THE INVESTMENT FUNDS INSTITUTE OF CANADA | L'INSTITUT DES FONDS D'INVESTISSEMENT DU CANADA

ETF RESILIENCY IN THE COVID-19 FINANCIAL CRISIS: A CANADIAN PERSPECTIVE

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This research brief by the Investment Funds Institute of Canada (IFIC) draws on data and analysis provided by National Bank of Canada Financial Markets, ETFs & Financial Products Research and research commissioned by IFIC from consulting, research and analytics firm, ETFGI.

IFIC would also like to thank TMX Group and ETF Global for their support and generosity in providing required data for the analysis undertaken by ETFGI.

About IFIC

The Investment Funds Institute of Canada is the voice of Canada's investment funds industry. IFIC brings together 150 organizations, including fund managers, distributors and industry service organizations, to foster a strong, stable investment sector where investors can realize their financial goals. By connecting Canada's savers to Canada's economy, our industry contributes significantly to Canadian economic growth and job creation.

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INTRODUCTION

Given the growth in assets and sales in exchange-traded funds (ETFs) in recent years, questions have been raised about the risks associated with ETFs and broader market stability.

Leading up to the COVID-19 financial crisis, some academics and policymakers hypothesized a scenario where investors, when faced with an external shock, would rush to sell their ETF shares in the secondary market and find few buyers. Liquidity providers (market makers and designated brokers) would step back from their role of making markets, and ETF shares would be redeemed with the associated sale of underlying securities. At its worst, a downward spiral would ensue with ETF redemptions causing asset sales and declining prices in underlying markets and declining prices and asset sales causing further ETF redemptions.

The COVID-19 financial crisis posed an unexpected test of these concerns. From a thorough examination of what transpired, it is clear that Canadian ETFs, as well as ETFs in other markets, proved resilient.

THE COVID-19 FINANCIAL CRISIS

During the COVID-19 market selloff, virtually all assets experienced unprecedented levels of drawdown and volatility. Between February 20 and March 23, 2020, the S&P/TSX composite index fell by 37%. As fixed income instruments were sold to raise cash, bond prices fell and significant parts of the fixed income landscape (certain corporate bonds and government treasuries) even went “no bid”.

DESIGNATED BROKERS AND MARKET MAKERS STEPPED UP

Designated brokers and market makers stepped up and facilitated an increased level of creations and redemptions and trading activity.

As seen in Chart 1, “absolute flow” was higher than normal from February to June of 2020, reaching a peak in March when the selloff was the deepest.

