BlackRock

Lessons from COVID-19:
Fixed Income Index Rebalancing

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Introduction

During March 2020, fixed income markets were extremely volatile amid a severe lack of liquidity resulting from the COVID-19 crisis. As March month-end coincided with quarter-end, the market was poised to experience higher trading volumes, with both monthly and quarterly rebalancing of indexes, funds, and portfolios set to take place. Further exacerbating this situation was the fact that March month-end was less than two weeks into new work-from-home (WFH) arrangements implemented by numerous companies as a result of the COVID-19 crisis for a large percentage of market participants. As such, the stress – from both a liquidity and operational perspective – of a month-end rebalancing in fixed income indexes presented a source of risk.

In this *Policy Spotlight*, we discuss how index providers' decisions to delay rebalancing until the end of April 2020 helped to preserve market liquidity during the March turbulence, avoid central bank interventions being undermined, and prevent unnecessarily large transaction costs for end-investors. We also observe that the eventual "catch-up" rebalancing in April was itself orderly, while accommodating significant increases in both investment grade issuance and new "fallen angels."

Background on Fixed income indexes

Fixed income indexes are used as benchmarks and tracking indexes by all types of investors and market participants, including in index and actively managed portfolios in both funds and separate accounts. Consequently, fixed income index rebalancing can impact investors in mutual funds, beneficiaries of pension plans, insurers, and other investors such as governments via sovereign wealth funds.

While each index provider has its own proprietary set of rules for index construction, there are some common features generally associated with fixed income indexes. For example, many fixed income indexes are rebalanced monthly; cash is regularly removed due to coupon payments and maturing bonds; and it is common to add new bond issuances that meet the index inclusion criteria and to remove bonds that no longer meet the criteria (e.g., investment grade (IG) bonds downgraded from BBB to high yield (HY), commonly known as "fallen angels"). Most fixed income indexes exclude "cash," or short duration bonds, given their focus on representing bonds with maturities longer than a year, resulting in the removal of bonds that roll "down the curve" in a given month. From time to time, an index provider may decide to add or remove bonds from a particular country, primarily based on credit and float criteria.

The opinions expressed are as of July 2020 and may change as subsequent conditions vary.

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Rebalancing issues in March 2020

In mid-March 2020, fixed income markets became stressed and experienced reduced liquidity as the COVID-19 crisis took hold and economic shutdown measures were put in place. March month-end coincides with quarter-end, meaning that both indexes and funds that rebalance monthly and portfolios that rebalance quarterly were scheduled to undergo a rebalance. Furthermore, the decision to remove South Africa bonds and add Israel bonds into the World Government Bond Index (WGBI) had already been announced, creating specific concerns around selling bonds with limited liquidity (see *Case Study*: South Africa Government Bonds on page 3). On top of the market liquidity concerns, a large percentage of market participants, including trading desks and back office settlement functions, had recently switched to WFH arrangements in response to the virus, and were still navigating unchartered waters.

The combination of market liquidity and operational conditions raised concerns about the rebalancing. The impact of a monthly rebalance on each index is generally relatively small (approximately 1%) each month and normally immaterial to any individual portfolio. However, collectively across the industry, sell- and buy- orders can total hundreds of billions of dollars, reflecting the widespread use of indexes across different investment strategies and types of investors. Given the abnormal level of liquidity in cash markets due to the COVID-19 pandemic and resulting market volatility, had all fixed income index rebalances proceeded as usual, the markets may have been further stressed.

This scenario did not come to pass, as various index providers decided to delay or alter their scheduled March rebalance. Exhibit 1 summarizes the measures taken by major index providers. The most important decision was the delay in removing securities, including Treasuries and corporate bonds, that rolled down the curve to under one year. This action was taken by most of the index providers. A second important factor was the decision to postpone the removal of South Africa government bonds from and the inclusion of Israel government bonds into the WGBI. A lesser factor was the decision to delay the removal of fallen angels as only some of the index providers took this action and others proceeded as scheduled.

