of the fourth quarter that inflation rates were struggling to maintain the downward momentum and core inflation rates were still relatively high. In the meantime, U.S. growth continued to slow gradually but remained healthy, especially in terms of labour market data. Elsewhere, economic activity has been weaker but clear recessions have so far been avoided. However, adding to an already fraught geopolitical backdrop, war erupted once more in the Middle East.

A global recession is still possible, given persistently high interest rates and labour markets that have started to weaken, but we cannot rule out a milder slowdown either. Inflation may edge lower this year, but we do not expect it to fall close to the near-zero levels experienced before the pandemic. This could mean that interest rates remain relatively high too, presenting a headwind to economic activity and risky asset market performance. Elevated uncertainty from geopolitical events and key elections in 2024 continues to create a highly unpredictable environment for investors.

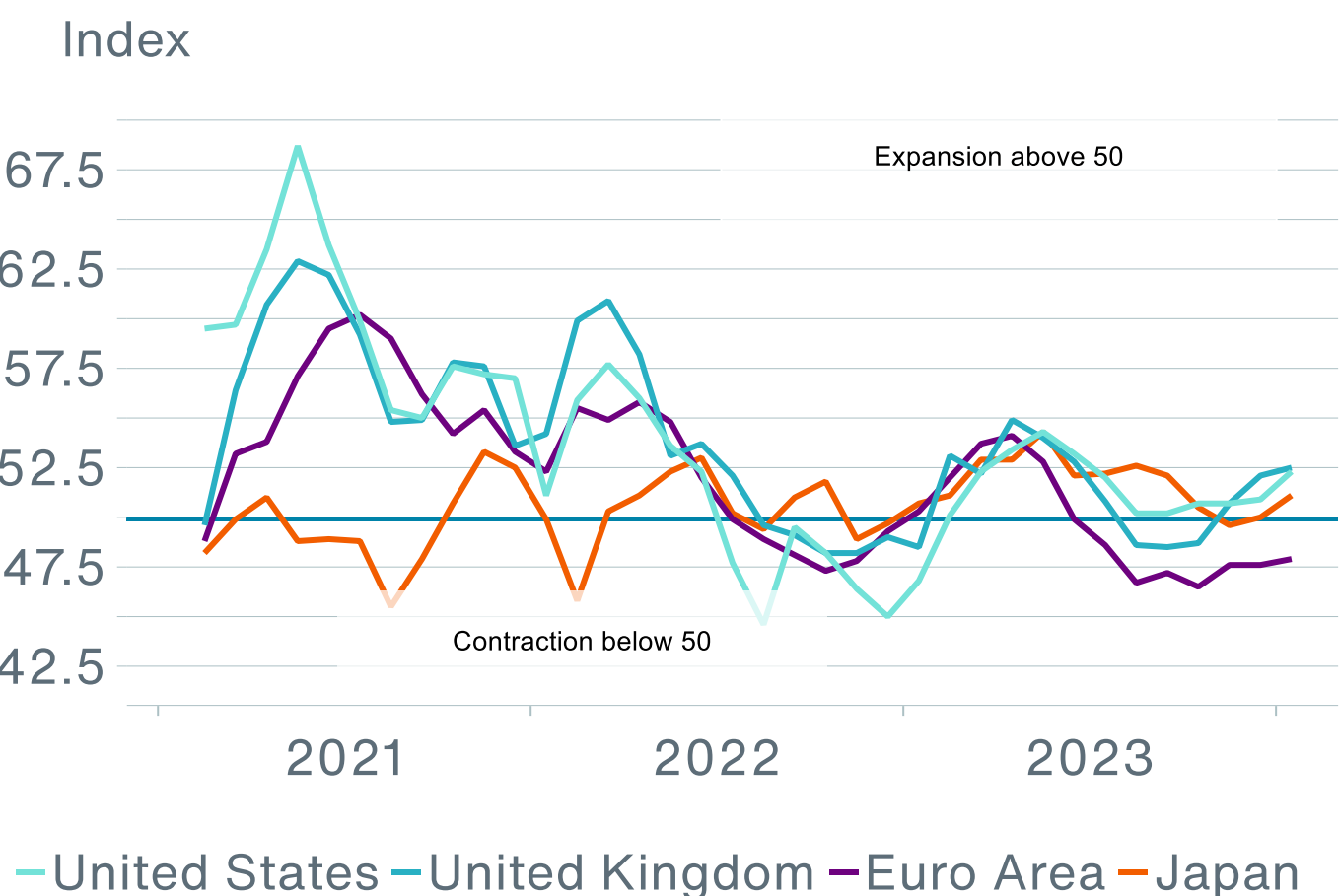
Global yields reverse course sharply over Q4 as rate cut expectations mount