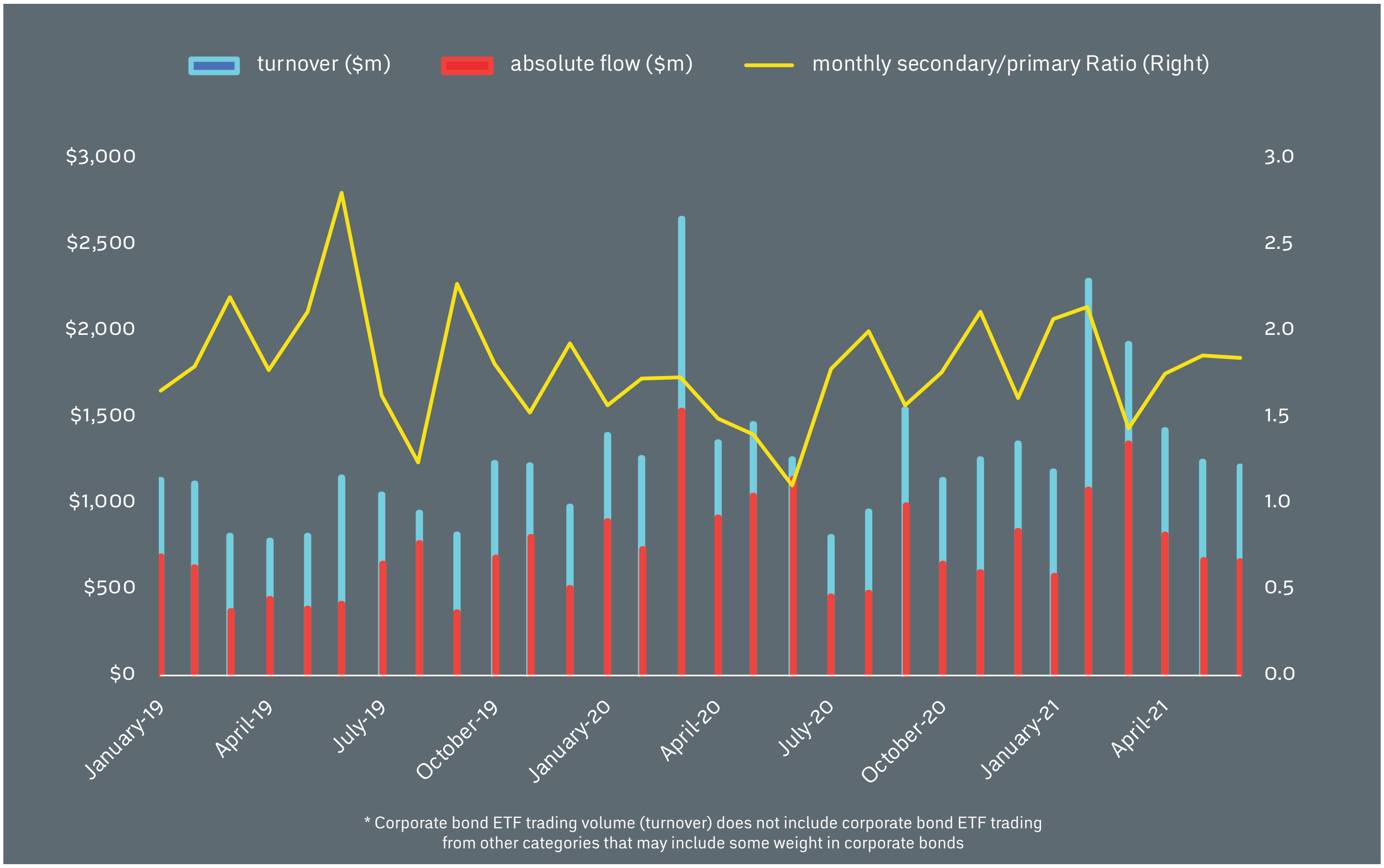
Absolute flow is a quantitative measure of the dollar value of the “market maker’s impact” to the underlying bond market; it is the sum of the absolute value of all daily inflow and outflow activity among the products in question. This is not a measure of net buying and selling activity, instead, it is treating all creation and redemption activity as a kind of “volume.” As seen in Chart 1, “absolute flow” was higher than normal from February to June of 2020, reaching a peak in March when the selloff was the deepest.

There was an increase in absolute flow of corporate bond ETFs in March 2020, when it reached a measure of $1.5 billion (more than doubling the $600 million average figure from prior months).

Just as absolute flow became largest in the spring of 2020, the “secondary to primary ratio” for corporate bond ETFs trended downward indicating that almost all the ETF selling pressure was met by ETF market makers buying the ETF shares and processing redemptions.

The “secondary to primary ratio” measures the relative participation of “natural buyers and sellers” transacting among themselves compared to market makers. It is calculated by dividing an ETF's turnover (or volume in dollar terms) by the absolute flow. For an ETF with virtually zero "natural" buying and selling, every dollar of volume on the exchange would necessitate a creation or a redemption at the end of the day, and the "secondary to primary ratio" would be very close to 1.

Chart 1 - Turnover and Absolute Flow of Canadian Corporate Bond ETFs* (monthly)
(Source: NBF, Bloomberg, Data as of June 2021)



In an analysis conducted by research firm, ETFGI, the number of market participants reporting ETF trades on Toronto Stock Exchange (TSX) increased from 49, pre-pandemic, to 60 during the COVID-19 period.[1]

The analysis was based on a sample of 133 ETFs -- 66 equity and 67 bond -- that track Canadian benchmarks listed on TSX.

ETFS PROVIDED LIQUIDITY AND PRICE DISCOVERY

Another concern expressed by some academics and policymakers was that an external shock would lead investors to engage in panic selling. Finding no buyers in the secondary market would force redemptions and the sale of security baskets, which in turn would cause stress and losses in underlying markets. These losses would then trigger a cycle of yet more ETF investors running for the exits, causing a downward spiral in prices and freezing markets.

