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Morgan Stanley Private Wealth Management
Zager Fixed Income Management (ZFIM) Newsletter

Key Questions Our Team is Thinking About:

1) How will the Great Bank Panic affect the economy and future inflation? ***(See page 2)***

2) What are corporate bond spreads telling us post-panic? ***(See page 7)***

3) The financial world changed with Dodd-Frank, did recent events change it again? ***(See page 9)***

4) How exposed are municipals to a weaker banking and economic landscape? ***(See page 11)***

Economics - *The Fed's Job Just Got Harder*

Despite the rapid rate hikes by the Federal Reserve to counter stubborn inflation, economic and financial landscapes largely remained orderly in 2022 and in to 2023. That all changed in early March with the events that led to two banks being placed into receivership and the full blown banking panic that followed. However, even with the dust still settling from a truly historic run on banks, the Fed continued down its path of hiking the Fed Funds Rate and pushing the upper bound to 5.0% in March.

While there had been a variety of economic "landing" scenarios being discussed in the first few months of the year, the shift in tone certainly changed at the end of the first quarter. As the market continues its scrutiny of banks and balance sheets, a recessionary scenario seems to be gaining as possibly the only outcome from here. While not unreasonable by any means, especially as growth expectations are looking weaker, the path to the Fed's target inflation rate is also not certain and is a key variable as to what economic conditions could look like in the months ahead. A few metrics provide hints as to whether or not we may be able get to the target inflation rate.

Taxable Credit - *Are Lower Yields Inevitable Now?*

The unanticipated events of March 2023 caused a sharp shift in sentiment as it relates to credit. This directly affected Treasury yields and curve shapes. As a result of that shift, volatility gripped fixed income markets at the end of the first quarter and could be witnessed in everything from corporate bond spreads to daily changes in benchmark yields. The end result is a mixed bag of lower Treasury yields, higher corporate spreads, and a cloudy view as to where rates may go in the short-term given the Fed's latest actions and price pressures that remain.

Preferred Securities – *Bank Panic Shatters the Calm*

As we look back, we can recognize how the start of the year was divided into three distinct periods. In January the market believed that inflation was going to decline largely on its own. In February Fed Chair Powell strongly indicated that there was more work to do. And in March the Great Bank Panic ensued, which strongly weighed on the Preferred market.

Municipal Bonds - *Richness Prevails*

The overarching theme for municipal bonds during the past few quarters has been that the municipal sector is expensive. This has yet to change. Driven by favorable revenue growth, solid cash levels, fewer refunding options, and volatile market conditions, the lack of bonds being issued is a key culprit in why municipal bonds have largely remained rich relative to corporates and Treasuries. Looking forward, there could be opportunities for municipal bonds to cheapen and provide more value than has been the case. A key to this will be increased debt issuance which could come from greater funding needs by issuers or better refunding opportunities should Treasury rates move lower.

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Economics:

The Fed's Job Just Got Harder:

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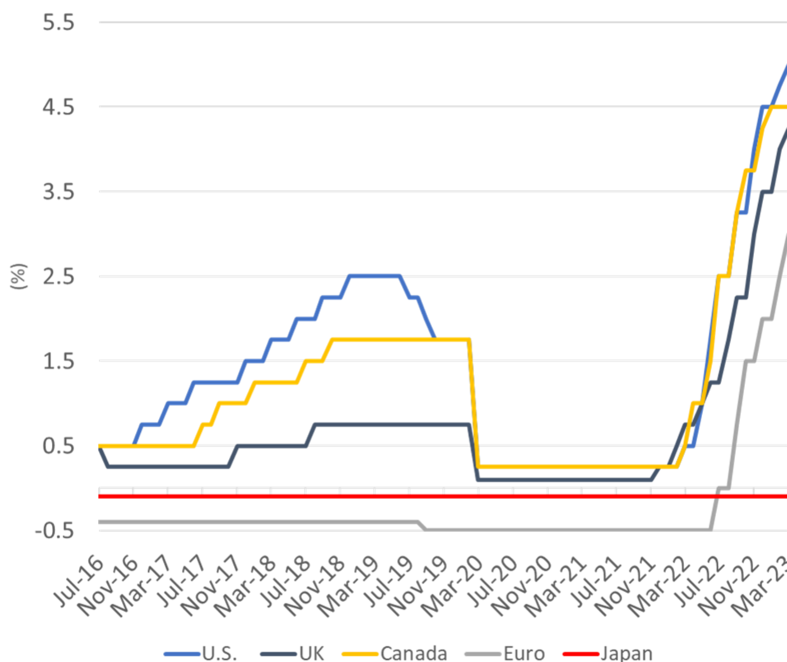
How Will the Great Bank Panic Affect the Economy and Future Inflation?

Prior to March 9th, the market was finally starting to acknowledge, even if reluctantly, that the Fed Funds Rate would likely be higher for longer. However, now that the bank panic is subsiding, the market has started to form a very different view as to how economic conditions may unfold and what that means for the Fed Funds Rate through 2023 and in to 2024.

As Exhibit 2 shows, the market has started to price in aggressive rate cuts beginning in just a few months from now. While the sentiment is understandable, the economic data we have seen to-date still does not support that view. So, either economic data will

(1.) Global Policy Rates

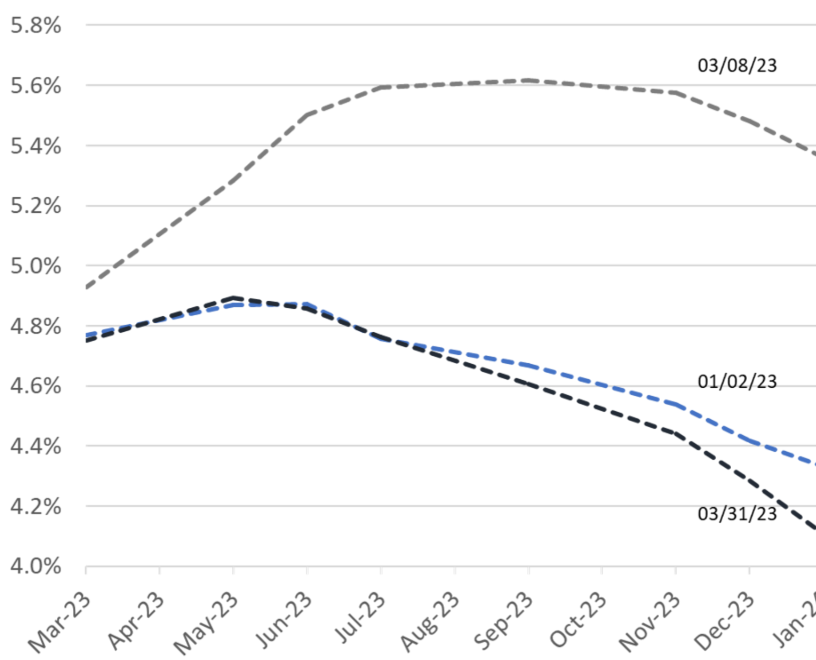
Central bank policy rates have continued to push higher in the face of sticky inflation.



Source: Bloomberg L.P.

(2.) Fed Futures Pre and Post Bank Panic

In early March, the market was finally starting to believe that the Fed Funds Rate would go higher for longer. That changed significantly after the bank panic on March 9th.



Source: Bloomberg L.P.

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start to come in sharply weaker than expectations in the coming months, or the market is once again getting ahead of itself in terms of Fed cuts.

A notable fallout from the Great Bank Panic has been the view that banks will almost certainly have limited loan growth for the foreseeable future. Given how important borrowing is for economic activity, the reduced access to capital for businesses and consumers can have a sudden and material effect on our economy. Should such an environment materialize, the overall impact could end up being the catalyst that pushes us into a standard or stagflation recession. While these scenarios are by no means a foregone conclusion, they are starting to feel more like base case than bear case scenarios at this point.

