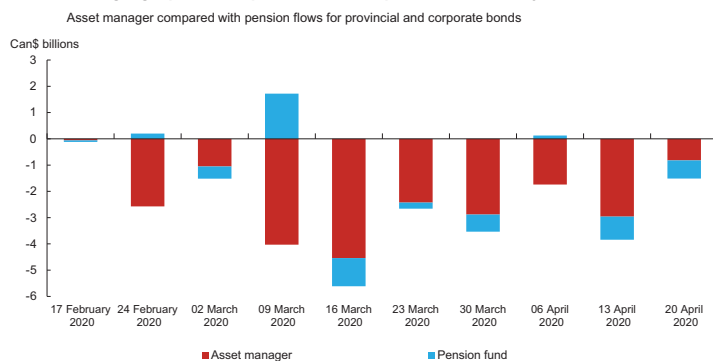


heightened uncertainties about macroeconomic factors and how long the liquidity stress would last. Findings from the interviews also suggest that the rapidity and magnitude of central bank interventions meant that opportunities to take advantage of depressed prices were short lived.

Overall, our findings suggest that the Big Eight took actions to build precautionary liquidity when they faced volatile market conditions and a high degree of uncertainty. They had the capacity to redeploy funds into risky assets and in support of market liquidity. However, they generally deemed that extra prudence was necessary to manage risk on behalf of their sponsors and clients.

**Chart 8: The Big Eight purchased provincial and corporate bonds in early March 2020**



Note: The Big Eight are the Canada Pension Plan Investment Board, Caisse de dépôt et placement du Québec, the Ontario Teachers' Pension Plan, the British Columbia Investment Management Corporation, the Public Sector Pension Investment Board, the Alberta Investment Management Corporation, the Ontario Municipal Employees Retirement System and the Healthcare of Ontario Pension Plan.

Source: Market Trade Reporting System 2.0

Last observation: April 20, 2020

## Conclusion

The crisis in March 2020 was an unprecedented macroeconomic shock. But it is also an opportunity:

- for policy-makers to understand the actions of market participants during a crisis
- for market participants to reflect on their risk frameworks and underlying assumptions about market liquidity

By better understanding how market participants react in crisis times, the Bank can improve its analysis of market functioning and potential financial system vulnerabilities. This can, in turn, inform future enhancements to central bank facilities for mitigating market-wide stress. To this end, the Bank has frequent and productive dialogue with the Big Eight. The data they provided

**DBRS Corporate Debt Ratings, by Rating**

<b>DBRS Rating</b>	<b>Issuer</b>	<b>Description</b>	<b>Last Update</b>
B high	Shawcor Ltd	Senior Unsecured Notes	Dec 1, 2021
B	Crew Energy Inc	Senior Unsecured Notes	Apr 12, 2022
B	Doman Bldg Materials Grp	Senior Unsecured Notes	Apr 29, 2021
CCC high	Sherritt Intl Corp	Senior Second Lien Notes	Dec 1, 2021
CCC	Source Energy Svcs Cda LP	Senior Secured First Lien Notes	Jan 27, 2022

Lead Underwriter(s): KGI Securities

**Zero Coupon Medium Term Notes, due Oct. 26, 2046**

Issued: US\$200,000,000 Oct 26, 2016  
 O/S: US\$200,000,000 Jan 31, 2022  
 Interest: Z.R.

**Redemption:** Redeem. on the following dates on min. 5 days' notice as follows:

Oct 26, 2019.....	US\$111.193	Oct 26, 2020.....	US\$115.196
Oct 26, 2021.....	US\$119.344	Oct 26, 2022.....	US\$123.64
Oct 26, 2023.....	US\$128.091	Oct 26, 2024.....	US\$132.702
Oct 26, 2025.....	US\$137.479	Oct 26, 2026.....	US\$142.429
Oct 26, 2027.....	US\$147.556	Oct 26, 2028.....	US\$152.868
Oct 26, 2029.....	US\$158.371	Oct 26, 2030.....	US\$164.073
Oct 26, 2031.....	US\$169.979	Oct 26, 2032.....	US\$176.099
Oct 26, 2033.....	US\$182.438	Oct 26, 2034.....	US\$189.006
Oct 26, 2035.....	US\$195.81	Oct 26, 2036.....	US\$202.859
Oct 26, 2037.....	US\$210.162	Oct 26, 2038.....	US\$217.728
Oct 26, 2039.....	US\$225.566	Oct 26, 2040.....	US\$233.687
Oct 26, 2041.....	US\$242.099	Oct 26, 2042.....	US\$250.815
Oct 26, 2043.....	US\$259.844	Oct 26, 2044.....	US\$269.199
Oct 26, 2045.....	US\$278.89	Oct 26, 2046.....	US\$288.93

Redeem. in whole only.

