In Search of Stability and Resilience Amid Heightened Fragility

> Interest rates moved significantly higher in the third quarter, producing another resoundingly negative quarter for total returns.

> The rate move was more extreme at the shorter end of the yield curve, as the Federal Reserve (Fed) delivered two additional 75-basis point (bps) rate hikes over the quarter (three in a row), bringing the year-to-date tightening cycle to +300 bps. The Treasury curve (using 2s/10s) was still slightly positive entering the quarter, but the two large rate hikes led to a 45-bps inversion by the end of the quarter.

> In the municipal market, inflation, higher rates, and volatility took their toll during the third quarter in a thinly traded market. The Bloomberg Municipal Bond Index, a broad measure of the municipal market, returned -3.84% for the second quarter, bringing the year-to-date return to -12.13%.

> On the municipal yield curve, both the short end and the long end were the weakest: the 2-year went up 121 bps, the 5-year gained 99 bps, and the 10-year went up 69 bps. But the long end went up 84 bps. In terms of performance, the 5-year was down 2.71% for the three-month period. The 10-year was down 2.54%. And the 30-year was down 5.95%.

INVESTMENT GRADE-TAXABLE

Pain Management Continues

Between higher inflation, sharper volatility, painful monetary policy, geopolitical confrontations, and more frequent and intense natural disasters, the 2022 nightmare continued in the third quarter:

> Q3 delivered yet another significant move higher in interest rates

> This produced another resoundingly negative quarter for total returns

> Treasury rates moved as follows:

	6/30/22	9/30/22	Change
2 Year	2.96	4.28	+1.32
5 Year	3.04	4.00	+1.04
10 Year	3.02	3.83	+0.82
30 Year	3.19	3.78	+0.59

Source: Bloomberg.

The rate move was more extreme at the shorter end of the yield curve, as the Fed delivered two additional 75-bps rate hikes over the quarter (three in a row), bringing the year-to-date tightening cycle to 300 bps.

The Treasury curve (using 2s/10s) was still slightly positive entering the quarter, but the two large rate hikes led to a 45-bps inversion by the end of the quarter. This curve inversion further intensified expectations of a monetary policy error by the Fed and the recession that it will induce:

> The Bloomberg Aggregate Index suffered a -4.75% total return in Q3, similar to Q1/Q2 at -5.93%/-4.69%

> This brought the Aggregate's year-to-date total return to -14.61%

> Bloomberg's 60/40 (stocks/bonds) Index showed there was nowhere to hide with a year-to-date total return of -20.80% through Q3

Evolution of Q3: False Hopes of a Fed Pivot

It seems so long ago, but the third quarter actually began with a departure from the pain of Q2. July saw rates decline modestly, making it only the second month of 2022 in which rates moved lower. Why? Somehow broader concerns about slowing growth and the belief that inflation might be peaking led investors to price in a less aggressive pace of monetary tightening.

While delivering the 75-bps hike at the July 27 Federal Open Market Committee (FOMC) meeting Chair Powell acknowledged some softening in the economy and, while leaving open the possibility of another 75-bps hike, he mentioned the inevitable downshift to a slower pace of rate hikes.

Did Powell give bulls a bum steer? The market rejoiced at the potential for slowing the pace of tightening – and the idea that a Fed pivot was near extended the rally in risk assets. Financial conditions "loosened" by 47 bps over July (using the Goldman Sachs Financial Conditions, or GSFCI), led by a 9.2% total return for the S&P 500®. Forward pricing in the rates market also began to pull forward eventual rate cuts into the first half of 2023.

That "pivot" message and forward pricing of rate cuts was not what the FOMC desired. With core inflation continuing to come in high the FOMC needed to push back on the "pivot" theme that came out of the mid-summer meeting and ensuing risk rally. The reset came in late August with Chair Powell's deliberately hawkish eight-minute speech at the Fed's annual Jackson Hole symposium:

> Powell never uttered the word "recession" – but he made it clear the pain the economy may have to endure to really restore price stability

> He also made the point to emphasize that pivoting "prematurely" can have grave consequences – a not so subtle reference to the Arthur Burns Fed of the 1970s

> Powell made it abundantly clear that the inflation mandate was the FOMC's priority

The risk asset rally was already decelerating in mid-August. A strong employment report released on August 5 renewed the sentiment that the Fed pivot theme may be premature, and Powell's late August speech led to even more pronounced "risk off" activity/sentiment.

