ATTACHMENT 1 A

Discussion Guide (Revised)

Toronto Investment Board

Q1 2022

Prepared by Retirement & Investment

Aon
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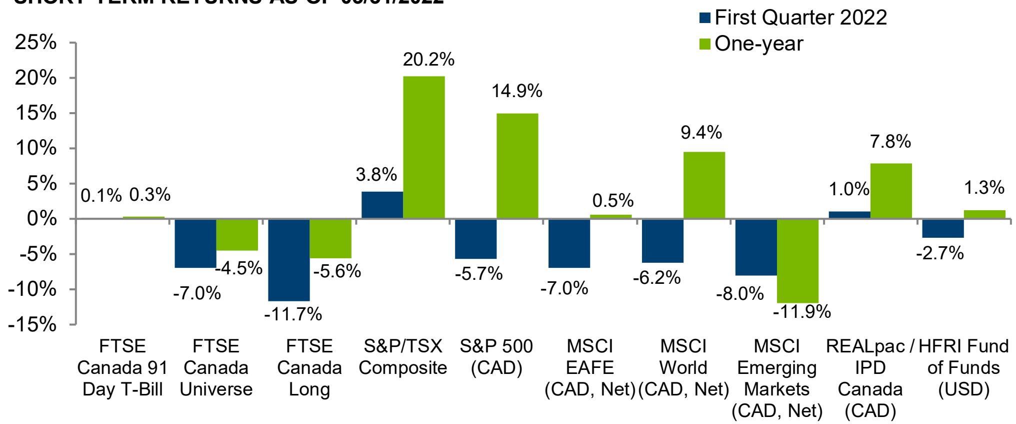
Capital Markets Overview

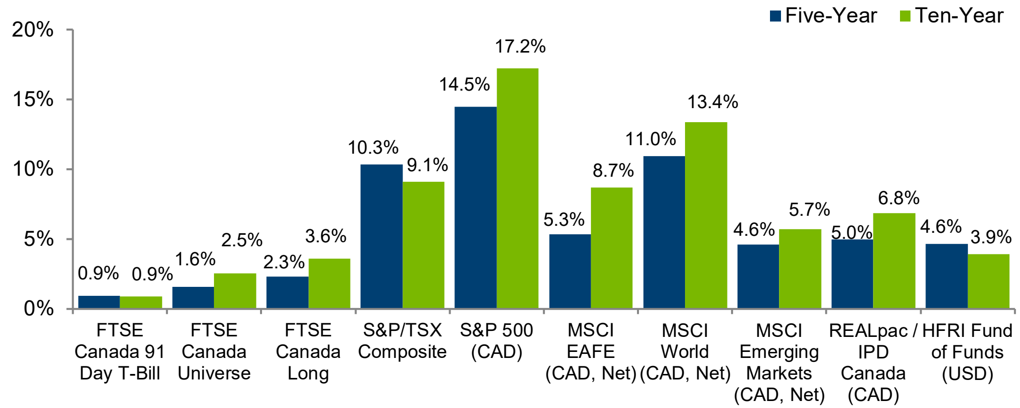
- Equities were challenged during the first quarter as volatility remained elevated. Global equity markets fell, with the U.S. weighing on the index in January, while Europe and Emerging Markets were weaker during the latter part of the quarter. The MSCI World Index returned -4.6% in local currency terms and 6.2% in Canadian dollar (CAD) terms, while Canadian equities returned 3.8%.
- The Bank of Canada (BoC) increased its interest rate for the first time since October 2018 to 0.5% from a record low of 0.25%. Meanwhile, despite the Omicron wave, the Canadian economy expanded at an annualized rate of 6.7% in Q4 2021, beating economists' expectations of 6.5%.
- The Federal Reserve (Fed) increased its benchmark interest rate by 25bps in March and formally ended quantitative easing. Chair Powell indicated that the FOMC will also look to reduce the size of its balance sheet, potentially starting in May. The FOMC consensus forecast for rate hikes shows the federal funds rate at approximately 1.9% by year-end, 2.8% by the end of 2023, and 2.4% through 2024.
- The Bank of England increased its benchmark interest rate for the third time since December, with the policy rate sitting at 0.75%. The European Central Bank (ECB) ended its emergency quantitative easing program in March and announced that it would accelerate the wind down of its legacy QE program and potentially stop net purchases in the third quarter if economic data supported the move.

SHORT TERM RETURNS AS OF 03/31/2022



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

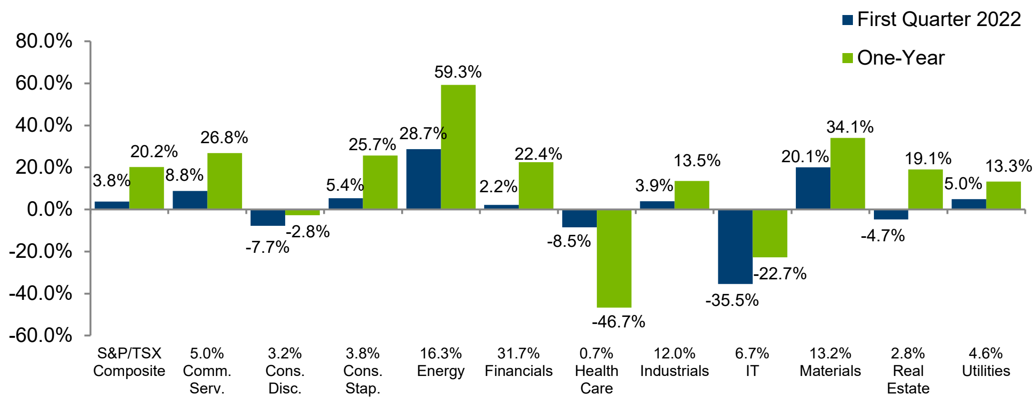
LONG TERM ANNUALIZED RETURNS AS OF 03/31/2022



