

Toronto Investment Board

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Discussion Topics

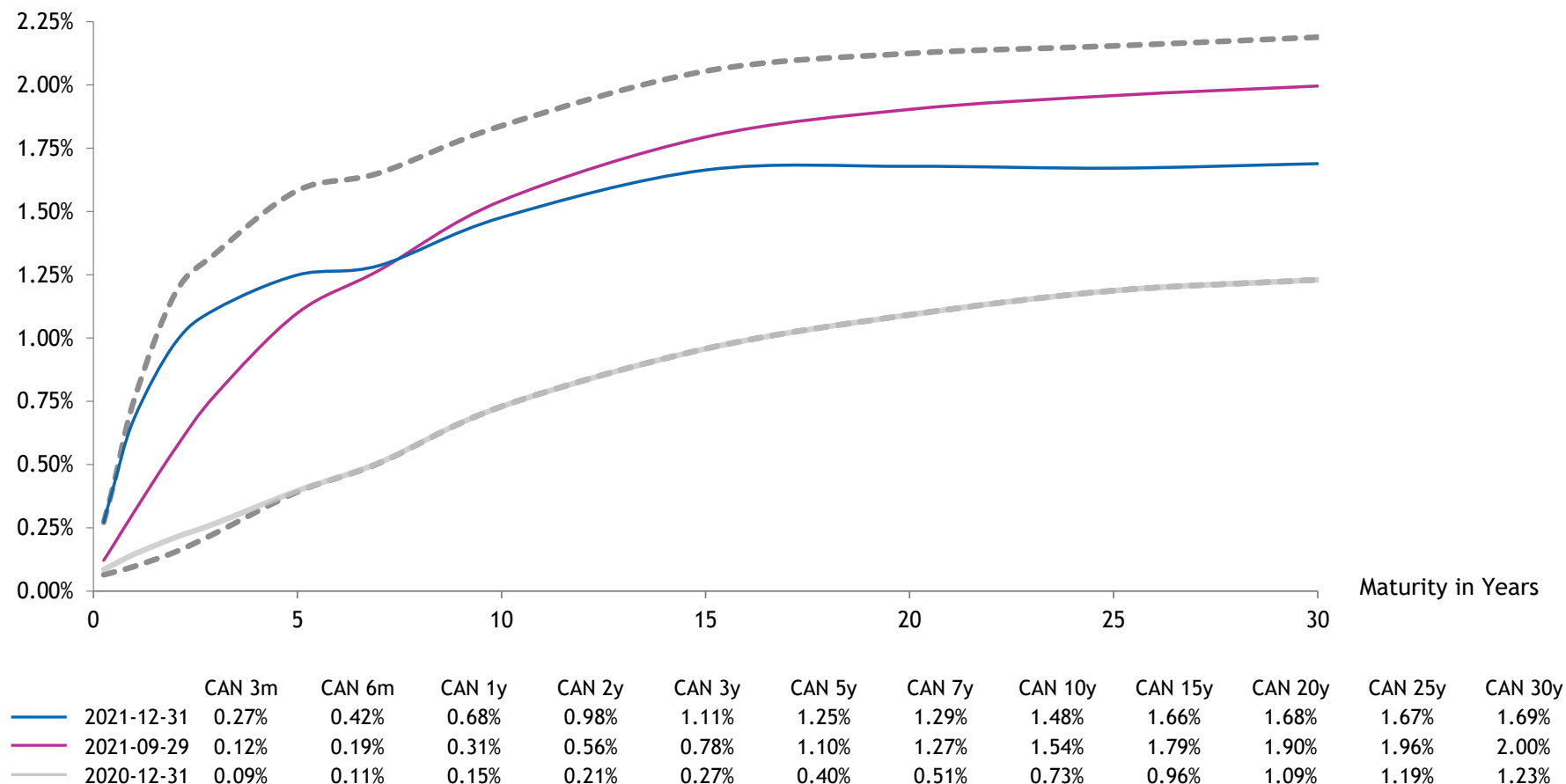
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Market Review