[1] IIROC, NBCFM - ETFs & Financial Products Research

The experience during the COVID-19 financial crisis showed that despite the extreme stress in the bond market, bond ETF redemptions were modest relative to assets and did not impact underlying markets.

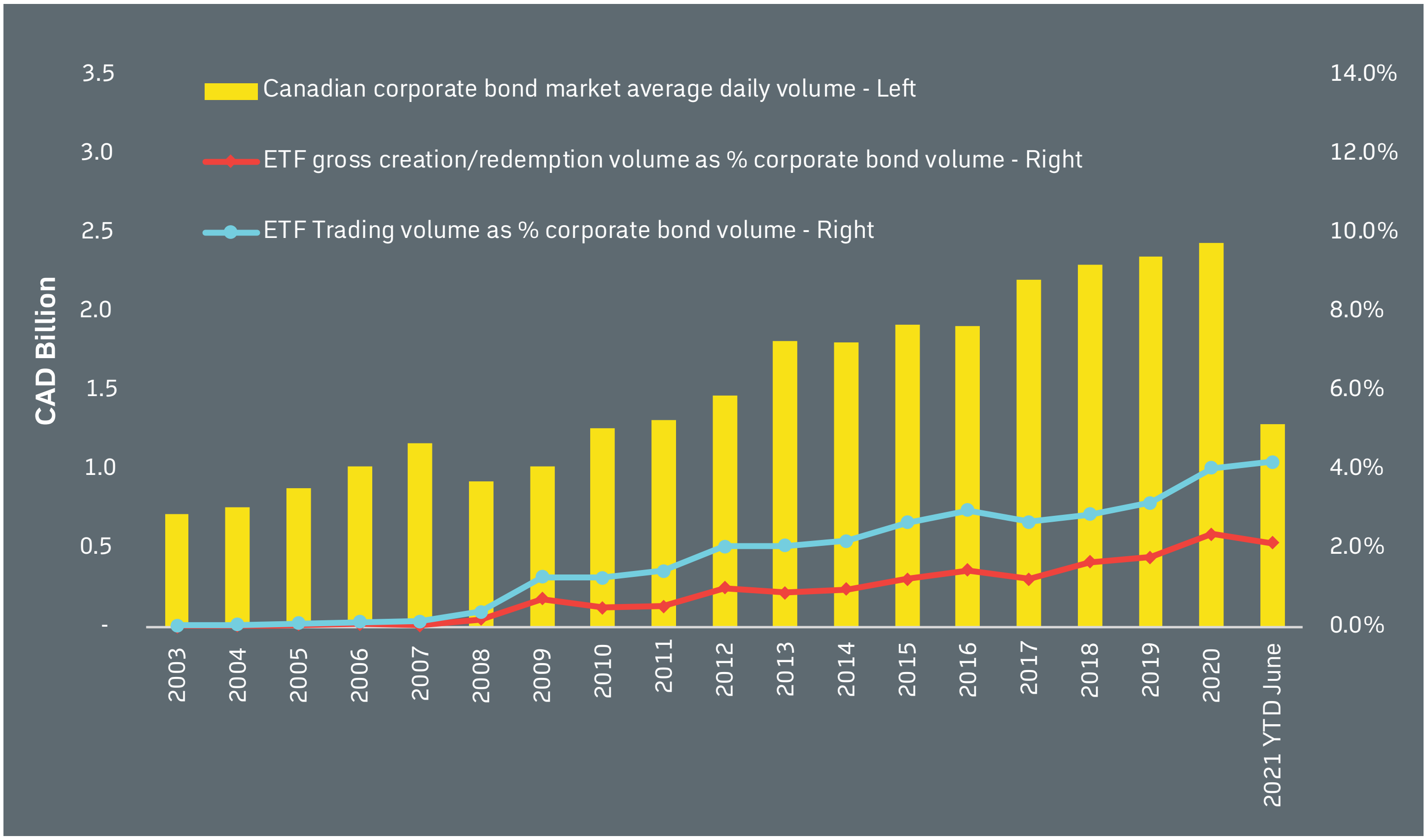
Bond ETFs are a very small fraction of the underlying bond market in Canada despite their growing size.

As seen in Chart 2, ETF primary market trading volume (creation/redemption) is about 2% of total Canadian bond trading volume.[2]

The ratio for secondary market trading volume to total corporate bond trading volume increased to 4% during 2020 and stabilized at that level as of June 2021.