Sources: S&P, MSCI, FTSE

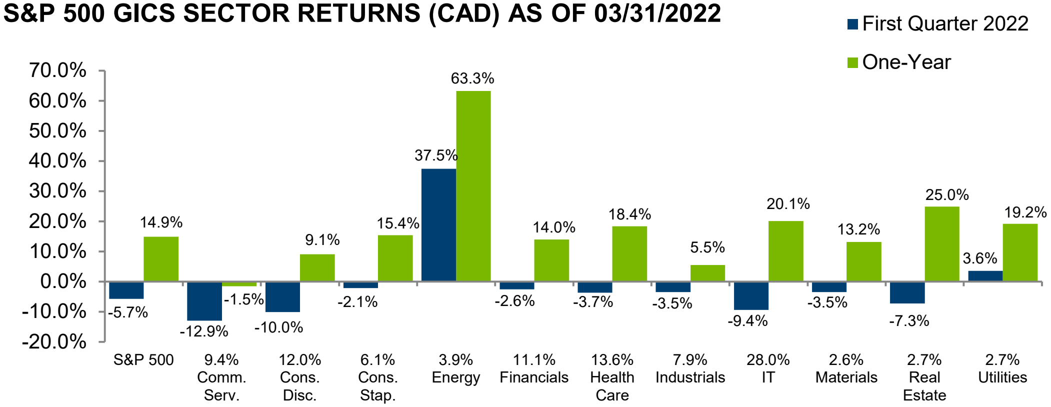
Capital Markets Overview – Regional View

S&P/TSX COMPOSITE SECTOR RETURNS (CAD) AS OF 03/31/2022



Source: S&P

S&P 500 GICS SECTOR RETURNS (CAD) AS OF 03/31/2022



Source: S&P

Canadian Equity Market:

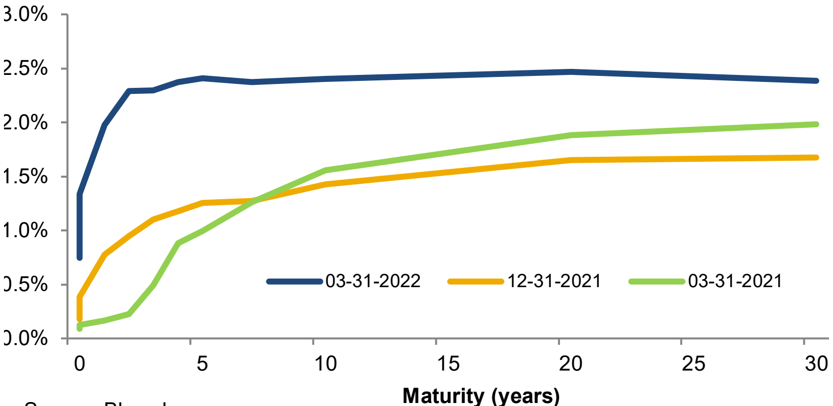
- The S&P/TSX Composite Total Return Index returned 3.8% during the quarter and 20.2% year-to-date in CAD terms.
- Value outperformed growth for the quarter (10.7% vs. -3.6%) and also outperformed over a trailing one-year period (30.8% vs. 9.8%).
- Across market capitalization, small-cap equity (8.4%) outperformed large-cap (3.8%) for the first quarter. However, large-cap outperformed over a trailing one-year period.

U.S. Equity Market:

- U.S. equities had a weak quarter with the S&P 500 index falling by 4.6% in local currency terms. The appreciation of the Canadian dollar against the U.S. dollar further dragged down the S&P 500 index returns to -5.7% in CAD terms.
- Large and medium cap stocks outperformed small caps over the quarter. On a style basis, value outperformed growth across market capitalizations over the quarter. Over a trailing one-year period, excluding large-cap stocks, value has outperformed growth.
- The U.S. economy remained strong with Q4 GDP up 6.9% (annualized), while inflation remained elevated, with U.S. CPI up 7.9% year-over-year in February.