Lead Underwriter(s): KGI Securities

**Zero Coupon Notes, due Dec. 1, 2046**

Issued: US\$332,000,000 Dec 1, 2016  
 O/S: US\$332,000,000 Jan 31, 2022  
 Interest: Z.R.

**Redemption:** Redeem. on the following dates on min. 5 days' notice as follows:

Dec 1, 2019.....	US\$112.454	Dec 1, 2020.....	US\$116.941
Dec 1, 2021.....	US\$121.607	Dec 1, 2022.....	US\$126.459
Dec 1, 2023.....	US\$131.505	Dec 1, 2024.....	US\$136.752
Dec 1, 2025.....	US\$142.208	Dec 1, 2026.....	US\$147.882
Dec 1, 2027.....	US\$153.783	Dec 1, 2028.....	US\$159.919
Dec 1, 2029.....	US\$166.299	Dec 1, 2030.....	US\$172.935
Dec 1, 2031.....	US\$179.835	Dec 1, 2032.....	US\$187.01
Dec 1, 2033.....	US\$194.472	Dec 1, 2034.....	US\$202.231
Dec 1, 2035.....	US\$210.30	Dec 1, 2036.....	US\$218.691
Dec 1, 2037.....	US\$227.417	Dec 1, 2038.....	US\$236.491
Dec 1, 2039.....	US\$246.927	Dec 1, 2040.....	US\$255.74
Dec 1, 2041.....	US\$264.944	Dec 1, 2042.....	US\$276.555
Dec 1, 2043.....	US\$287.589	Dec 1, 2044.....	US\$299.064
Dec 1, 2045.....	US\$310.997	Dec 1, 2046.....	US\$323.405

Redeem. in whole only.

Lead Underwriter(s): Yuanta Securities Co., Ltd.

**Zero Coupon Medium Term Notes, due Sept. 28, 2047**

Issued: US\$60,000,000 Sep 28, 2017  
 O/S: US\$60,000,000 Jan 31, 2022  
 Interest: Z.R.

**Redemption:** Redeem. at any time on min. 15 and max. 60 days' notice at the greater of U.S. Treasury Yield + 0.1% and par.

**Change of Control:** Upon a Change of Control Triggering Event (the occurrence of both a Change of Control, involving the acquisition of more than 50% of BCE Inc. voting shares, and a Rating Event), the company will be required to make an offer to repurchase all, or any part, of each holder's notes in cash equal to 101% of the aggregate principal amount of notes repurchased plus accrued and unpaid interest on the notes repurchased up to but excluding the date of purchase.

**Guarantor:** BCE Inc.

**Lead Underwriter(s):** Barclays Capital Inc., BMO Capital Markets Corp., BofA Securities, Inc., Citigroup Global Markets Inc., RBC Capital Markets, LLC

**Trustee:** The Bank of New York Mellon

**CUSIP:** 0778FPAC3

**2.75% Debentures, Series M-49, due Jan. 29, 2025**

<b>DBRS Rating:</b>	BBB high	Mar 8, 2022
Issued:	\$600,000,000	May 13, 2019
O/S:	\$600,000,000	Dec 31, 2021
Interest:	2.75 % (S)	Jan 29/Jul 29

**Redemption:** Redeem. on and after Dec 29, 2024 on min. 30 and max. 60 days' notice at par. Prior to Dec. 29, 2024, redeem at any time on min. 30 and max. 60 days' notice at the greater of Canada Yield Price (Canada Yield + 0.29%) and par.

**Change of Control:** Upon a Change of Control Triggering Event (the occurrence of both a Change of Control, involving the acquisition of more than 50% of BCE Inc. voting shares, and a Rating Event), the company will be required to make an offer to repurchase all, or any part, of each holder's debentures in cash equal to 101% of the aggregate principal amount of debentures repurchased plus accrued and unpaid interest on the debentures repurchased up to but excluding the date of purchase.

**Guarantor:** BCE Inc.

**Lead Underwriter(s):** CIBC World Markets Inc., Merrill Lynch Canada Inc., RBC Capital Markets, Scotia Capital Inc.

**Trustee:** CIBC Mellon Trust Company

**CUSIP:** 07813ZCB8

**3.35% Debentures, Series M-47, due Mar. 12, 2025**

<b>DBRS Rating:</b>	BBB high	Mar 8, 2022
Issued:	\$1,500,000,000	Mar 12, 2018
O/S:	\$1,500,000,000	Dec 31, 2021
Interest:	3.35 % (S)	Mar 12/Sep 12

**Redemption:** Redeem. on and after Jan 12, 2025 on min. 30 and max. 60 days' notice at par. Prior to Jan. 12, 2025, redeem at any time on min. 30 and max. 60 days' notice at the greater of Canada Yield Price (Canada Yield + 0.30%) and par.

