WHITE PAPER

DiMeo Schneider & Associates, L.L.C.

Breaking the Rules in Fixed Income Index Construction

How Extreme Bouts of Volatility Drove Index Providers to Breach Their Methodologies

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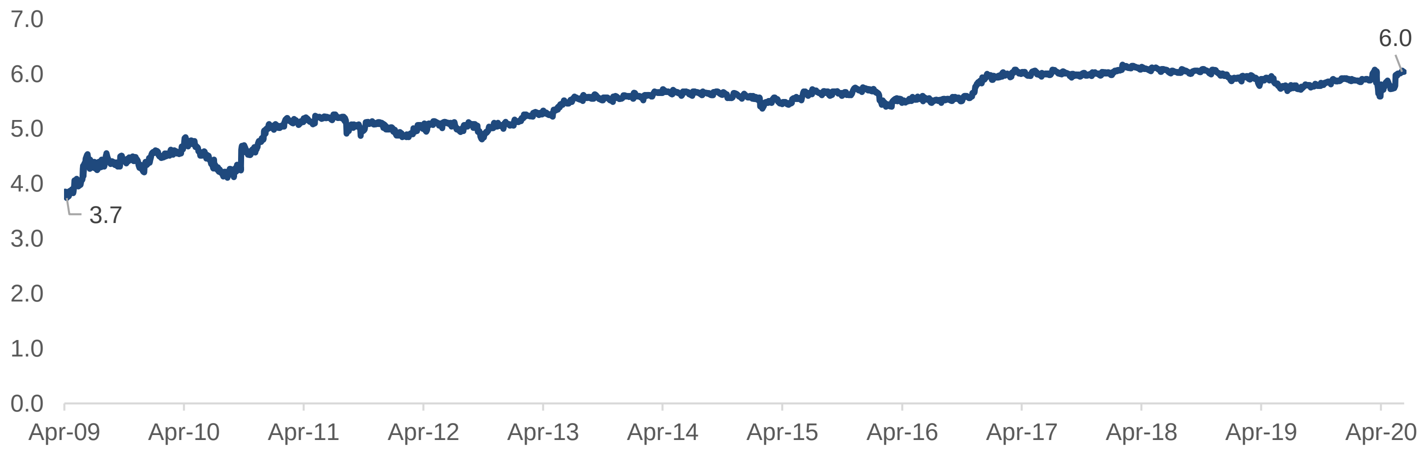
As fixed income markets evolved over the last cycle, we extensively examined and analyzed new risks present in benchmarks with a focus on increased interest rate and credit risks. The Bloomberg Barclays U.S. Aggregate Index (Agg), a benchmark of investment-grade, fixed income securities, has seen its duration (interest rate risk) increase by nearly 60 percent since March 2009. During that same period, the Agg's corporate credit allocation increased from 17.4 percent to 23.7 percent, with BBB-rated securities increasing from 6.8 percent to 17.7 percent. Much of this may seem redundant in light of previous reports and analysis. However, the volatility experienced by markets in March 2020 introduced a new development in our study of fixed income benchmarks.

Bloomberg Barclays U.S. Aggregate Duration (Years)



Source: Factset.

The growth in passive exchange traded and mutual fund strategies across fixed income portfolios has been meaningful over the last cycle. Passive assets currently account for 31 percent and $525 billion in assets of Morningstar's investment-grade core and core plus bond mutual fund peer groups. And many of these portfolios are rules based, meaning if securities fall outside of their stated opportunity set (investment-grade securities), the funds are effectively forced to sell those securities in order to maintain alignment with the benchmarks they seek to track.

As benchmark providers, such as Intercontinental Exchange ("ICE") and Bloomberg Barclays, sought to rebalance indices on the typical monthly schedule in March 2020, they were faced with an interesting challenge: Several "fallen angels" – investment-grade securities that were downgraded to below investment grade – were positioned to be removed from investment-grade benchmarks. Those securities issued by Occidental, Ford and Delta, accounted for roughly 1.2 percent of the Bloomberg Barclays Investment Grade Corporate Index as of

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February 29, 2020. In response to the market volatility and seizure in liquidity during the rebalance period, index providers made an interesting decision. For the first time ever, they abandoned their rebalancing rules. The breaking of the rules was not uniform across providers. ICE, for example, decided to postpone the removal of the downgraded corporate issues, while Bloomberg Barclays did remove the downgraded issues but determined they would keep securities with maturities of one year or less in the investment-grade universe due to market liquidity concerns.

What was the consequence of this decision? Overall, such a decision has had – and will continue to have – a major impact on the market. For instance, benchmark providers have now set a precedent that changes risks surrounding fallen angels. We've cited that more than $2 trillion in BBB-rated securities are at risk of downgrades due to leverage levels and the cyclicality of the issuer's industry. Should a wave of downgrades occur, those bonds would effectively swamp the $1.1 trillion high-yield universe. However, the influence of passive investment managers may play a critical role as will the Federal Reserve's ("the Fed") announcement and willingness to buy corporate debt, including fallen angels. Passive managers are key stakeholders of benchmark providers as the data licensed by the provider is required for the manager to effectively track those indexes. It is possible that the influence of passive managers caused benchmark providers to delay the rebalance until the market rationalized in order to minimize any tracking errors in those benchmarks.