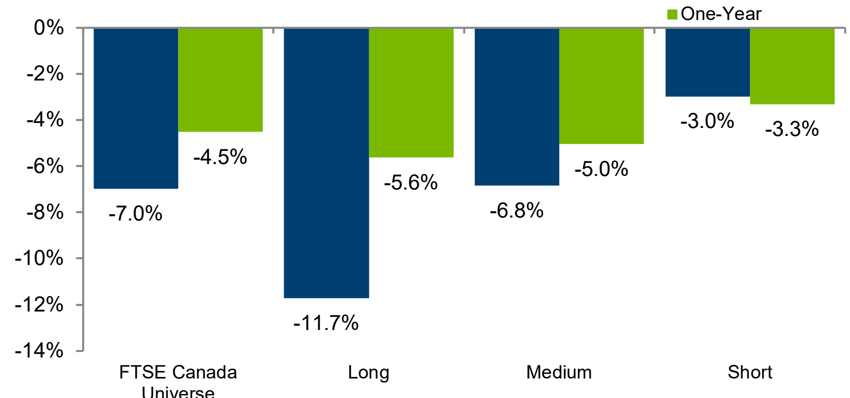
Capital Markets Overview – Fixed Income

CANADIAN FEDERAL YIELD CURVE



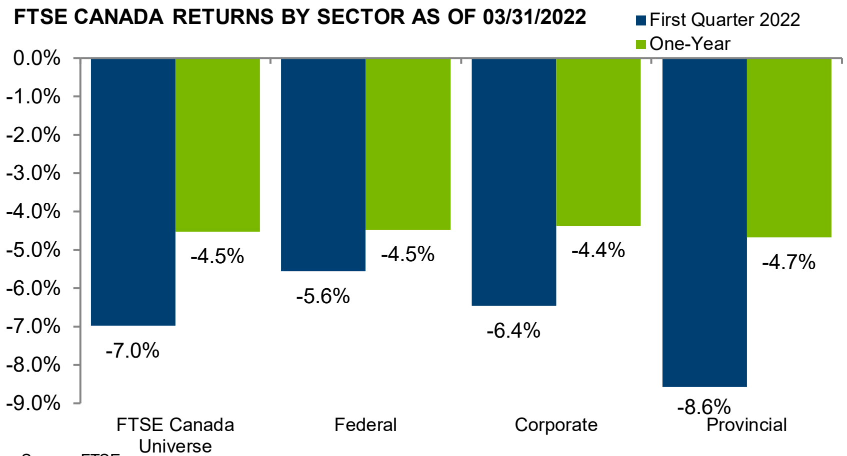
Source: Bloomberg

FTSE CANADA RETURNS BY MATURITY AS OF 03/31/2022



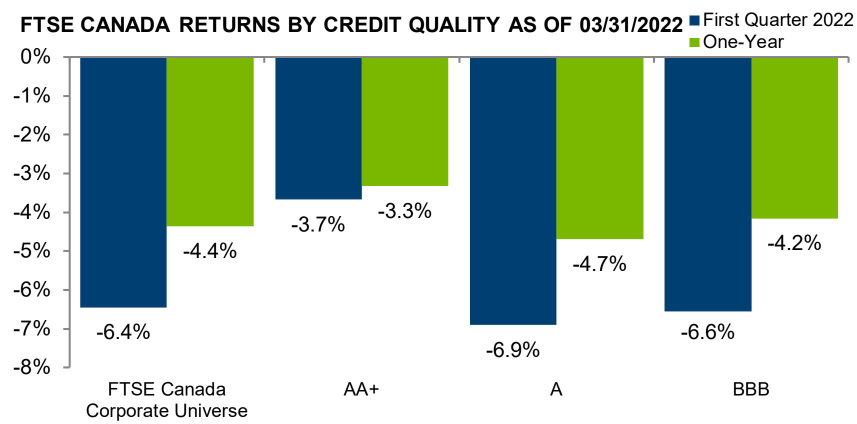
Source: FTSE

FTSE CANADA RETURNS BY SECTOR AS OF 03/31/2022



Source: FTSE

FTSE CANADA RETURNS BY CREDIT QUALITY AS OF 03/31/2022



Source: FTSE

- Real yields also rose, with the real 30-year yield increased 68bps to 0.54%. Meanwhile, Canada's annual inflation rate accelerated to the fastest pace in 30 years as the Consumer Price Index (CPI) rose to 5.7% in the year to February. The inflation reading continued above the Bank of Canada's control range of 1 3% for the eleventh consecutive month.

Executive Summary – Sinking Fund and Long-Term Fund

	Performance (%)						
	Quarter / YTD	1 Year	5 Year	Market Value ($000s)	Estimated Annual Fee (bps.)	Performance Objective Met	Action Required
Sinking Fund Return	-9.9	-2.9	-				
Benchmark Return [1]	-8.0	-1.4	-	1,533,838	14.3	n/a	No
Total Fund Value Added	-1.9	-1.5	-				
Long Term Fund Return	-7.6	-1.9	-				
Benchmark Return [1]	-5.7	-0.7	-	3,171,664 [2]	16.1	n/a	No
Value Added	-1.9	-1.2	-				

Events

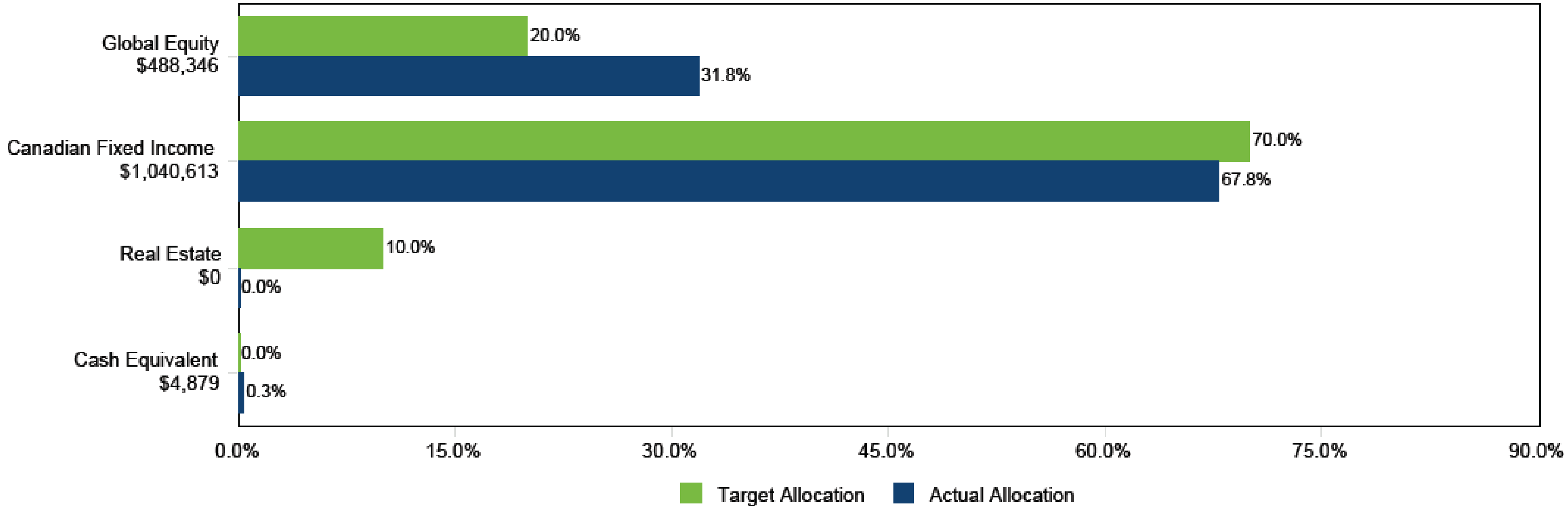
- The Board approved the City's recommendations on real estate providers for implementing towards the target real estate strategy for both Sinking Fund and Long Term Fund. The City is continuing to work with legal to complete the contracts.
- As of March 31, 2022 the Sinking Fund global equites is over the maximum weight by 1.8%.

Recommendations

- Rebalance the Sinking Fund's global equites.

