



## Liquidity Conditions in Canadian Fixed-Income Markets During the Covid-19 Shock

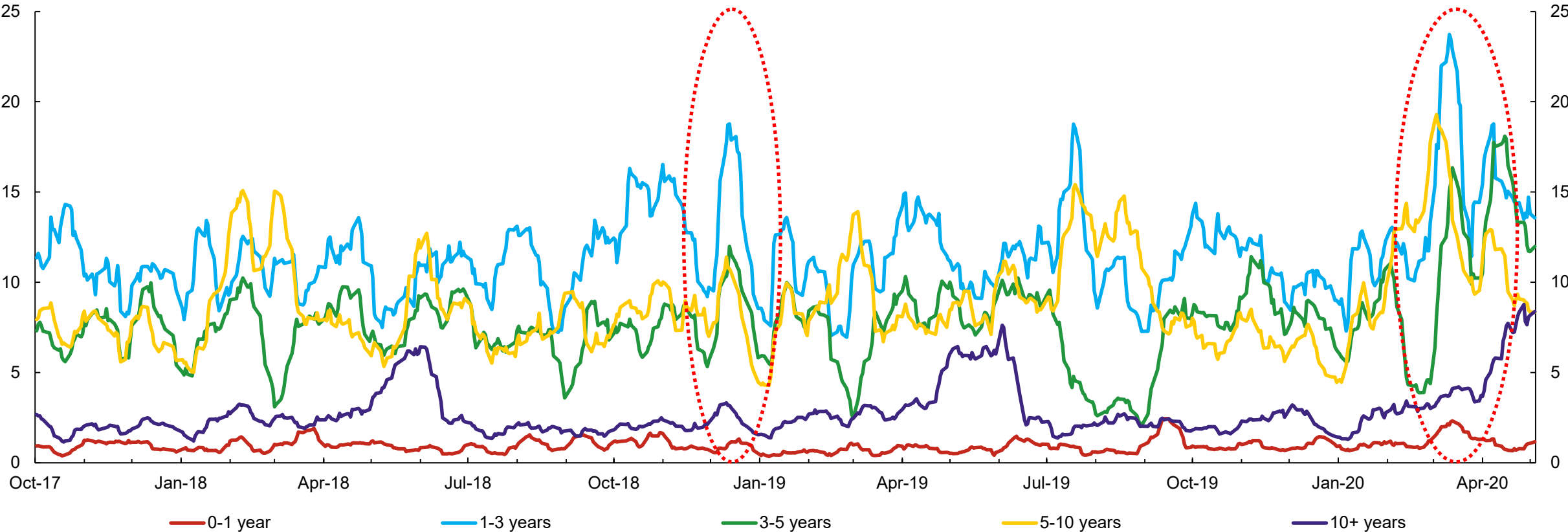
May 13<sup>th</sup>, 2020

# GoC trading volumes increased for all maturities

The rise in trading volumes was most noticeable in shorter dated bonds

10-day moving average, daily data

Trading Volume \$Billions



Sources: MTRS 2.0, Bank of Canada calculations

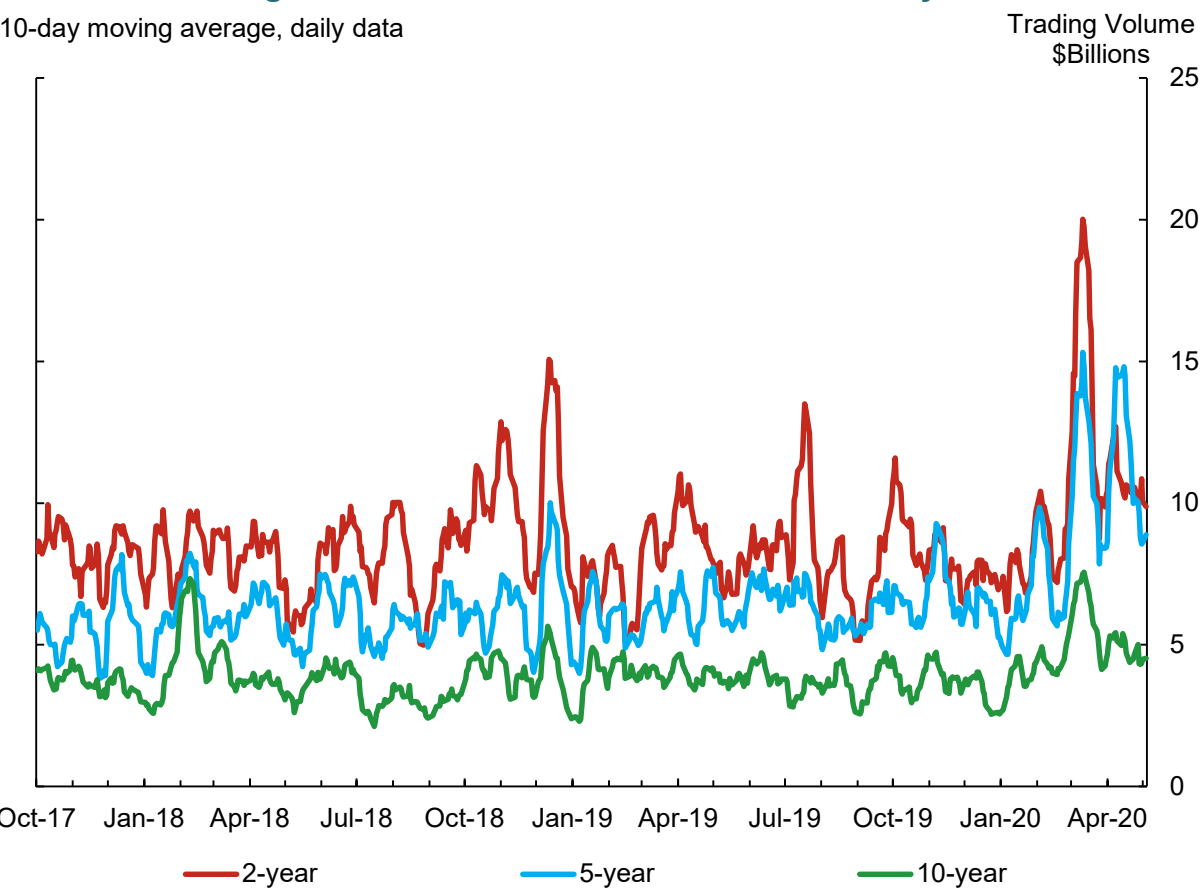
Last observation: May 4, 2020



# Both benchmark & non-benchmark GoC trading volumes rose

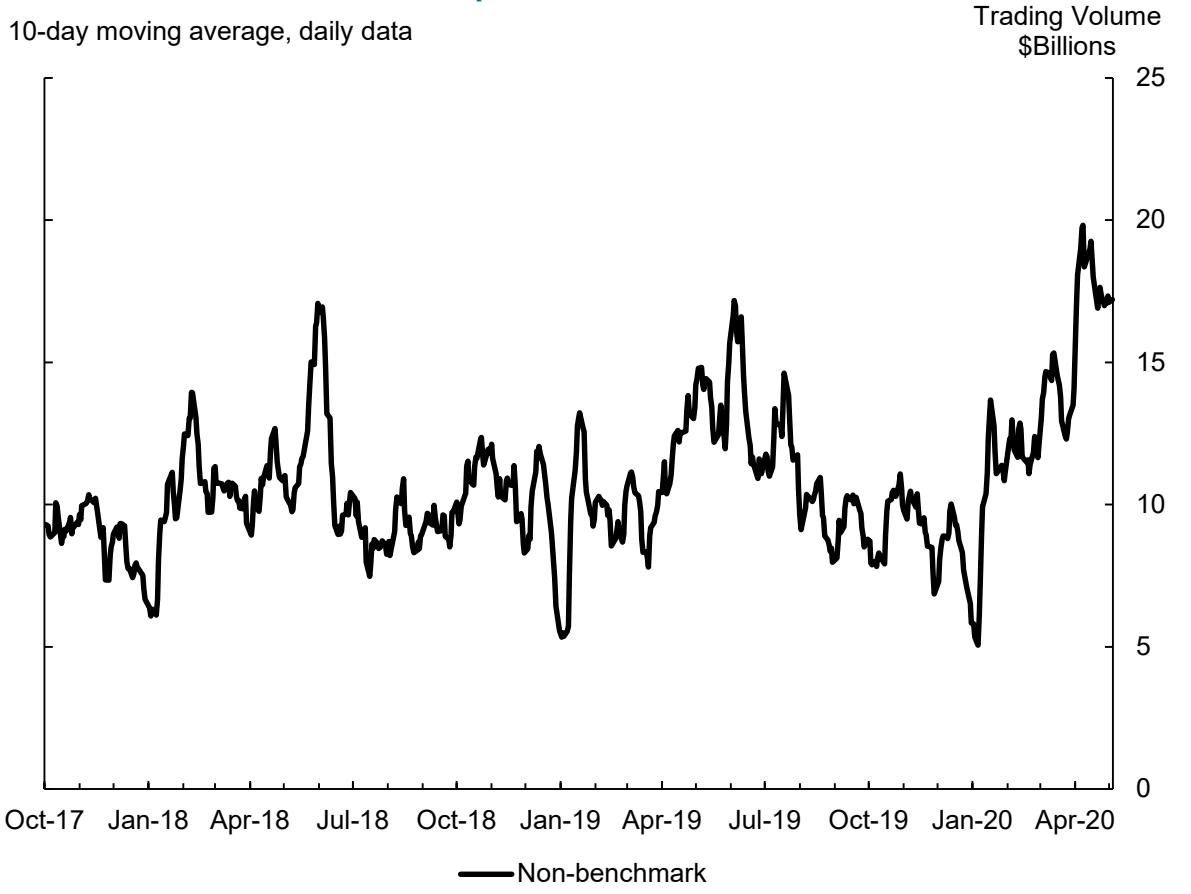
**Increase in trading-volume was most noticeable for 2- and 5-year benchmarks**

10-day moving average, daily data



**Non-benchmark volumes rose past recent records**

10-day moving average, daily data



Sources: MTRS 2.0, Bank of Canada calculations

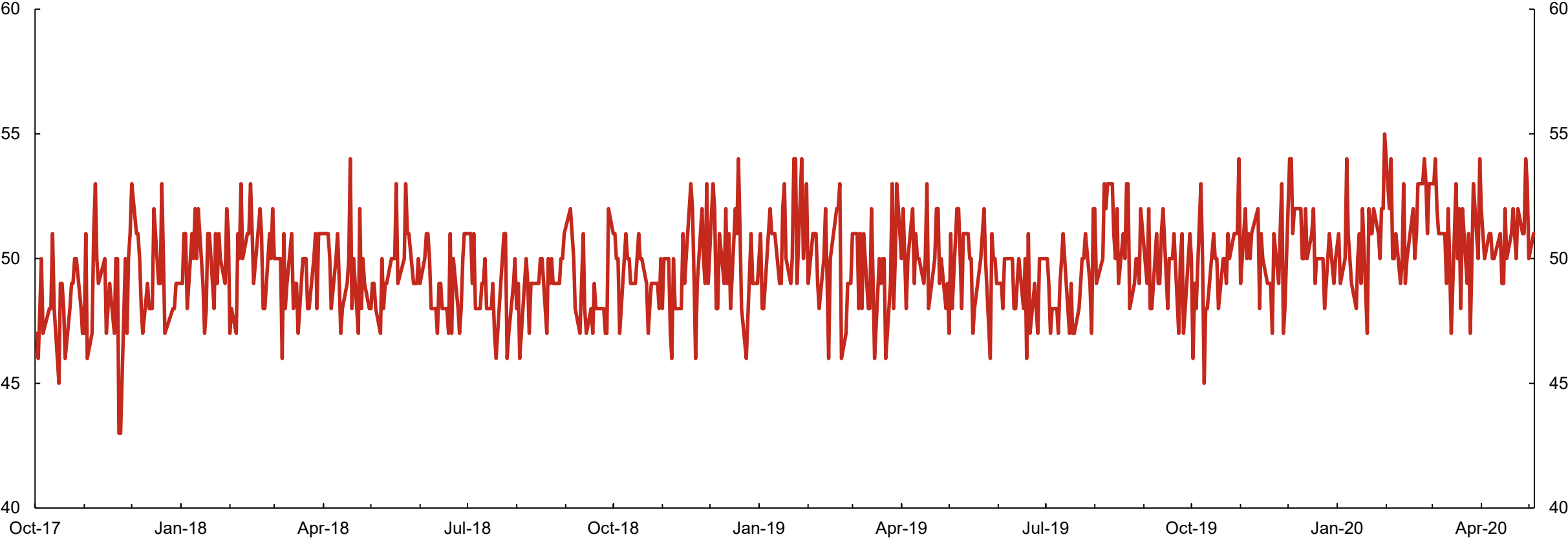
Last observation: May 4, 2020



# The increase in trading volume did not change trading concentration

As trading volumes increased, the count of unique CUSIPs traded each day did not change significantly