This conflicts with the interests of active managers whose mandate is to outperform those benchmarks through active portfolio allocation and security selection. As a result of index providers disrupting rebalancing rules, benchmarks no longer accurately reflected their representative markets. While the market environment experienced in March was unprecedented, the reaction from those who provide a structural reference point was equally unexpected. Keen investors would be wise to monitor how benchmark construction decisions influence technical risk factors across fixed income markets.

While the issue of benchmark providers choosing to ignore their index construction and rebalancing rules is hopefully a one-time occurrence, there is another aspect of index construction that warrants attention. Index provider Bloomberg Barclays adjusts for the Treasury float in the market for some of its U.S. Treasury indices. This effectively removes new issue Treasuries that the Fed purchases for their System Open Market Account ("SOMA") from the benchmarks, including the widely used Bloomberg Barclays U.S. Aggregate Index.

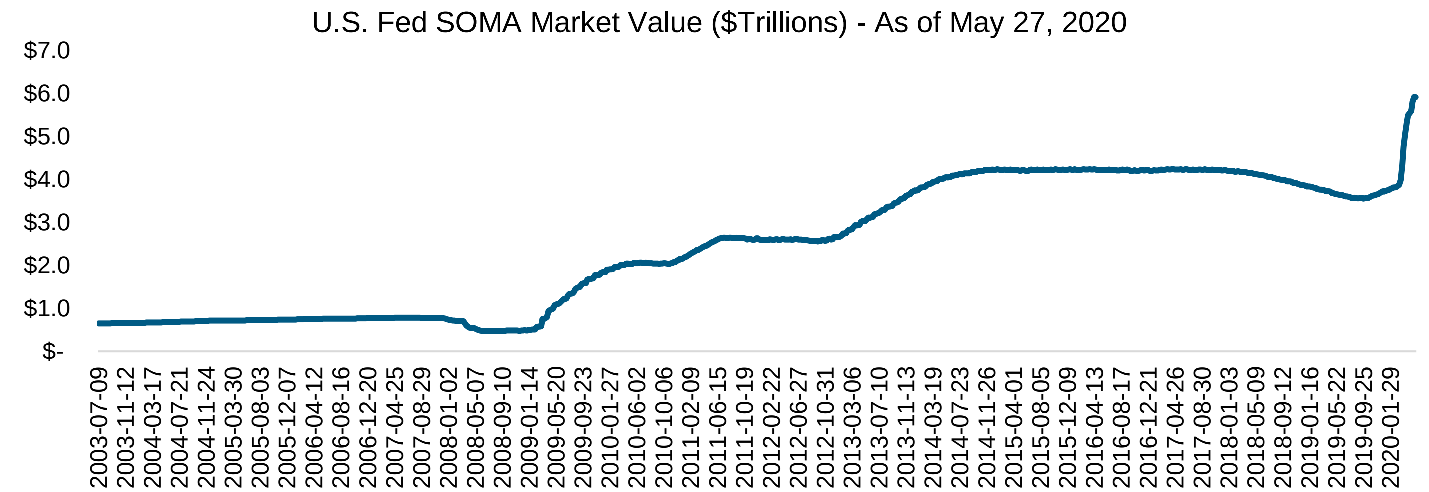
As the coronavirus crisis unfolded and fixed income market liquidity all but evaporated, the Federal Reserve announced a plethora of asset purchase and liquidity programs to help calm the markets. This included the announcement on March 15, 2020, that the Fed is committed to purchasing up to $500 billion in Treasuries and $200 billion in agency MBS. After this major decision, the Fed then proclaimed a new policy shift on March 23, 2020, stating that it would conduct open-ended quantitative easing in "the amounts needed to smooth market functioning and effective transmission of monetary policy to broader financial conditions and the economy."

As a result of the Fed's uptick in Treasury purchases, we saw a substantial change in the composition of the Agg during April, with the weight of U.S. Treasuries in the index falling by approximately 2.5 percentage points, while the corporate bond and securitized exposures increased by 2.0 and 0.5 percentage points, respectively (see table).

	March 31, 2020		April 24, 2020		Change	
	Market Value ($billions)	Market Value (%)	Market Value ($billions)	Market Value (%)	Market Value ($billions)	Market Value (%)
Treasury	9,747	40.9	8,974	38.4	-773	-2.5
Gov't Related	1,396	5.9	1,373	5.9	-23	0.0
Corporate	5,739	24.1	6,099	26.1	360	2.0
Securitized	6,948	29.2	6,948	29.7	0	0.5
Total	23,829	100.0	23,394	100.0		

Source: Bloomberg Barclays

Since the end of March, the SOMA account increased by more than $1.5 trillion, including purchases of both Treasuries and mortgage backed securities ("MBS"). While the pace of the Fed's SOMA purchases in the future is mostly unknown at this point, these purchases, coupled with record levels of corporate debt issuance this year, will likely result in a further reduction of free-floating Treasuries in the Agg.