Government of Canada Interest Rates in 2021

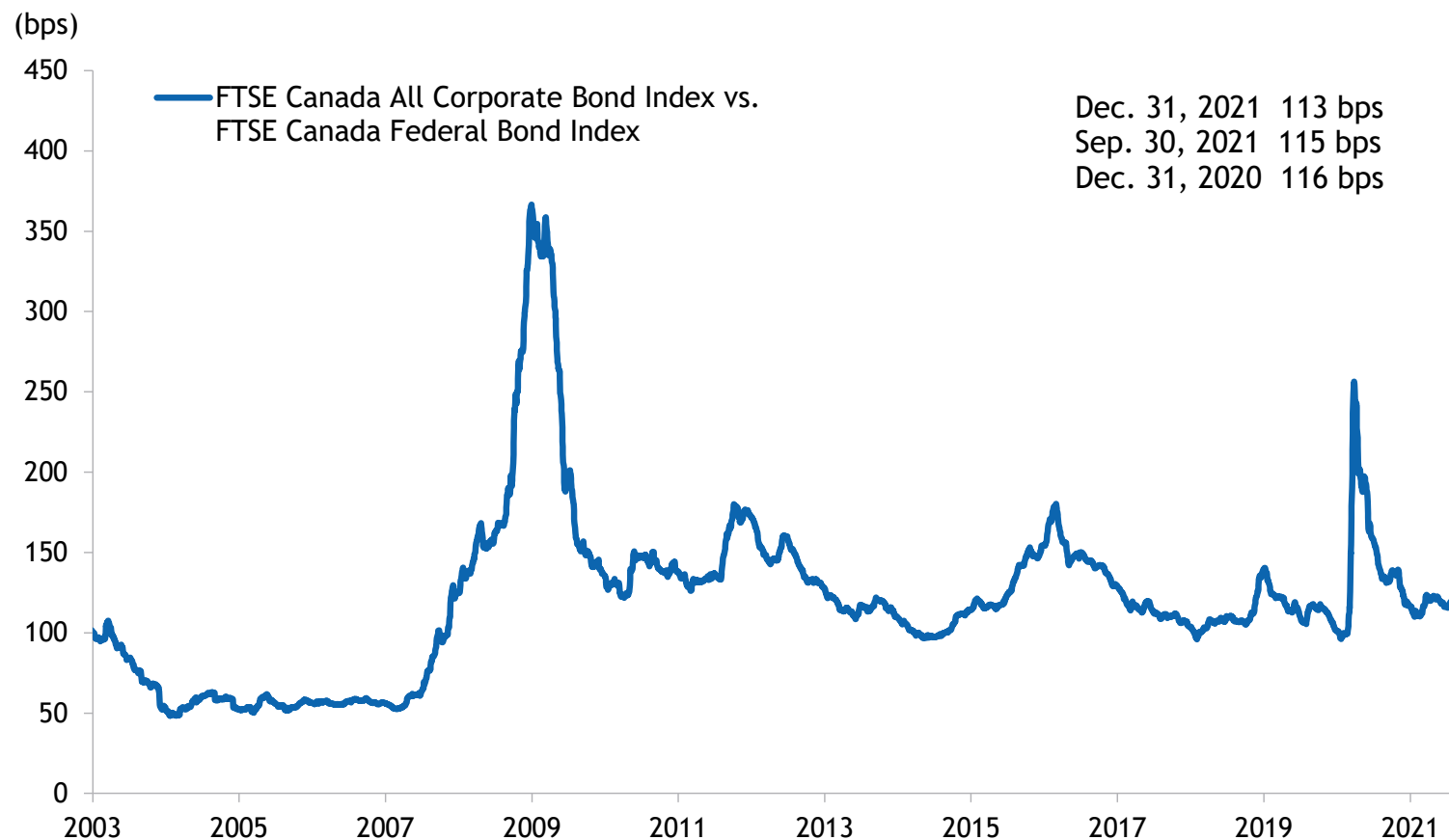
Yield to Maturity



As at December 31, 2021

Note: Yields are calculated using constant maturity par yields generated by the Addenda Capital yield curve algorithm. The estimated yield curves are based on FTSE Canada daily prices.
 Sources: FTSE Canada, Addenda Capital