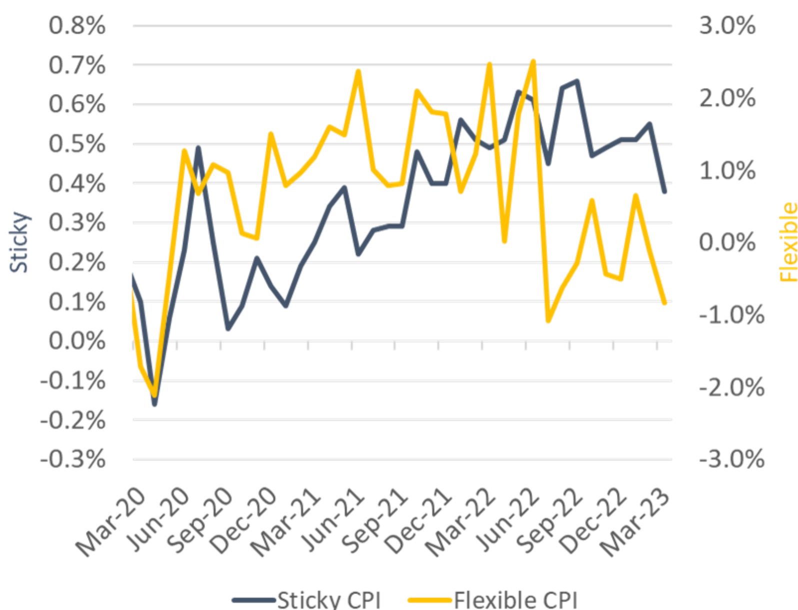
Stubborn Inflation Shows Signs of Progress:

If you have not thought about inflation over the past month, it would be hard to blame you given all that has taken place. However, getting inflation down from current levels and on a believable path toward 2% is central to the Fed pausing rate hikes, before ultimately starting to bring the policy rate down.

Given all that has occurred over the past three years, it is hard to believe that the early days of the pandemic were only a few short years in the rearview. If anything, the economy is still evolving from that point and has yet to reach a steady state. This is of course understandable considering how the economy went from shutdowns, stimulus fueled re-openings, and on to super charged consumption of goods over services in a very short period. As Exhibit 3 shows, price pressures have remained stubborn, especially among the more sticky components (service side of things). Whereas the flexible components of CPI have remained lower on a month-over-month basis, the sticky components have yet to show much softening. The sticky components contain items such as shelter, travel, and medical costs that will be key to

(3.) Sticky vs Flexible CPI Components (MoM)

Sticky CPI components remain elevated even as flexible components have come down.

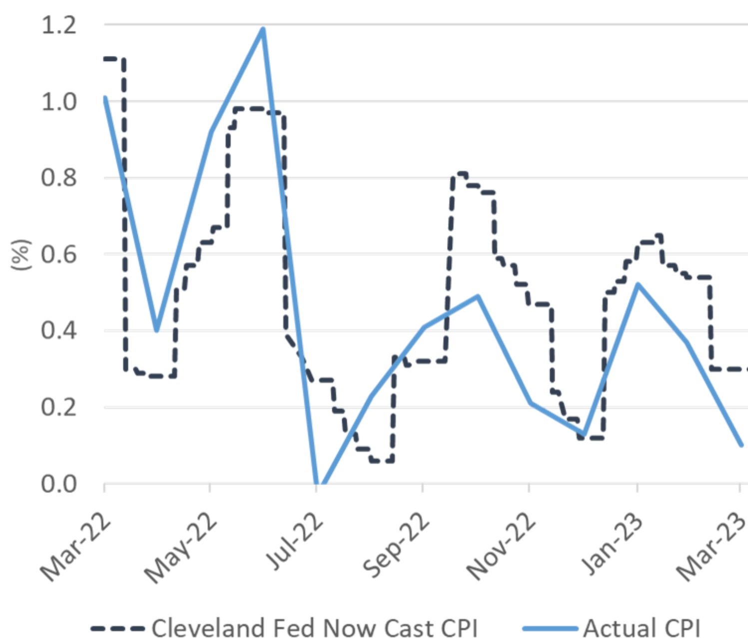


**The Sticky vs Flexible components are based on their historical frequency of price changes.*

Source: Bloomberg L.P.

(4.) Cleveland Fed Nowcasting CPI v Actual (MoM)

Though month-over-month CPI has been choppy, the Cleveland Fed's Nowcast has been a good leading indicator as to the general direction prior to official CPI prints being released.



Source: Bloomberg L.P.

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getting overall inflation moving in the right direction in the months ahead.

In trying to get a glimpse of where inflation may be headed in the coming weeks, we like to check in on the Federal Reserve Bank of Cleveland's CPI Nowcasting data (See Exhibit 4). Meant to provide an estimate of where current month or quarter CPI is expected to be on any given day, the Nowcast can be a useful gauge as to what an econometric model may be telling us about inflation. Since the model is based on a limited number of inputs, it is not especially precise. With that said, the Nowcast has at least been a good estimator as to the direction inflation is headed since early 2022.

Another measure of where inflation could be in the future is the breakeven rate for a specific term. Breakeven rates, which represent the difference between inflation-linked Treasuries and the nominal Treasury debt of the same maturity, represent how the market is pricing in inflation over different periods of time (See Exhibit 5). These rates have been volatile recently as market expectations for inflation and Fed rate actions have fluctuated with new data and recent events.

Is Commercial Real Estate the Next Shoe to Drop?:

Though there have been whispers and rumblings around commercial real estate since the realization that work from home had some staying power, those sounds turned cacophonous as greater attention was placed on banks and their balance sheets in the wake of the recent bank panic. Among the concerns being focused on by market participants is higher vacancy rates among office space, refinancing risks in light of higher rates and tighter credit conditions, as well as declining asset values across the commercial real estate complex.

Though there are certainly regional, sector, and asset specific factors to consider, the potential for broad declines in asset values[1] is very significant for overall market and economic conditions. While some of the anticipated declines can be attributed to mean reversion given the run-up in

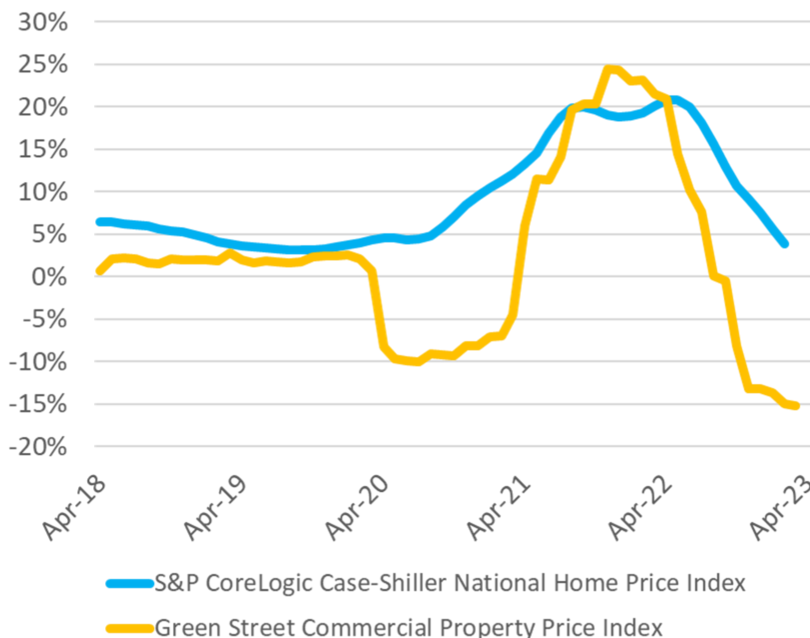
(5.) Breakeven Rates

Breakeven rates, which represent the difference between inflation-linked Treasuries and the nominal Treasury debt of the same maturity, have been volatile in 2023.

