



April 3, 2022

CIO Strategy Bulletin

A Brighter Future for Fixed Income?

David Bailin, Chief Investment Officer and Head of Citi Global Wealth Investments

Steven Wieting, Chief Investment Strategist and Chief Economist

Bruce Harris, Head – Global Fixed Income Strategy

Joseph Kaplan, Global Investment Strategy

SUMMARY

- Certain types of fixed income have experienced their worst total return to begin a new year in decades. The 2-year Treasury yield now embeds one of the sharpest and fastest expected increases in policy rates in US history for any 12-month period. As of April 1, the yield on the 2-year had risen 173bps YTD.
- Despite these movements, we believe fixed income will be a key allocation of portfolios in 2022. The sharp selloff this year in bonds has opened up an opportunity to invest at a relatively higher yield point, with most of the expected interest rate hiking cycle likely already priced in. We also think the value of fixed income in portfolios is now higher than it was in 2021.
- Blame the sudden “Powell pivot” for the unilaterally bad performance in bonds. Last November, Fed Chair Powell noted that the Fed had lost its patience with inflation after attributing most of the distortions in consumer prices to the pandemic.
- Now, even with a war in Ukraine, Covid spiking in China and a doubling of supply shocks in energy and agricultural commodities, the Fed remains emboldened to continue its hawkishness.
- It would be risky if the Fed was “just” increasing rates this rapidly. But it’s also likely to cut the size of its balance sheet at the same time, which will further reduce market liquidity. We think the Fed may be overestimating the strength of the economy and its ability to withstand higher rates and reduced financing.
- In this week’s Bulletin, we explain why we believe fixed income may be better for portfolios in 2022. We review investment grade, munis, high yield, preferred securities, and emerging markets credit, looking at the pros and cons of each of these markets. Not all will perform well under each of our three scenarios, but their revaluation has created potential profit and hedging opportunities for investors.

A Brighter Future for Fixed Income?

For bondholders, 2022 may feel like the “worst of times.” The Fed policy pivot completely altered rate expectations. Certain types of fixed income have experienced their worst total return to begin a new year in decades. The 2-year Treasury yield now embeds one of the sharpest and fastest expected increases in policy rates in US history for any 12-month period year (see **Figures 1 and 2**). As of April 1, the yield on the 2-year had risen 173bps YTD – nearly 113bps of which happened since the beginning of March.

Yet, in the face of these results, we believe that fixed income will become an important element for client portfolios in 2022. Here’s why:

- We believe the majority of the mark-to-market losses for the fixed income asset class may already have been realized. The extremely fast selloff this year in bonds has opened up an opportunity to invest at a relatively higher yield point, with most of the expected interest rate hiking cycle likely already priced in.
- We believe that peak rates for fixed income in this cycle will be reached in 2022, creating buying opportunities.
- We also believe that the value of fixed income in portfolios is now higher than it was in 2021. At present, bonds add both income and possible protection from extreme downside equity risks (see **Figures 3 and 4**).
- AAA-rated bonds such as US Treasuries are unlikely to see permanent losses, even if rates move higher. Any mark-to-market losses are an “opportunity cost” of not being able to invest at a higher yield.