Number of unique GoC CUSIPs traded daily



Sources: MTRS 2.0, Bank of Canada calculations

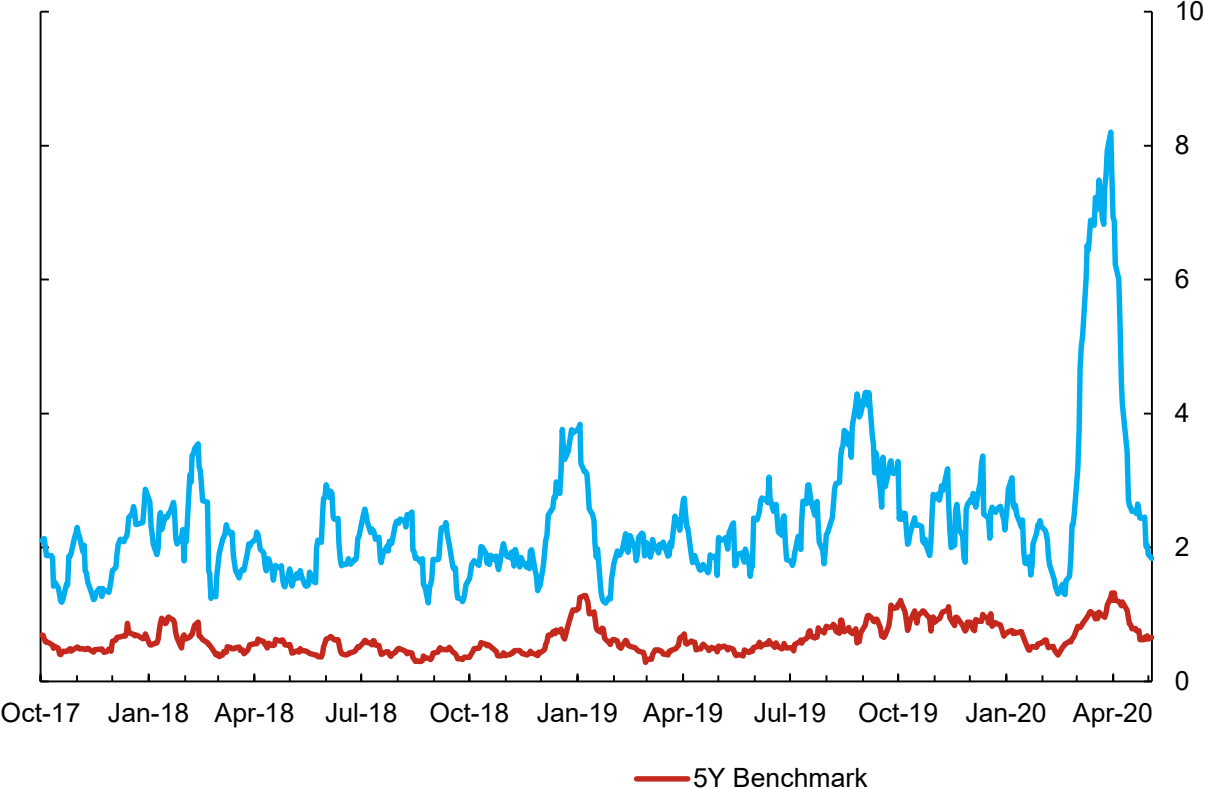
Last observation: May 4, 2020



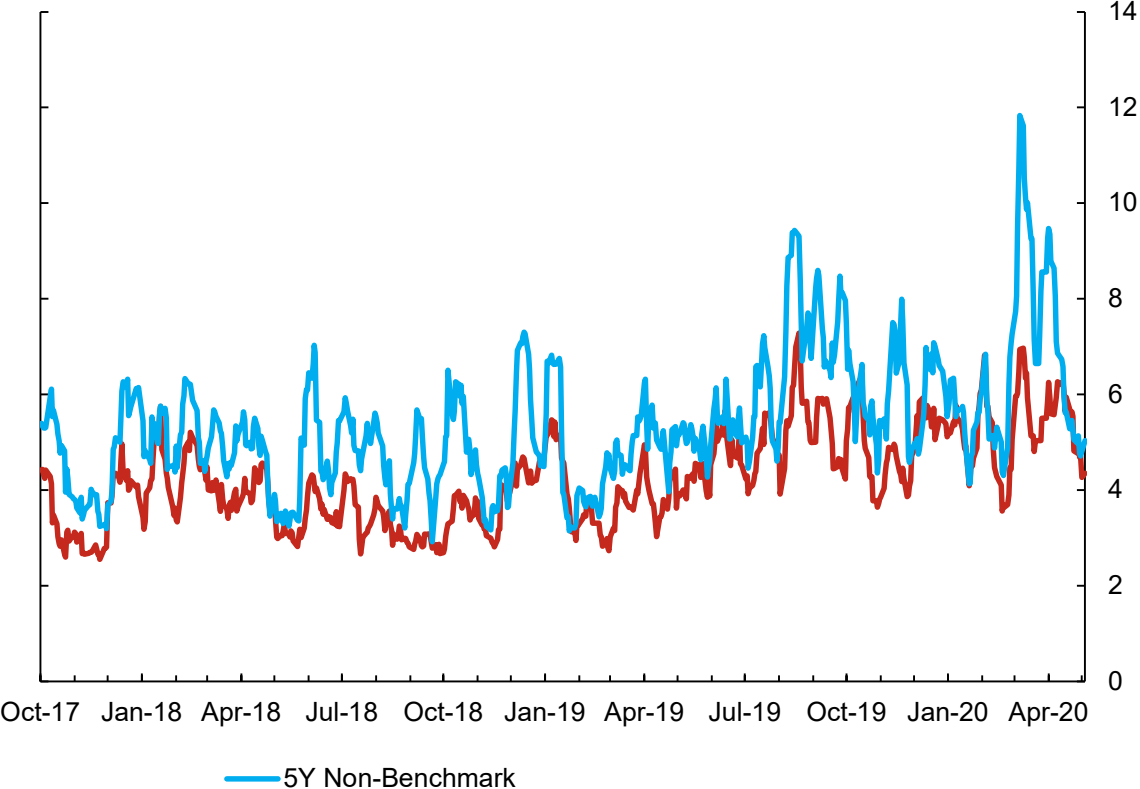
# As GoC trading volumes increased, so did the cost of liquidity

Price-impact and round-trip transaction costs increased for both benchmark and non-benchmark GoCs in March

10-day moving average, daily data



10-day moving average, daily data



Sources: Canadian Depository for Securities, Bank of Canada calculations

Last observation: May 4, 2020

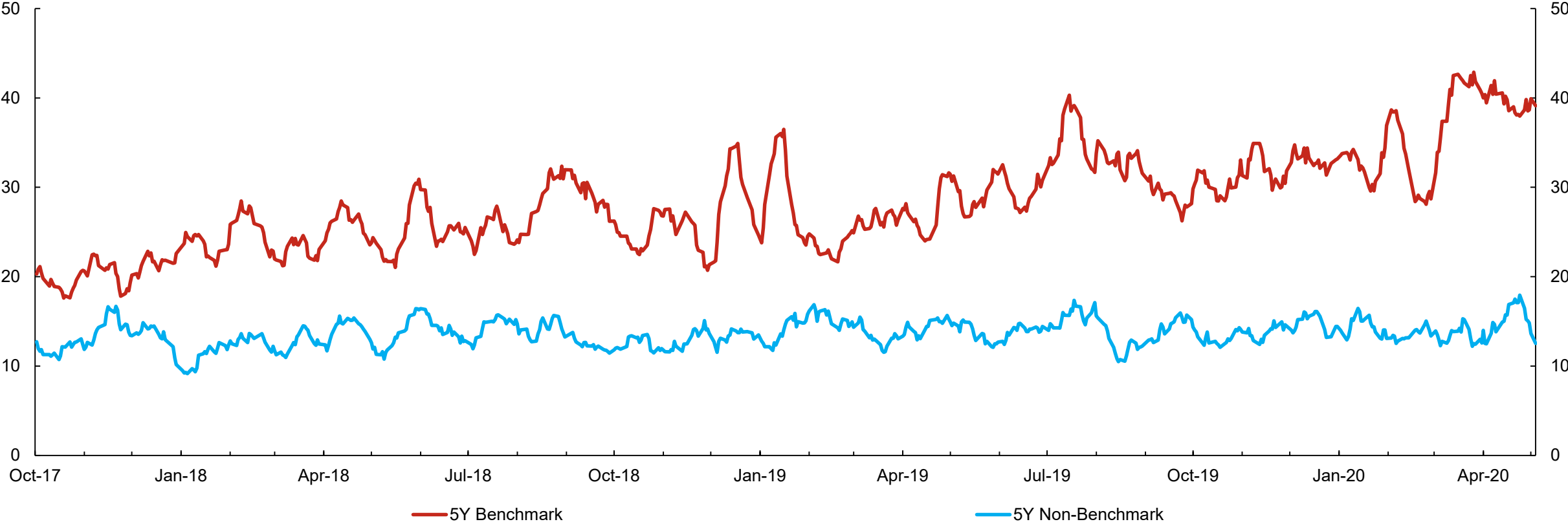


# While GoC market liquidity declined, trade sizes were unaffected

While aggregate market liquidity for GoCs declined, trade-sizes for benchmark and non-benchmark GoCs were within historical estimates

10-day moving average, daily data

Trade Size \$Millions



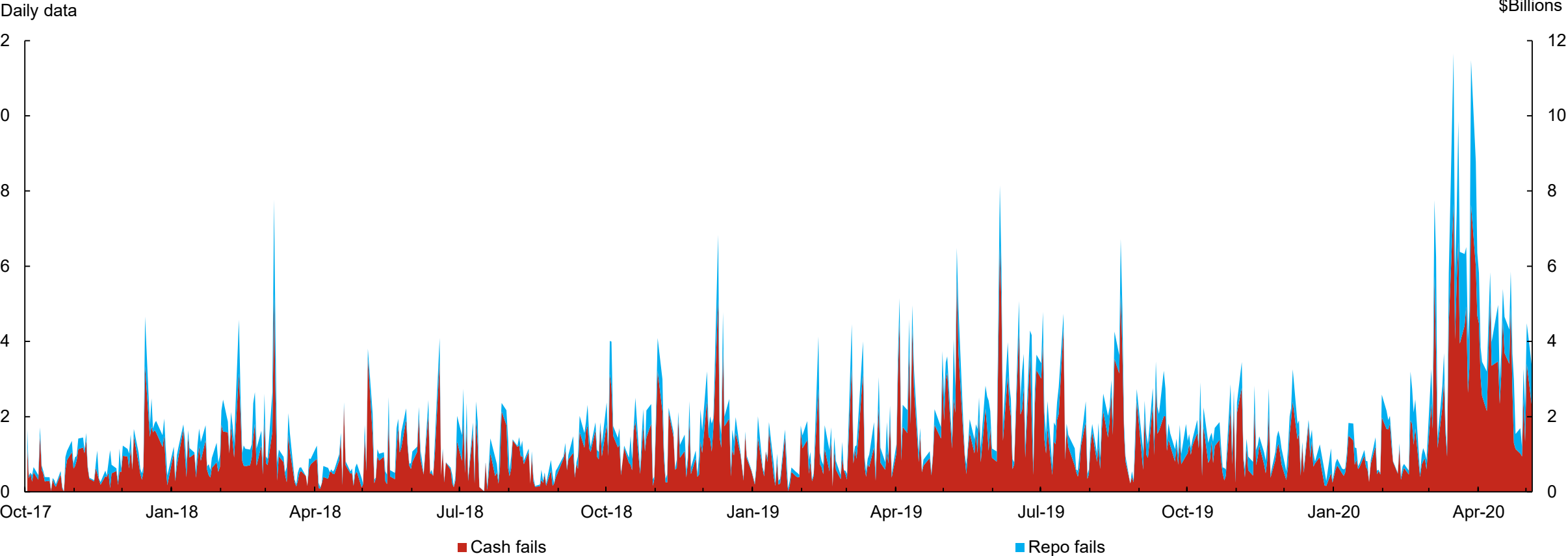
Sources: Canadian Depository for Securities, Bank of Canada calculations

Last observation: May 4, 2020



# Cash and repo fails in GoCs shot up as trading volumes increased

Cash and repo market fails in the aggregate GoC market peaked at a total of ~\$11 Billion



Sources: Canadian Depository for Securities, Bank of Canada calculations

Last observation: May 4, 2020

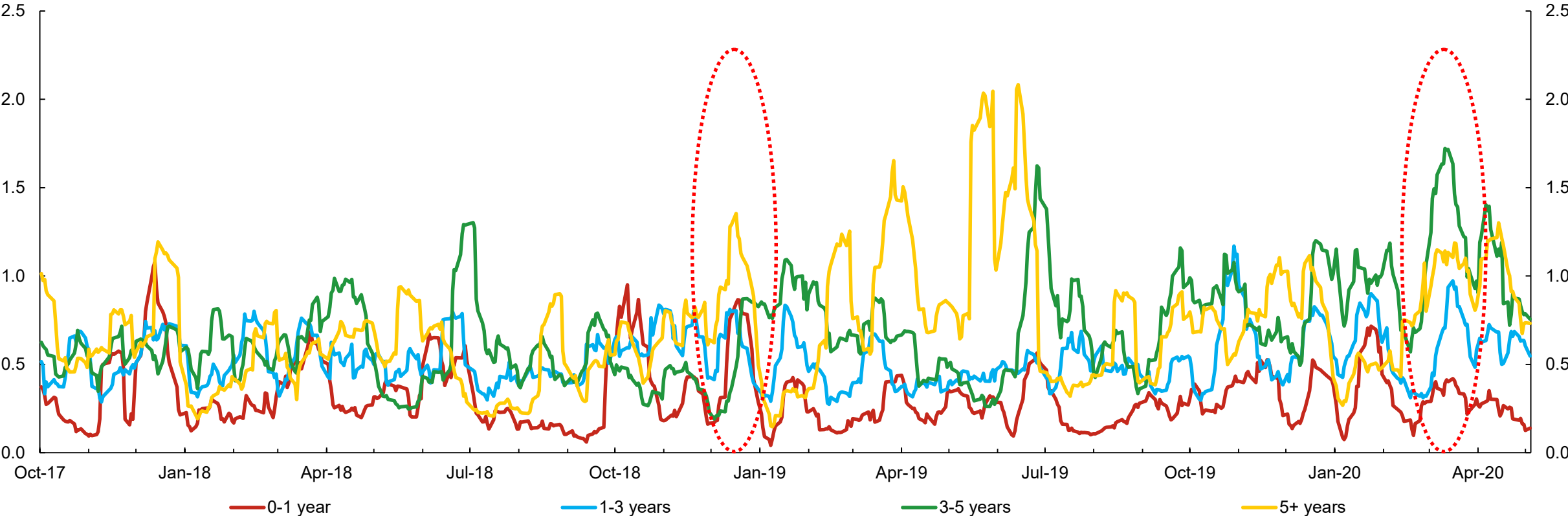


# Similar to GoCs, trading volumes for CMBs increased

Trading volumes for Canada Mortgage Bonds increased with jumps concentrated in the 3-5 years maturity sector