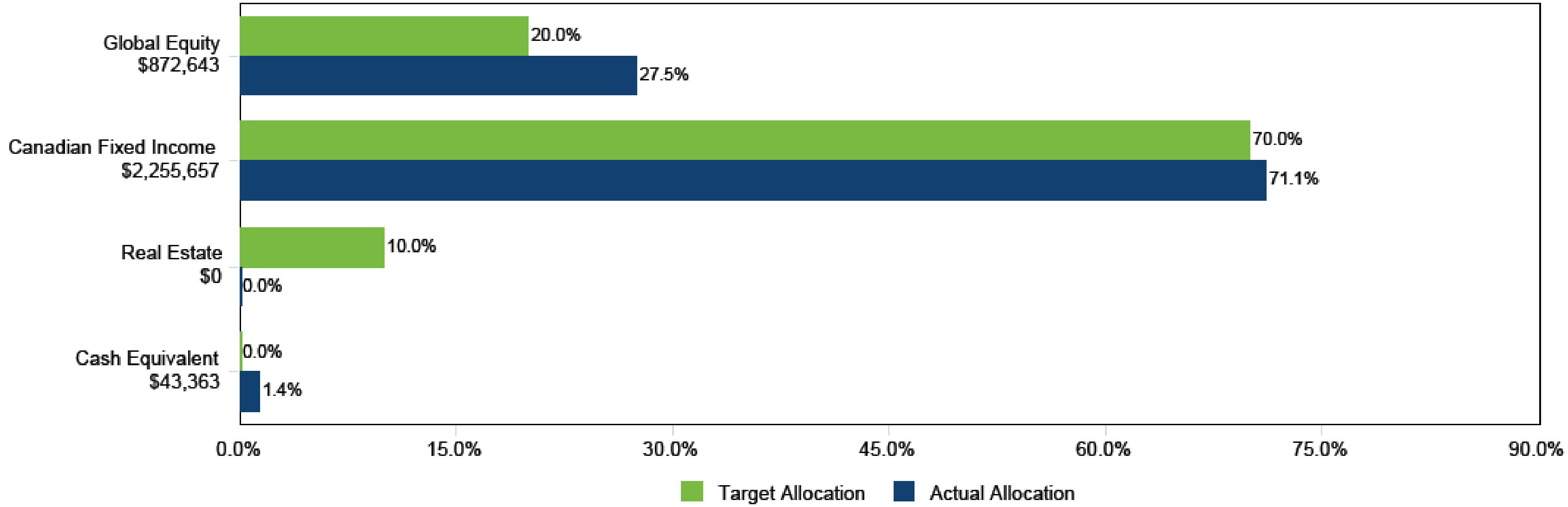
[1]The benchmark return is calculated based on the weighted average return of the target asset mix of respective Sinking and Long-Term Fund as specified in the SIPP. The plan is currently transitioning towards the target asset mix and is not fully allocated as per the target asset mix specified in the SIPP.
[2]Market Value of Long-Term Fund excludes inactive accounts with Leith Wheeler and CC&L for the fixed income component

Asset Mix Compliance – Sinking Fund



	Market Value ($000)	Market Value (%)	Target Allocation (%)	Differences (%)	Minimum Allocation (%)	Maximum Allocation (%)	Within Range
Global Equity	488,346	31.8	20.0	11.8	0.0	30.0	No
Canadian Fixed Income	1,040,613	67.8	70.0	-2.2	50.0	100.0	Yes
Real Estate	-	0.0	10.0	-10.0	0.0	10.0	Yes
Cash Equivalent	4,879	0.3	0.0	0.3	0.0	5.0	Yes
Total Fund	**1,533,838**	**100.0**	**100.0**	**0.0**			

Asset Mix Compliance – Long Term Fund



	Market Value ($000)	Market Value (%)	Target Allocation (%)	Differences (%)	Minimum Allocation (%)	Maximum Allocation (%)	Within Range
Global Equity	872,643	27.5	20.0	7.5	0.0	30.0	Yes
Canadian Fixed Income	2,255,657	71.1	70.0	1.1	50.0	100.0	Yes
Real Estate	-	0.0	10.0	-10.0	0.0	10.0	Yes
Cash Equivalent	43,363	1.4	0.0	1.4	0.0	5.0	Yes
Total Fund	**3,171,664**	**100.0**	**100.0**	**0.0**			

Strategy Performance

Strategy	Rating	Value Added (%) Quarter	Value Added (%) SI*	Objective Met	Above Median 5 Year	Action Required
Addenda LDI	**Buy**	-0.6	-0.3	n/a	n/a	No
Fiera LDI	**Buy**	0.1	0.1	n/a	n/a	No
CC&L Core Fixed Income	**Buy**	-0.4	0.4	n/a	n/a	No
Leith Wheeler Core Fixed Income	**Buy**	0.3	0.5	n/a	n/a	No
Pier 21 Global Equity	**Buy**	-5.5	0.0	n/a	n/a	No
Oakmark Global Equity	**Buy**	0.5	-3.8	n/a	n/a	No
Fiera Global Focused Equity	**Buy**	-4.7	-4.0	n/a	n/a	No
LGIM Multi-Factor Global Equity	**Buy**	-1.6	-2.8	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	No significant updates impacting City of Toronto	Advanced
CC&L	Most recently in 2022, Ryan Elliot and Brian Milne became business owners. Jane Justice, Portfolio Manager & Trader, Fixed Income retired from the firm during the quarter.	Integrated
Fiera	On February 1, 2022, Fiera Capital announced a sub-advisory partnership with StonePine Asset Management has been established. On March 22, 2022, Fiera Capital announced that the company has joined 16 organizations in North America as the first signatories of the CFA Institute's new 'Diversity, Equity and Inclusion (DE&I Code)'. The change will complement and continue to enhance Fiera's effort to enact long-term cultural change in all levels of the organization. Team members Transitioning to StonePine Asset Management: - Andrew Chan - VP and Head of Research, Global Equities - Effective January 2022	Advanced
Oakmark		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	Integrated*

*The LGIM Multi-Factor Equity Fund is a passive strategy that tracks the SciBeta Developed Low-Carbon & ESG High-Factor-Intensity Multi-Beta Maximum Deconcentration Index provided by Scientific Beta. The LGIM Multi-Factor Equity Fund's investment universe is tilted to reduce exposure in companies that score poorly on various ESG and carbon intensity criteria. This fund does not have a formal ESG rating. The ESG score above applies to the LGIM's passive equity platform which has a broader target universe which does not take into consideration various ESG components.

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.

Our categories were renamed to Limited, Integrated, Advanced and Not Applicable, from a former numerical system of 1–4. This reduction in the number and naming of the categories was done in order to make the descriptions more meaningful and impactful. Funds can be clearly identified in terms of ESG integration and improves clarity for clients. All else being equal, we consider that ESG-integrated portfolios will outperform those portfolios which fail to integrate ESG factors into their decision-making over the longer term.

Appendix A: Asset Allocation Views

Medium Term Views

Total Return Cross Asset Class Views

---	--	-	=	+	++	+++
		Equities	Core fixed income	Alternatives		
		Credit		Cash		

Large moves in yields have prompted an upgrade to our core fixed income view. It is time to take some negative duration chips off the table.