Figure 1: The 2-Year US Treasury yield less Fed Funds Rate

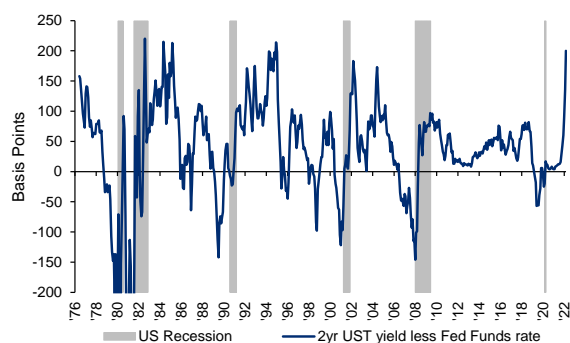
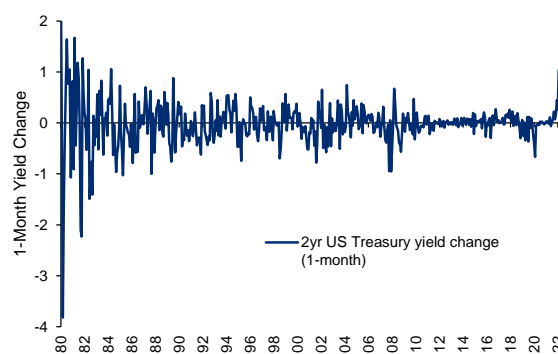
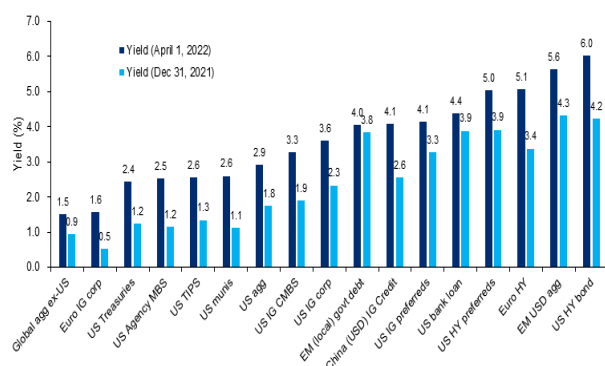


Figure 2: 2-year US Treasury monthly change in yield



Source: Bloomberg as of March 30, 2022.

Figure 3: What a difference 3 months can make for yield, as every FI asset category sees a sharp rise in yield



Source: Bloomberg as of April 1, 2022.

Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Past performance is no guarantee of future results. Real results may vary.

Figure 4: Negative correlation between equities and US Treasuries during equity corrections, as generally when equities perform poorly, bonds gain value



Source: Haver Analytics as of April 1, 2022.

Forthcoming Opportunities

In this week's Bulletin, we explain why fixed income may be better for portfolios in 2022. We review the individual sub-asset classes of investment grade, munis, high yield, preferred securities, and emerging markets credit, looking at the pros and cons of each of these markets. Not all will perform well under each of our three scenarios, but their revaluation has created possible profit and hedging opportunities for investors.

As we discussed last week (see [“Three Scenarios for the Economy and Markets”](#)), the Fed's new “backward look” to inflation and employment data means its policy decisions are focused on the rear view mirror. We think reality is more likely than not to change their view over time.

We see supply chain woes abating and a slower economy ahead. In the event that the Fed sees inflation slowing as the economy slows, it *may* adopt a more pragmatic view of how much the economy can tolerate in the form of higher rates and Quantitative Tightening (QT). In this “RESILIENT” scenario, fixed income performance will likely improve. In fact, we have already added to US bond holdings in the event the economy is RESILIENT (see our “Three Scenarios” table in the Appendix).

Of course, we may be wrong about the Fed's willingness to look at the data. If the Fed does not “listen” and drives rates too high, too fast and/or undertakes QT, the higher price sensitivity and volatility of long bonds may benefit portfolios. However, the US would slip into the RECESSION scenario in the year that follows. This would harm lower quality or overleveraged companies. Should equities move lower in the face of slowing earnings, long-term Treasuries and highly rated investment grade corporate and municipal bonds may benefit from capital appreciation due to a “flight to safety.” This possible hedge to equity downside (and riskier forms of fixed income) suggests that investors maintain a blended-risk approach to portfolios.

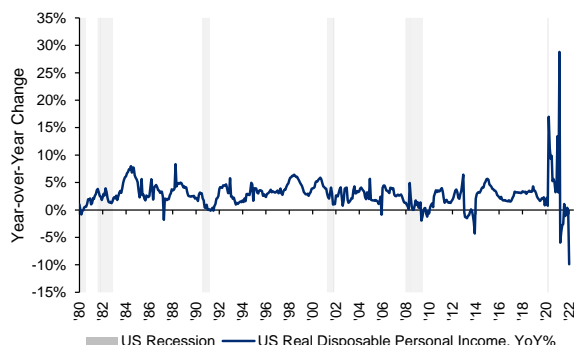
What the 30-year Treasury “Long Bond” Is Telling Us

At 2.43%, the 30-Year long bond is telling us that policy tightening can't be sustained for more than a couple of years. In fact, interest rate cuts are priced into Treasury maturities starting in 2024. The income support for consumers during Covid is over and 2022 will see US government spending drop by 22%. Longer-term yields suggest that while the Fed eased in a fiscal boom last year, it is now tightening into a future economic slowdown.