10-day moving average, daily data

Trading Volume \$Billions



Sources: MTRS 2.0, Bank of Canada calculations

Last observation: May 4, 2020

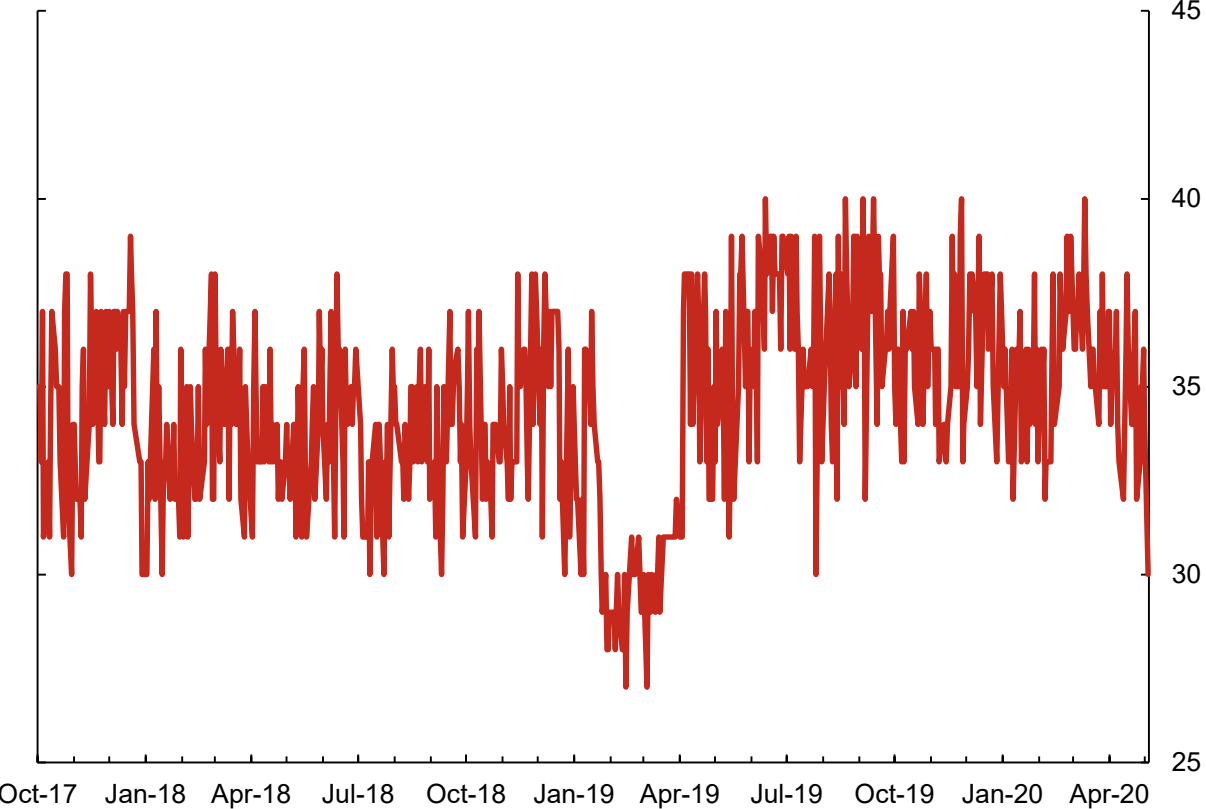




# Changes in trading volumes for CMBs did not alter trade concentrations

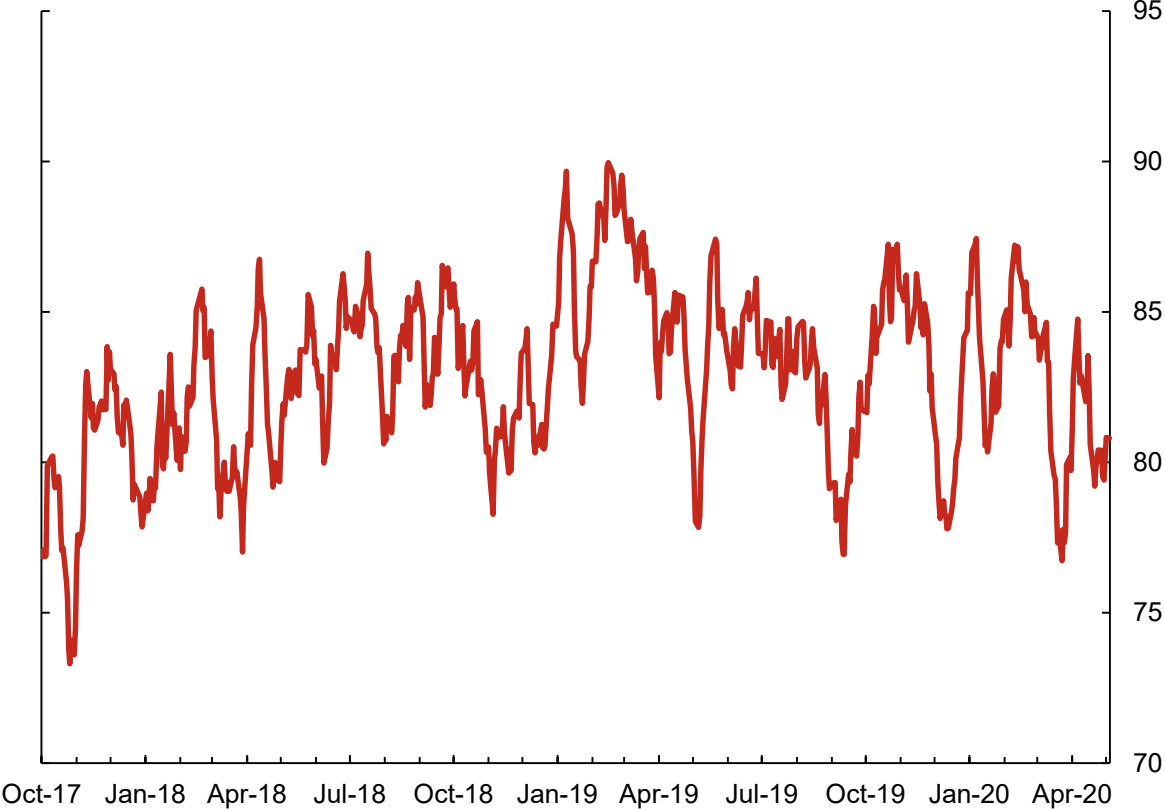
Even as trading volumes increased, the number of unique CUSIPs traded and the volume share of top 10 CMB CUSIPs did not markedly shift

Number of unique CMB CUSIPs traded daily



Top 10 CUSIPs % share of total daily corporate volume

10-day moving average, daily data



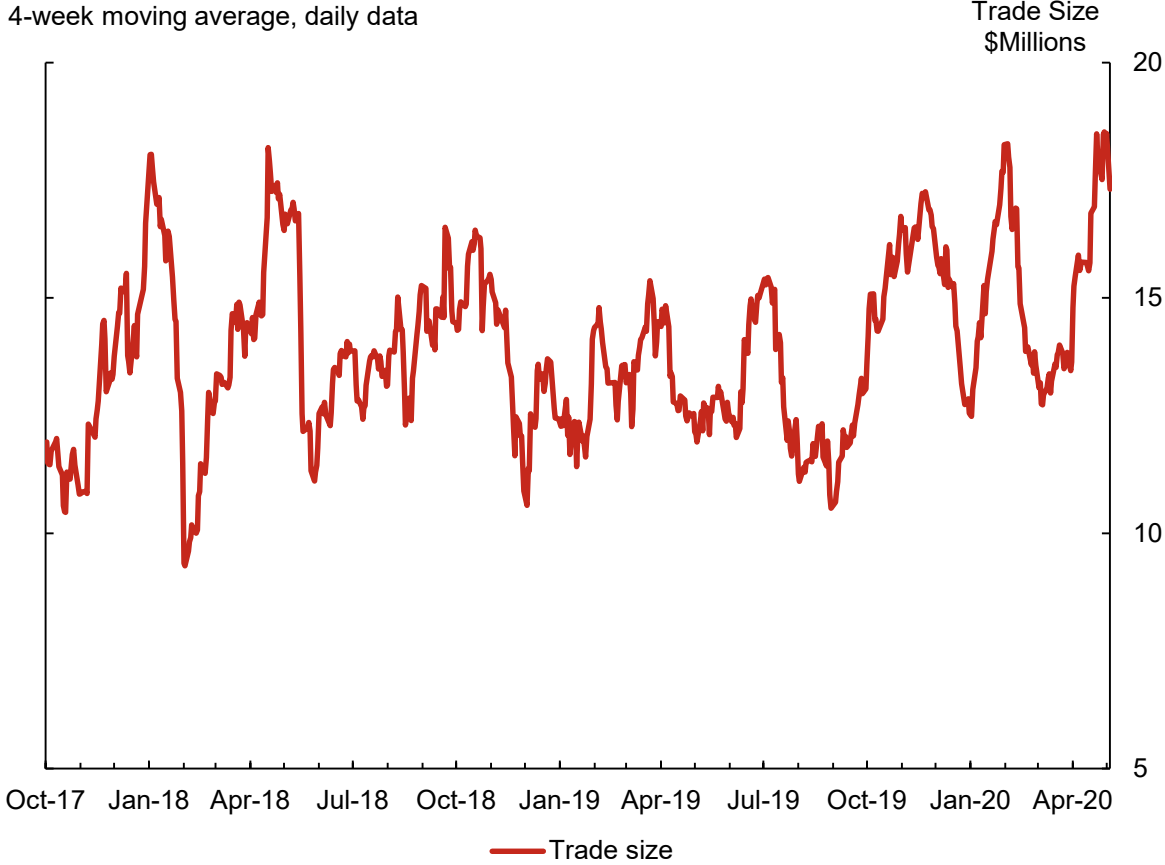
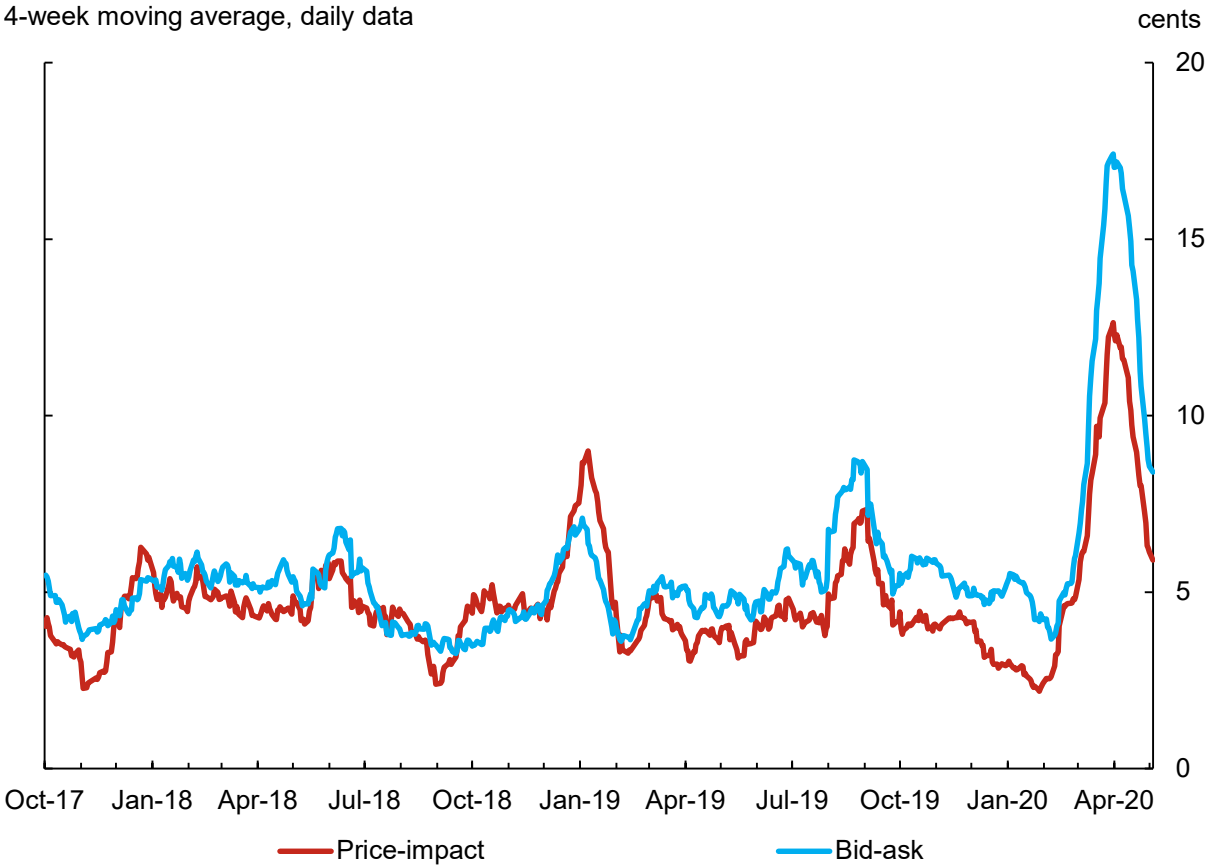
Sources: MTRS 2.0, Bank of Canada calculations