The index providers' decisions to delay rebalancing in March preserved the limited market liquidity and enabled end-investors to avoid unnecessary transaction costs due to wide bid-ask spreads in the market. This was critical at a time when central banks, including the Federal Reserve and the European Central Bank, were actively trying to increase market liquidity, and large sell-orders would likely have undermined their actions (see *Sidebar*: Central Banks Measures to Improve Market Liquidity on page 4).

Short duration securities

The primary driver behind delaying fixed income rebalancing was the illiquidity of securities with less than one year to maturity.

We estimate that $128.8 billion of Treasuries would have needed to be rebalanced out of the Bloomberg Barclays U.S. Treasury Index in March.[1] While Treasuries posed no idiosyncratic risk and were beginning to show signs of recovery in late March due to the Federal Reserve's response (see *Sidebar*: Central Bank Measures to Improve Market Liquidity on page 4), the sheer volume of Treasuries set to be removed from the index against a backdrop of volatile prices, lack of market depth and liquidity, and increases in transaction costs raised concerns.

Exhibit 1: Fixed income index rebalancing decisions, month-end March 2020

Index Provider	March Month-End Rebalancing Status Summary	<1y Securities	Inclusion New Issues	Fallen Angels
Bloomberg	Rebalance proceeded with reduced turnover due to postponement of removal of securities with <1 year to maturity	Delay	Proceed	Proceed
ICE	Postponed rebalance (bond and preferred)	Delay	Delay	Delay
Markit	Postponed majority of rebalance	Delay	Delay	Delay
JPM	Rebalance proceeded, but limiting amount of turnover	Delay	Partial Delay	Delay
FTSE	Postponed rebalance	Delay	Delay	Delay
S&P	Rebalance proceeded	Proceed	Proceed	Proceed

Source: BlackRock, Bloomberg, ICE, Markit, JPM, FTSE, S&P. As of March 26, 2020.

Of additional concern were short-duration investment grade corporate bonds. As shown in Exhibit 2, there was decreased demand for these bonds. The yield-to-worst[2] bid-ask spreads for US IG bonds under one year to maturity averaged approximately 7 basis points in January and February. However, leading into March month-end, spreads spiked; on March 23, the yield-to-worst bid-ask spread was 83 basis points, reflecting the lack of appetite. As noted in a recent Bank for International Settlements (BIS) bulletin, this was driven mainly by two factors: 1) the "dash for cash" that led to selling pressure in the cash market; and 2) a reduction in dealer activity, as dealers tried to preserve their balance sheet capacity and were unwilling to add credit risk amidst widening corporate bond spreads.[3] We estimate that $59.3 billion of bonds that had less than one year left to maturity were due to be removed from the Bloomberg BarCap US Investment Grade Index.[4]

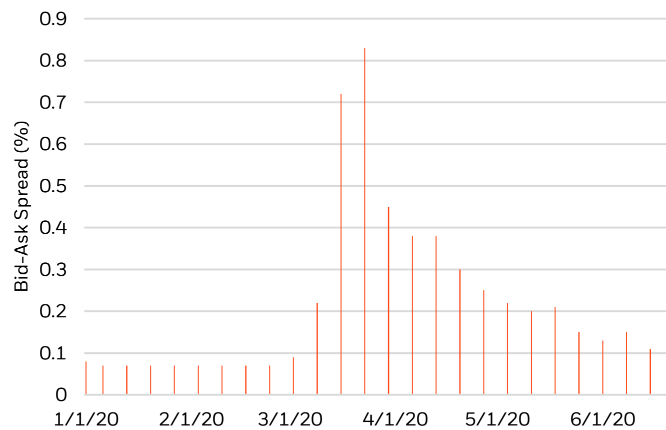
In this illiquid environment, the estimated $188.1 billion of Treasuries and corporate bonds with less than one year to maturity that were due to be removed from the Bloomberg indexes would likely have had a significant impact on the markets.

Fallen angels

Some commentary has suggested that the decision to "delay the recomposition of investment-grade bond indices [was] in response to downgrades" of BBB-rated bonds to high yield.[5] However, fallen angels were not the key focus for the delay. In fact, two of the major index providers decided not to delay this aspect of their rebalance.