By the end of August, rates resumed moving higher, and risk assets were selling off again. This set the markets up for a very painful September following some painful months earlier in the year. Rates rose significantly in September, and risk assets underperformed considerably:

> The Bloomberg Aggregate Bond Index was -4.32% for September

> The S&P 500 was -9.22% for September

> Both represented the worst monthly total returns thus far in 2022

Total/Excess Return Summary

Total returns were very negative again across the board in the investment grade space (using Bloomberg index data) given the significant move higher in rates:

	Third Quarter (%)	YTD (%)
Aggregate	-4.75	-14.61
Investment Grade Corporate	-5.06	-18.72
RMBS	-5.35	-13.66
CMBS	-3.85	-11.81
ABS	-1.34	-5.06

Source: Bloomberg.

Excess returns were negative for the primary spread sectors (Corporates and RMBS), but the difference is notable between the two.

IG Corporate generated a somewhat muted -33 bps of excess, as the early Q3 positive risk sentiment helped offset the later quarter weakness.

> Lower quality BBB credits modestly outperformed with -13 bps of excess against single-A credits at -56 bps

> Long credit drove the underperformance with -110 bps of excess against intermediate credit at +7 bps

Residential mortgage-backed securities (RMBS) suffered more with -169 bps of excess, as the weakness of August and September easily overwhelmed the positive excess of July.

> RMBS saw -191 bps of excess in September alone, the worst month EVER in excess return terms (since RMBS excess return calculations began in 1988)

> Having lost the large, price insensitive buyer (Fed) in June, the sector has remained under pressure since then

> PCC (perfect current coupon) – a generic spread proxy for the "production" or near par priced coupon – widened over Q3 from +137 bps to +184 bps (spread to the 10-year Treasury)

> PCC at +137 bps to begin the quarter was already wide – representing a level last seen coming out of the Global Financial Crisis (GFC) back in 2009

> PCC at +184 bps represents a level last seen in the heart of the GFC prior to Treasury stepping in to put government-sponsored enterprises (Fannie Mae and Freddie Mac) into conservatorship

> Fear of the Fed becoming a seller of RMBS at some point as part of its QT (quantitative tightening or balance sheet runoff) effort is part of the negative sentiment around the sector, which Chair Powell attempted to deflect in the last press conference by emphasizing that the FOMC is not even discussing RMBS sales at this point in time

Commercial mortgage-backed securities (CMBS) and asset-backed securities (ABS) excess returns were not material over Q3, generating -26 bps and +30 bps, respectively.

The "PLUS" sectors generated more mixed total returns, but much better excess returns over the quarter (again based on Bloomberg index data).

> The high yield total return was only modestly negative at -0.65% and excess return was +227 bps

> Emerging market debt showed a total return of -4.06% and excess return of +20 bps

GOLDMAN SACHS FINANCIAL CONDITIONS INDEX

As of 9/30/22. Source: Bloomberg

Broad Financial Conditions Tighter

The Fed has often emphasized that it looks at a broad set of metrics to gauge the overall tightening of financial conditions

> Using the GSFCI, Q3 saw another 111 bps of tightening

– Recall Q2 saw a record level of tightening at 187 bps

– Q1 tightening was 78 bps

– The GSFCI has now tightened by 376 bps year-to-date

> Also recall, the GSFCI incorporates the Fed's target rate, the 10-year Treasury yield, BBB spreads, stock prices, and the trade weighted dollar

– The changes in all these components have contributed to the tightening

> While many see this overall policy shift as a policy error, dooming the economy to eventual recession, the reality is that this is the Fed's intent – a necessary shift in policy to restore price stability

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Outlook

After 300 bps of rate tightening this year, many investors are wondering whether the Fed will pause or pivot in 2023. From the Fed's recently (September meeting) updated "dot chart," the median Fed target rate for the end of the year is 4.375% (implying a 4.25-4.5% target rate range) – so another +125 bps of tightening (+75 bps at the November meeting and +50 bps at the December meeting).

Also, from that "dot chart" update, the terminal rate would peak at 4.625 (implying a 4.5% to 4.75% target rate range) – so another +25 bps in early 2023 – and stay there through the end of 2023.

Note, however, that the "dot chart" only implies rate cuts in 2024 and 2025 – not 2023 as the rates market continues to anticipate.