Source: Bloomberg L.P.

(6.) Real Estate Property Indices

Real estate property price growth has come down substantially from early 2022 and has turned substantially negative for commercial real estate.



Source: Bloomberg L.P. and Green Street

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values due to cheap capital in the post-pandemic recovery period, there are some notable changes to demand and demographics that can continue to have an acute impact on commercial real estate values this cycle.

Employment is the Final Piece to the Fed Puzzle:

During this recent rate hiking cycle, the Fed has been consistent in pointing to the overall strength of employment as the counterbalance to concerns around too much tightening too quickly. So far that argument has held up (See Exhibit 7). However, with what we know about recent layoff announcements and the lag in which such layoffs show up in economic data sets, there is a feeling that the jobs strength argument could run out of gas very soon. However, until that actually happens, it would be hard to see how the Fed backs down from their stance.

Are Three Economic Scenarios Still Possible?:

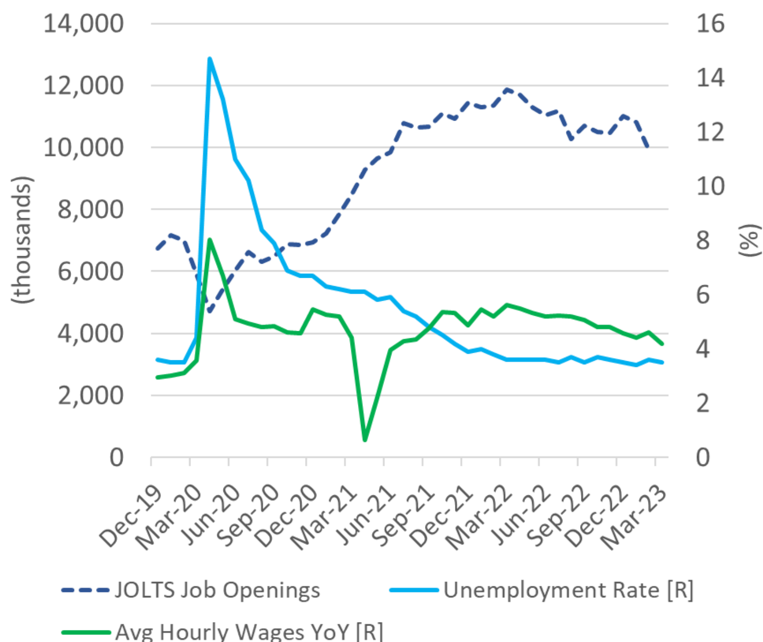
In our previous Newsletter, we wrote of three possible economic scenarios that could materialize this cycle: 1) standard recession; 2) stagflation; and 3) no recession. Only a month removed from a global banking panic and new expectations that financial conditions will only get tighter, it seems like there are only two plausible scenarios now; either a standard recession or a stagflation scenario.

Though the market has seemingly bought into a recession scenario (See Exhibit 2), the fact that the Fed did not hesitate to raise the Fed Funds Rate in the midst of the bank panic seems to us that more clearly needs to be done to fight inflation. In addition, with certain aspects of inflation still trending higher and the potential impact from recent cuts in oil production by OPEC[2] on energy prices, we are not necessarily out of the woods on inflation just yet.

While there is of course a possibility that we do not enter into a recession in the next year or two, we also have to be mindful that not all recessions or stagflation scenarios are the same.

(7.) Job Openings and Unemployment

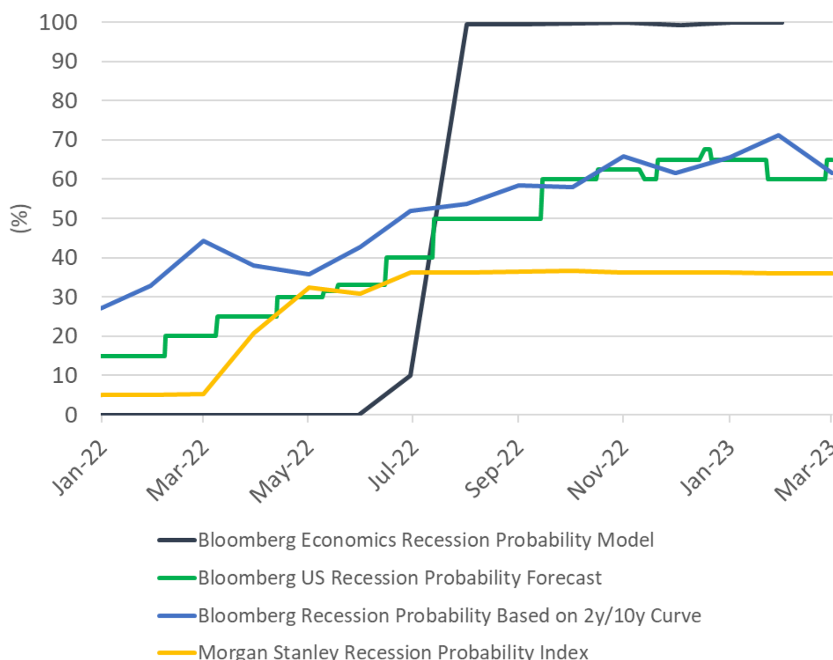
Despite concerns around a weakening economy, the jobs picture remains positive for the time being.



Source: Bloomberg L.P.

(8.) Recession Probabilities

Twelve month recession probabilities have surprisingly not changed much throughout the first few months of 2023 despite all the concerns that came out of the month of March.



Source: Bloomberg L.P.

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Recessions have been and can be worse than others, and so there is also the potential for milder outcomes given the strength of employment to this point. Needless to say, the pace of economic change is picking up and all signs point to it being in the direction needed to slow Fed rate hikes. Just how quick and swift such changes occur will be the ultimate read on what type of economic cycle we end up in down the road.

Taxable Credit:

Are Lower Yields Inevitable Now?:

The unanticipated events of March 2023 caused a sharp shift in sentiment as it relates to credit. This directly affected Treasury yields and curve shapes. As a result of that shift, volatility gripped fixed income markets at the end of the first quarter and could be witnessed in everything from corporate bond spreads to daily changes in benchmark yields. The end result is a mixed bag of lower Treasury yields, higher corporate spreads, and a cloudy view as to where rates may go in the short-term given the Fed's latest actions and price pressures that remain.

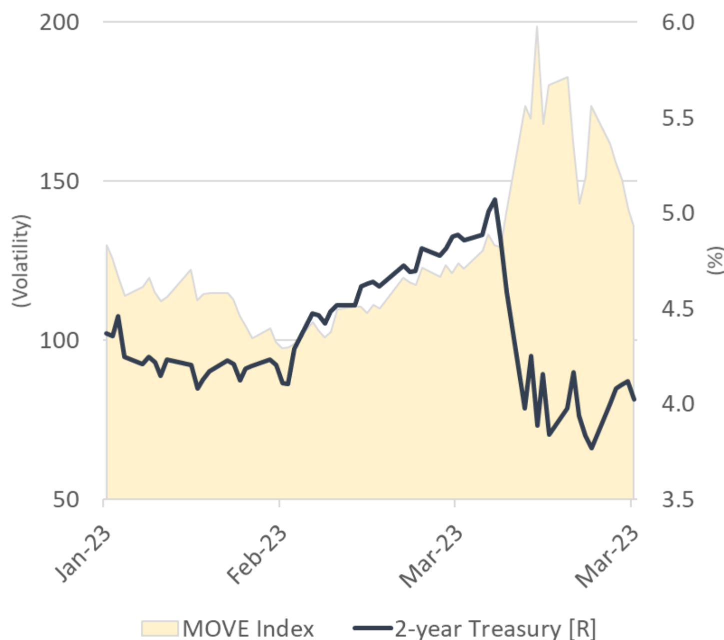
Rates Turn Volatile:

In early 2023, the market was starting to believe that the Fed hiking cycle was nearing an end. However, with economic data that was less supportive of that thesis and a full on risk-off environment due to the banking panic, the Treasury market has experienced significant volatility year-to-date.