As we describe in our August 2019 *Policy Spotlight*, "US BBB Bonds: A Primer," the ability to retain downgraded bonds depends on where those bonds are being held. For example, in actively managed funds, portfolio managers

Exhibit 2: Bid-Ask Spreads (%) for US Investment Grade Corporate Bonds (<1 year)



Source: MarketAxess (MKTX). As of June 30, 2020. Note: in Yield to Worst (i.e., measure of lowest possible yield that can be received on a bond without defaulting on its contract) terms.

Case Study: South Africa Government Bonds

On March 27, South Africa's long-term foreign-currency and local-currency debt lost its last IG rating with a downgrade from Moody's, stemming from concerns that the COVID-19 pandemic would lead to a sharp downturn in its already struggling economy. Consequently, South Africa no longer met the criteria for the World Government Bond Index (WGBI), which measures the performance of fixed-rate, local currency, IG sovereign bonds. However, FTSE, the index provider of the WGBI, announced its intention to postpone its WGBI rebalancing until the end of April, leaving approximately $3 billion of South Africa government bonds in this index for an additional month after their downgrade.

In the weeks leading up to March 27, liquidity conditions for South Africa government bonds were poor, with bid-ask spreads roughly 4 to 5 times what they had been in previous months. These market conditions were driven by a combination of risk-off market sentiment globally, the government-enforced lockdown, infrastructure issues (e.g., rolling electricity blackouts) for South Africa-based dealers, and the operational stressor of transitioning to WFH. These conditions were further exacerbated when South Africa government bonds were downgraded to HY, causing a spike in intraday volatility and declining liquidity in rates markets. Bid-ask spreads widened even further following the announcement to about 5 to 10 times normal levels.

Had FTSE proceeded with the index rebalancing and removal of these bonds, investors and users of this index, and the funds that track the WGBI who chose to sell these bonds, would have incurred unusually high transaction costs given the market conditions at the time. On March 25, the South African Reserve Bank (SARB) announced a government bond purchase program, causing spreads to start narrowing.[6] This action, combined with policy interventions globally that had contributed to risk-on sentiment, allowed for market conditions to improve. As a result, the ultimate rebalancing went smoothly and investors choosing to sell were able to do so in an orderly market.

often have discretion to over- or under-weight different securities or sectors relative to the fund's performance benchmark or even to invest opportunistically in sectors outside of the benchmark, and would not usually be compelled to sell fallen angels. Similarly, many separate accounts, where asset owners typically can customize investment strategy guidelines, incorporate flexibility in holding downgraded bonds. Even index mutual funds and ETFs, which aim to closely track the performance and risk characteristics of their benchmark indexes, generally have some flexibility to hold a certain percentage of non-index names. While we do not expect that under normal conditions downgraded securities would be held over the long-term by such funds, this flexibility mitigates the need for immediate forced selling. For a more detailed description of types of accounts and approaches to downgrades, see pages 7-8 of our August 2019 *Policy Spotlight*.

Importantly, this level of flexibility is particularly critical for fallen angels because of the investment opportunity that they often present. As shown in a 2019 Bank of America Merrill Lynch study, fallen angels often outperform after being downgraded, and "for investors [who] must sell [fallen angels]... generally speaking performance tends to improve markedly for strategies postponing liquidation."[7] Thus, many investors chose to hold fallen angels through the market volatility in March and April. Indeed, we find that even in June 2020 (after prices have already reached some level of non-distressed parity), some IG fund managers continue to hold fallen angels, underscoring the point that concerns around fallen angels were not the key driver behind the decision to delay.