Real disposable income is falling. Despite strong labor markets, the surge in inflation and falling income have seen real disposable income fall by a record amount in early 2022 (see **Figure 5**).

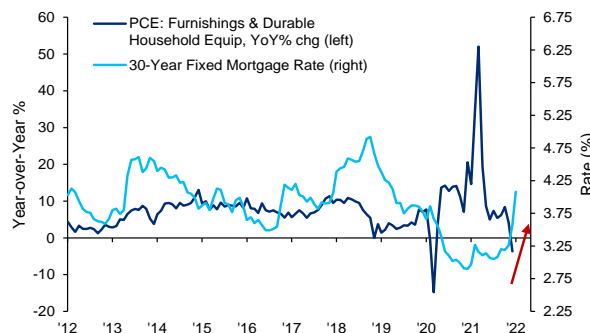
And higher interest rates are already rippling through the economy. Higher mortgage rates constrain home purchases, and that's happening on top of an existing contraction in Covid-related demand for home improvements and furniture (see **Figure 6**). A combination of inflation and home price depreciation may be the start of a "reverse wealth effect."

Figure 5: Real disposable income boomed during fiscal and monetary easing, now falling during fiscal/monetary tightening



Source: Bloomberg as of March 30, 2022.

Figure 6: Housing-related demand correcting lower from Covid excesses and higher rates



Source: Bloomberg as of March 30, 2022.

Glad That Quarter Is Over

Fixed income investors must feel like Apollo Creed in the first "Rocky" movie. Having survived the early and middle rounds (2020-21). Through 1Q2022, the broad US Aggregate Bond Index is down 5.9%, while the US Investment Grade Aggregate is down 7.7% as credit spreads widened and yields moved higher. In emerging markets, the USD aggregate sovereign index is 9.6% lower, in part due to Russian bond performance; but even Latin American USD debt is down 5.7% for the year. Somewhat better performance was seen by leveraged bank loans, down about 0.2% so far this year and US Treasury Inflation Protected Securities (TIPS), which offer inflation compensation, down 3.0%.

By quarter end, there were no true fixed income winners.

What Errs You, Mr. Powell?

Blame the sudden "Powell pivot" for the unilaterally bad performance in bonds, with impact throughout all global asset markets. Last November, Chairman Powell noted that the Fed had lost its patience with inflation after noting that the pandemic was responsible for the majority of the distortions in consumer prices. This included fiscal steps to support consumers even when labor markets were quickly recovering in 2021. In short, the Fed has fully shifted its attention to fighting inflation through much tighter monetary policy.

Now, even with a war in Ukraine, Covid on the upswing across China and a doubling of supply shocks in energy and agricultural commodities, the Fed remains emboldened to continue its new-found hawkishness. Its confidence in the resilience of the US economy is based on a very tight labor market at present. Given this view, the Fed seems highly likely to enact a 50bp rate hike at its next meeting in May.

In reaction to this hawkishness, investors are trying to determine how much further the Fed may go in raising rates if "new data points" do not show inflation decelerating quickly enough. Analysts are calling for up to 250bps more in rate hikes in 2022, bringing the Fed Funds rate to 2.75%-3%. If implemented, this would be the largest one-year increase since 1994-1995.

But Wait, There's More! QT

Rapid rate rises would be risky if the Fed was “just” increasing rates. But this Fed is also very likely to engage in a simultaneous reversal of lending to the bond market as early as May. By reducing the size of its balance sheet (a process called quantitative tightening, or “QT”) market liquidity is further reduced as normal investors need to take the place of the Fed by holding more bonds. This unusual dual policy – raising interest rates and undertaking QT, has been tried just once before, in 2018. It did not end well (see our [March 27 CIO Bulletin](#)). Equity markets fell 20% from October to December before the Fed reversed policy, ending QT and dropping rates to “save the economy” from the Fed itself. If the Fed continues down this course, 2022 might see a replay.

The combination of rates moving too quickly AND the unknown impacts of QT formed a crucial piece of the scenario analyses we presented in last weekend's Bulletin (“[Three Scenarios for the Economy and Markets](#)”). The Fed doing too much, too soon, was the primary driver in our RECESSION scenario.

Overestimation?