Exhibit 9 shows the broader Treasury volatility index (MOVE Index) as well as the daily moves in the two-year Treasury since the start of the year. Clearly, the market has not been able to find a solid footing which has made positioning that much more tricky. Though early April economic data has come in slightly weaker and partially supportive of the overall shift down of the yield curve (See Exhibit 10), prior to any clear signals from the Fed. any economic surprises along the way are

(9.) Volatility in Treasuries

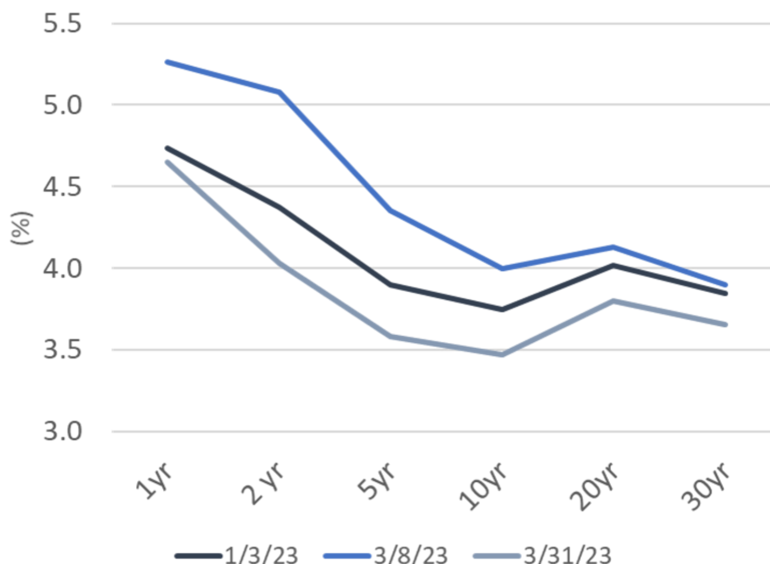
Through the first few months of 2023, volatility in the Treasury market peaked in March as the bank panic took hold and dormant fears around the economy surfaced.



Source: Bloomberg L.P.

(10.) Treasury Curves Pre- and Post-Panic

With all the volatility that took place throughout the first three months of 2023, the Treasury yield curve ended lower at the end of March than where it started at the beginning of the year.



Source: Bloomberg L.P.

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sure to add to the broad volatility being experienced.

What are Corporate Bond Spreads Telling Us Post-Panic?:

As the new year began, our view was that in general, credit would become more of a story this year than rates. Though we could have not predicted the events that took place in March, and which still have us in a state of shock, that view has ultimately come to fruition in a real way.

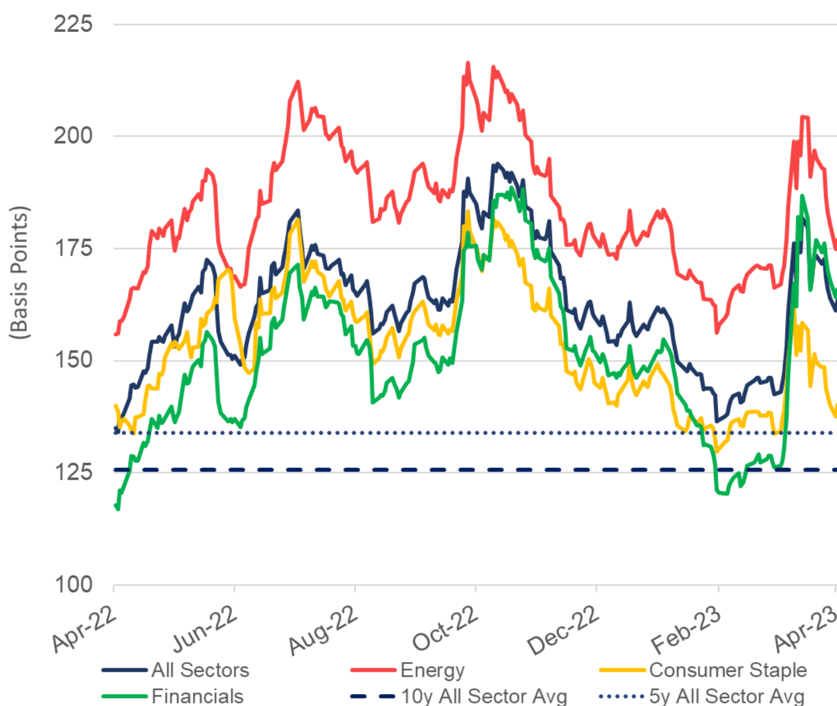
Exhibit 11 provides a birds eye view of investment grade credit spreads over the past year as well as how current yields stack up to two and ten year averages. A few themes standout. While most sectors were tracking above both the two and ten year averages since April 2022, spreads peaked in October and November of last year and were actually trending downward to start 2023. Another theme has been that energy spreads have consistently been the highest among major sectors over the past year. Additionally, whereas financial spreads had consistently tracked below the all sectors index, that quickly changed as the events of March unfolded. Finally, all of the major sectors saw spreads come down post-panic though remain above where they had been in January or February of this year. This leads us to believe that the market is moving past the initial reaction from the bank panic though is now pricing in more concerns with credit and a potential recession.

Corporate Defaults Picking Up:

Even prior to the events of March 2023, U.S. corporate defaults were starting to pick up and reached a recent high of seven defaults in February 2023. This trend, if it continues, will be a clear indication that credit is becoming more of an issue and credit deterioration is likely to pick up as economic conditions weaken. One important note is that amidst the bank panic and renewed focus on credit and real estate, the lower yield environment that has materialized could actually provide a much needed buffer to some credits as they seek out funding sources or negotiate refinancing terms. Though

(11.) U.S Investment Grade Sector Spreads

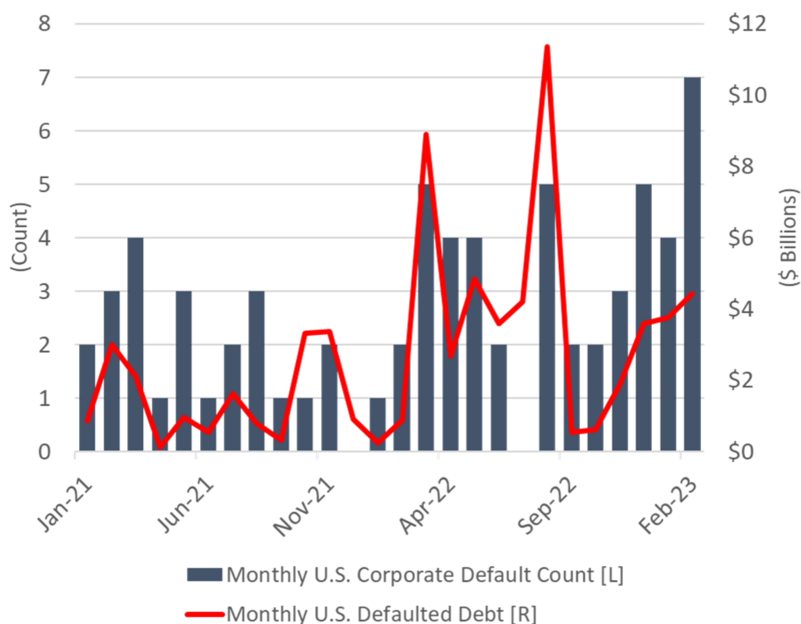
Corporate spreads widened in March 2023 though were still below the peaks of October and November 2022.