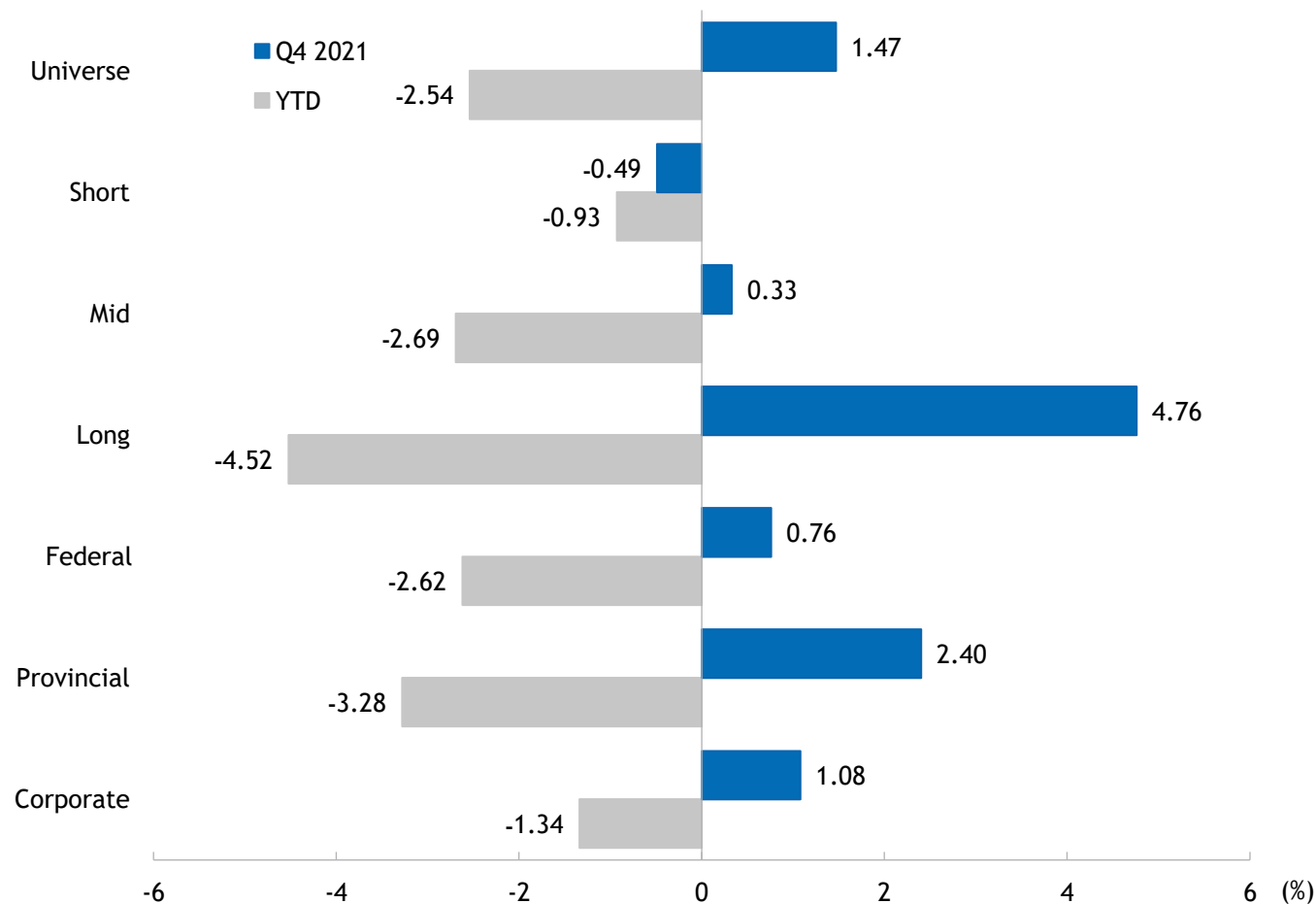
Universe Corporate Bond Spreads



As at December 31, 2021

Sources: FTSE Canada, Addenda Capital

Canadian Bond Market Returns



As at December 31, 2021

Source: FTSE Canada



Portfolio Performance and Characteristics

Master Account Sinking Fund – Q4 2021 Returns

City of Toronto - Master account Sinking Fund

Account Number: A1327

Currency: CAD

Summary of Performance Results

For the periods ending December 31, 2021

City of Toronto - Master account Sinking Fund

	ANNUALIZED RETURNS								
	1 month	Quarter to date	Year to date	1 yr	2 yrs	3 yrs	4 yrs	5 yrs	Start (2019-06-30)
A1327	3.19%	4.25%	-3.25%	-3.25%	2.86%	-	-	-	2.45%
Benchmark Index *	3.06%	3.74%	-4.29%	-4.29%	3.46%	-	-	-	2.77%
Added Value	13	51	104	104	-60	-	-	-	-32
	ANNUAL RETURNS AS OF DECEMBER 31								
	2021	2020	2019	2018	2017	2016	2015	2014	2013
A1327	-3.25%	9.36%	-	-	-	-	-	-	-
Benchmark Index *	-4.29%	11.84%	-	-	-	-	-	-	-
Added Value	104	-248	-	-	-	-	-	-	-

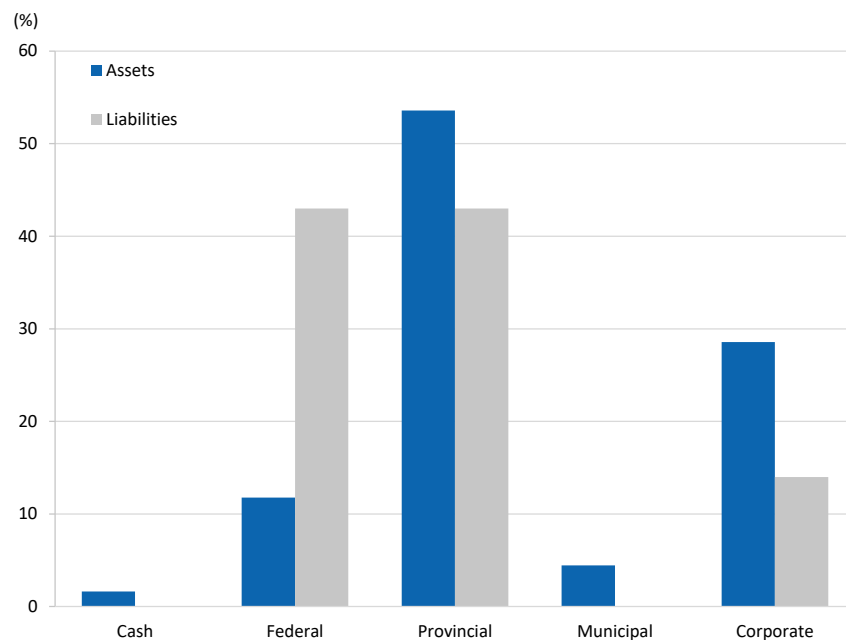
The portfolio's performance returns are calculated using the time-weighted rate of return methodology and represent total returns (including income, realized and non-realized gains and losses). The performance results exclude the portfolio's management and custodian fees. Valuations and rates of returns are computed and stated in the portfolio's base currency.
For the Addenda Pooled Funds, the investment performance is net of the Funds' administrative expenses (custodian, audit, and others). In addition, certain series are net of the Funds' management and performance fees, if applicable.

* Benchmark Index : Toronto Aggregate Liability Benchmark

- The yield curve flattened materially in the period with short maturity yields rising 30-40bps while long maturity yields declined 30-35 bps.
- Outperformance in the quarter was primarily driven by the drop in long yields. This contributed positively to performance as the portfolio is weighted more heavily in long maturities in order to keep aggregate duration in line with the benchmark.
- As at March 23, 2022, the fund had a return of -11.74% vs -11.07% for the index year to date.