Central Bank Measures to Improve Market Liquidity

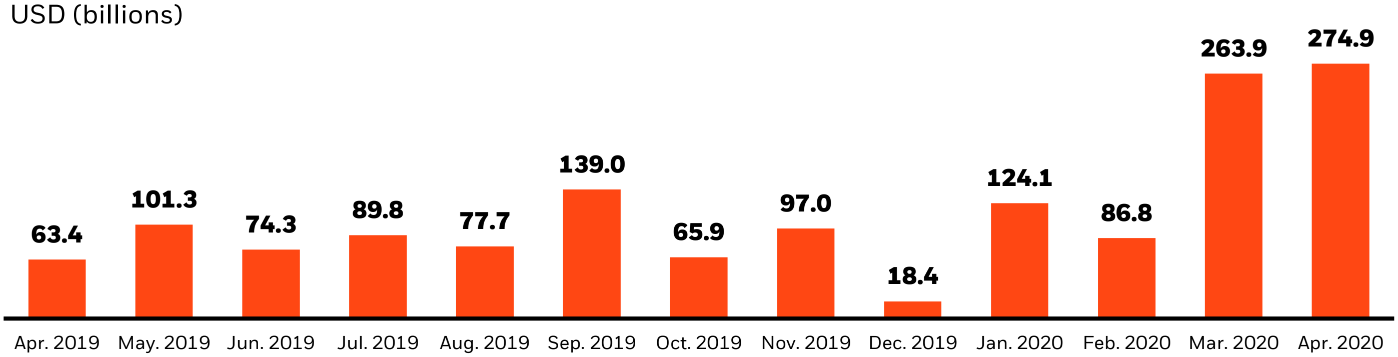
Multiple central banks intervened in markets with measures to improve market liquidity. In the US, on March 23, the Federal Reserve announced several programs to provide support to commercial paper and fixed income markets. The Primary Dealer Credit Facility (PDCF)[8] aimed to improve liquidity conditions through overnight and term funding collateralized by IG securities, including commercial paper and municipal bonds. At the same time, the Secondary Market Corporate Credit Facility (SMCCF) made purchases of investment grade corporate debt, similarly with the aim to ease market conditions.[9] Programs with a shorter-term focus were also put into effect; the Money Market Mutual Fund Liquidity Facility (MMLF)[10] and the Commercial Paper Funding Facility (CPFF)[11] eased liquidity conditions by respectively refinancing and directly purchasing short-term instruments.

Additionally, on March 18, the European Central Bank (ECB) announced its intention to purchase €750 billion of government bonds, covered bonds, corporate sector bonds, and asset-backed securities issued by entities within the Eurozone as part of the Pandemic Emergency Purchase Programme (PEPP).[12] Shortly after, the Bank of England (BoE) announced plans on March 19 to purchase an additional £200 billion of UK government and sterling non-financial investment-grade corporate bonds.[13]

Impact of rebalancing delay

As a result of the index rebalancing delay in March, a significant portion of the rebalancing of indexes, funds, and portfolios was postponed to April month-end, making April a "catch-up" month. In addition, March and April saw a large new issuance calendar for IG corporate bonds (see Exhibit 3). Gross US IG issuance across March and April 2020 totaled $540 billion; issuance in April 2020 alone stood at $275 billion, over four times more than in April 2019. Many of these new issues were added to various fixed income indexes in April.

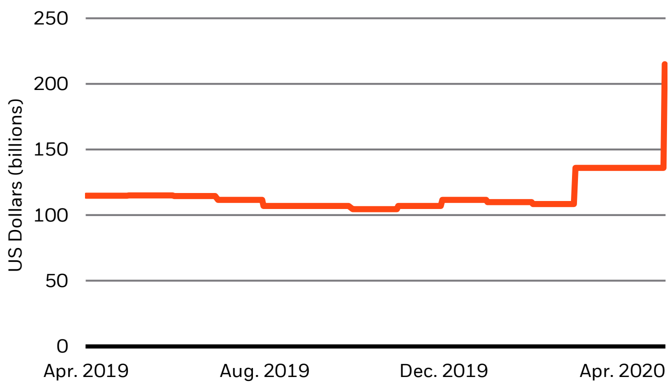
Exhibit 3: Gross USD investment grade issuance, April 2019 to April 2020
USD (billions)



Source: Bloomberg, BlackRock. As of May 4, 2020.

Simultaneously, there was a sharp increase in "fallen angels" volume, which nearly doubled in the US from the start of the year to reach $215 billion by the end of April 2020 (see Exhibit 4). Despite the rebalancing catch-up, the new issue supply, and the increase in fallen angels, trading at April month-end was orderly and liquidity was robust. Where applicable, these securities were removed from various fixed income indexes in April.