Data dependency remains the primary overriding theme the Fed attaches to any forward-looking policy guidance – and it remains steadfast that the updated dots are merely the current opinions of all FOMC members – not a formal forecast or intentional forward guidance.

Clearly the cycle to date has been brutal and given the incremental nature of most tightening cycles, the idea that this current cycle may produce 450 bps of tightening over a 12-month window is a jolt that harkens back to the 1980s:

> The early 2000s cycle saw 425 bps of tightening – but that was over a two-year period that saw 25-bps hikes over seventeen consecutive meetings

> The subsequent cycle saw 225 bps of tightening spread out over three years (Dec '15 to Dec '18) with only periodic 25-bps hikes

Treasury rates have moved considerably higher this year and as a result benchmark yields across the investment grade market have followed suit:

> The Bloomberg Aggregate yield to worst (y-t-w), or the lowest rate an investor can expect to earn short of a default, ended Q3 at 4.75% – a level not seen since 2008

> Given a decade of financial repression, the 2010s saw the Aggregate y-t-w average around 2.5%, which was down considerably from the approximately 5% average of the 2000s

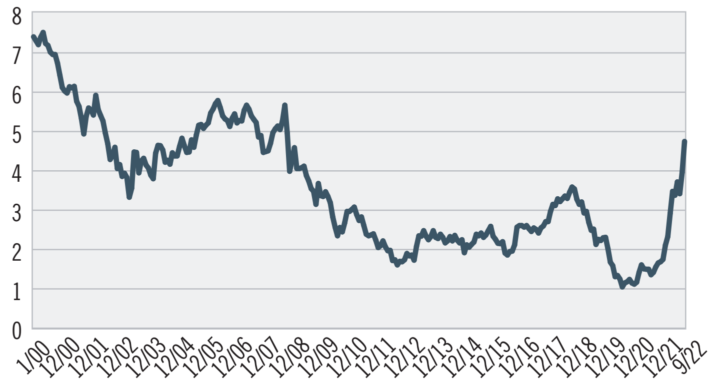
> The return of inflation has finally forced yields to return to levels that represent the "old normal" as opposed to the low rates that permeated the "new normal" in the post-GFC era

> If we can be optimistic, the investment grade market finally offers the potential to counter the "return free risk" label that witty observers applied to U.S. Treasuries for most of the 2010s

FOLLOW THE JUMPING YIELD

While the rate move has been substantial, spread changes for both the IG and HY credit sectors have been relatively muted. Spreads have widened – hence the negative excess returns across the board year-to-date – but the move has been somewhat orderly considering the magnitude of the rate shift, the sell-off in the stock market, and the consensus expectation of imminent recession (if we are not already in a recession, as some analysts contend).

BLOOMBERG AGGREGATE YIELD TO WORST MONTHLY FROM JANUARY 2000 TO SEPTEMBER 2022



As of 9/30/22. Source: Bloomberg

It is this relatively muted response, in corporate credit in particular as opposed to the already considerable pain the RMBS market has endured, that warrants ongoing caution and more defensive positioning for the balance of 2022 and early 2023.

Policy tightening comes with long and variable lags, so the full extent of the Fed's action to date is still to be felt. After all, inflation remains very high and while energy price declines since the spring have helped headline inflation moderate, core inflation remains uncomfortably high:

> Forecasts for a smooth return to the 2% price stability objective seem overly optimistic

> Peak inflation is not the important point, but instead the level at which core inflation returns to will be key

> Should the road to 2% inflation prove too punishing to the economy over time, perhaps the target will be raised

> Could the Fed eventually acknowledge a 2% inflation target is unrealistic in the current environment and raise its target to 2.5%, 3%, or 3.5%? It is impossible to gauge at this point

Further Complications: Liquidity and Market Structure

While we emphasize the Fed's dual mandate of price stability and full employment, illiquidity and financial stability are growing in prominence. To put it simply, intermediaries of the capital markets have not kept pace with the growth of the capital markets.