Last observation: May 4, 2020



# The cost of liquidity also increased for CMBs

Liquidity in the CMB market declined sharply along price dimensions such as price-impact and bid-ask, while trade-size remained within historical bounds



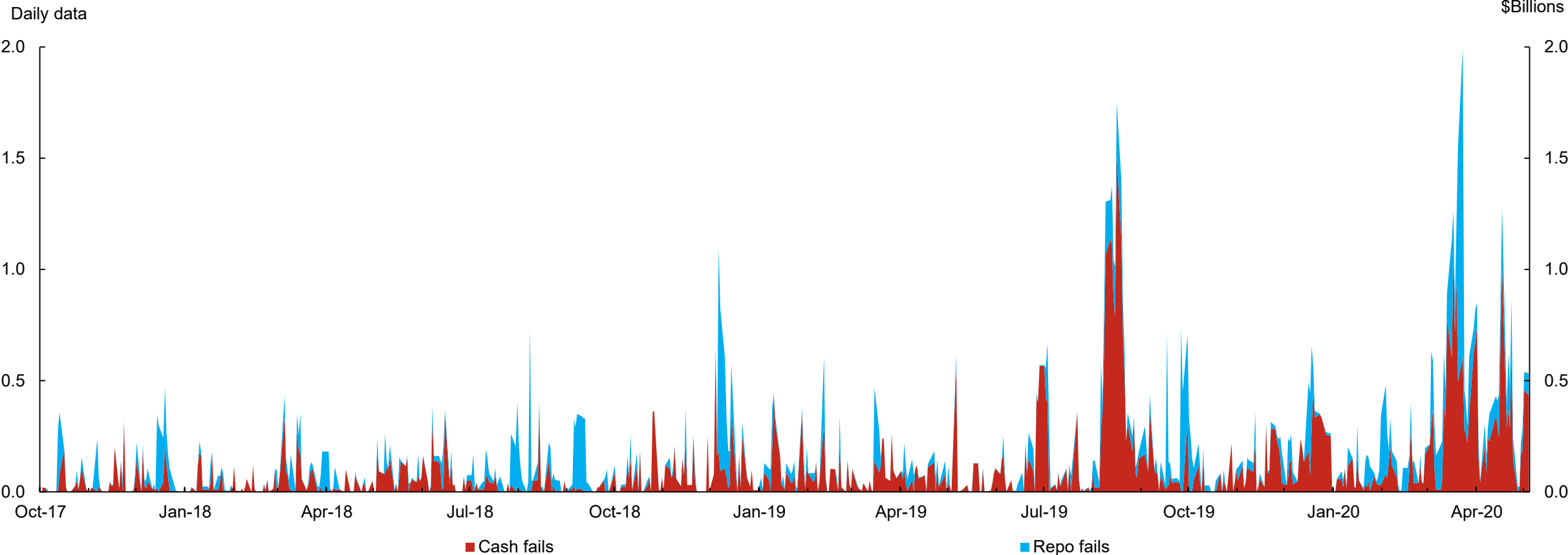
Sources: Canadian Depository for Securities, Bank of Canada calculations

Last observation: May 4, 2020



# Repo fails accounted for the majority of settlement fails in the CMB market

Similar to the GoC market as market stresses compounded, cash and repo fails increased in the CMB market



Sources: Canadian Depository for Securities, Bank of Canada calculations

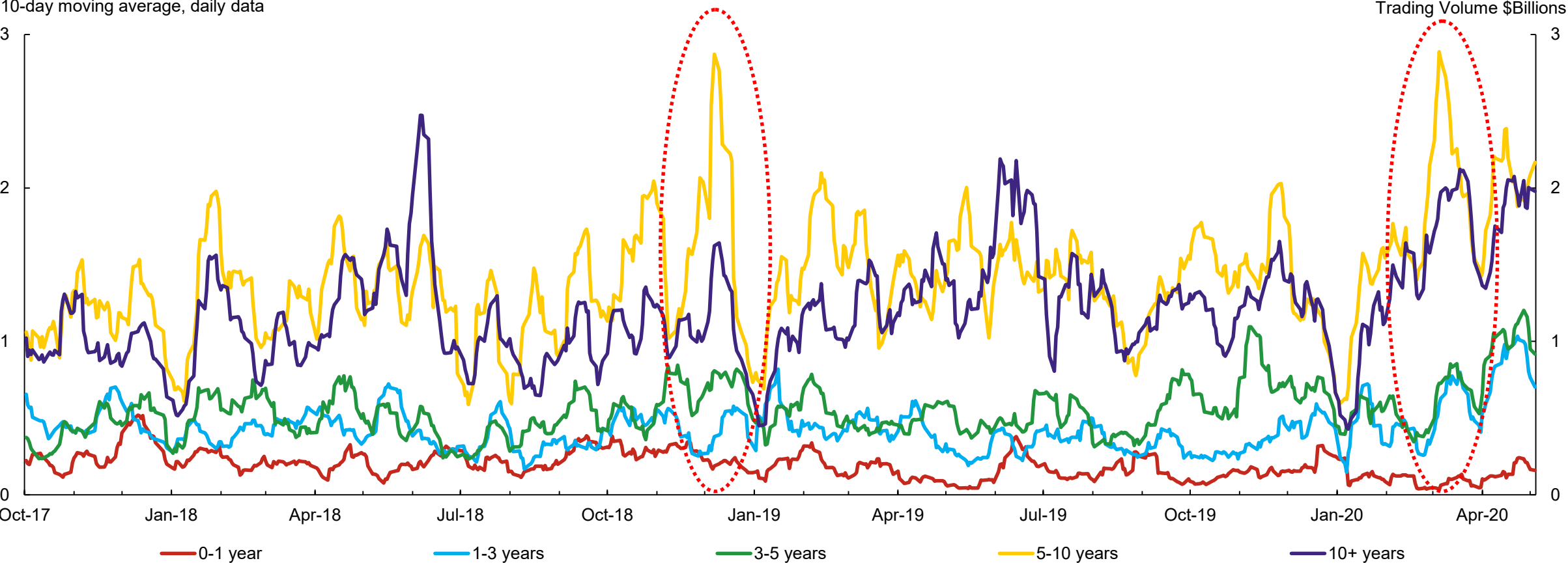
Last observation: May 4, 2020



# Trading volume in provincial bonds rose across all maturities

Similar to the GoC & CMB market, trading volumes rose for provincial bonds across all maturity spectrums with the largest increase in the 5-10 year sector

10-day moving average, daily data



Sources: MTRS 2.0, Bank of Canada calculations

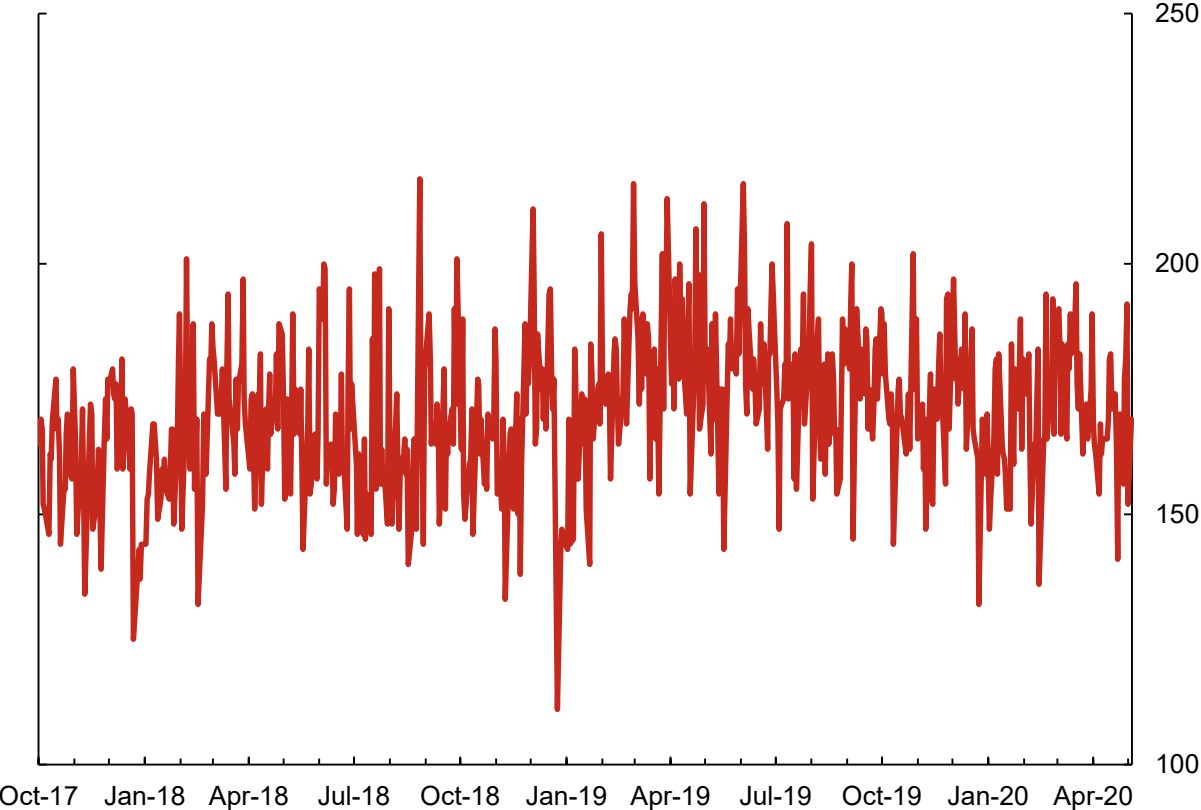
Last observation: May 4, 2020



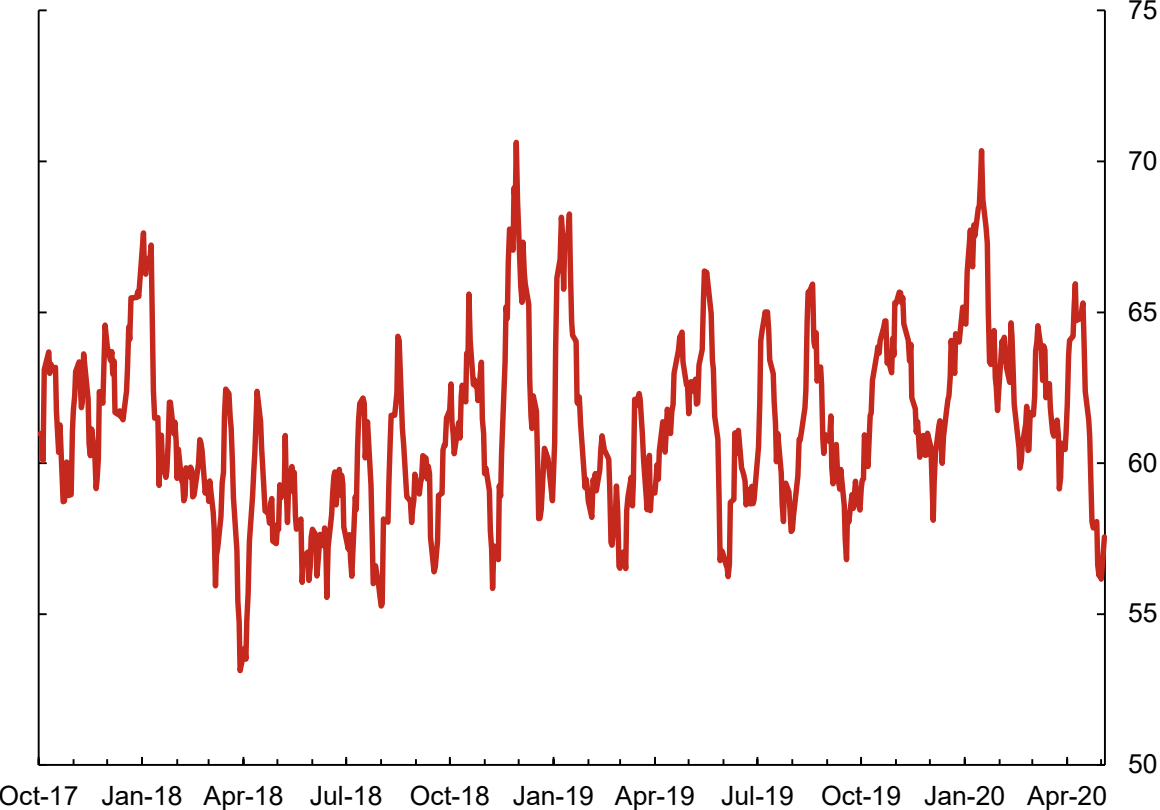
# Trading concentrations remained unaffected in the provincial bond market

Again, as seen in other markets, the change in trading volume and market stresses did not change trading concentration in the provincial bond market