10-year government bond yields



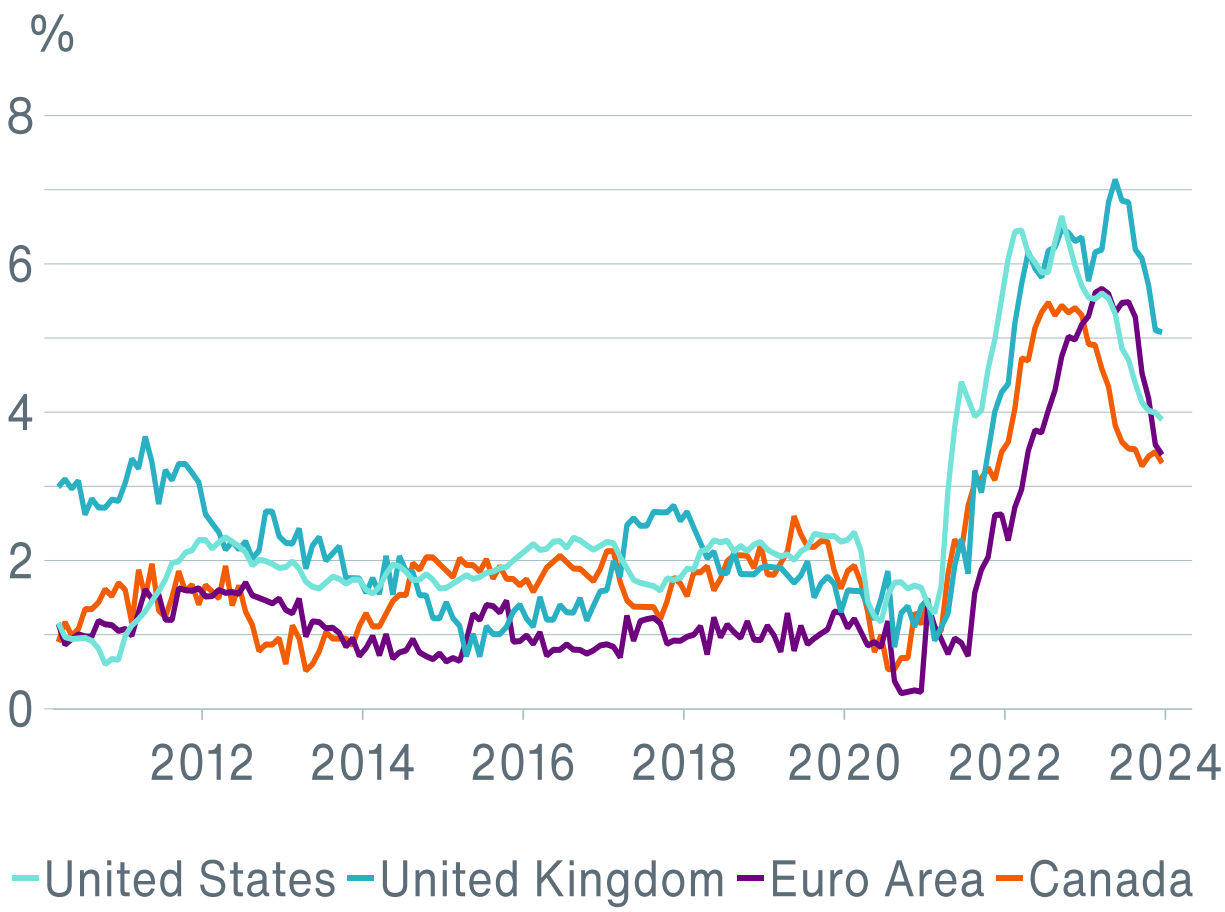
Source: Macrobond

Economic activity remained relatively weak in much of the G7 except for the U.S. – Selected composite PMIs



Source: Macrobond

Core inflation edged lower over Q4 but remained much higher than pre-pandemic levels



Source: Macrobond



Appendix
Thought Leadership



Thought Leadership Papers

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How Public Pension Should Assess Liquidity

Many public pension funds find value in illiquid assets such as private equity, private credit, and real assets. Read on for research-backed guidance on how different plan characteristics can impact public pension funds' ability to invest in illiquid assets.



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In this article, Daniel Ingram, Aon's North American Head of Responsible Investment, talks about responsible investing approaches, how it differs from impact investing, and how to evaluate integration by asset managers.



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Impact Investing is Hard: Here's How to Do It Well

The landscape for impact investing is complex and evolving. Investors need to balance their impact with other investment characteristics. These tradeoffs also require a different approach depending on the asset class and investment structure.

In this paper, Aon's team shares insights on key considerations, recommended questions and a practical framework.



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