What happens if something breaks in the current QT regimen (which many market players think is eventual)? Consider what happened in the United Kingdom's gilt market after a surprise fiscal policy announcement by the new government. Pension funds following a so-called liability-driven investment strategy (LDI) were forced to post more collateral when prices for UK

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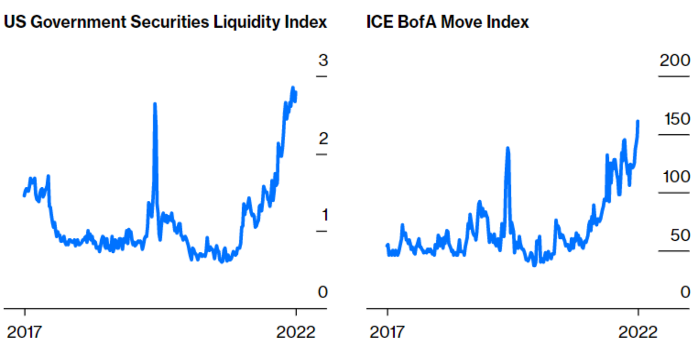
sovereign bonds collapsed suddenly – in part driven largely by their own selling. That prompted the Bank of England to step in to prevent a systemic crash by committing to buy long-dated assets until October 14. They were supposed to be entering a QT period on October 3, but that was delayed until October 31. Since then, the new prime minister fired her chancellor and backtracked, and the Bank of England's governor made it clear he will "not hesitate to raise interest rates to meet the inflation target" of 2%.

Against that backdrop, we are already seeing exceptionally high levels of illiquidity in the U.S. Treasury market and the RMBS market. So financial stability may resonate further over the fourth quarter now that the Fed's QT program has hit its full balance sheet run-off pace of $95 billion a month. We would not be shocked if that level of QT ended early and the Fed actually tries to add to its balance sheet to improve liquidity – long before it wants to loosen financial conditions.

If that sounds like the central bank version of whack-a-mole, recall the Fed's prior use of Operation Twist in which it sold short-term Treasury bills/notes and used the proceeds to buy long-term Treasury notes. However, such steps are short-term solutions because the Fed has a limited stock of short-term Treasuries so that it can only "sterilize" a limited amount of longer-term purchases and keep the reserve level in the banking system unchanged.

BAD COMBINATION

The U.S. Treasury Market is Suffering from Declining Liquidity and Elevated Volatility



Data as of 10/13/22. Source: Bloomberg.
A higher Liquidity Index means liquidity is moving lower.

INVESTMENT GRADE-TAX EXEMPT

Continued Strong Demand Despite Volatility and Liquidity Issues

Inflation, higher rates, and volatility took their toll during the third quarter in a thinly traded market. The Bloomberg Municipal Bond Index, a broad measure of the municipal market, returned -3.46%, bringing the year-to-date return to -12.13%. Year-to-date, the Bloomberg Municipal Bond Index outperformed the Bloomberg Aggregate Bond Index (-14.61%), Bloomberg Corporate Index (-18.72%) and Bloomberg Treasury Index (-21.27%).

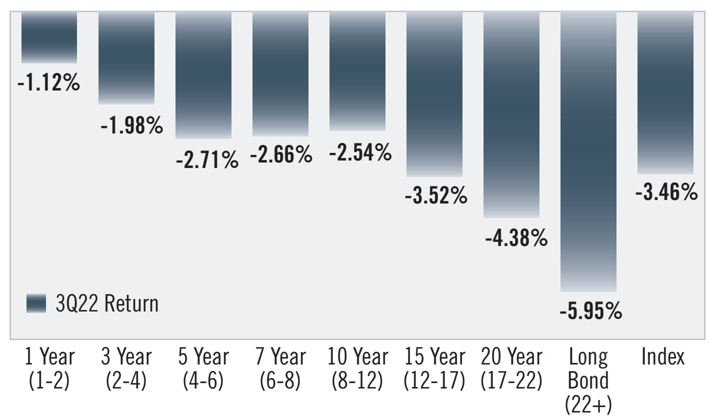
Early in the quarter demand outstripped supply as more money came due to investors than municipals being issued. September transitions the stage to less favorable technicals for October and November. Municipals continue to loosely follow the volatility of the treasury market however front-end municipal demand has kept the municipal curve at a positive slope unlike the Treasury market.

On the municipal yield curve, both the short end and the long end were the weakest: the 2-year went up 121 basis points (bps), the 5-year gained 99 bps, and the 10-year went up 69 bps. But the long end went up 84 bps. By mid-August, many retail investors, the dominant share of the market, headed for the exits.

In terms of performance, the 5-year was down 2.71% for the three-month period. The 10-year was down 2.54%. And the 30-year was down 5.95%.