Number of unique provincial CUSIPs traded daily



Top 10 CUSIPs % share of total daily corporate volume



10-day moving average, daily

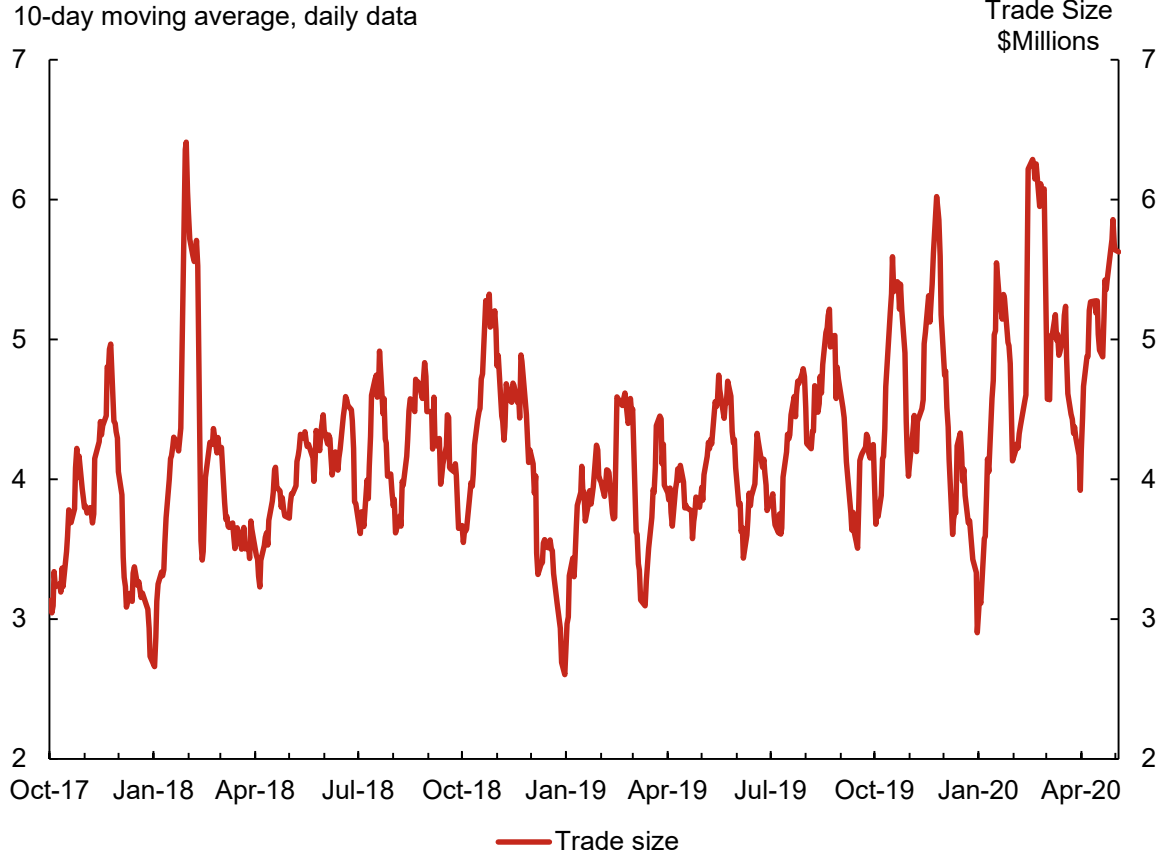
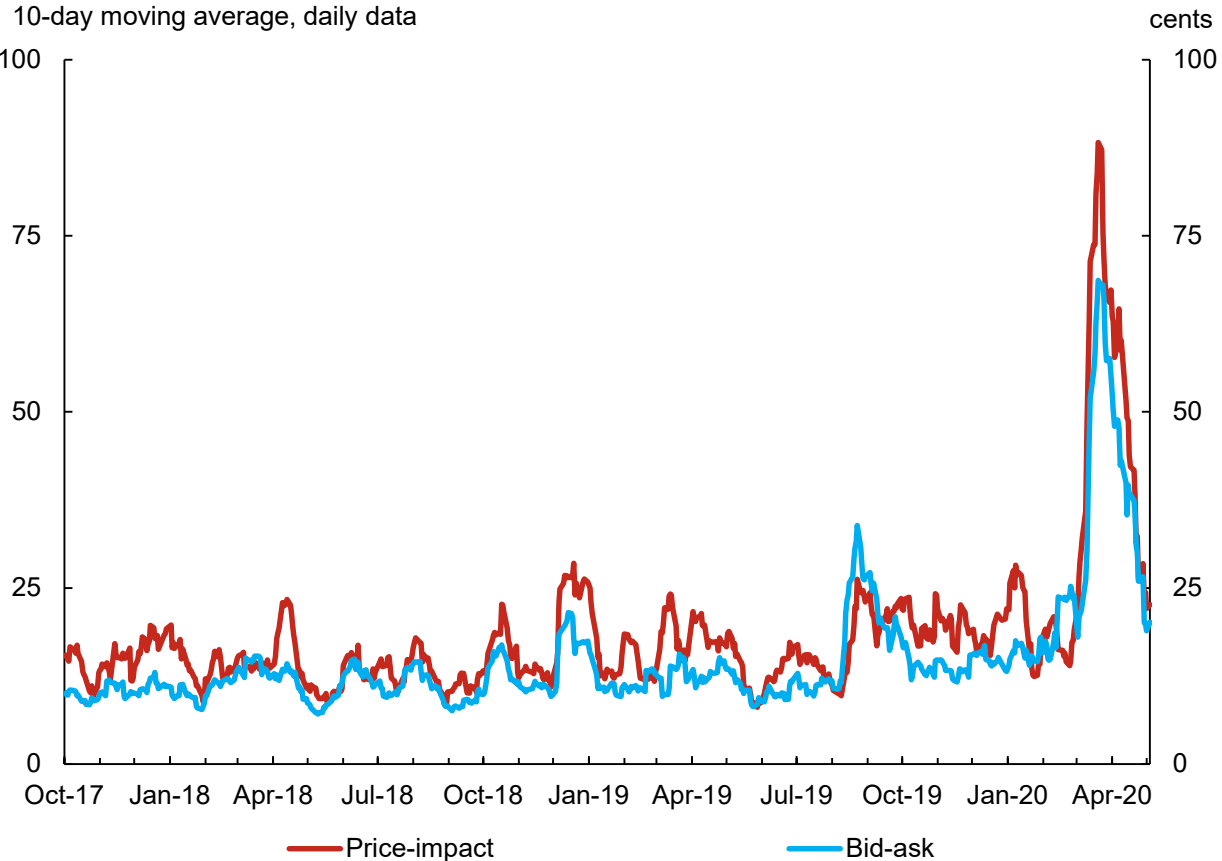
Sources: MTRS 2.0, Bank of Canada calculations

Last observation: May 4, 2020



# Similar to other markets liquidity declined sharply along price dimensions

Liquidity in the provincial market declined sharply along price dimensions such as price-impact and bid-ask; again, trade-size did not change markedly



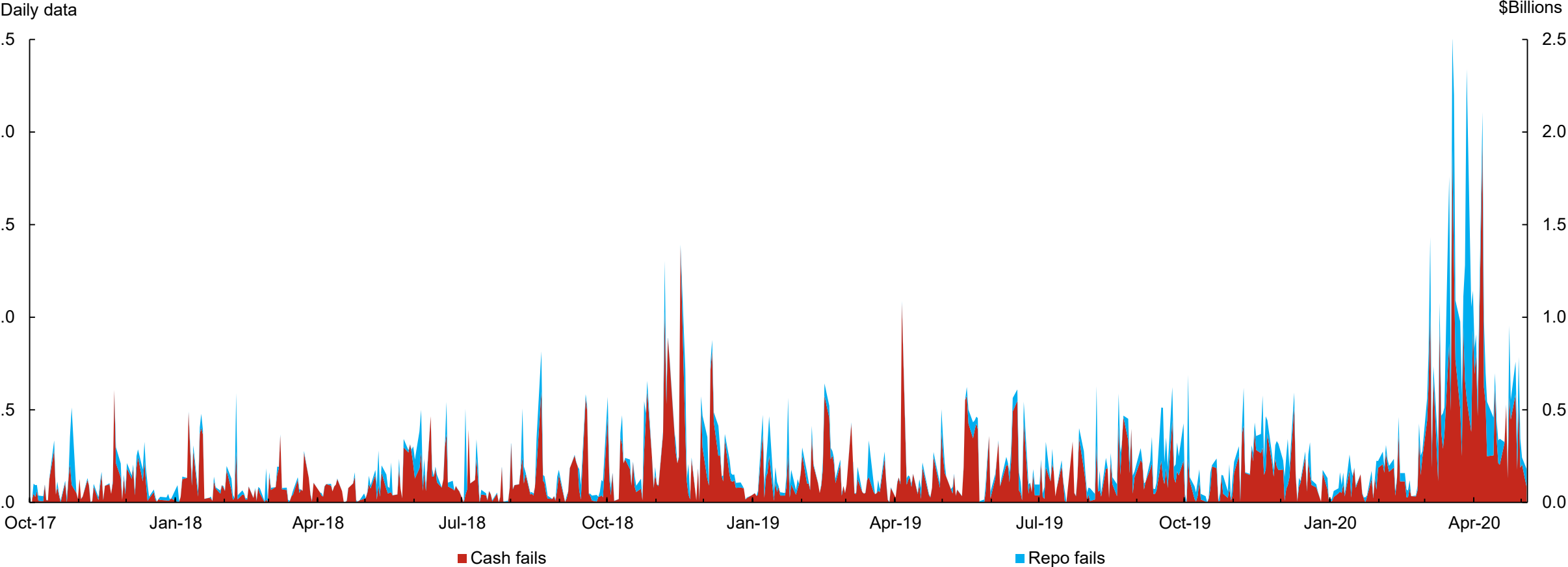
Sources: Canadian Depository for Securities, Bank of Canada calculations

Last observation: May 4, 2020



# Fails in the provincial bond market peaked in March

Fails in the provincial bond market exhibited the same pattern as the GoC market; i.e. spikes in volume of both repo and cash fails above recent levels



Sources: Canadian Depository for Securities, Bank of Canada calculations

Last observation: May 4, 2020

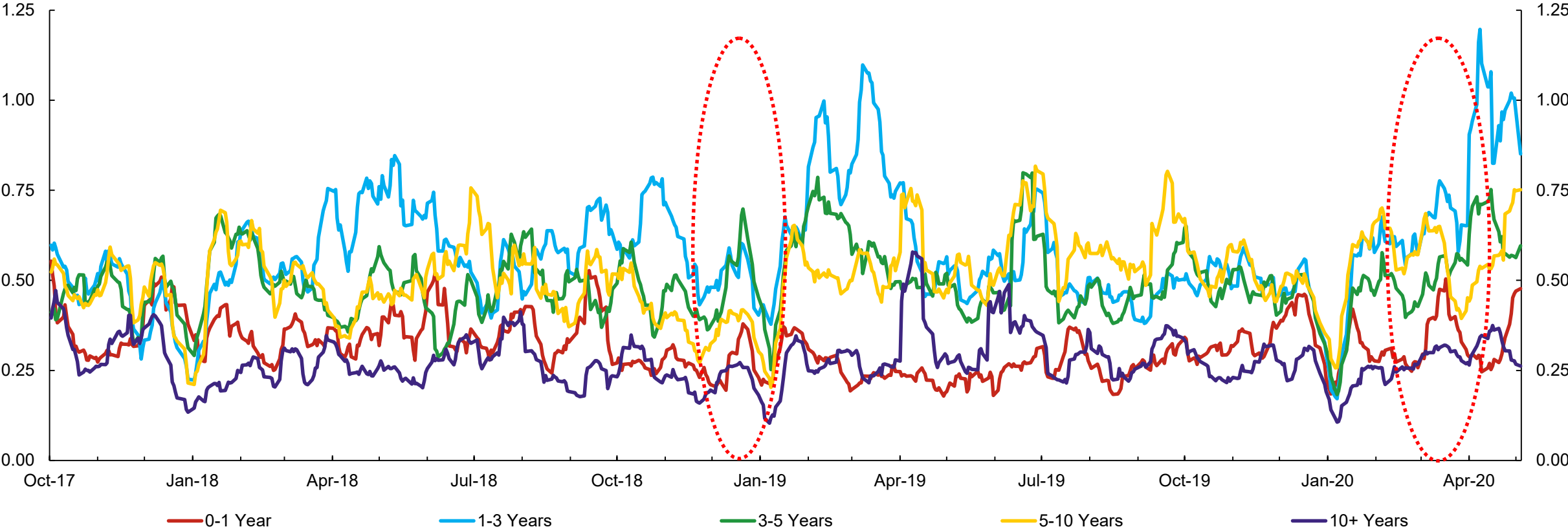


# Corporate bond volumes increased slightly during the Covid-19 shock

Increases in corporate bond volumes were most notable in shorter tenors

10-day moving average, daily data

Trading Volume \$Billions



Sources: MTRS 2.0, Bank of Canada calculations

Last observation: May 4, 2020



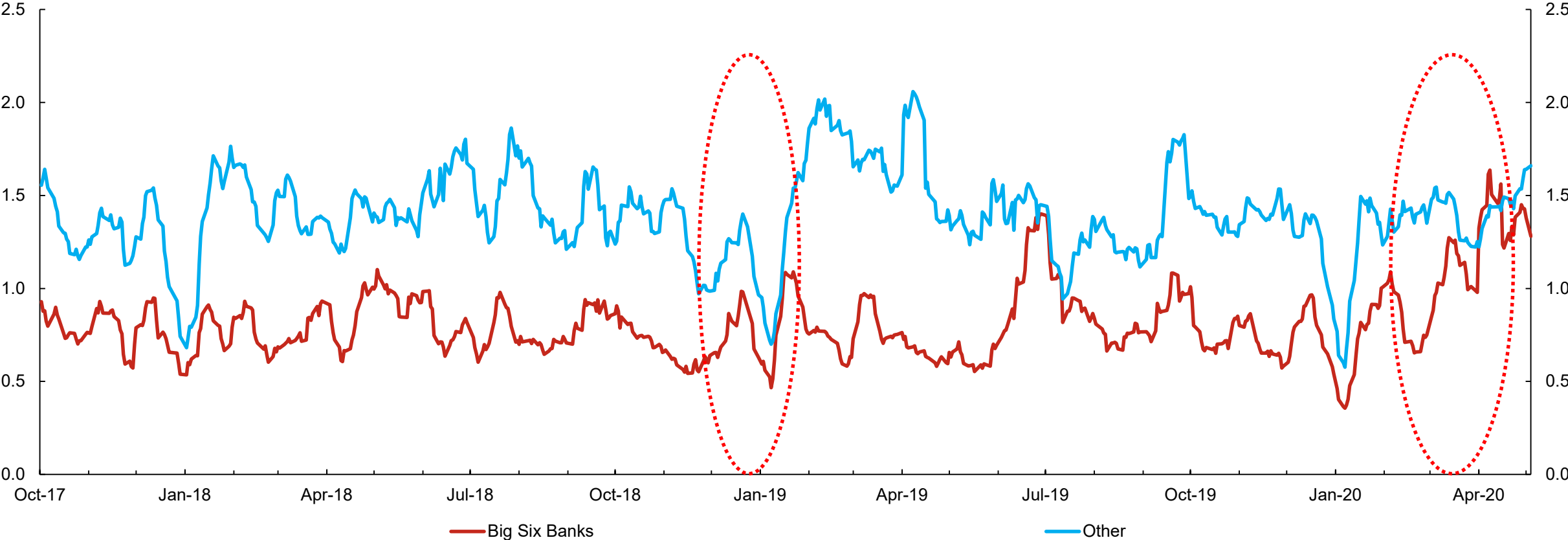


# The increase in aggregate trading volume was driven by deposit notes

The jump in aggregate trading volume was primarily driven by an increase in trading volume for debt issued by the Big-6 banks