Source: Bloomberg L.P.

(12.) Corporate Defaults

Corporate defaults were starting to pick up even before the bank panic of March 2023, though all issuers in the most recent month were all below investment grade credits.



Source: Moody's Investors Service

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spreads are higher, some relief on the benchmark rate may provide a little more time than would have been the case prior to the bank panic.

Preferred Securities:

Bank Panic Shatters the Calm

As we look back, we can recognize how the start of the year was divided into three distinct periods. In January the market believed that inflation was going to decline largely on its own. In February Fed Chair Powell strongly indicated that there was more work to do. And in March the Great Bank Panic ensued, which strongly weighed on the Preferred market.

January benefitted from yields falling and risk assets outperformed the stock market. As a result, preferreds were enjoying strong gains. Then at the February 1st FOMC press conference and in speeches afterword, Fed Chair Powell strongly indicated that there was a lot more work to do. That is, the FOMC would continue raising rates and then hold the rate at elevated levels for a period of time, at least until the end of the year and until inflation had shown clear signs of abating. This clear signal from the Fed altered market sentiment as rates began to rise and risk assets reversed course and began giving back some of the gains from January.

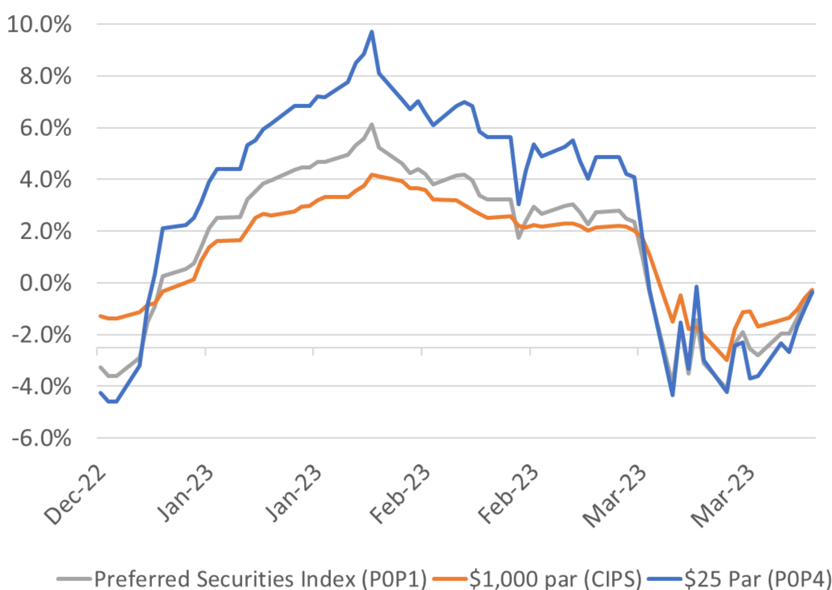
Then during the period of March 8-10, with a run on a number of banks, risk assets fell and the preferred indices briefly turned negative for the year (See Exhibit 13).

Preferred Spreads:

During the beginning of the year, both $25 and $1,000 par preferreds outperformed. This reversed sharply with the bank panic and both preferred types traded to the widest spreads since March 2020 (see chart 14). The relationship between bank senior debt to preferreds should be somewhat bounded as both are impacted by the same factors that impact credit risk of the financial industry. Given this relationship, both security types did in fact widen post bank panic (See Exhibit 15). However, the preferred market reached the recent wides relative to senior debt in March. (See Exhibit 16).

(13.) Preferred Security Index Returns

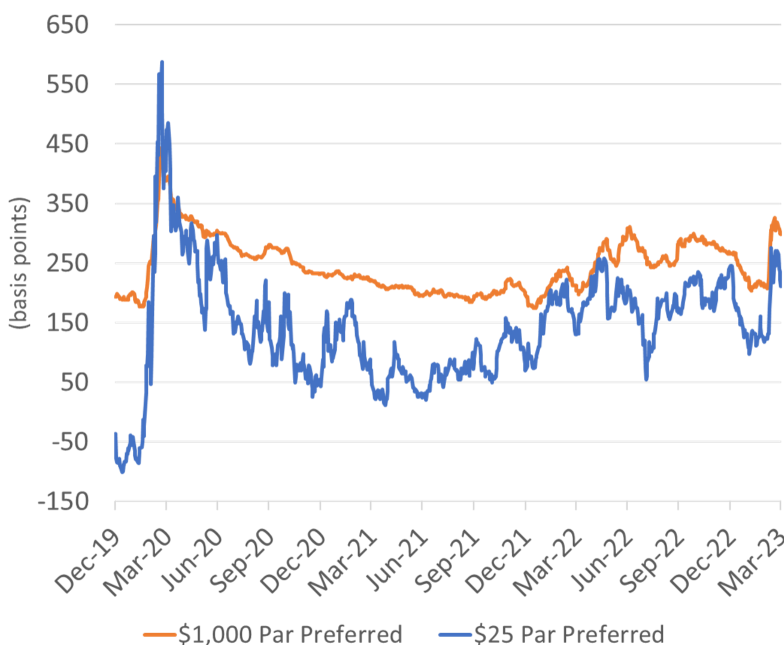
A strong start to the year largely reversed by quarter-end.



Source: Bloomberg L.P.

(14.) Preferred Option Adjusted Spreads

Spreads narrowed before reverting to wides dating back to early 2020.



Source: Bloomberg L.P.

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Some of this dislocation may be attributable to the write-off of Credit Suisse AT1s in the European Market and a knee jerk reaction by investors. While AT1 bonds are a type of preferred, it s not a mechanism utilized in the US market and the event that occurred there could not be repeated with US preferred issues.

The financial world changed with Dodd-Frank, did recent events change it again?

Leading up to March, the indicators we had been watching closely for signs of stress in the high grade banking sector, such as capital levels and loan performance, were still flashing green. Born out of the Great Financial Crisis, Dodd-Frank bank stress tests were designed to maintain a level of confidence in the safety of deposits and creditworthiness of banks. Nonetheless, a number of banks experienced classic runs on deposits, though possibly accelerated by idiosyncratic customer bases and the current digital nature of money where deposits can be moved at the speed of a mouse click. This realization will certainly add pressure on all but the largest and most systematically important banks. Small banks will most likely be faced with increased funding costs, and be pushed to scale up through mergers or acquisitions. The element that remains to be seen is if banks in the size range of $100B to $250B in assets will suffer over the long-term from this event and whether future regulatory changes help or hinder their prospects.