The spike in ETF trading value indicates that investors were turning to ETFs as a vehicle to access liquidity.

Chart 2 - Canadian Corporate Bonds (Source: NBF, Bloomberg, IIROC, Data as of June 2021)



ETF LIQUIDITY IMPROVED COMPARED TO UNDERLYING HOLDINGS

ETFGI's analysis evaluated liquidity as measured by bid-ask spreads and found that equity ETFs improved their spreads relative to their underlying baskets during the height of the market stress.

During March 2020, ETF bid-ask spreads, on average, widened to 1.85 times the average spreads in the

2 IIROC, NBCFM - ETFs & Financial Products Research

months preceding the crisis, whereas the underlying basket of securities average spread increased to 2.36 times the average spread leading up the market event.

The analysis was based on the previously mentioned sample of 133 ETFs (66 equity and 67 bond ETFs) that track Canadian benchmarks listed on TSX.

A similar liquidity analysis for bonds and bond ETFs was not possible due to the lack of available market data.

ETF INVESTORS DID NOT RUN FOR THE EXITS

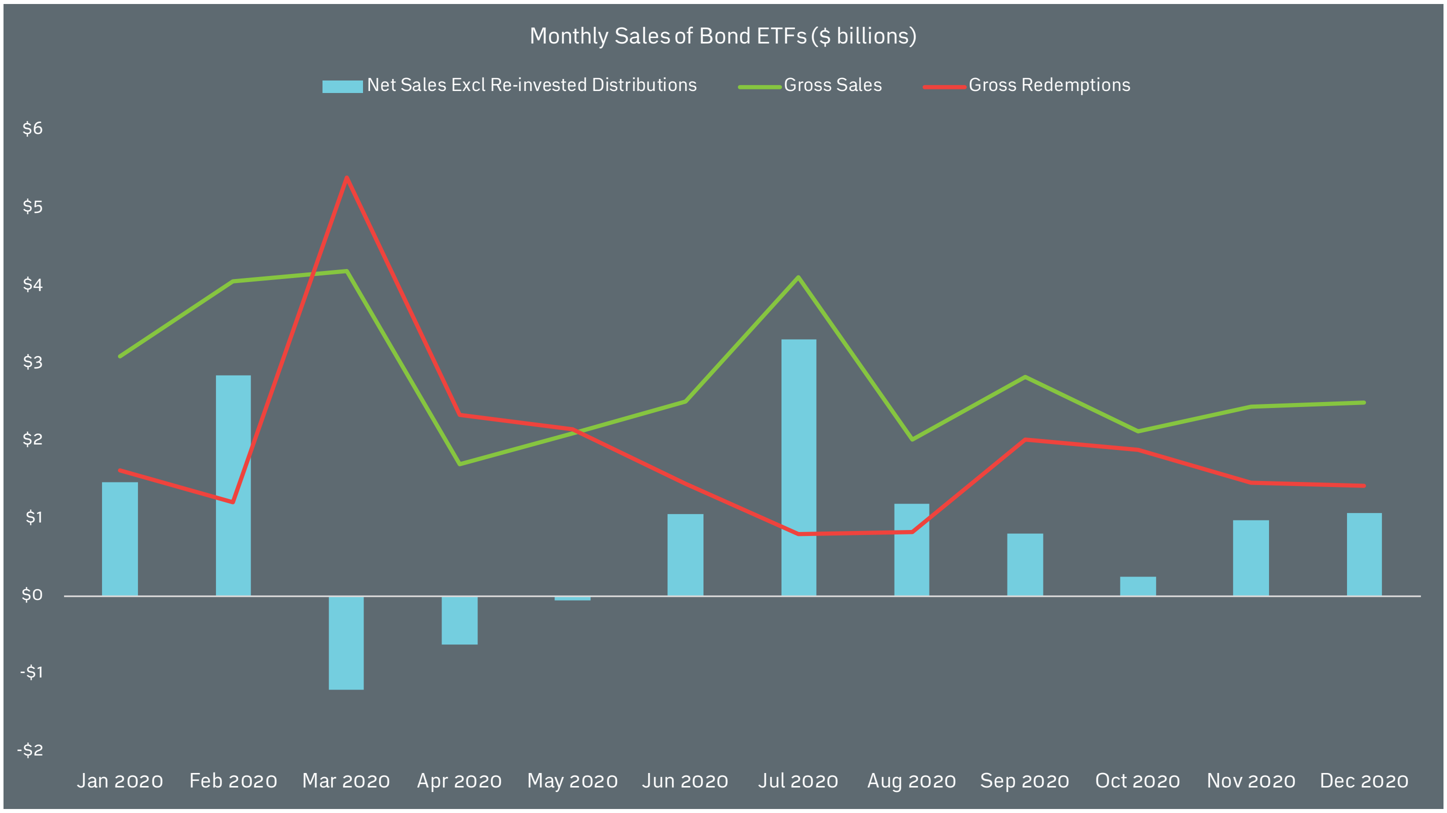
Investors did not run for exits, and net redemptions, even in the most stressed periods during the spring of 2020, were moderate.