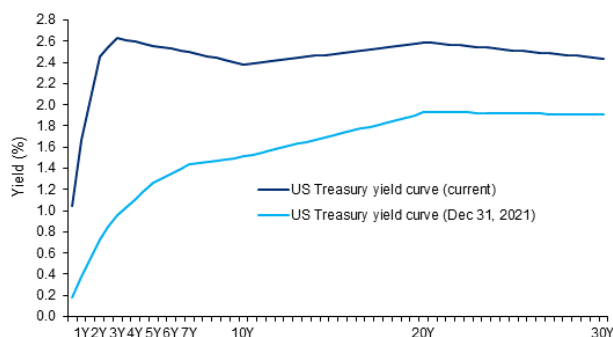
The present change in the Fed's rhetoric seems most akin to the aggressive reversal of the monetary policy taken when Fed Chairman Volcker was appointed in 1980. Then, the US was fighting double-digit inflation that had unfolded for years. The inflationary build-up to that period took more than a decade and did not have its roots in pandemic distortions or temporary fiscal stimulus.

In the present setting, we think the Fed may be overestimating the strength of the economy and the ability for the US economy to withstand higher rates and reduced financing from the central bank. There is clear evidence that the market is concerned about a “policy error” in which the Fed overtightens and drives the economy into a recession.

The US Treasury yield curve is now inverted from the 2y to the 10y point by 8bps, an indicator that can portend an economic downturn ahead – but not always (see “[Which Yield Curve Matters](#)”). The curve is even inverted slightly by 3bps from the 2y to the 30y point (**Figures 7 and 8**). Ironically, the last time the 2y10y curve was inverted was in the summer of 2019, and the Fed reacted immediately by starting to **cut rates**.

For further details, see our highlighted section **INVERSION AND RECESSION – WHICH CURVE MATTERS?** toward the end of the Bulletin.

Figure 7: US Treasury yield curve



Source: Bloomberg as of April 1, 2022.

Figure 8: US Treasury 2s10s yield curve



Source: Bloomberg as of April 1, 2022.

Prior Warnings

We have been warning since early in 2021 that longer-term yields were going to move higher due to post-pandemic mean-reversion (the 10y yield was a record low 0.5% in early August 2020), gradually higher long-term trend inflation, and economic recovery. However, the resurgence of Covid-19 variants last year added uncertainty about the re-opening speed of the US economy and the path to eventual rate hikes.

With a decade of below-target inflation following the Global Financial Crisis, the Fed altered its policy approach and did not take “pre-emptive action” to stem inflation. It was the Fed’s preference to foster slightly higher trend inflation in an era in which central bankers still worried about deflation. The approach left the Fed easing through the boom of 2021, only ending Quantitative Easing last month.

By its own admission, the Fed did not expect a supply shock in the form of Covid distortions or conflict in Eastern Europe to be the upward inflation driver. By treating both exogenous and internally driven inflation sources the same way, the Fed seems compelled to tighten into a growth-threatening shock. Previously, the Fed was able to ease during exogenous inflation shocks, such as during the first Gulf War oil price spike of 1990-1991.

With rate hike expectations altered so dramatically in such a short period, the Treasury yield curve’s shape also changed, with the curve experiencing a “bear flattening.” The short end of the curve experienced tremendous movement, with the 2yr bond – which absorbed all those expected rate hikes – having its worst monthly return since the 1980s.

Our Review of Future Fixed Income Opportunities by Market

Where does all this leave fixed income investors? In our model GIC Level 3 portfolio, we have gradually added over-weights in intermediate US Treasuries and investment grade credit as we steadily sought to de-risk equities from mid-2021 to this past month.

While 2022 intermediate bond losses have been meaningful, they have been significantly less than longer-duration instruments. Meanwhile, our underweights to European and Japanese government bonds – with the world’s lowest interest rates – have helped us avoid losses in these segments of the fixed income market as rates rose.

At these new higher yield levels, intermediate duration bonds will likely see stable valuations or appreciation – including coupon income payments – in each of our three scenarios. Short of an economic boom with the Fed tolerating greater inflation (and we think inflation will decelerate into year-end), intermediate rates may finally be topping. We also expect that markets and/or the economy will signal to the Fed that it cannot raise rates imprudently. This could also stabilize yields at the longer end.