**Change of Control:** Upon a Change of Control Triggering Event (the occurrence of both a Change of Control, involving the acquisition of more than 50% of BCE Inc. voting shares, and a Rating Event), the company will be required to make an offer to repurchase all, or any part, of each holder's debentures in cash equal to 101% of the aggregate principal amount of debentures repurchased plus accrued and unpaid interest on the debentures repurchased up to but excluding the date of purchase.

**Guarantor:** BCE Inc.

**Lead Underwriter(s):** CIBC World Markets Inc., Merrill Lynch Canada Inc., RBC Capital Markets, Scotia Capital Inc.

**Trustee:** CIBC Mellon Trust Company

**CUSIP:** 07813ZBZ6

**3.55% Debentures, Series M-41, due Mar. 2, 2026**

<b>DBRS Rating:</b>	BBB high	Mar 8, 2022
Issued:	\$750,000,000	Feb 29, 2016
O/S:	\$750,000,000	Dec 31, 2021
Interest:	3.55 % (S)	Mar 2/Sep 2

**Redemption:** Redeem. on and after Dec 2, 2025 on min. 30 and max. 60 days' notice at par. Prior to Dec. 2, 2025, redeem. at any time on min. 30 and max. 60 days' notice at the greater of Canada Yield Price (Canada Yield + 0.605%) and par.

**Change of Control:** Upon a Change of Control Triggering Event (the occurrence of both a Change of Control, involving the acquisition of more than 50% of BCE Inc. voting shares, and a Rating Event), the company will be required to make an offer to repurchase all, or any part, of each holder's debentures in cash equal to 101% of

**4.5% Senior Notes, due June 10, 2044**

<b>DBRS Rating:</b>	BBB high	Jul 22, 2021
Issued:	US\$500,000,000	Jun 4, 2014
O/S:	US\$500,000,000	Dec 31, 2021
Interest:	4.50 % (S)	Jun 10/Dec 10

**Redemption:** Redeem. on and after Dec 10, 2043 on min. 30 and max. 60 days' notice at par, conditional on tax changes. Prior to Dec. 10, 2043, redeem. at any time on min. 30 and max. 60 days' notice at the greater of U.S. Treasury Yield + 0.20% and par. Redeem. at any time at par, conditional on tax changes.

**Guarantor:** Guaranteed by Spectra Energy Partners, LP and Enbridge Energy Partners, L.P.

**Lead Underwriter(s):** Citigroup Global Markets Inc., Deutsche Bank Securities Inc., HSBC Securities (USA) Inc., DnB NOR Markets, Inc., BNP Paribas Securities Corp., MUFJ Securities Americas Inc., Mizuho Securities USA Inc., Wells Fargo Securities, LLC

**Trustee:** Deutsche Bank Trust Company Americas

**Paying Agent:** Deutsche Bank Trust Company Americas

**CUSIP:** 29250NAJ4

**4.87% Medium Term Notes, due Nov. 21, 2044**

<b>DBRS Rating:</b>	BBB high	Jul 22, 2021
Issued:	\$250,000,000	Dec 21, 2018
O/S:	\$250,000,000	Dec 31, 2021
Interest:	4.87 % (S)	May 21/Nov 21

**Redemption:** Redeem. on and after May 21, 2044 on min. 30 and max. 60 days' notice at par. Redeem. at any time prior to May 21, 2044 on min. 30 and max. 60 days' notice at the greater of Canada Yield Price (Canada Yield + 0.565%) and par.

**Note:** Issued upon exchange of Enbridge Income Fund 4.87% Medium Term Notes, Series 13, due Nov. 21, 2044.

**Trustee:** Computershare Trust Company of Canada Inc.

**Paying Agent:** Computershare Trust Company of Canada Inc.

**CUSIP:** 29251ZBF7

**5.5% Senior Notes, due Dec. 1, 2046**

<b>DBRS Rating:</b>	BBB high	Jul 22, 2021
Issued:	US\$750,000,000	Nov 29, 2016
O/S:	US\$750,000,000	Dec 31, 2021
Interest:	5.50 % (S)	Jun 1/Dec 1

**Redemption:** Redeem. on and after Jun 1, 2046 on min. 30 and max. 60 days' notice at par, conditional on tax changes. Prior to June 1, 2046, redeem. at any time on min. 30 and max. 60 days' notice at the greater of U.S. Treasury Yield + 0.40% and par. Redeem. at any time at par, conditional on tax changes.