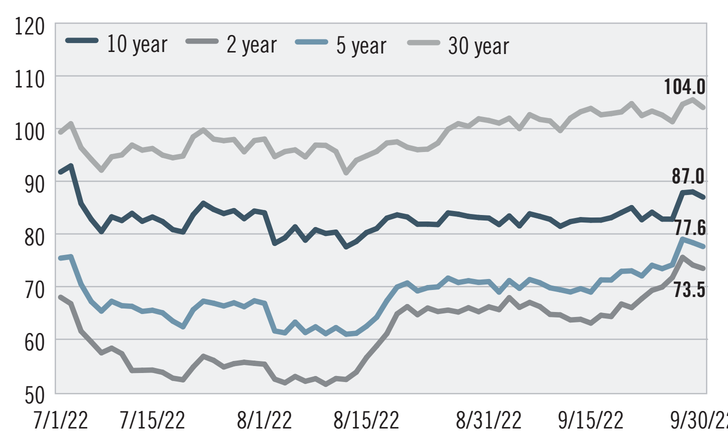
By the end of September, ratios cheapened up quite a bit versus Treasuries, all of which began to attract buying interest from some insurance companies and crossover buyers.

BLOOMBERG MUNICIPAL BOND INDEX MATURITY DISTRIBUTION



As of September 30, 2022. Source: Bloomberg.

MUNICIPAL BOND/TREASURY RATIOS



As of September 30, 2022. Source: Bloomberg

Much More Liquidity in Higher Quality

For the quarter, the declines in quality issues were nearly even. AAA was down 3.50%. AA fell 3.34%, A dropped 3.51%, and Baa was down 4.07%. However, quality continues to hold its own better than other ratings, and there is much more liquidity in the higher quality. Year-to-date, the AAA is down 11.71%, AA is down 11.62%, A is down 12.55%, and Baa is down 14.93%.

Momentum turned more favorable at the beginning of October as muni ratios looked attractive. Whether that trend holds is another matter. If retail investors remain skittish, illiquidity could continue, since dealers are generally reluctant to hold inventory in this sort of market environment, but that can change quickly. Once the market appears poised to rally, there often is not enough bonds to meet demand.

Obviously, all attention is on the Fed, the pace of future rate hikes, the direction of the U.S. dollar, and whether the Fed will need to intervene at the long end like the Bank of England has done to mitigate volatility.

In any case, the municipal market is still an asset class that people want to own, but we need to see some stability. We need to have a market environment where the Fed has done most of its increases and Treasury markets are much more stable. Once we reach that point, retail demand should be very strong.

Credit Stability

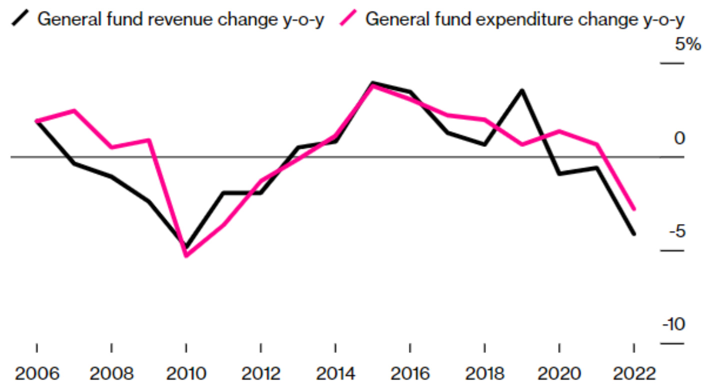
On the credit side, while there has not been as much improvement as we saw in the first half, we are not seeing much decline yet, either. Obviously, the overarching concern is whether we go into a recession – and if so, how severe – and the ramifications for states, cities, and revenue bonds. However, as of this writing, credit is stable, and for the fourth quarter we do not really see too much to be concerned about yet.

When it comes to the states and cities that the Fund owns, most of them are very well-positioned for a recession. So, we are not too worried about the bonds that the Fund owns because we are just much more oriented to higher quality bonds.

Against that backdrop, we are a little cautious on hospital bonds that have come under pressure. Another yellow flag would be any state or local municipality that did not shore up its finances while the opportunity was good. Meantime, we remain selective about transportation and airport issues and believe there are still some very good credits there.

CITIES BRACE FOR REVENUE DIP

Governments are expecting tax revenue to decline as a recession looms



Source: NLC analysis of data from the City Fiscal Conditions survey and annual financial reports. Note: 2022 data is estimated.