Exhibit 4: Volume of USD "Fallen angels"
(April 1, 2019 to March 30, 2020)



Source: Bloomberg, BlackRock. As of May 4, 2020.

Conclusion

The index rebalancing story during the time of COVID-19 is a positive one. The swift actions of many index providers enabled the fixed income market to avoid unnecessary turnover at a challenging time with market uncertainty and limited liquidity. Had the index providers gone ahead with rebalancings, the selling pressure – especially in short-term bonds – would have undermined the actions by central banks to add liquidity to the markets and resulted in higher transaction costs for end-investors. Instead, the delays in March and the "catch-up" month of April proved orderly and efficient.

While the COVID-19 crisis was highly unusual in many ways, it highlighted the importance of indexes as part of the market ecosystem. The full and partial rebalancing delays were undertaken on a voluntary basis by the various index providers. We recommend that index providers work with asset managers and asset owners on how to evolve best practices around index construction in light of the lessons from COVID-19. In addition, we recommend that policy-makers consider how, if at all, they might provide guidance to index providers to address potential rebalancing modifications in the future. This could cover, for example, when index providers should consider a rebalancing delay, what the length of the delay should be, and how stakeholders should be notified. Furthermore, we recommend that any new guidance or rules be created with the goal of global harmonization, given the cross-border usage of many indexes.

Endnotes

1. Bloomberg, BlackRock. As of July 1, 2020.
2. Yield to Worst (YTW) is a measure of the lowest possible yield that can be purchased without a company defaulting on its contractual terms.
3. Bank for International Settlements (BIS), *The recent distress in corporate bond markets: cues from ETFs* (April 14, 2020), 4.
4. Bloomberg, BlackRock. As of June 23,2020.
5. European Systemic Risk Board *note on liquidity in the corporate bond and commercial paper markets, the procyclical impact of downgrades and implications for asset managers and insurers*, May 2020, pp. 6. See also Bank of England *Interim Financial Stability Report*, May 2020, pp. 9: "analysis suggests that a return to 2009 downgrade rates could force portfolio rebalancing in excess of daily turnover in US corporate bond markets."
6. South African Reserve Bank (SARB), Media Statement, *Further amendments to the money market liquidity management strategy of the South African Reserve Bank and additions to the Monetary Policy Portfolio*, available at https://www.resbank.co.za/Lists/News%20and%20Publications/Attachments/9805/Further%20amendments%20to%20the%20money%20market%20liquidity%20management%20strategy%20of%20the%20SARB.pdf.
7. Bank of America Merrill Lynch, "You're Gonna Need a Bigger Allocation to Corporates," (June 7, 2019).
8. Federal Reserve, *Federal Reserve Board announces establishment of a Primary Dealer Credit Facility (PDCF) to support the credit needs of households and businesses* (March 17, 2020), available at https://www.federalreserve.gov/newsevents/pressreleases/monetary20200317b.htm.
9. Federal Reserve, *Federal Reserve announces extensive new measures to support the economy* (March 23, 2020), available at https://www.federalreserve.gov/newsevents/pressreleases/monetary20200323b.htm.
10. Federal Reserve, *Federal Reserve Board broadens program of support for the flow of credit to households and businesses by establishing a Money Market Mutual Fund Liquidity Facility (MMLF)* (March 18, 2020), available at https://www.federalreserve.gov/newsevents/pressreleases/monetary20200318a.htm.
11. Federal Reserve, *Federal Reserve Board announces establishment of a Commercial Paper Funding Facility (CPFF) to support the flow of credit to households and businesses* (March 17, 2020), available at https://www.federalreserve.gov/newsevents/pressreleases/monetary20200317a.htm.
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13. Bank of England, *Asset Purchase Facility (APF): Asset Purchases and TFSME – Market Notice* (March 19, 2020), available at https://www.bankofengland.co.uk/markets/market-notices/2020/apf-asset-purchases-and-tfsme-march-2020.

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