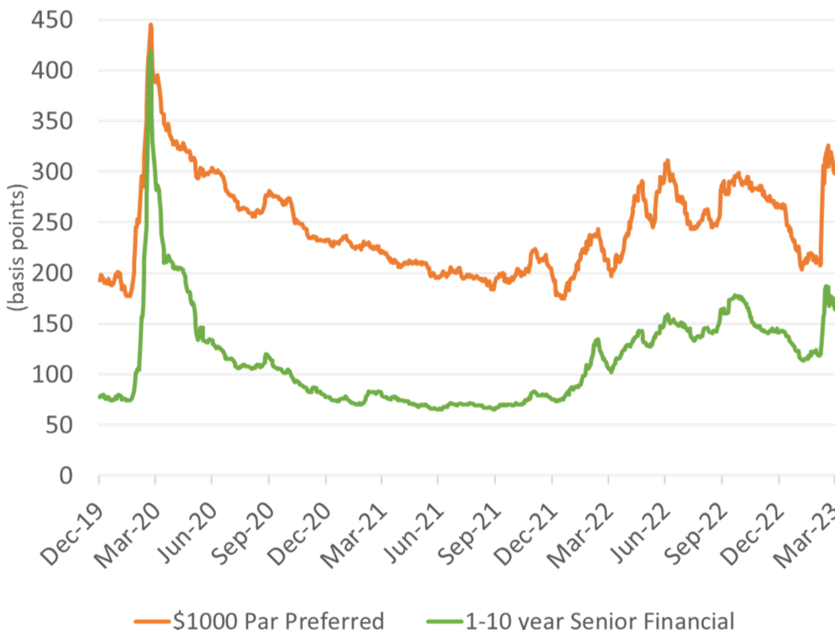
Municipal Bonds:

Richness Prevails:

The overarching theme for municipal bonds during the past few quarters has been that the municipal sector is expensive. This has yet to change. Driven by favorable revenue growth, solid cash levels, fewer refunding options, and volatile market conditions, the lack of bonds being issued is a key culprit in why municipal bonds have largely remained rich relative to corporates and Treasuries. Looking forward, there could be opportunities for municipal bonds to

(15.) $1,000 Par Preferred vs 1-10 Year Senior Financial OAS

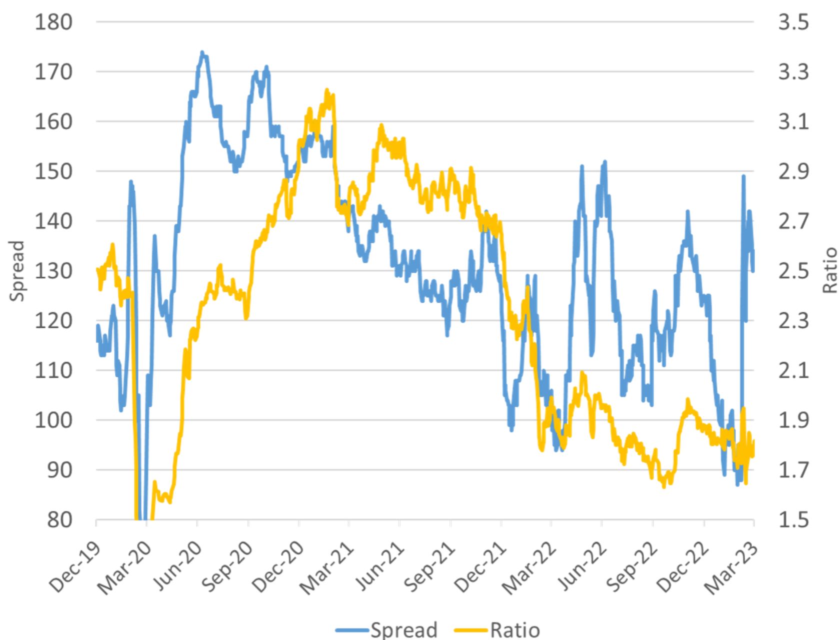
The SVB shock reverberated across senior and preferred financial debt.



Source: Bloomberg L.P.

(16.) $1,000 Par Preferred vs 1-10 Year Senior Financial OAS Differential and Ratio

Preferreds provide significant relative value again compared to senior financial debt.



Source: Bloomberg L.P.

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cheapen and provide more value than has been the case. A key to this will be increased debt issuance which could come from greater funding needs by issuers or better refunding opportunities should Treasury rates move lower.

Yields Come Down:

Just as the Treasury curve shifted downward in March and into April, municipals have followed a similar path. Largely due to lack of supply, municipals have also largely benefitted from a flight to quality in the aftermath of the bank panic.

April has historically been a weaker month from a technical standpoint given cash needs for tax payments and fewer bond redemptions relative to other months. That weakness has yet to materialize this year as of the publication date of this newsletter, though that could change quickly as we have seen throughout the past year.

Issuance Remains Subdued:

Annual municipal issuance in 2022 was the lowest it had been since 2018, which was a bit of an outlier in itself. Municipal issuers have so far benefitted from an economic recovery on the one hand and have faced less than favorable borrowing conditions on the other, which has directly impacted primary market activity.

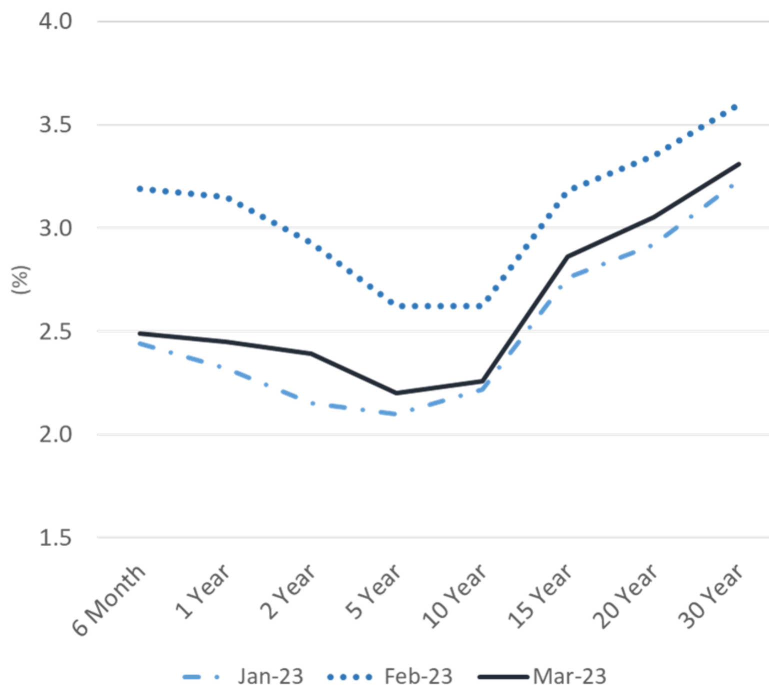
As Exhibit 19 shows, first quarter 2023 issuance was the second lowest quarter since 2020. Considering how volatile markets have been and the multi-month lead time many issuers need to get authorization and prepared for a debt issuance, it may be some time for the borrowing environment to be welcoming enough to entice a rush to the market.

Relative Value Remains Limited:

Whether comparing municipals to Treasuries or similarly rated corporates, after factoring in taxes, tax exempt bonds have continued to be expensive on a relative value basis. Issuance is certainly the primary driver in our view, though we also think that some investors fail to look at the securities from a taxable equivalent

(17.) Municipal Yield Curve

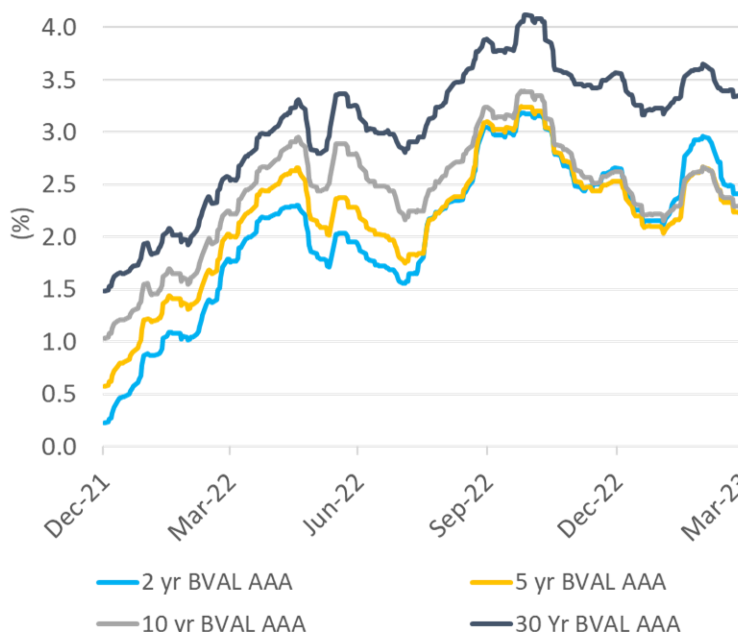
The municipal yield curve has whipsawed during the first few months of 2023.