Equities are challenged from a weakening economic picture, inflation and tightening policy. We prefer gaining return-seeking exposure through alternative asset classes

Relative Asset Class Views

Equity Regions

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

EAFE view downgraded due to the exposure to the Ukrainian conflict

Credit

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

Bank loan preference lowered after strong relative Q1 returns

Equity Styles

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

We maintain a defensive posture on equity styles

Core Fixed Income*

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

Corporate bond view remains in line with Federal bond view

Alternatives

---	--	-	=	+	++	+++
			Commodities	Diversifying Hedge Funds		
			Real Estate	Global Infra.		
				Private Credit		

Non-correlated alternatives still generally preferred

Currencies versus CAD

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

Upgraded the CAD view against major currencies.

Equities

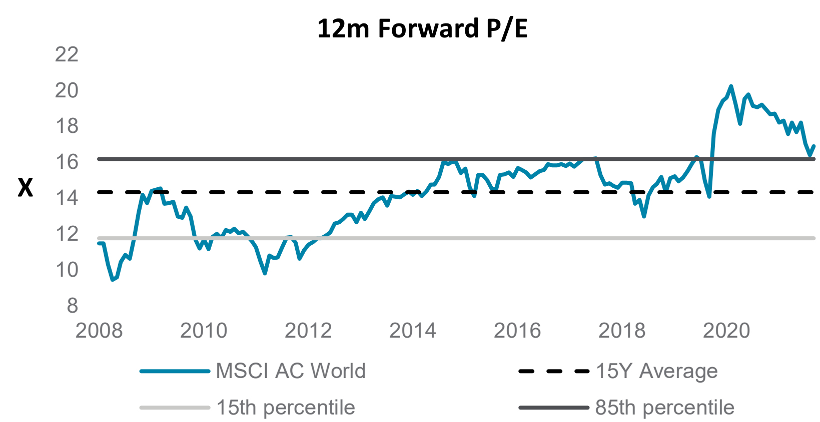
The outlook clouded by uncertainty and our less constructive view remains in place

- Following a strong year of returns, equity markets have suffered large declines in the first quarter of 2022. Just as fears surrounding the Omicron variant of Covid were subsiding, Russia invaded Ukraine, sparking sharply higher oil prices and significant risk aversion. Of course, throughout the period, worries about multi-decade high inflation and the prospect of rapidly tightening monetary policy have persisted and have been exacerbated by the Ukrainian conflict. Whereas it seemed to us that inflation would peak at some point this year and growth would only moderate a little, the risk of higher and more persistent inflation and lower growth has risen. The degree of uncertainty is very high, however, and we still expect inflation to ease back gradually next year.
- The market falls we have already seen have triggered better valuations, even as earnings forecasts have been revised lower, but we maintain our caution as the situation remains highly uncertain and impossible to predict. Relative to bonds, rising yields have started to alter the attraction of equities and markets were dropping sharply even before the Ukrainian crisis. At the same time, we must continue to track the stance of monetary policy, which is currently firmly in the tightening camp, with several interest rate increases expected this year. But these expectations could be challenged as the year progresses if growth starts to suffer.
- Overall, despite better valuations, the high degree of uncertainty and the prospect of economic challenges has prompted us to maintain our less constructive view on equities.

Earnings revisions fall as market declines

Source: Factset, Aon

Earnings-based valuations significantly less expensive



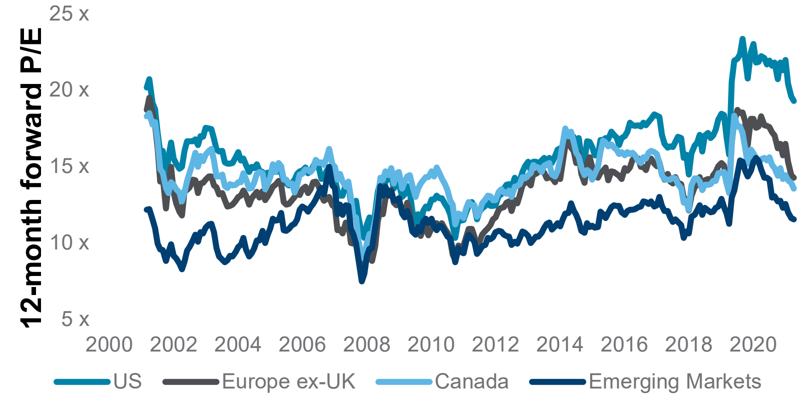
Source: Factset, Aon

Equities

Remaining defensive and downgrading European view

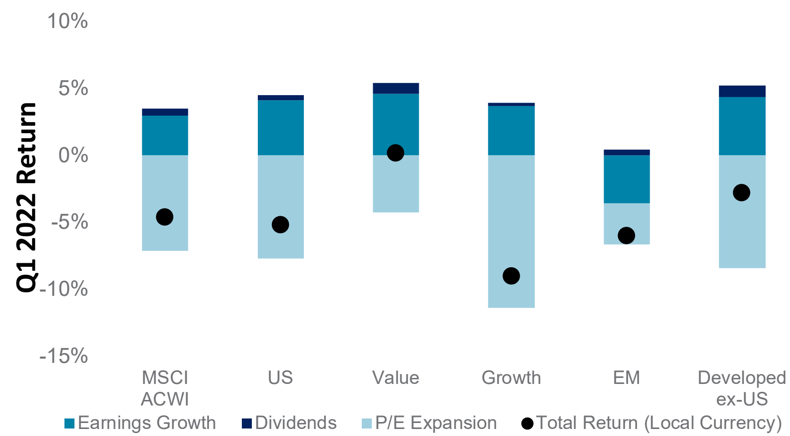
- In much of January and February, the prospect of higher interest rates and inflation triggered a sharp sell-off in technology stocks, especially in the US, which was part of the reason why growth stocks underperformed value stocks. More recently, the Ukrainian crisis pushed energy prices much higher and boosted the performance of commodity-related stocks – again, boosting value style equities. However, we remain neutral between value and growth over the medium-term.
- On the one hand, there is no doubt that higher interest rates are an important headwind for technology and growth stocks in general. But a weaker economic outlook has dampened mid- and long-duration yields and the more defensive nature of growth stocks could be beneficial in any downturn. On the other hand, beyond energy, a flatter yield curve and the prospect of weaker loan growth will likely limit profits for financial companies – the other important value sector. In terms of other styles, we continue to prefer low volatility and quality styles for their defensive properties during what is likely to be a highly volatile and directionless time in equity markets.
- In terms of the regional view, we think that a downgrade to the European view is warranted as this region is especially exposed to Russian energy, the impact of sanctions and refugee flows. Our emerging markets view remains neutral, although we note recent more expansionary policies from China. We believe that a generally more settled environment will be required for a more concerted improvement in EM returns, however.