Investment grade credit

The investment grade bond index spread has widened YTD from about 90bps to 116bps as of March 31, briefly reaching a high spread of 145bps a few weeks ago. This swift move higher likely stemmed from uncertainty generated by the Ukraine conflict. While this spread widening is certainly welcome for new investors, especially on top of Treasury yield increases, the overall spread remains pretty close to its multi-decade historical low of 76bps set in 2005 (**Figure 9**).

We had previously posited in our recent [fixed income bulletin](#) that IG credit may also be pricing in higher spreads in part due to higher inflation expectations. This may still be the case, but given the sudden hawkish shift in the Fed’s tone on fighting inflation as well as a possible de-escalation in the Ukraine conflict, further spread increases may be limited absent a large shift to “risk aversion” in markets. We continue to favor intermediate IG as a reasonable way to earn carry income that can offset inflation while seeking to provide some portfolio balance should equities underperform.

Figure 9: US Investment Grade Corporate Bond Spread



Source: Bloomberg as of March 30, 2022

Munis

As noted in our [CIO Bulletin last weekend](#), for suitable investors who can take advantage of favorable tax treatment, the muni yield/Treasury yield ratio ("M/T ratio") is currently very favorable versus recent historical averages in all maturities. This ratio measures the percentage of yield one receives for AAA-rated municipal bonds to the yield received from the same maturity Treasury. As of March 30, the 5y M/T ratio has risen from about 45% to almost 83% now, while the 10y ratio has risen from about 70% to 95%. Most ratios are near the top quartile of their 5y historical highs. The value of this ratio is indicated by the high tax-equivalent yields that can be obtained (**Figures 10 and 11**).

Figure 10: Muni yield ratios, by tenor

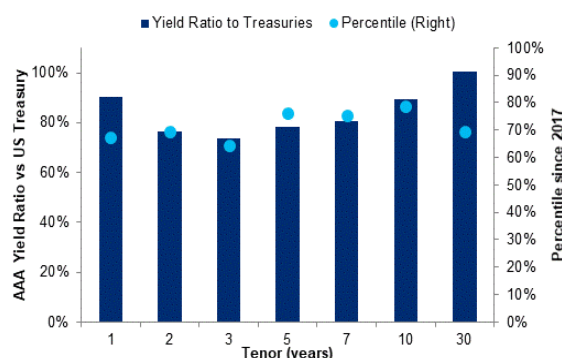
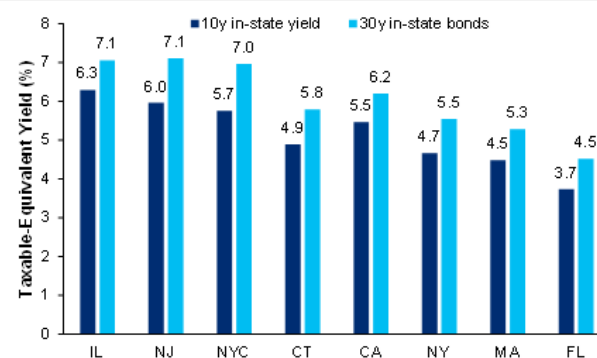


Figure 11: Tax equivalent yields in select states



Source: Bloomberg as of March 30, 2022. Note: Tax equivalent yields adjust for top Federal and Affordable Care Act tax rate (40.8%), as well as state income tax rates for each state yield. Past performance is no guarantee of future returns. Real results may vary. Citi and its employees are not in the business of providing, and do not provide, tax or legal advice to any taxpayer outside Citi. Any statement in this Communication regarding tax matters is not intended or written to be used, and cannot be used or relied upon, by any taxpayer for the purpose of avoiding tax penalties. Any such taxpayer should seek advice based on the taxpayer's particular circumstances from an independent tax advisor.

The creditworthiness of most munis is as robust as we have ever seen. US states – one of the largest issuers of municipal bonds – are experiencing improving credit metrics due to very strong tax revenues as the economy expands and federal payments increased. As a prime example, California may have a budget surplus for its 2022-23 fiscal year of over \$50 billion. As another example, New York ended its 3Q21 with a budget surplus growth of over \$15bn. While not every state is experiencing these surpluses, many are, and that improves the overall credit sentiment for the sector. In addition, local governments and other issuing entities may also see some of these surpluses deployed in their jurisdictions and may be able to raise additional tax revenue due to home price appreciation, improving their payment capacity as well.