Source: Bloomberg L.P.

(18.) Municipal Spot Yields

Municipal spot yields peaked in October and November of 2022 and have since come down despite ongoing concerns with inflation and Fed rate hikes.



Source: Bloomberg L.P.

standpoint and could be leaving some money on the table in the process.

How Exposed are municipals to a weaker banking and economic landscape?

Even before the dust settled from the Great Bank Panic, ZFIM and other market participants were starting to think about how the events might impact the municipal market. Though the cause of the bank runs was highly idiosyncratic and not applicable to municipal credits in general, the swift change in sentiment regarding credit and economic prospects cannot be dismissed.

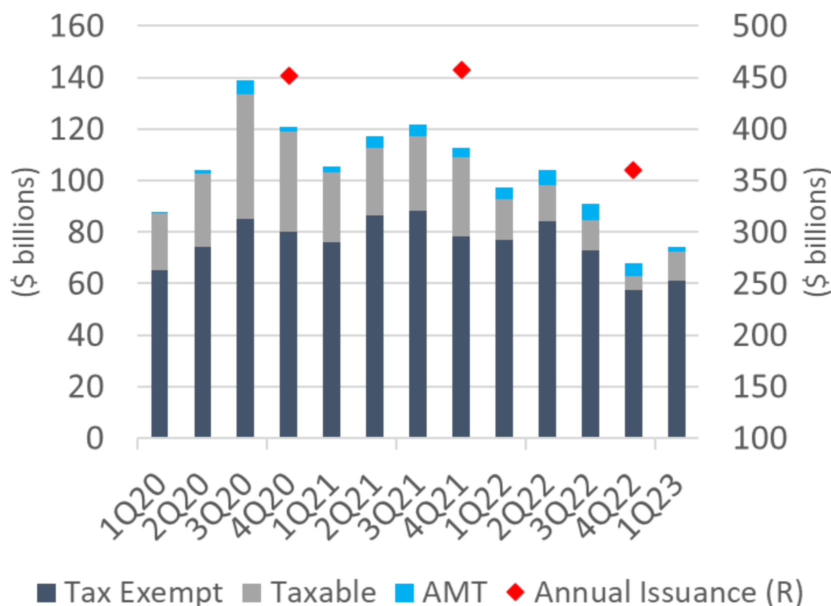
For instance, even though larger issuers access funding through public offerings that reach a variety of investors, there are still many municipal issuers, the smaller ones in particular, that borrow directly from local or more traditional regional banks to fund capital projects or equipment leases and purchases. If one of the effects of the bank panic is tighter credit standards, access to capital by these issuers is expected to be more limited and more expensive. In addition, the tighter credit environment also affects business borrowing which in turn affects local economies. The extent of reduced borrowing and ultimately reduced spending can have many downstream effects on tax revenue for municipalities that we have to keep an eye on as we navigate this new economic environment.

Partially offsetting some of these concerns, especially as it relates to larger municipal issuers, is that many of the economies have the scale and diversification to provide a cushion against the conditions described above. Large metro areas with broad economic bases have proven to be resilient in recent economic downturns which many would describe as highly stressed environments. This is of course why many municipal bonds tend to rally in risk-off environments as the market generally views them as safe havens relative to corporates and other more cyclical and volatile asset classes.

There are of course exceptions and some credits will get caught up in the

(19.) Municipal Issuance

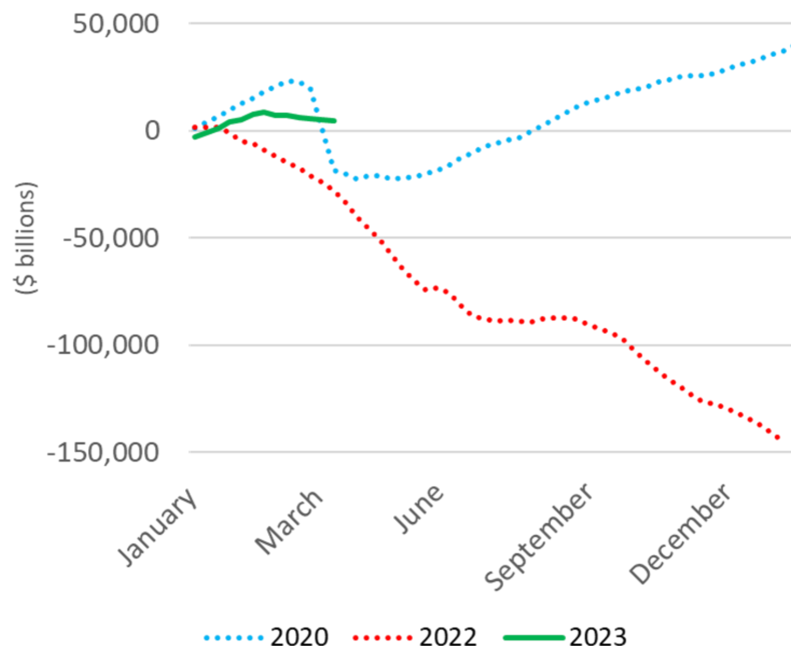
Municipal issuance remained at depressed levels in the first quarter of 2023.



Source: SIFMA US Municipal Bonds Statistics

(20.) Historical Net Muni Fund Flows

After sustaining historic levels of outflows from muni bond funds in 2022, 2023 reflects a an more stable environment on a cumulative basis through March of 2023.



Source: Bloomberg L.P.

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immediate aftermath of the bank panic (e.g. gas or energy prepay bonds backed by bank credits have cheapened) as well as those that will begin to experience stress should credit conditions tighten and economic conditions weaken. As result, it is important to look at the underlying credits, understand the protections they have in place, as well as the levels of stress they can withstand in a down cycle.