10-day moving average, daily data

Trading Volume \$Billions



Sources: MTRS 2.0, Bank of Canada calculations

Last observation: May 4, 2020

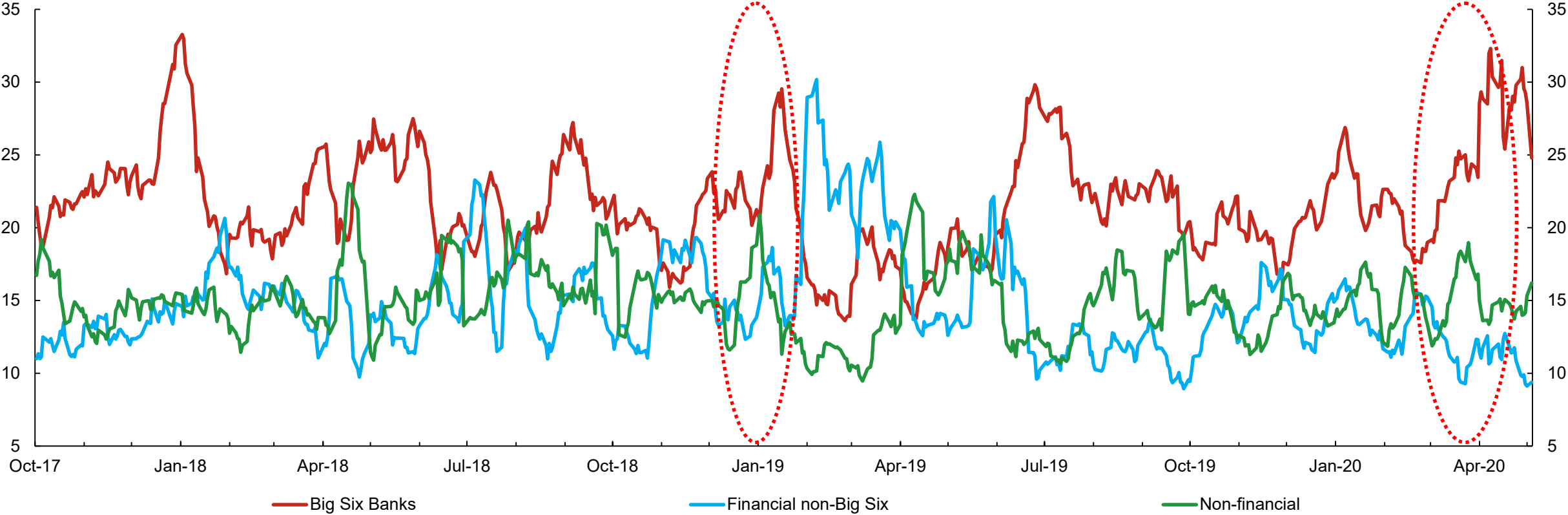


# Trading became noticeably more concentrated in bank-issued debt

As corporate bond trading volumes increased, trading concentration rose for bank-issued debt

Top 10 CUSIPs % share of total daily corporate volume

10-day moving average, daily data



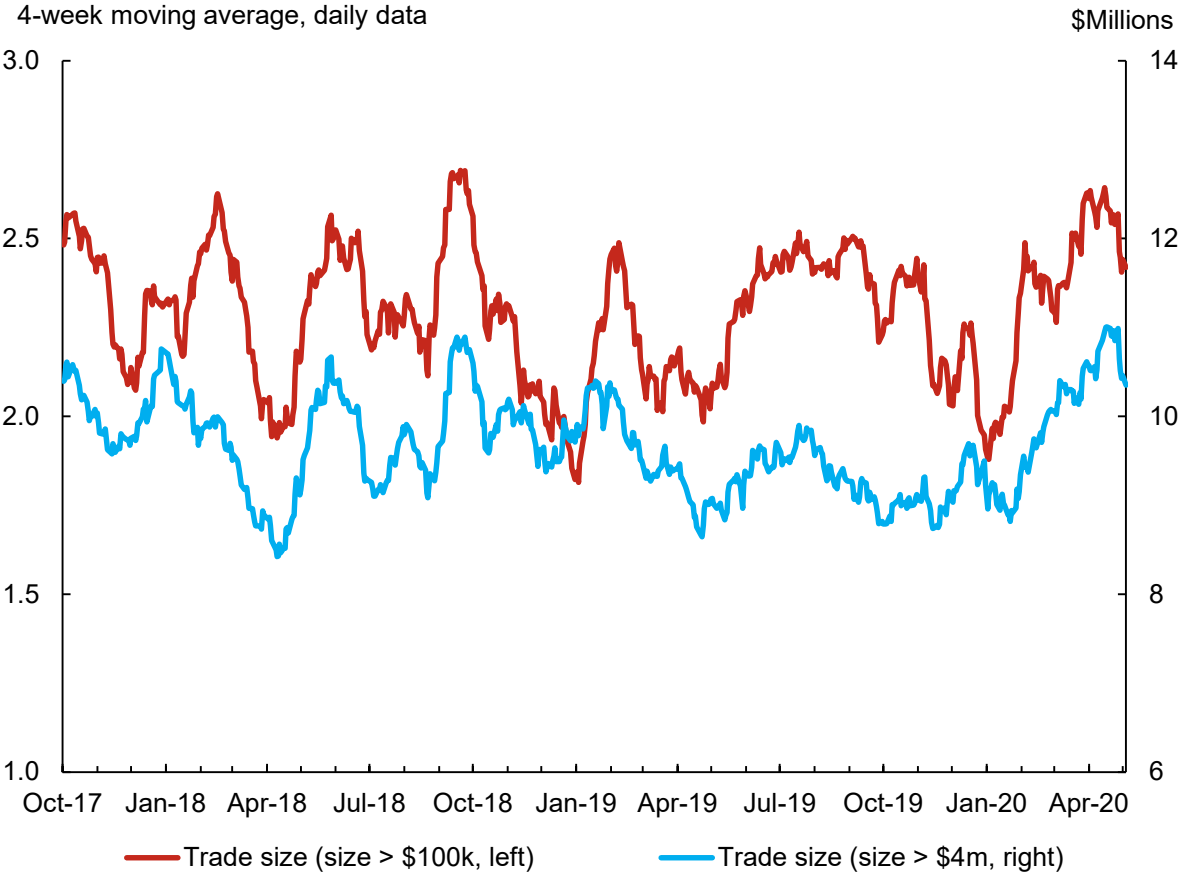
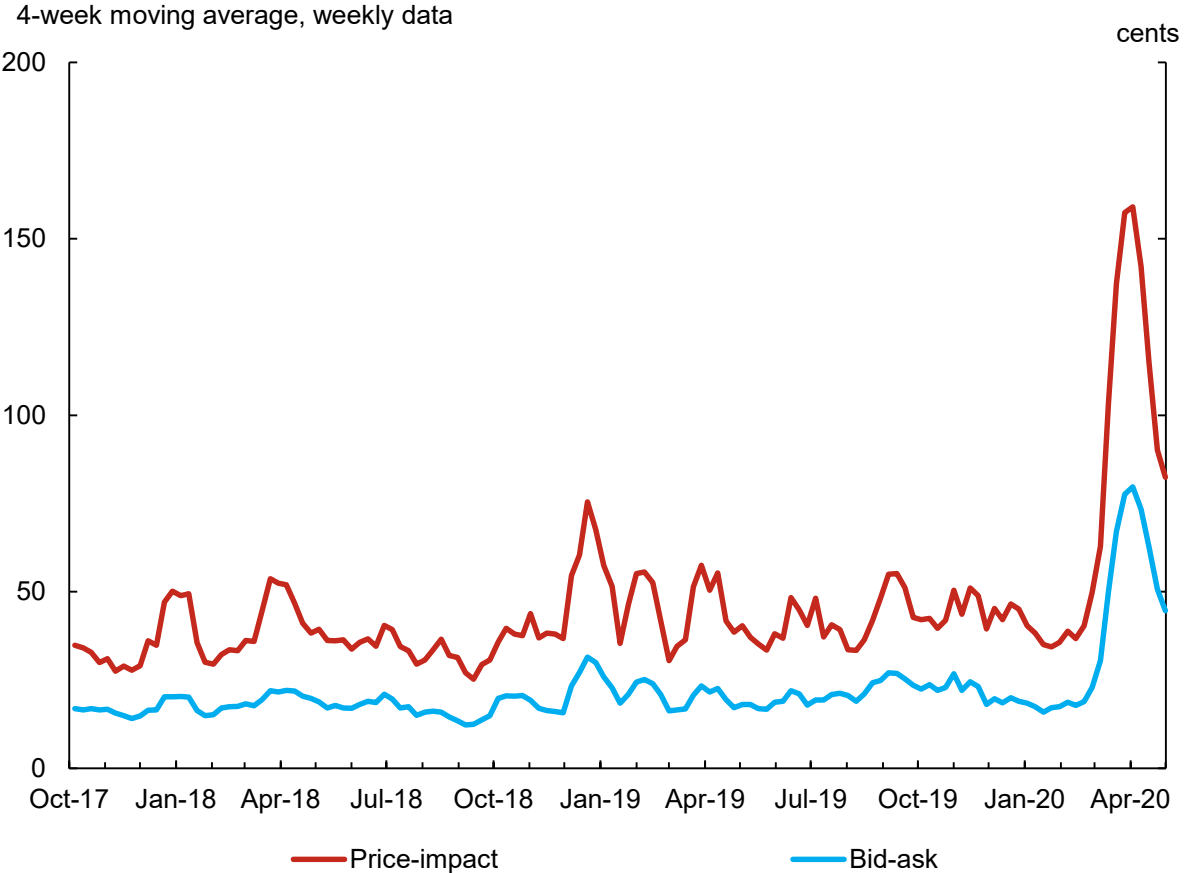
Sources: MTRS 2.0, Bank of Canada calculations

Last observation: May 4, 2020



# Aggregate corporate liquidity deteriorated sharply

Aggregate corporate bond market liquidity declined along price dimensions, while trade-size for both large and small trades remained unaffected