Valuation gaps narrow during this year's market turmoil



Source: Factset, MSCI, Aon

US and Growth stocks sell-off most due to rising interest rates in January and February – the Ukraine crisis yet to be reflected



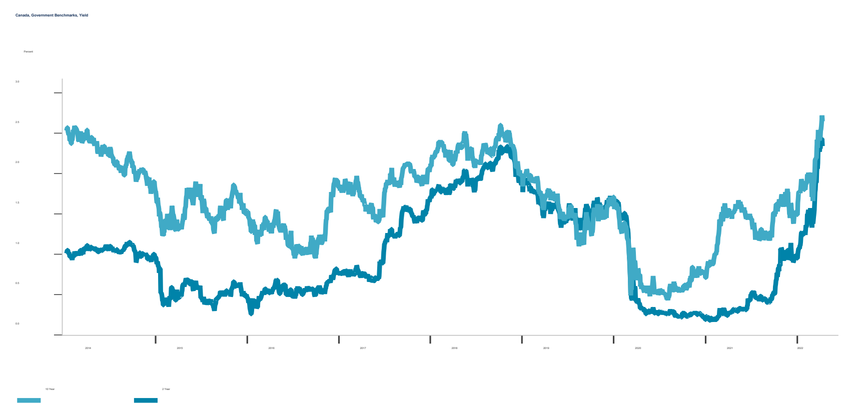
Source: Factset, MSCI, Aon. Changes in the 12-month forward P/E and earnings per share shown. Local currency returns and MSCI World Growth and Value indices shown.

Core fixed income

Neutral duration stance maintained amid heightened uncertainty, rising inflation and monetary policy tightening

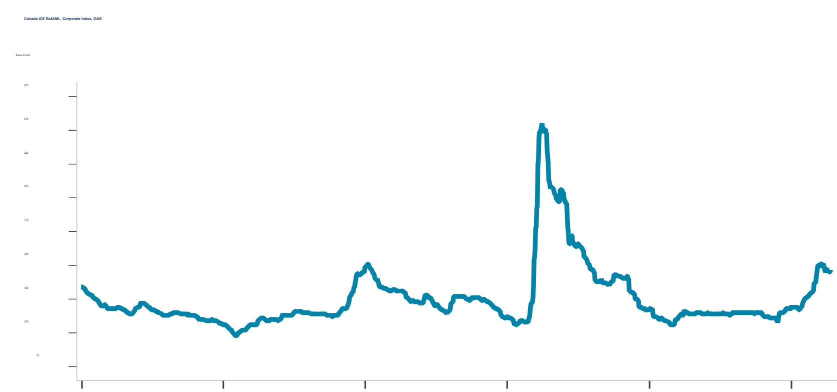
- 10-year Federal yields have surged by 105bps since the end of December, whilst 2-year yields have moved higher by 110bps over the same period, translating into large losses in the TMX indices. At the same time, the yield curve has flattened and, given likely further rate increases by the BoC, may flatten further in the coming months. Whilst losses have been greatest in longer-duration bonds, we suspect that yield movements will be larger in shorter-duration yields and we now think that the risks are more balanced in terms of future yield movements. **We maintain a neutral duration stance.**
- Corporate spreads have widened as a result of rising uncertainty and the threat to growth, and we suspect volatility will be elevated this year. Valuations are less expensive, of course, but underlying Federal yield movements will still be an important driver of returns and the prospect of a weaker global economic backdrop keeps us cautious. **We remain neutral in our view relative to Federal bonds.**
- As with Federal yields, Canadian provincial yields were already climbing late last year, but rapidly accelerating inflation and the Russian invasion of Ukraine has triggered sharp surges in yields. Overall, we see more balanced risks for future yield movements in both Federal and Provincial bonds. Whilst the longer average duration of provincial bonds will be a drag currently, a reversal in conditions would bring the biggest benefits here too. Therefore, **we remain neutral relative to Federal bonds.**

Already climbing yields spike higher as inflation accelerates



Source: Macrobond

Slight IG spread widening but valuations remain unattractive

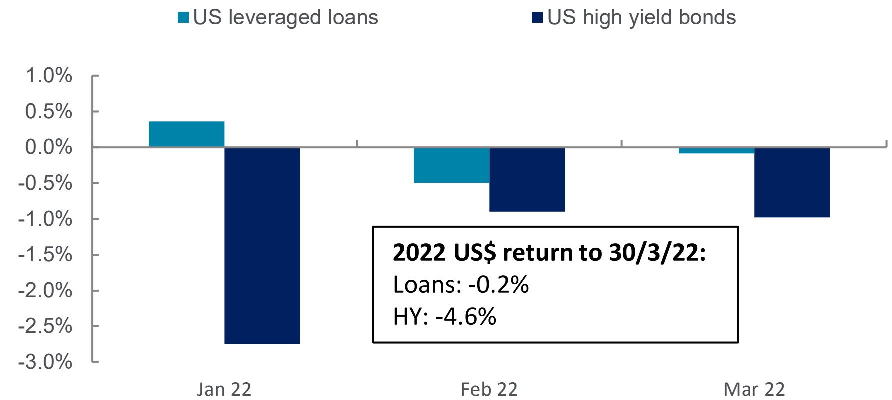


Source: Macrobond

Return Seeking Credit
Remaining defensively positioned amongst credit sectors

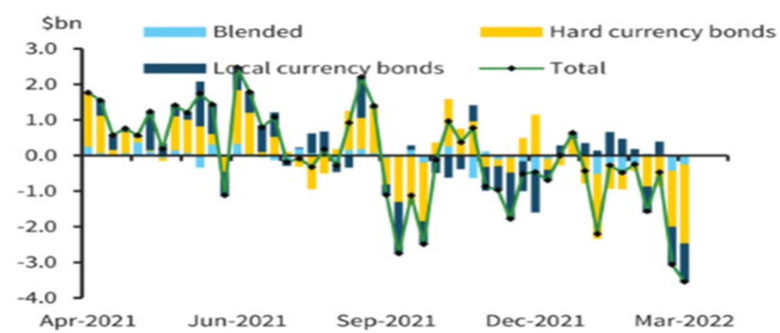
- US HY bond credit spreads retraced more than half of their expansion in the year up to mid-March by the end of March as risk markets gained some composure on hopes of a Russia-Ukraine war resolution. However, HY bond yields are now above 6.5%, up from 4.3% at the start of the year. Leveraged bank loans have performed much better with their floating rate characteristic providing support.
- Whilst we do not think that current HY bond spreads fully reflect the risks of slowing economic growth, HY bonds and bank loan outlooks have become much more balanced. Our recent preference for bank loans, supported by the backdrop of expected US rate hikes, has worked well.
- US$ denominated emerging market (EM) debt has performed poorly so far this year as underlying US treasury yields have risen. They underperformed local EM debt which has a shorter duration and has proved more resilient with rallies in commodity-producing countries' currencies. EM debt valuations look cheap. However, the economic and geopolitical backdrop remains risky and so we are keeping defensively positioned for the time being.