Rebuilding Florida

As millions have observed in the last several weeks, it is going to take a long time to rebuild the vast areas ravaged by Hurricane Ian. However, if past recoveries are any indication, those areas should come back even stronger with whatever flood and wind insurance is available, as well as billions of dollars of assistance already pledged by the federal government.

We have not seen any credits at risk of bankruptcy in the affected areas. Some might have a short-term, negative outlook. Others might be a short-term downgrade by some of the rating agencies, but they will remain investment grade quality.

Outlook

Municipal investors should take heart from the fact that the economy is still doing well, but we will have to see the effects of higher interest rates.

The less favorable seasonality we mentioned earlier typically changes come mid-November. If that trend continues this time around, demand should eclipse supply by the end of November, December, or January like it did during the summer months. It all depends on what happens in the Treasury market.

Will Fed policy change in the face of tighter liquidity? In any case, we are primarily positioned with high quality bonds which are easier to sell, even in an illiquid market, if necessary. So that approach held its value. We are also primarily invested in higher coupon bonds (5%), and they have also held their value better. The issue that we have seen is people who bought 4% or 3% coupons on 20- or 30-year bonds last year, and even earlier this year, are now priced at very deep discounts.

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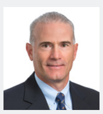
Authored by:

Investment Grade – Taxable



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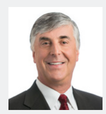
Investment Grade – Tax-Exempt



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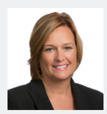

Dusty Self
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The **Bloomberg U.S. Aggregate Bond Index** measures the U.S. investment grade fixed rate bond market. The index is calculated on a total return basis. The **S&P 500® Index** is a free-float market capitalization-weighted index of 500 of the largest U.S. companies. The index is calculated on a total return basis with dividends reinvested. **Bloomberg U.S. Corporate Investment Grade Bond Index** measures performance of investment grade corporate bond funds. The index is calculated on a total return basis. **Bloomberg Municipal Bond Index** is a capitalization weighted bond index created by Bloomberg Barclays intended to be representative of major municipal bonds of all quality ratings. The **Bloomberg High Yield Municipal Bond Index** covers the universe of fixed rate, non-investment grade debt. The **Bloomberg Municipal 1-Year Index** is designed to track the U.S. short-term tax-exempt bond market, including state and local general obligation bonds, revenue bonds, pre-refunded bonds, and insured bonds. The **Bloomberg Long Bond Index** is designed to track the U.S. long-term tax-exempt bond market. The **Bloomberg AAA Index** tracks AAA-rated municipal bonds. The **Bloomberg Baa Index** tracks Baa-rated bonds. The **Bloomberg US 60:40 Index** is designed to measure cross-asset market performance in the U.S. The index rebalances monthly to 60% equities and 40% fixed income. The equity and fixed income allocation is represented by Bloomberg U.S. Large Cap Index and Bloomberg U.S. Aggregate Bond Index, respectively. The **Bloomberg U.S. Government Securities Liquidity Index** – a gauge of deviations in yields from a fair-value model – is approaching new highs, which means liquidity is moving lower. The **ICE BofA U.S. Bond Market Option Volatility Estimate Index (MOVE)**, formerly known as the Merrill Lynch Option Volatility Estimate Index, measures U.S. bond market yield volatility by tracking a basket of over the counter options on U.S. Treasury notes and bonds. The basket is comprised of at-the-money one month options on the current 2-year, 5-year, 10-year and 30- year Treasuries. The index value is equal to the average of the implied normal yield volatility of the four options, where the 10- year option is given a 40% weight and the other basket components each hold a 20% share.

The indexes are unmanaged, their returns do not reflect any fees,expenses, or sales charges, and are not available for direct investment.

A **Basis Point (bp)** is equal to 0.01%. **Average Coupon** is the weighted average coupon (annual rate of interest on the bond's face value that the issuer agrees to pay the holder until maturity) of all the securities in a fund.

Credit Ratings noted herein are calculated based on S&P, Moody's and Fitch ratings. Generally, ratings range from AAA, the highest quality rating, to D, the lowest, with BBB and above being called investment grade securities. BB and below are considered below investment grade securities. If the ratings from all three agencies are available, securities will be assigned the median rating based on the numerical equivalents. If the ratings are available from only two of the agencies, the more conservative of the ratings will be assigned to the security. If the rating is available from only one agency, then that rating will be used. Ratings do not apply to a fund or to a fund's shares. Ratings are subject to change.

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