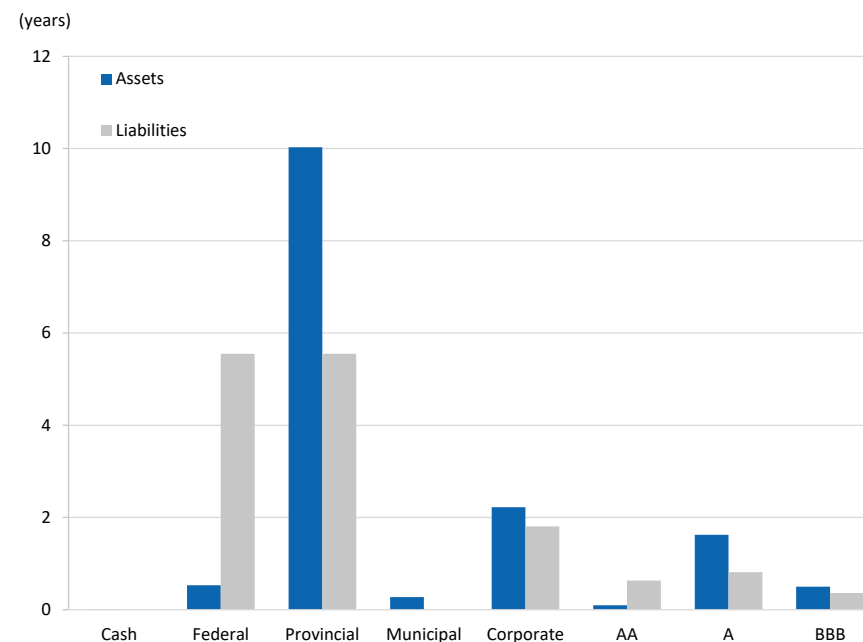
Portfolio Characteristics

Sector Weights



Weights	Assets (%)	Liabilities (%)
Cash	1.62	0.0
Federal	11.76	43.0
Provincial	53.58	43.0
Municipal	4.46	0.0
Corporate	28.58	14.0

Sector Duration Contribution



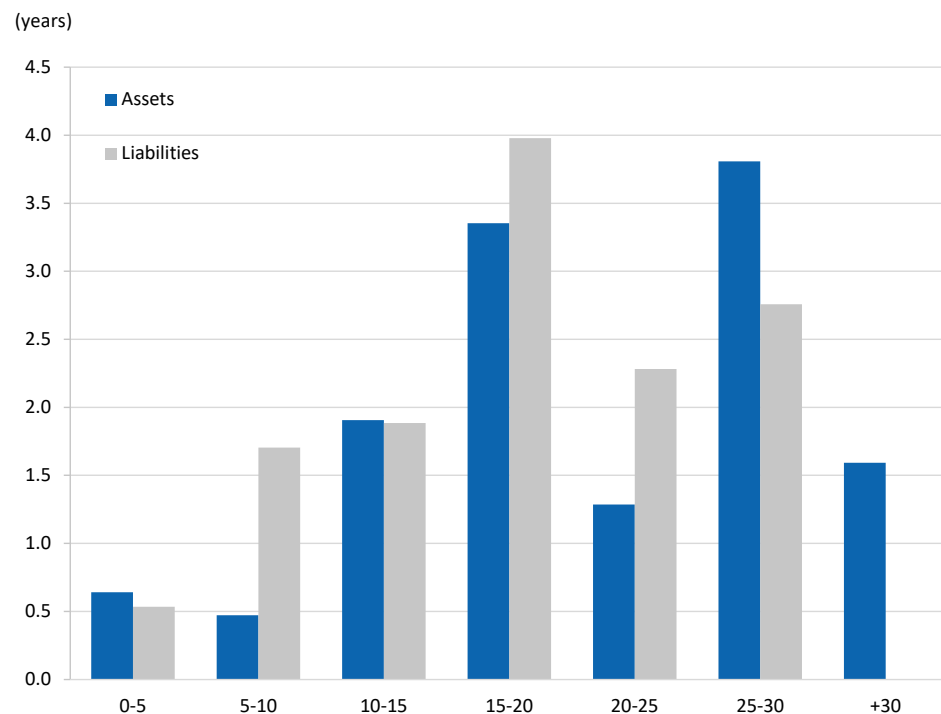
Duration Contribution	Assets	Liabilities
Cash	0.00	0.00
Federal	0.53	5.55
Provincial	10.03	5.55
Municipal	0.28	0.00
Corporate	2.22	1.81
AA	0.10	0.63
A	1.62	0.81
BBB	0.50	0.36
Total	13.06	12.91