Loans have significantly outperformed HY bonds this year, after returning the same last year



Source: CS, ICE BofA

Risk-off sentiment has encouraged further Emerging debt outflows



Source: EPFR Global, Morgan Stanley as of March 11, 2022.

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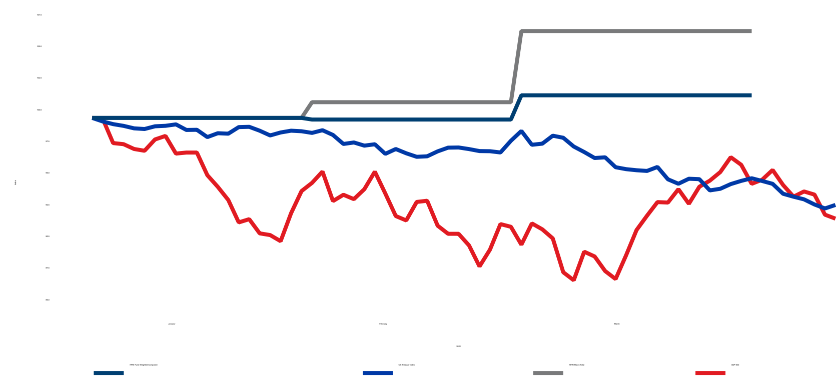
Alternatives

Hedge funds have performed well this year

- The interlocking shocks of Ukraine, higher inflation, and rapid central bank action repricing, have pushed equities and bonds to become more correlated. We investigate the historic relationship between equity and bond moves and comment on the portfolio risk that results from equity and bond market correlation on the next page.
- Portfolios that rely on equities and bond performance will have suffered through the first quarter and will likely face a tougher time going forward. Gone are the days where simple beta exposure was a sure bet.
- However, this turmoil and volatility have created opportunities for asset classes that are not reliant on rising markets, for example hedge funds. Prior to the first quarter, these strategies lagged traditional 60% equity / 40% bond portfolio exposure, but they have more recently performed well as market volatility has picked up. The general increase in volatility has created opportunities in which these active strategies typically thrive. We believe that this improvement will not be isolated just to the first quarter but will continue over the medium term as markets adjust to the new realities of central banks quickly withdrawing liquidity.
- In addition to hedge funds, other alternatives which are less liquid than hedge funds are also likely to provide some diversification to portfolios – private real estate and infrastructure are two of our favoured choices at present.

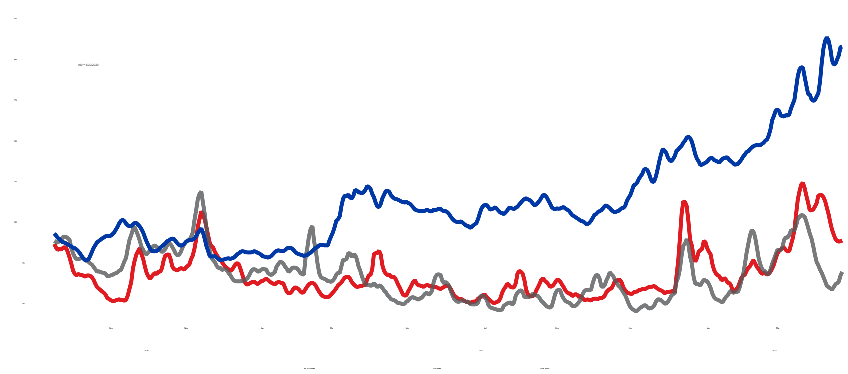
Hedge funds have performed well through the crisis

Cumulative return indices



Source: Bloomberg, 11 April 2022

A higher volatility environment has helped hedge funds



Source: Bloomberg, CBOE VIX Index tracks equity market volatility implied by S&P 500 Index options, ICE BofA MOVE Index tracks yield volatility implied by US treasury options, CBOE OVX Index tracks crude oil volatility implied by oil ETF options. As at 11 April 2022.

Currencies

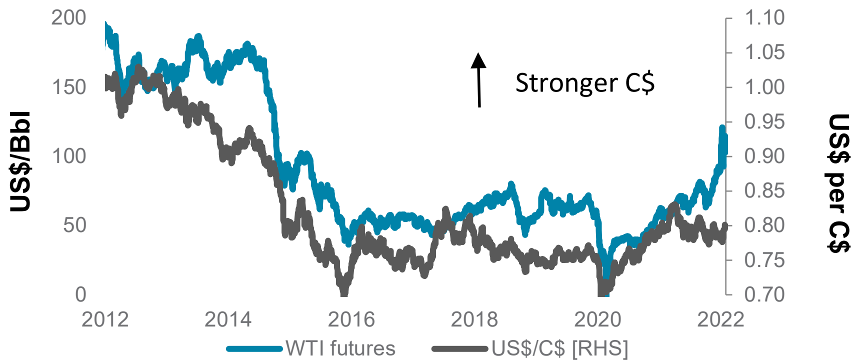
We think the Canadian dollar has upside from here

- The Canadian dollar is only slightly up against the U.S. dollar this year despite crude oil prices rising by more than 40% with the Russia-Ukraine war recently adding to upward oil price pressure.
- We think that this disappointing performance from the loonie can be explained by the Fed's hawkish stance and then the flight to U.S. safety when Russia invaded Ukraine. The Canadian dollar has appreciated against other major currencies given that the war has little impact through trade or financial links on Canada on top of its boost from oil.
- As indicated last quarter, we think that the Canadian dollar has upside from here and we are now moving to a positive view. Oil prices are expected to remain elevated under the assumption that Russian sanctions will remain in place. Higher prices will keep Canada's terms of trade and commodity producer revenues strong. Concern that the energy sector is a shrinking contribution to growth and that capital spending in the sector is also low, should not prevent the C$ from appreciating on the back of the higher oil price.
- The concern is that, even though the BoC hiked rates in March slightly ahead of the Fed, it may not hike as aggressively as the Fed over the rest of the year given high Canadian household debt and house prices. However, the BoC's statement that it is ready "to act forcefully" may indicate that it will keep pace with the Fed for the moment.
- Our view that the U.S. dollar will weaken over the next few years also gives support for this view, although there is a risk that the U.S. dollar remains firm this year due to the war or tighter monetary policy. We are therefore delaying moving to a negative U.S. dollar view against the euro, yen and EM currencies.