Sources: Canadian Depository for Securities, Bank of Canada calculations

Last observation: May 1, 2020

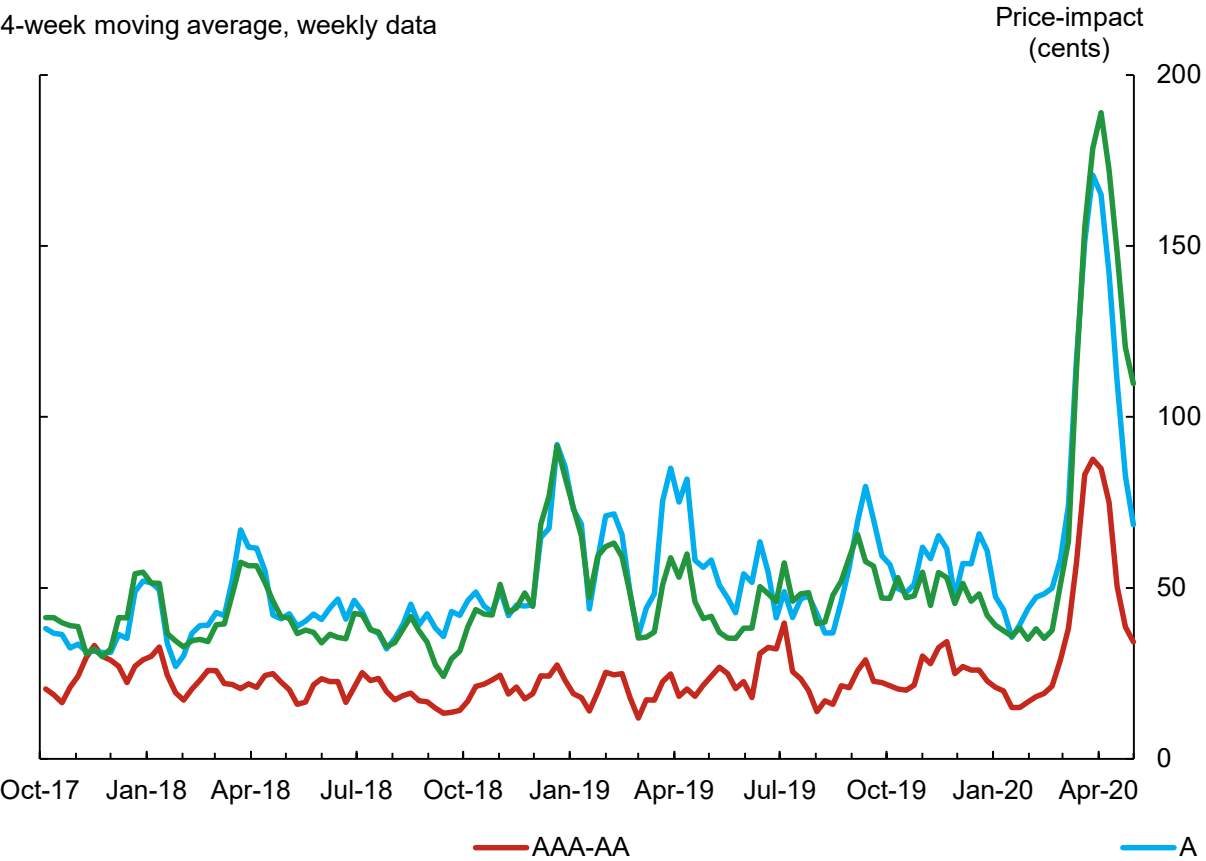
Last observation: May 4, 2020



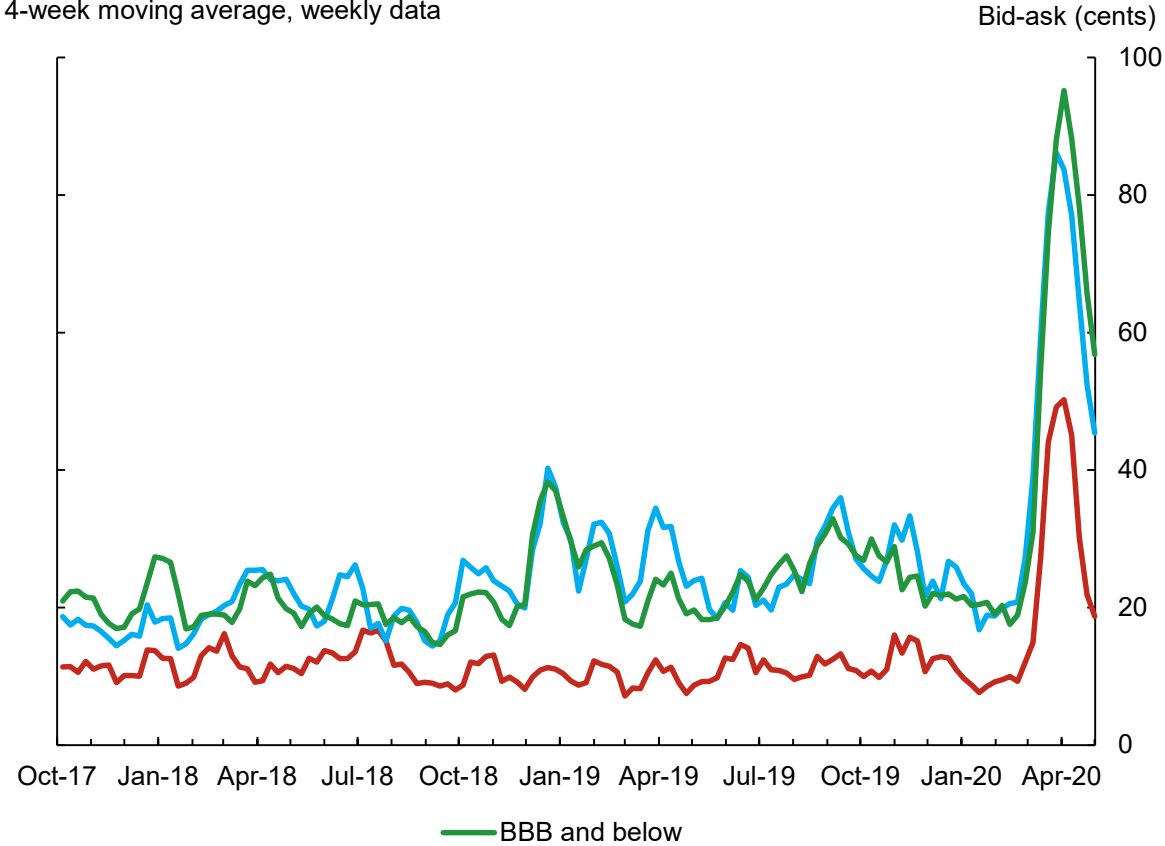
# The decline in corporate liquidity was worse for lower-rated debt

The decline in corporate bond market liquidity was concentrated in “BBB and below” and “A” rated debt

4-week moving average, weekly data



4-week moving average, weekly data



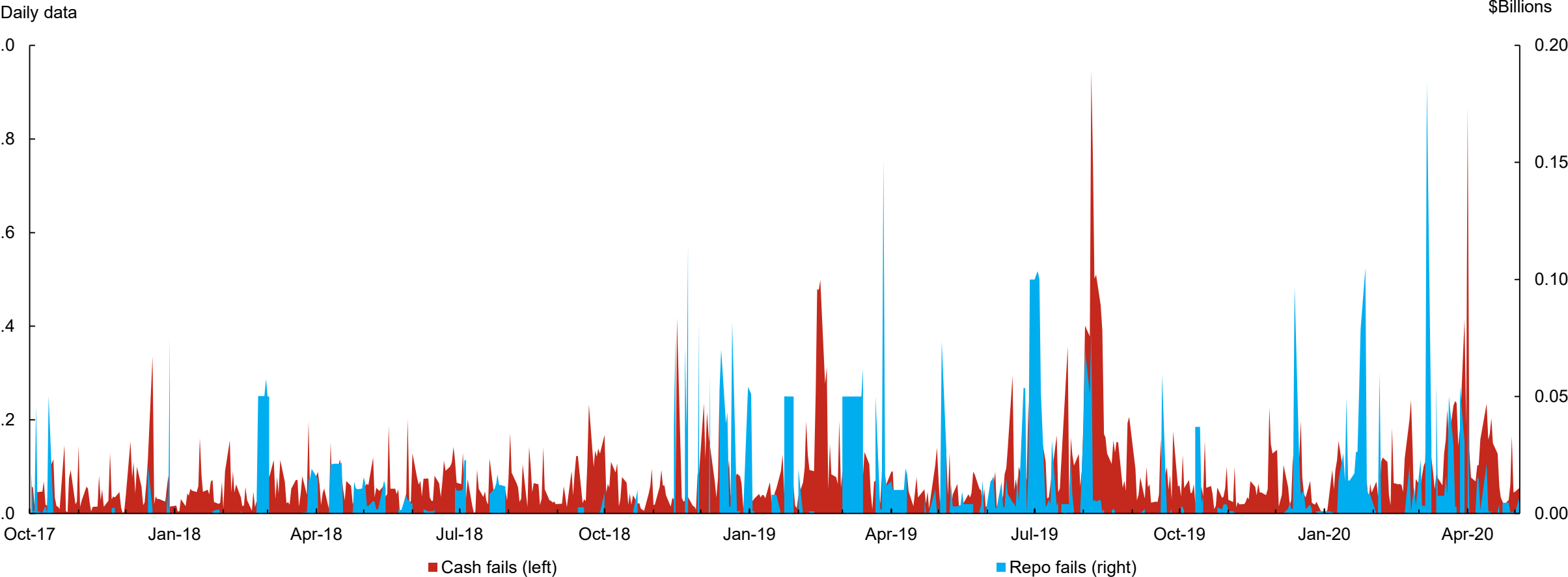
Sources: Canadian Depository for Securities, Bank of Canada calculations

Last observation: May 1, 2020



# Cash fails increased more than repo fails in the corporate bond market

Cash fails did not surpass recent historic fail levels while repo fails were above recent highs



Sources: Canadian Depository for Securities, Bank of Canada calculations

Last observation: May 4, 2020

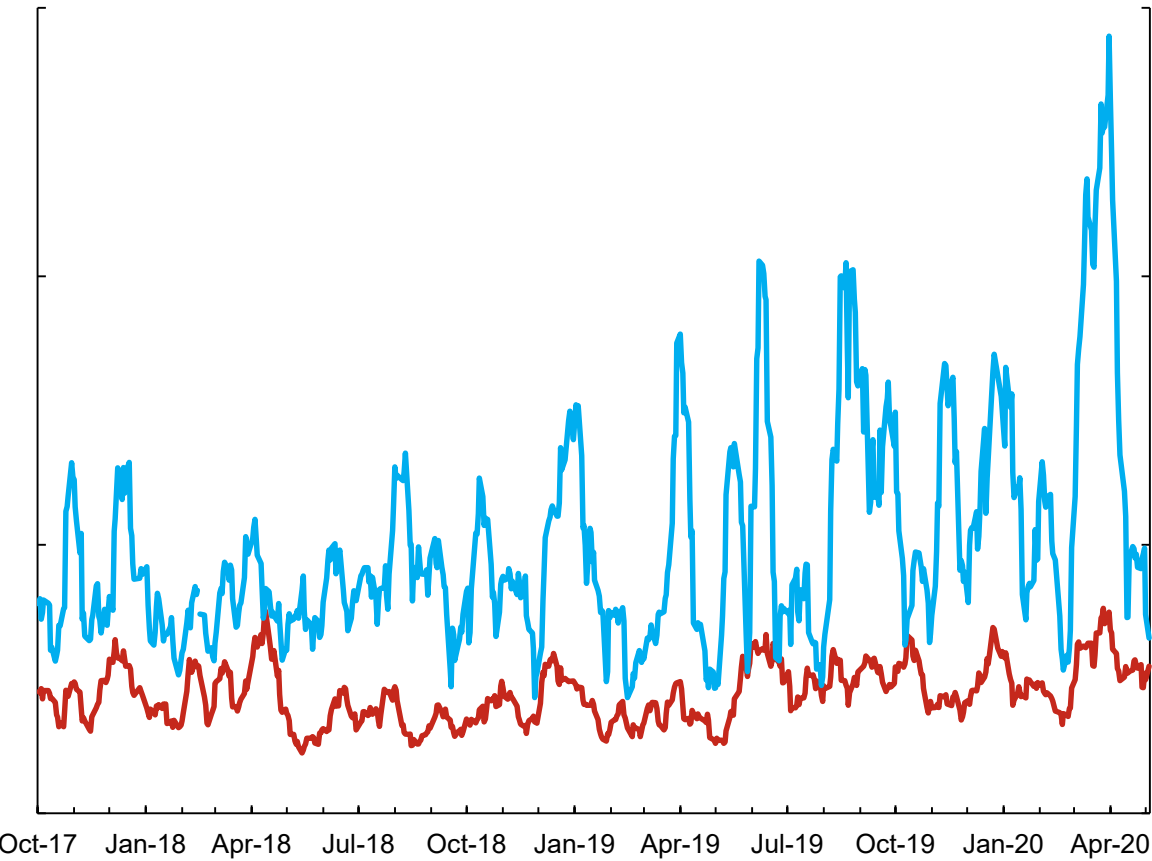




# Appendix Slides

# Price impact & bid-ask proxies for 10-year GoCs

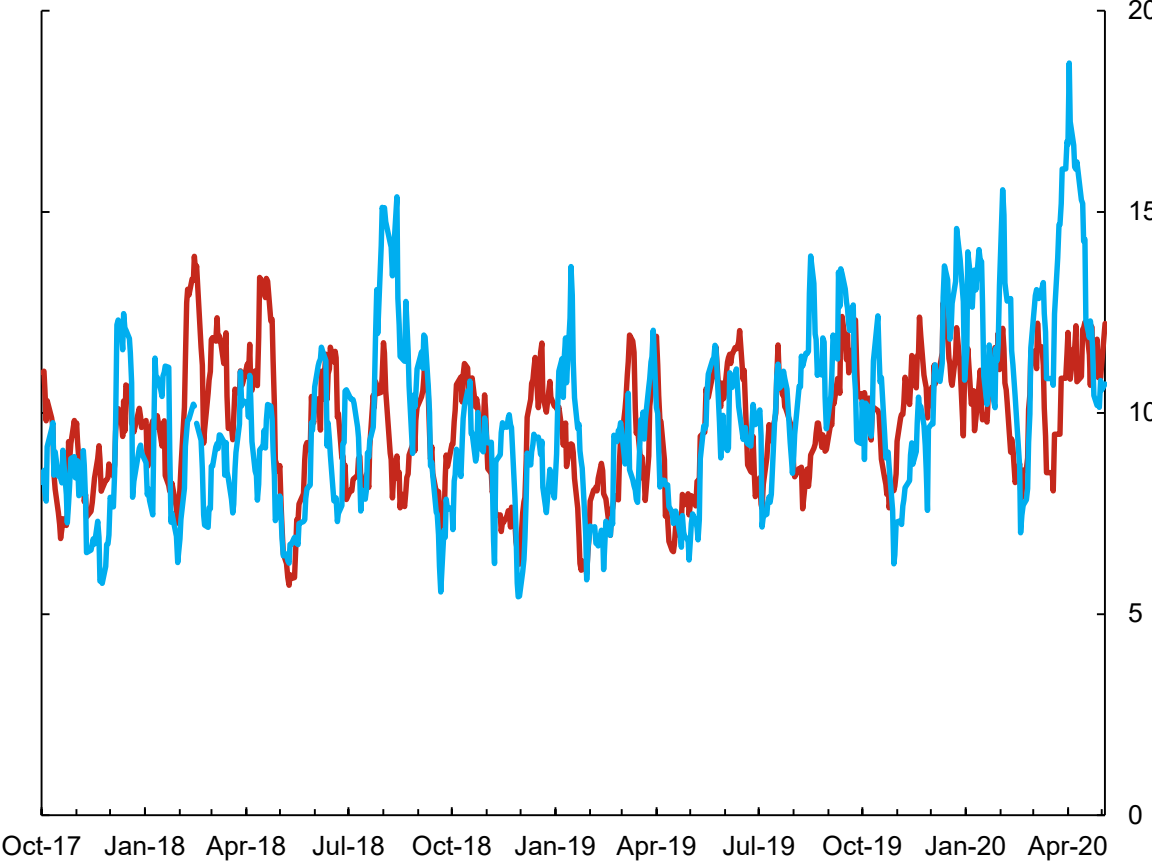
10-day moving average, daily data



— 10Y Benchmark

Price-Impact Proxy (cents)