As at March 18, 2022

Source: Addenda Capital

Risk Characteristics

Key Rate Durations



Risk Summary	Assets	Liabilities
Duration (years)	13.06	13.14
Convexity	305.0	241.7
Average Term (years)	14.4	13.2
Average Yield (%)	3.23	0.00
Internal Rate of Return (%)		2.17

Key Rate Durations	Assets	Liabilities
0-5	0.64	0.53
5-10	0.47	1.70
10-15	1.91	1.89
15-20	3.35	3.98
20-25	1.29	2.28
25-30	3.81	2.76
+30	1.59	0.00

As at March 18, 2022

Source: Addenda Capital

Portfolio Activity Summary

- Funded \$246.0 M of principal repayments in the second half of 2021 (\$76M July, \$170M Dec).
- \$90M of sinking fund contributions were allocated in the second half of 2021 which were incorporated into the risk management as they occurred a few weeks in advance of the July withdrawal.
- Both repayments resulted in both asset and liability duration extensions due to the removal of short maturities. Due to weighting differences of the short exposures, asset duration increased more and required some reduction to align with the liabilities.
- Corporate credit duration contribution increased as a result of the reduction in portfolio size due to withdrawals, as well as the addition of new infrastructure and university bond issues.
- Five new liabilities totaling \$337M of notional amount were added to the benchmark in 2021.
- Post maturity and new issue adjustments liability duration measured 13.98 at YE 2021, an increase of 0.53 from 2020.
- The portfolio composition is entirely domestic fixed income and has no direct exposure to Russia

Upcoming

- There are no scheduled repayments from any sinking funds during 2022.

Impact Positioning

Impact Investments Exposure in the Portfolio

Impact Themes and Categories	Market Value (\$M)	Weight (%)
Climate Change	109.8	21.3
Renewable Energy	103.6	20.1
Clean Transportation	6.2	1.2
Community Development	4.3	0.8
Development Finance	2.3	0.4
Credit Unions and Financial Services Co-operatives	2.0	0.4
Health and Wellness	3.2	0.6
Hospitals	3.2	0.6
Education	2.7	0.5
Universities	2.7	0.5
Total	120.0	23.2