As seen in Chart 3, investors did withdraw from bond ETFs during March, April and May 2020; however, inflows quickly resumed in June.

The monthly net outflows from bond ETFs as percentages of starting assets were 1.8% ($1.2 billion) in March, 0.9% ($629 million) in April and 0.1% ($56 million) in May.

Investors did not halt their purchases during the most stressed periods. In fact, when gross redemptions were at their highest in March 2020, gross sales were also at their highest suggesting that instead of running for the exits, many investors saw the price declines as a buying opportunity.

Chart 3 - Bond ETF Sales



CONCLUSIONS

Designated brokers and market makers facilitated ETF creations and redemptions throughout the selloff of bond ETFs, and there is no evidence that they stepped away or failed to meet their obligations to provide quotes during what turned out to be a very stressful period.

Throughout the crisis, investors did not dramatically increase their redemptions or halt their purchases of bond ETFs.

There is no evidence that ETFs affected the underlying bond markets in a negative way due to the balance of buying and selling throughout the market stress and the low representation of ETF trading within the wider bond market.

When the underlying bond liquidity declined, ETFs offered access to an otherwise frozen market.

For equity ETFs, the liquidity profile improved during the market stress relative to underlying securities.

OTHER RESEARCH EXAMINING ETF RESILIENCY

THE INVESTMENT COMPANY INSTITUTE (US)

The resiliency demonstrated by Canadian ETFs is consistent with research conducted by the Investment Company Institute examining the US market. The report, Experiences of US Exchange-Traded Funds During the COVID-19 Crisis, concludes that "ETFs proved their resilience in March 2020 during unprecedented market volatility resulting from the COVID-19 crisis. Indeed, contrary to negative predictions, ETFs performed as designed. Rather than stepping away, APs, market makers, and other liquidity providers remained active and engaged, helping to facilitate heightened ETF creation and redemption activity and trading volumes. ETFs also acted as a source of stability and an important source of price discovery in the fixed-income market by providing investors with real-time views on the costs of liquidating the underlying bonds."

THE INVESTMENT ASSOCIATION (UK)

Similarly, research undertaken by the Investment Association in the UK found that "in the time of market stress investors turned to ETFs for transparency and liquidity. ETFs saw record primary and secondary trading volumes during the height of the crisis. When trading in the underlying markets was impaired, with a resultant impact on pricing services' abilities to provide intraday pricing, ETFs offered a source of both additional liquidity and price discovery, with traders being able to use ETFs to estimate the prices of the underlying bonds."

With respect to market participants, the research found that AP arrangements also proved resilient during the crisis, with little to no impact on the number of active APs operating in the ETF during March and April.

THE INTERNATIONAL ORGANIZATION OF SECURITIES COMMISSIONS (IOSCO)

The International Organization of Securities Commissions published a thematic note examining the resiliency of ETFs during the COVID-19 induced market stress. The research draws on market data, as well as survey responses from regulators and industry participants across jurisdictions.

The research found that the ETF structure was "relatively resilient" throughout the market stress and that no imminent risks were identified from a regulatory or financial stability perspective. In fact, the research found that ETFs provided an "additional layer" of liquidity and that fixed income ETFs in particular played a role in providing additional pricing information for the underlying bond markets during the period.

In terms of concerns, the research did observe that certain futures-based oil ETPs/ETFs and leveraged/ inverse ETFs experienced difficulties during COVID-19 volatility and "may warrant further consideration related to product structuring and contingency planning."