Source: U.S. Federal Reserve Bank of New York

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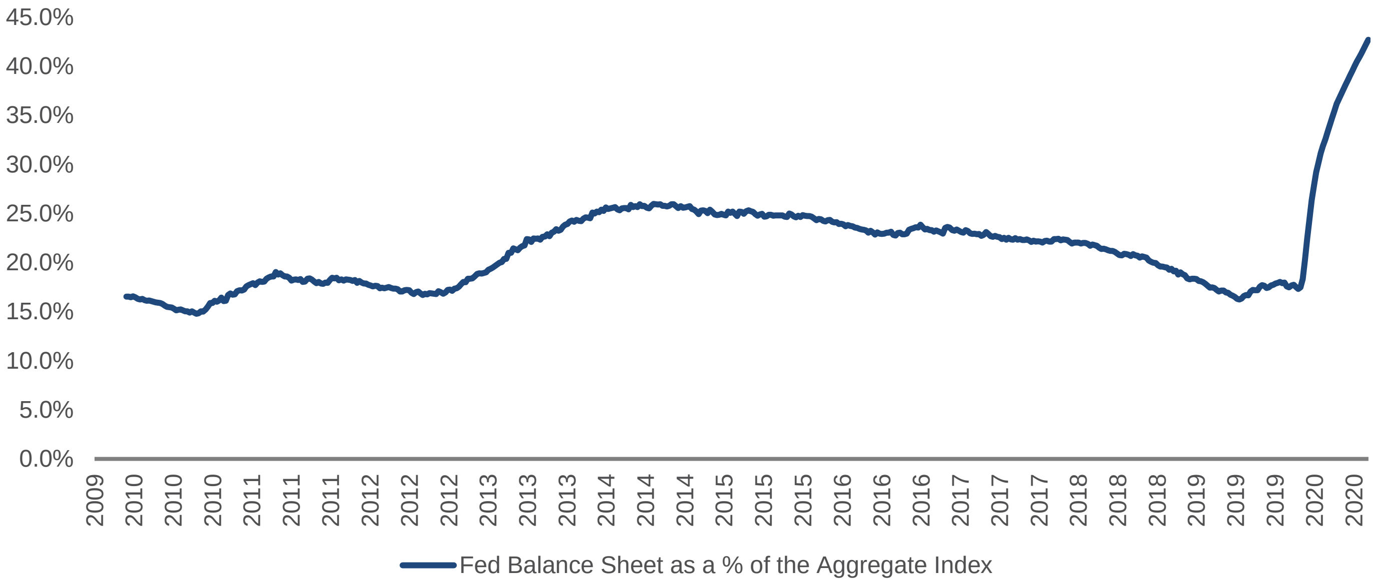
The Fed's purchases will entirely depend on the future economic environment and condition of financial markets. While this is difficult to predict, some forecasts project the Federal Reserve's balance sheet could equate to more than 40 percent of the Agg's market value by the fall. This is not a negligible change. In fact, if realized, this level of fluctuation could have a meaningful impact on the underlying profile of fixed income benchmarks.



Source: BlackRock, data for 2020 is forecasted

As index providers disregard their standard rebalancing practices, we must contemplate the precedent they have now set for similar situations in the future. The inherent conflict is evident:

- Active managers believe the index providers should maintain fidelity to the rules set forth by those providers.
- Passive managers accept such lack of compliance with these traditional index provider guidelines; after all, they benefit from not being forced to sell in an illiquid market.

As the two sides are at odds in their assessment of the situation, in our studied opinion, active managers, who are not beholden to index rules and rebalancing, have ample opportunities to determine the best risk-reward opportunities and generate attractive returns within the fixed income space. Passive investing, as it turns out, may not be that passive after all as index methodologies, whether they are followed or not, impact the risk, duration and sector profile of the index over time and may have unintended impacts on overall portfolio exposures.

For more information, please contact any of the professionals at DiMeo Schneider & Associates, L.L.C.

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Ryan researches and performs operational due diligence on core investment managers. He is a team member of our Global Public Markets Group. Prior to joining the firm in 2014, Ryan served as a Research Assistant in U.S. Public Finance for S&P Ratings Services. He received a BS in Management from Indiana University's School of Public and Environmental Affairs and is pursuing his MBA from the Kellogg School of Management at Northwestern University. He is a CFA® charterholder and member of the CFA Society of Chicago and CFA Institute. Ryan served as a member of the Children's Research Fund Junior Board and enjoys competing in triathlons.

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