As at March 18, 2022



Market Outlook

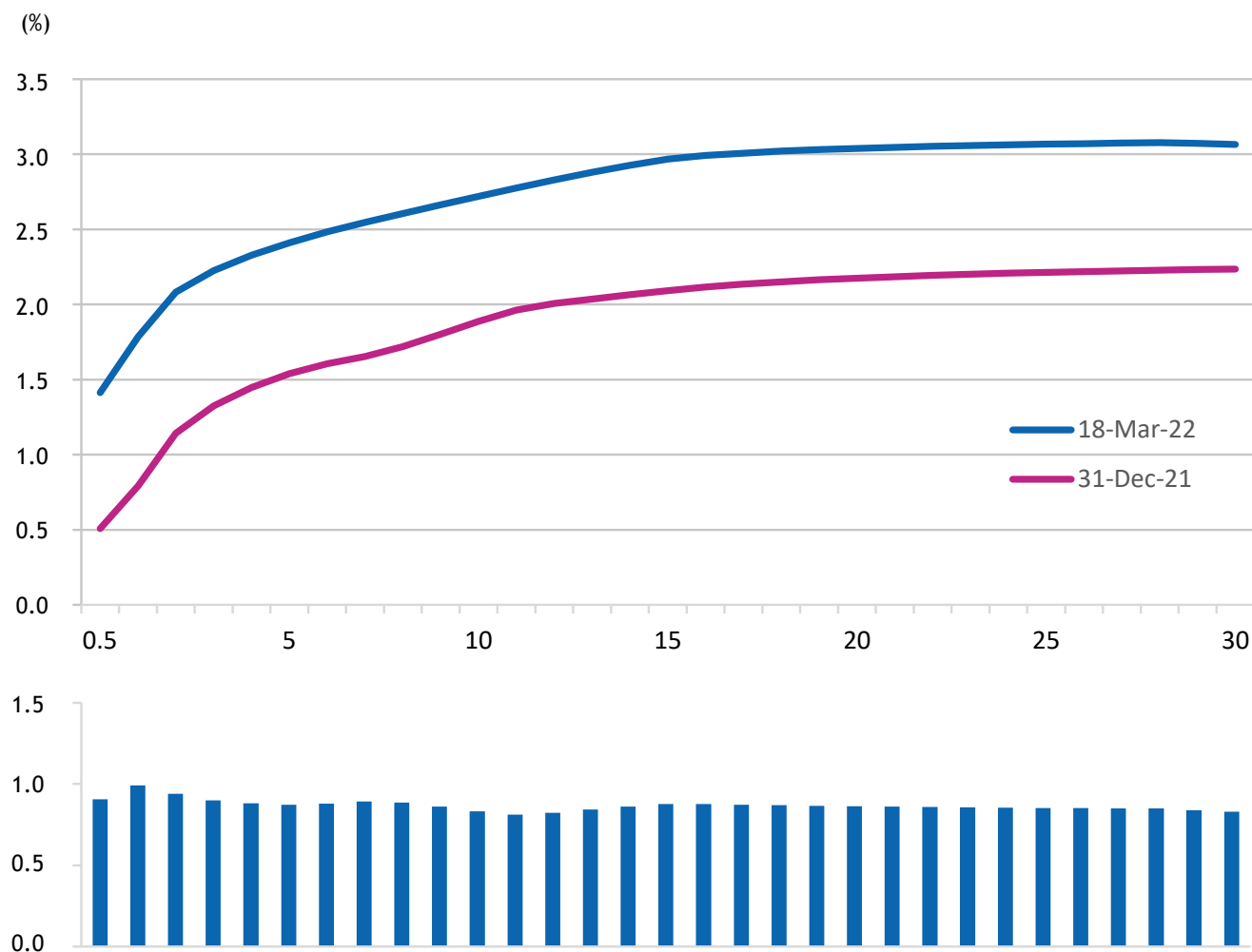
2022 Outlook and Strategy

- Central Banks are battling a difficult inflation dynamic driven primarily from persistent supply chain disruptions due to pandemic issues and now geopolitical conflicts.
- Interest rates will remain volatile as central banks transition to a tighter monetary policy throughout this year.
- Against this backdrop aggregate demand risks slowing as fiscal stimulus measures end, rising energy costs erode disposable incomes, and consumer and business sentiment declines
- Potential for the yield curve to flatten further as central banks tighten policy and inflation and growth decelerate.
- Continue to align the portfolio interest rate risk closely to the liabilities and use future sinking fund contributions to take advantage of higher yields.
- Remain cautiously constructive on corporate credit based on recent improvements in valuations but being conscious of the risks to the growth backdrop.