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Endnotes: Sources

Economics Section

1. Morgan Stanley Research, The REIT Weekly. What's Going On with CRE Property Prices?, March 27, 2023.

2. Bloomberg News, Shock OPEC+ Oil Production Cut Puts $100 a Barrel on Horizon, April 3, 2023.

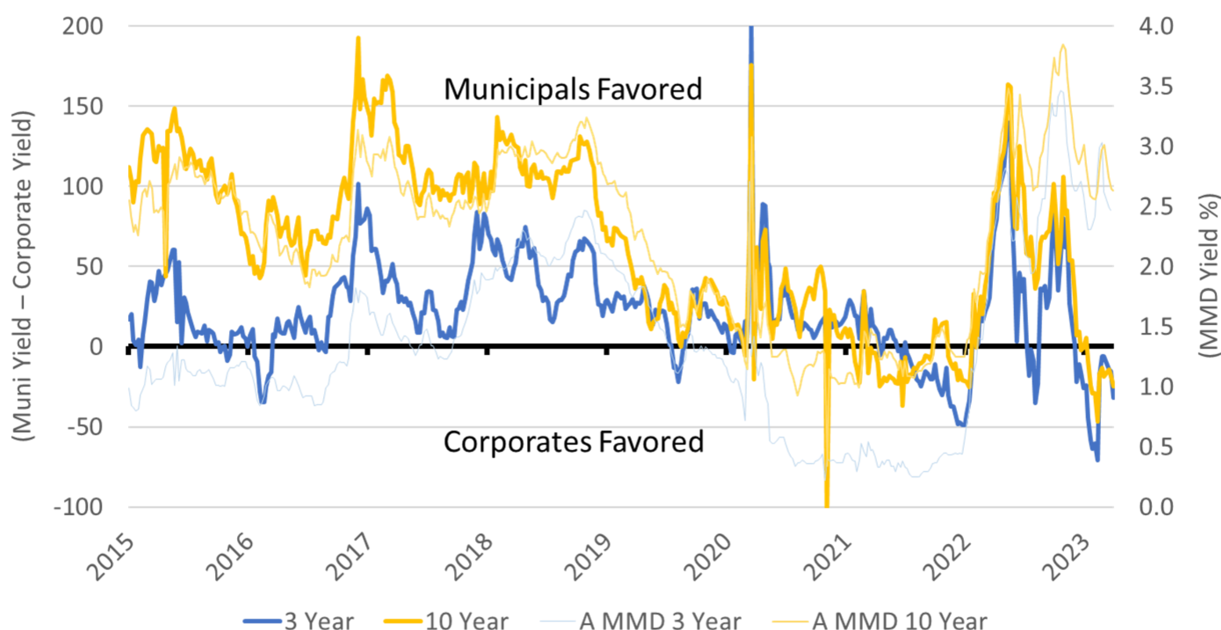
(21.) Municipal Ratios

Outside the longest dated maturities, municipal to Treasury ratios remained rich and within a tight bandwidth through most of 2023 year-to-date.

Source: Bloomberg L.P.

(22.) Muni vs Corporates Breakeven Comparison

Though 'A' rated municipals have provided a higher taxable equivalent yield in most periods since 2015, 'A' rated corporates have become more favorable on a relative value basis more frequently in recent months.



Source: Bloomberg L.P.

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ZFIM is a dedicated separate account fixed-income management team within Morgan Stanley Private Wealth Management. The team is experienced in fixed-income, cash equivalent investment, and portfolio management for a number of Morgan Stanley's largest separately managed clients.

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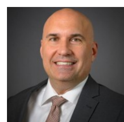

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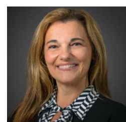

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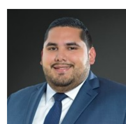

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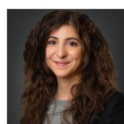

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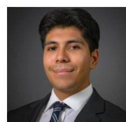

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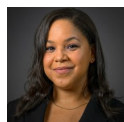

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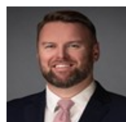

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Diversification does not guarantee a profit or protect against a loss.

Bonds are affected by a number of risks, including fluctuations in interest rates, credit risk and prepayment risk. In general, as prevailing interest rates rise, fixed income securities prices will fall. Bonds face credit risk if a decline in an issuer's credit rating, or creditworthiness, causes a bond's price to decline. Finally, bonds can be subject to prepayment risk. When interest rates fall, an issuer may choose to borrow money at a lower interest rate, while paying off its previously issued bonds. As a consequence, underlying bonds will lose the interest payments from the investment and will be forced to reinvest in a market where prevailing interest rates are lower than when the initial investment was made. NOTE: High yield bonds are subject to additional risks such as increased risk of default and greater volatility because of the lower credit quality of the issues.

Interest in municipal bonds is generally exempt from federal income tax. However, some bonds may be subject to the alternative minimum tax (AMT). Typically, state tax-exemption applies if securities are issued within one's state of residence and, local tax-exemption typically applies if securities are issued within one's city of residence.

Preferred securities can be called prior to maturity, which may reduce yield if purchased at a premium. Preferred securities may be subject to other call features or corporate restrictions that may have an effect similar to a call. Prices may fluctuate reflecting market interest rates and the issuer's credit status.

International investing may not be suitable for every investor and is subject to additional risks, including currency fluctuations, political factors, withholding, lack of liquidity, the absence of adequate financial information, and exchange control restrictions impacting foreign issuers. These risks may be magnified in emerging markets.

ICE BofAML US Corporate Index (C0A0)
ICE BofAML US Corporate Index tracks the performance of US dollar denominated investment grade corporate debt publicly issued in the US domestic market. Qualifying securities must have an investment grade rating (based on an average of Moody's, S&P and Fitch), at least 18 months to final maturity at the time of issuance, at least one year remaining term to final maturity as of the rebalancing date, a fixed coupon schedule and a minimum amount outstanding of $250 million. An investment cannot be made directly in a market index.

ICE BofAML US High Yield Index (H0A0)
ICE BofAML US High Yield Index tracks the performance of US dollar denominated below investment grade corporate debt publicly issued in the US domestic market. Qualifying securities must have a below investment grade rating (based on an average of Moody's, S&P and Fitch), at least 18 months to final maturity at the time of issuance, at least one year remaining term to final maturity as of the rebalancing date, a fixed coupon schedule and a minimum amount outstanding of $250 million. An investment cannot be made directly in a market index.

ICE BofA US Municipal Securities Index (U0A0)
ICE BofA US Municipal Securities Index tracks the performance of US dollar denominated investment grade tax-exempt debt publicly issued by US states and territories, and their political subdivisions, in the US domestic market. Qualifying securities must have at least one year remaining term to final maturity, at least 18 months to final maturity at the time of issuance, a fixed coupon schedule and an investment grade rating (based on an average of Moody's, S&P and Fitch). Minimum size requirements vary based on the initial term to final maturity at time of issuance. An investment cannot be made directly in a market index.

ICE BofA US Treasury Index (G0Q0)
ICE BofA US Treasury Index tracks the performance of US dollar denominated sovereign debt publicly issued by the US government in its domestic market. Qualifying securities must have at least one year remaining term to final maturity, a fixed coupon schedule and a minimum amount outstanding of $1 billion. Qualifying securities must have at least 18 months to final maturity at the time of issuance. An investment cannot be made directly in a market index.

ICE BofA Fixed Rate Preferred Securities Index (P0P1)
ICE BofA Fixed Rate Preferred Securities Index tracks the performance of fixed rate US dollar denominated preferred securities issued in the US domestic market. Qualifying securities must have an investment grade rating (based on an average of Moody's, S&P and Fitch) and must have an investment grade rated country of risk (based on an average of Moody's, S&P and Fitch foreign currency long term sovereign debt ratings). In addition, qualifying securities must be issued as public securities or through a 144a filing, must be issued in $25, $50, or $100 par/ liquidation preference increments, must have a fixed coupon or dividend schedule and must have a minimum amount outstanding of $100 million. An investment cannot be made directly in a market index.

Barclays U.S. Aggregate Corporate Index represents the total return measure of the corporates portion of the Barclays U.S. Aggregate Index. An investor cannot invest directly in a market index.
The SIFMA Municipal Swap index is a 7-day high-grade market index comprised of tax-exempt VRDOs reset rates that are reported to the Municipal Securities Rule Making Board's (MSRB's) SHORT reporting system. The index is calculated on an actual/actual basis and is published every Wednesday by 4 p.m. Eastern Time. The bonds going into the index are selected from all eligible bonds reporting data through the SHORT system that meet the index criteria as set forth by SIFMA. The index is calculated by Bloomberg as the calculation agent for SIFMA. AN investor cannot invest directly in a market index.

The Bloomberg Barclays US Corporate Bond Index measures the investment grade, fixed-rate, taxable corporate bond market. It includes USD -denominated securities publicly issued by US and non-US industrial, utility and financial issuers. The US Corporate Index is a component of the US Credit and US Aggregate Indices, and provided the necessary inclusion rules are met, US Corporate Index securities also contribute to the multi-currency Global Aggregate Index. An investment cannot be made directly in a market index.

The KBW Bank Index is designed to track the performance of the leading banks and thrifts that are publicly-traded in the U.S. The Index includes 24 banking stocks representing the large U.S. national money centers, regional banks and thrift institutions.
An investment cannot be made directly in a market index.