**Guarantor:** Guaranteed by Spectra Energy Partners, LP and Enbridge Energy Partners, L.P.

**Lead Underwriter(s):** Barclays Capital Inc., Deutsche Bank Securities Inc., Mizuho Securities USA Inc., MUFJ Securities Americas Inc., BNP Paribas Securities Corp., SMBC Nikko Securities America, Inc.

**Trustee:** Deutsche Bank Trust Company Americas

**Paying Agent:** Deutsche Bank Trust Company Americas

**CUSIP:** 29250NAM7

**4% Senior Notes, due Nov. 15, 2049**

Issued:	US\$500,000,000	Nov 15, 2019
O/S:	US\$500,000,000	Dec 31, 2021
Interest:	4.00 % (S)	May 15/Nov 15

**Redemption:** Redeem. on and after May 15, 2049 on min. 10 and max. 60 days' notice at par. Redeem. at any time prior to May 15, 2049 on min. 10 and max. 60 days' notice at the greater of U.S. Treasury Yield + 0.30% and par.

**Guarantor:** Guaranteed by Spectra Energy Partners, LP and Enbridge Energy Partners, L.P.

**Lead Underwriter(s):** Barclays Capital Inc., Credit Suisse Securities (USA) LLC, Deutsche Bank Securities Inc., SMBC Nikko Securities America, Inc., Credit Agricole Securities (USA) Inc., Mizuho Securities USA Inc., Wells Fargo Securities, LLC

**Trustee:** Deutsche Bank Trust Company Americas

**Paying Agent:** Deutsche Bank Trust Company Americas

**CUSIP:** 29250NBA2

## McCain Finance (Canada) Limited

### 3.868% Senior Notes, Series E, due Feb. 7, 2023

<b>DBRS Rating:</b>	A low	Jun 11, 2021
Issued:	\$90,000,000	Feb 7, 2013
O/S:	\$90,000,000	Dec 31, 2021
Interest:	3.868 % (S)	Jan 7/Aug 7

#### Private Placement

**Redemption:** Redeem. at any time at the greater of Canada Yield Price (Canada Yield + 0.5%) and par.

**Guarantor:** McCain Foods Limited

**Lead Underwriter(s):** Scotia Capital Inc.

**CUSIP:** 579330AD3

### 4.565% Senior Notes, Series F, due Feb. 7, 2033

<b>DBRS Rating:</b>	A low	Jun 11, 2021
Issued:	\$160,000,000	Feb 7, 2013
O/S:	\$160,000,000	Dec 31, 2021
Interest:	4.565 % (S)	Jan 7/Aug 7

#### Private Placement

**Redemption:** Redeem. at any time at the greater of Canada Yield Price (Canada Yield + 0.5%) and par.

**Guarantor:** McCain Foods Limited

**Lead Underwriter(s):** Scotia Capital Inc.

**CUSIP:** 579330AE1

## McGill University

### 2.926% Bonds, Series C, due July 26, 2049

Issued:	\$90,000,000	Jul 26, 2019
O/S:	\$90,000,000	Dec 31, 2021
Interest:	2.926 % (S)	Jan 26/Jul 26

**Redemption:** Redeem. on and after Jan 26, 2049 at par. Redeem. at any time prior to Jan. 26, 2049 at the greater of Canada Yield Price (Canada Yield + 0.30%) and par.

**Lead Underwriter(s):** BMO Capital Markets

**CUSIP:** 78032C8Z7

### 3.975% Bonds, Series B, due Jan. 29, 2056

Issued:	\$160,000,000	Jan 29, 2016
O/S:	\$160,000,000	Dec 31, 2021
Interest:	3.975 % (S)	Jan 29/Jul 29

#### Private Placement

**Redemption:** Redeem. on and after Jul 29, 2055 at par. Redeem. at any time prior to July 29, 2055 at the greater of Canada Yield Price (Canada Yield + 0.475%) and par.

**Lead Underwriter(s):** RBC Capital Markets, BMO Capital Markets

**Trustee:** BNY Trust Company of Canada

**CUSIP:** 78032C8Y0

## McGill University Health Centre

### 5.36% Senior Debentures, Series A, due Dec. 31, 2043

<b>DBRS Rating:</b>	AA low	Oct 26, 2021
Issued:	\$266,000,000	Jul 14, 2010
O/S:	\$266,000,000	Dec 31, 2021
Interest:	5.36 % (S)	Jun 30/Dec 31

#### Private Placement

**Redemption:** Redeem. at any time at the greater of Canada Yield Price (Canada Yield + 0.4%) and par.

**Lead Underwriter(s):** RBC Capital Markets

**CUSIP:** 580563AA2