Source: Addenda Capital

Appendix

Liability Discount Curve*



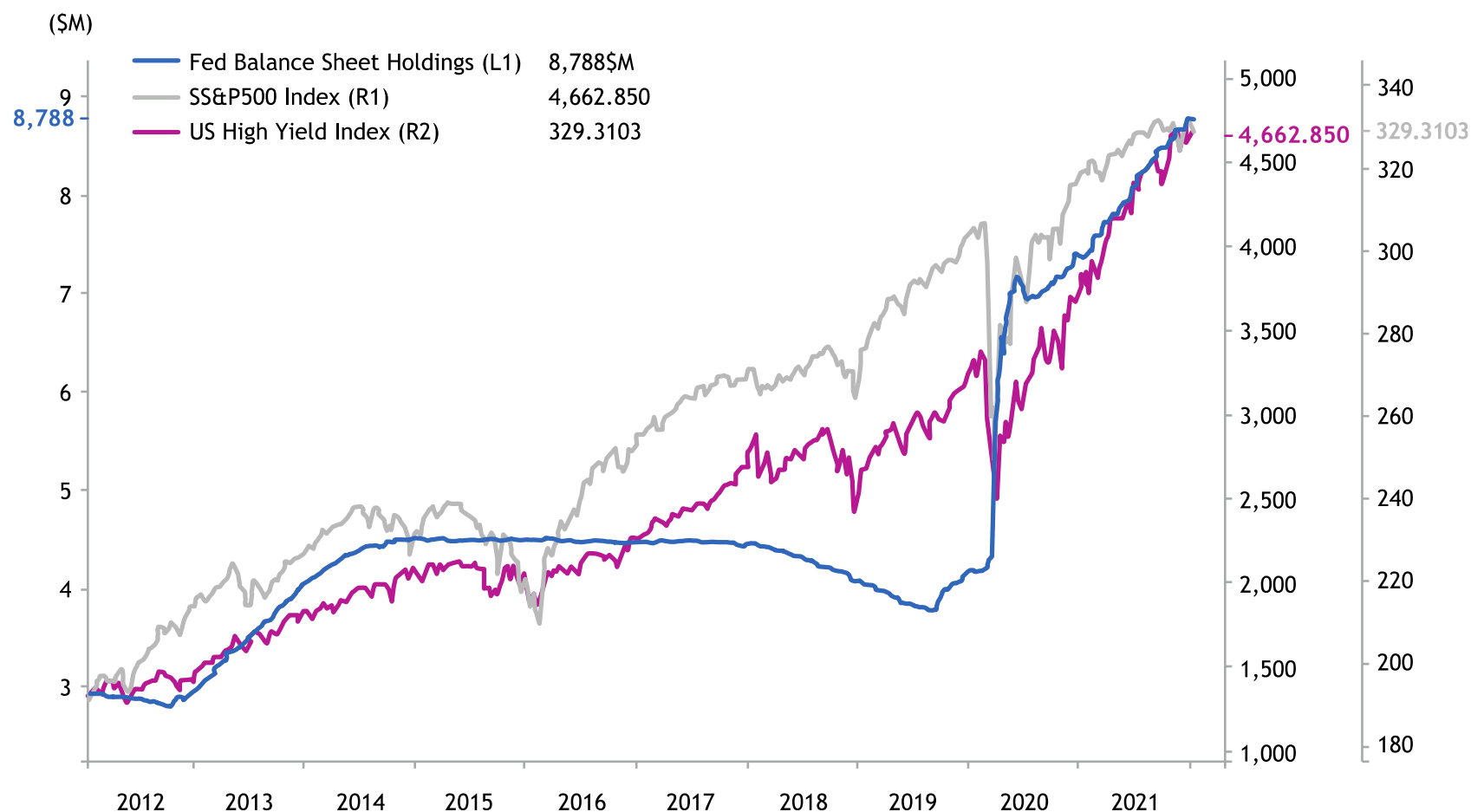
As at March 18, 2022

*Discount Curve Composition 43% Federal, 43% Provincial, 14% Corporate

Source: Addenda Capital

Fed QE and Risky Asset Performance

Fed Balance Sheet relative to S&P500 and US High Yield indices



As at January 17, 2022

Sources: Bloomberg, Addenda Capital

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FTSE Canada

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Unless otherwise specified, assets are presented in Canadian dollars.

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