The Canadian dollar has broken above its downward trend line

Source: Bloomberg

The Canadian dollar has not kept up with the oil price rise



Source: Bloomberg

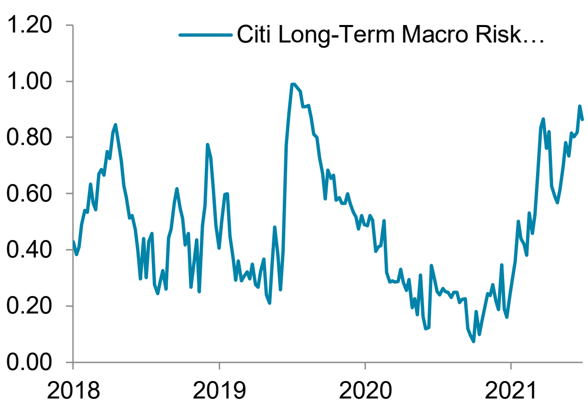
Economic highlights

Economic data was overshadowed by geopolitical risk during the first quarter. However, growth in the US remained robust with fourth quarter GDP supported by business inventories. Inflation remained elevated and continued to climb, with the focus for 2022 on how inflation will be impacted by the Russia-Ukraine conflict, as well as the monetary policy response. The Fed ended quantitative easing and raised rates by 0.25% in March. Geopolitical risks did not seem to influence the Fed's recent pivot, however, although GDP estimates were revised down as growth is expected to normalize. This raises questions as to whether or not the Fed can engineer a 'soft landing' with an economy already slowing and facing a fiscal drag.

The Bank of England also raised rates for the second consecutive meeting in March. The ECB ended its emergency bond buying program in March and has also announced its plan to reduce the asset purchases of its pre-pandemic purchasing program.

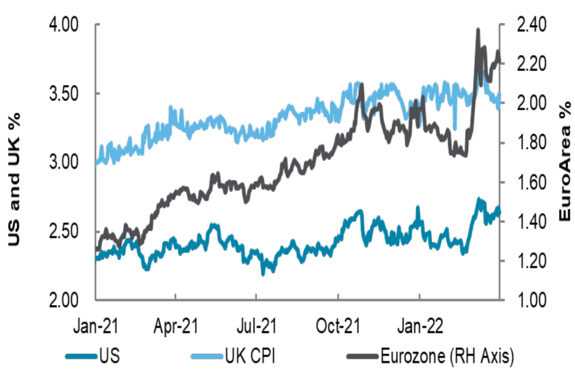
We still believe that developed world growth will continue to lose momentum over the coming year given recent political tensions and the spill-over effects into global trade and financial markets. The path forward for emerging economies may also be difficult should deglobalization accelerate.

As economies move beyond Covid, new macro risks have emerged



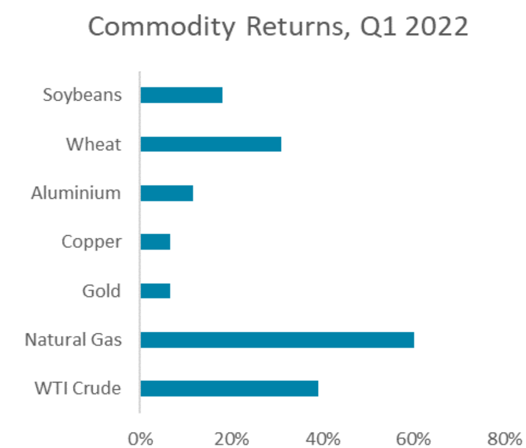
Source: Bloomberg, 12/4/22

Inflation Expectations are rising
Forward-starting inflation swaps (5Yx5Y)



Source: Bloomberg

The Ukraine conflict has pushed many commodity prices higher



Source: Bloomberg, active futures contracts

Appendix B: Thought Leadership

Market outlook

access code: **aon!**

Thought Leadership Papers

During the last quarter, we produced papers on the following topics. Although these topics may not be directly applicable to your fund, they may be of general interest and provide some insight into Aon's global research. For more details, please contact your Aon Investment Consultant.

- **Canadian Private Debt** – Private Debt (also known as private credit) has increased in popularity as investors are seeking ways to generate higher yields in a low interest rate environment.
  - This paper, written by Aon's Fixed Income Manager Research team, provides an overview of Canadian Private Debt and answers the following questions: What is private debt? What are the risks? What are the Benefits? How can we access the asset class?
- **Inflation Update** – Inflation is running at multi-decade highs in both Canada and the U.S., well above the Bank of Canada Target of "an average rate of 2%". At Aon, we expect Inflation will likely remain elevated for much of this year but not much beyond that – inflation is likely to peak this year and head lower over time.
  - In this document Aon's Global Asset Allocation Team explains where inflation is now, what has driven the acceleration, and what happens next.
- **Private Equity Past and Present: Three Questions with Bruce Ingram** – In this paper, Bruce Ingram, a member of Aon's Private Equity Team, discusses three questions on Private Equity.
  - How has the market for private equity evolved over the past decade?
  - Valuations in private equity have increased meaningfully. How should investors think about private equity dynamics today?
  - What factors does Aon believe are important to be a successful private equity investor?
- **Five Tips for Creating an ESG Investment Policy** – The need to address environmental and social megatrends, as well as to manage pre-financial investment risk and long-term sustainability, is creating increased pressure on investors to consider environmental, social, and governance (ESG) concerns within their portfolios. However, there continues to be confusion about what ESG integration entails, which can slow adoption of a comprehensive policy or program.
  - For those starting their ESG journey, this paper suggests five steps that can be taken towards the successful implementation of an ESG Investment Policy.

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