10-day moving average, daily data



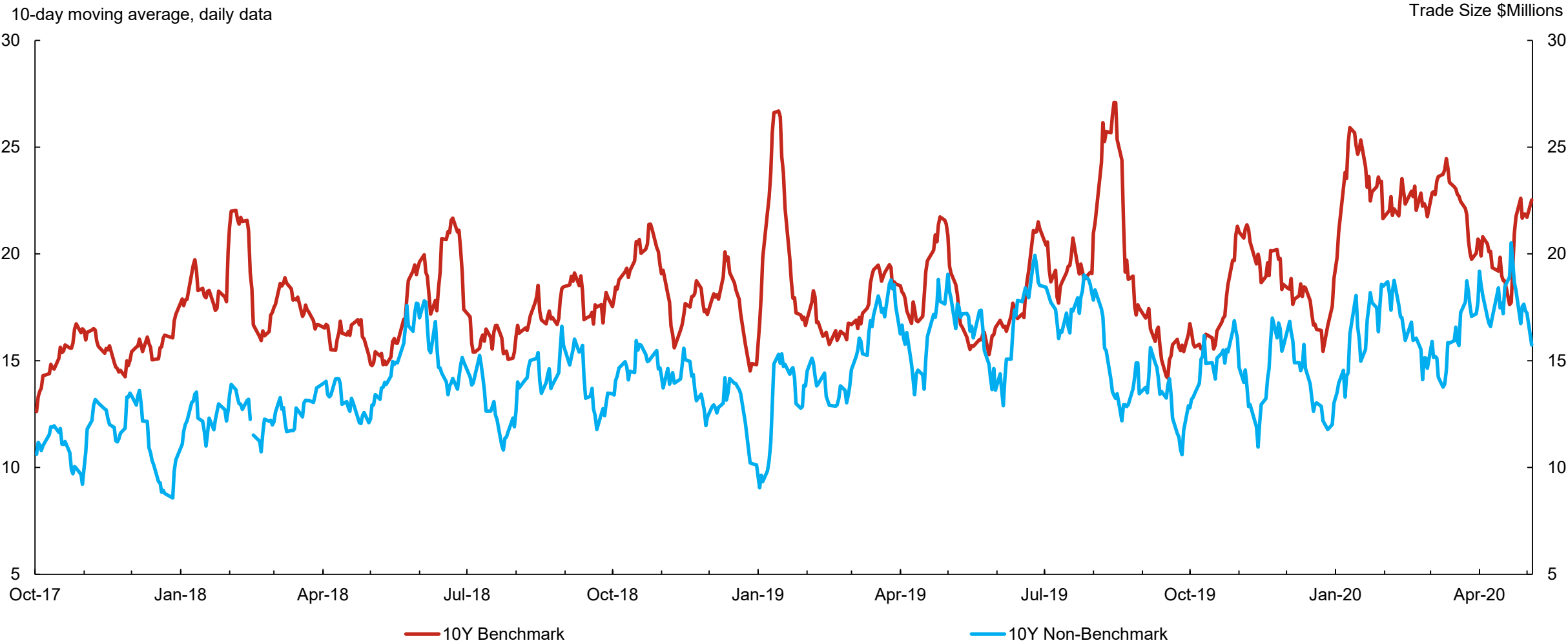
— 10Y Non-Benchmark

Bid-Ask Proxy (cents)

Sources: Canadian Depository for Securities, Bank of Canada calculations

Last observation: May 4, 2020

# Trade-size for 10-year GoCs



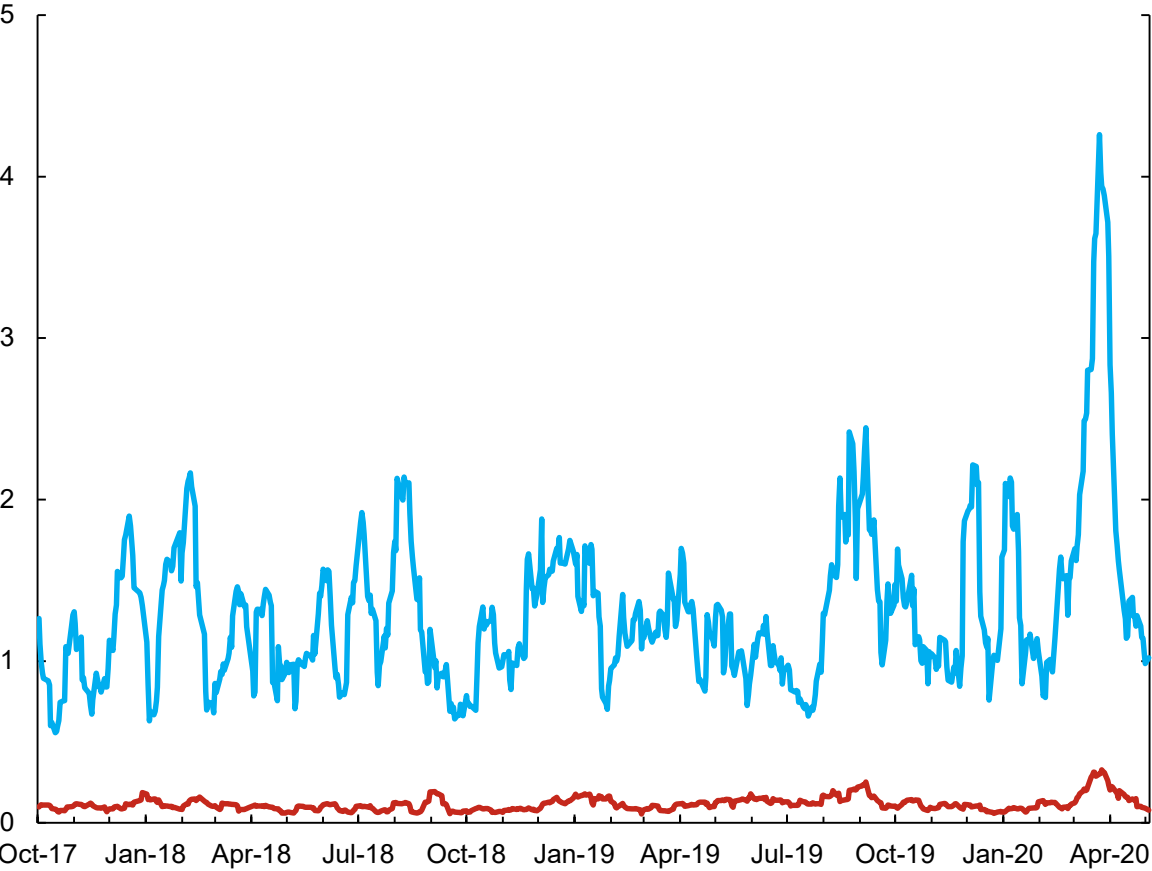
Sources: Canadian Depository for Securities, Bank of Canada calculations

Last observation: May 4, 2020



# Price impact & bid-ask proxies for 2-year GoCs

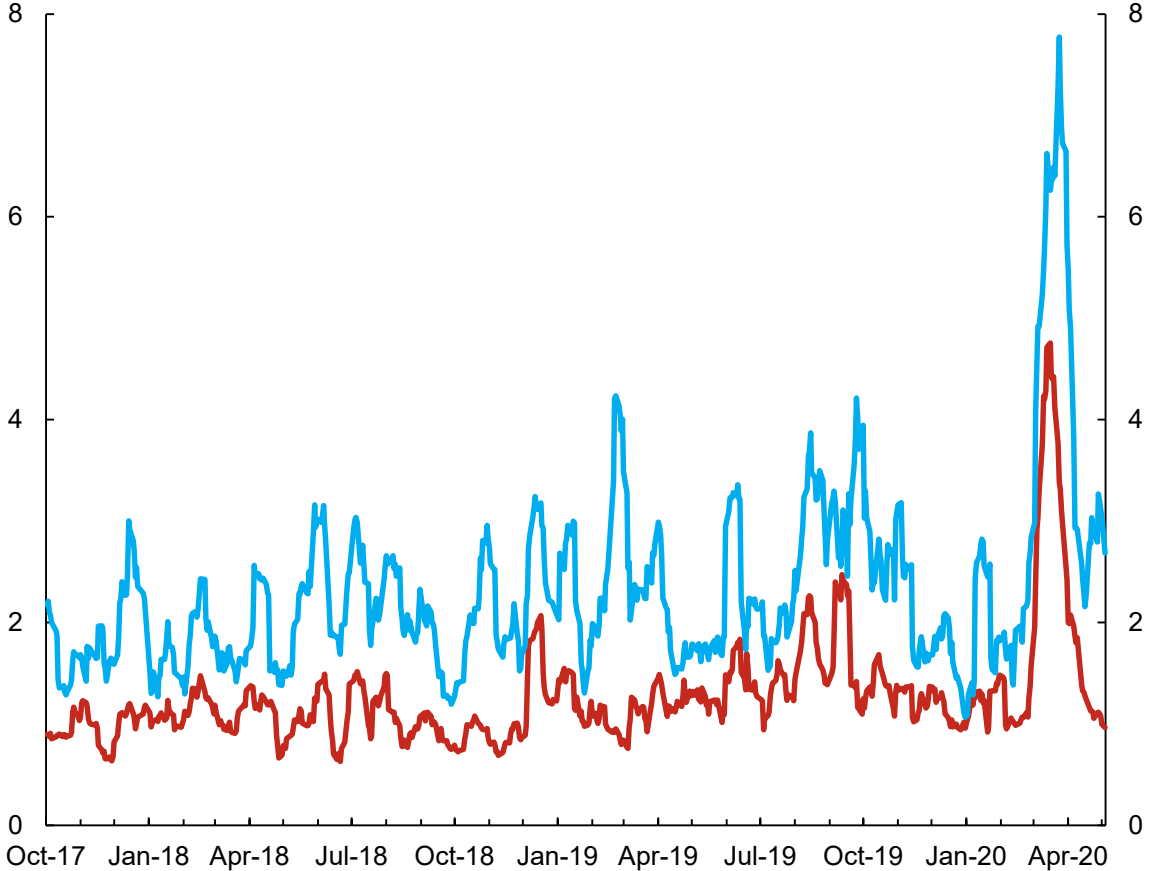
10-day moving average, daily data



— 2Y Benchmark

Price-Impact Proxy (cents)

10-day moving average, daily data



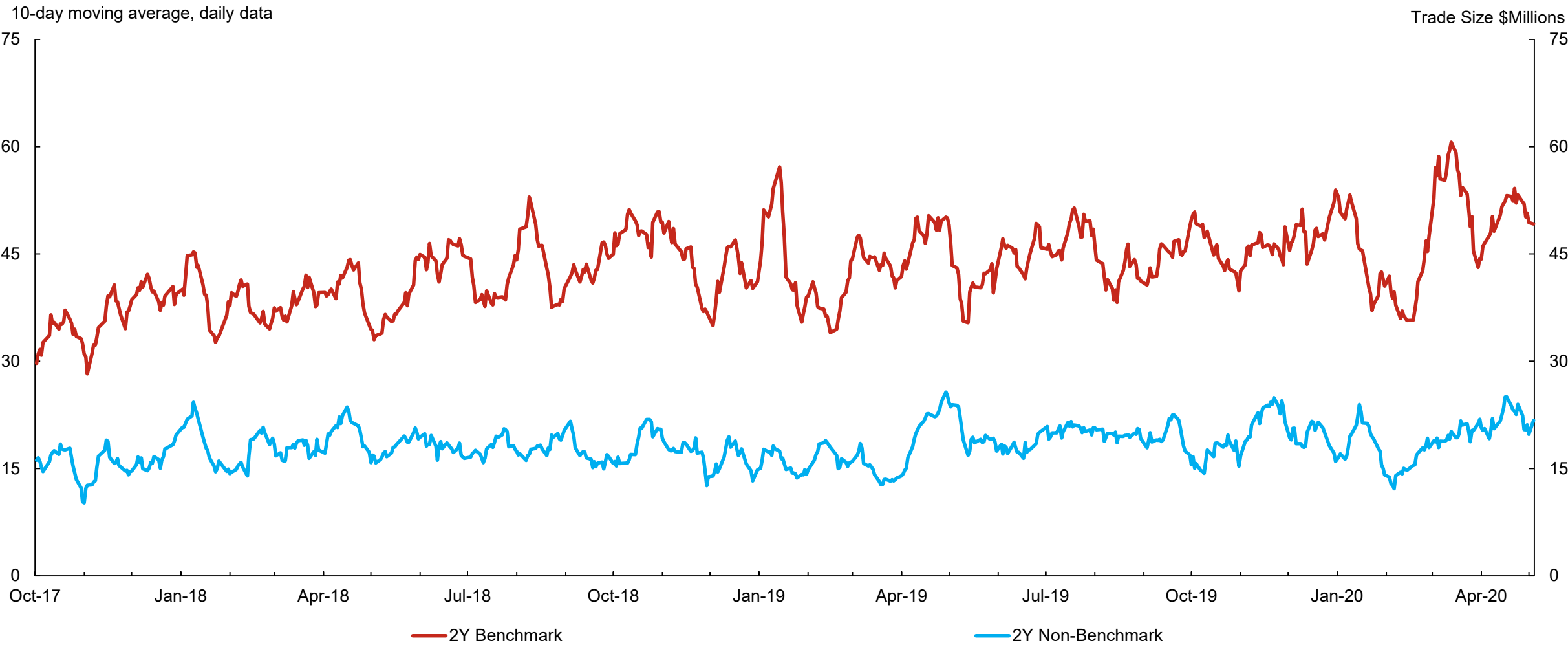
— 2Y Non-Benchmark

Bid-Ask Proxy (cents)

Sources: Canadian Depository for Securities, Bank of Canada calculations

Last observation: May 4, 2020

# Trade-size for 2-year GoCs



Sources: Canadian Depository for Securities, Bank of Canada calculations

Last observation: May 4, 2020