For investors with large cash balances who can take advantage of the tax benefits offered by municipal bonds, now might be a good time to consider this asset class. But investors should be aware that building a core holding can take time, since most municipal bonds are bought in the primary market at issuance, and trade less frequently in the secondary market.

High yield credit

While investment grade bonds may be entering a more normal yield and spread range based on past levels, HY bonds likely have another 100bps+ to widen before they reach the 5yr average pre-pandemic spread levels of around 440bps (currently 325bps as of March 31) and yields of about 7% (currently 6.01% as of March 31). (See **Figure 12**.)

HY credit metrics overall have improved tremendously since the pandemic because of higher product prices creating a sort of “windfall revenue,” allowing many companies to pay down their debt quickly. This is especially true in energy, which represents about 13% of the HY sector. In addition, many companies’ assets have appreciated (e.g., retailers that own real estate), or the replacement cost of their fixed assets have increased due to inflation (e.g., auto production). This adds additional asset coverage for debt if ever needed.

Higher Yield, Higher Risk

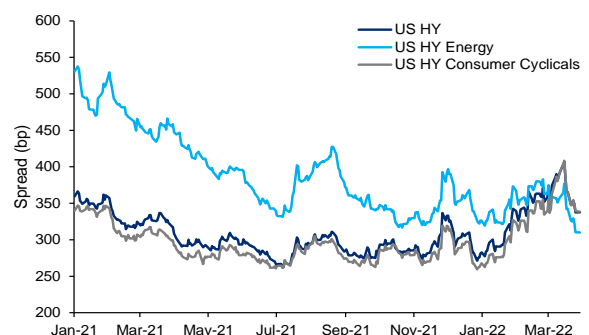
There are a few considerations to be mindful of when investing in high yield (HY). First, as the Fed raises rates, corporate financing costs will increase, and since these HY companies are generally more leveraged than IG companies, higher rates will have a greater impact on their free cashflow. Second, most of the positive performance in the index has been driven by the energy sector, which has outperformed the index over the past year by over 7.5% as energy spreads compressed over 130bps over the past year to March 31, even as the overall index’s spreads rose slightly, about 30bps (**Figure 13**).

Figure 12: US HY bond spread



Source: Bloomberg as of March 30, 2022.

Figure 13: US HY energy spreads vs broader HY



Source: Bloomberg as of March 30, 2022.

Based on current futures pricing, crude oil prices are expected to come down rather substantially in the coming year (about 15%-20%). While energy bonds wouldn’t necessarily widen just because of lower energy prices – most companies would still be very profitable at current futures pricing - to the extent that these companies were increasing their capex (and issuing more debt) just as prices started falling, spreads might widen over fears of future overproduction.

Finally, almost 20% of the HY index is exposed to the consumer discretionary sector, which comprises industries such as autos, travel, gaming, airlines, retail, etc. This sector not only has been slow to repair its balance sheets since it was the last to re-open post-pandemic, but it is also the most exposed to a sudden slowdown in consumer spending should a RECESSION scenario materialize (as outlined last

week in our [CIO Bulletin](#)). It was with this type of “tail risk” in mind that we have argued that investors consider credit hedges within HY markets as a less expensive way to hedge overall portfolio risk.

Despite these considerations, we do see a place for certain HY bond sectors in certain investor portfolios for clients comfortable with the risk profile.

For those concerned about rates rising even more than currently priced by the market, leveraged bank loans – which are both floating-rate and usually have collateral backing the loans - may be an interesting way to become invested in this asset class at similar yields (albeit bank loan issuers will pay higher financing costs more quickly than fixed rate issuers).

Preferred securities

Both IG and HY preferreds have dropped in price in 2022. At present yield levels (IG at 4.57% and HY at 5.46% as of March 31), preferred securities may be interesting for investors who want shorter-duration fixed income exposure (<4 years) and are comfortable with both the credit risk, and the “extension risk” of the preferred structure (see **Figure 14**). For US taxpayers, there may be favorable tax treatment as well.

Preferred securities and other “contingent capital” securities sit near the bottom of an issuer’s capital structure, below unsecured debt and just above equity. These securities are generally “fixed-to-float,” which means fixed rate for some period (often five years) after which they generally switch to floating rate plus a credit spread. At the end of the fixed period, most issues are callable by the issuers. Some issues are “perpetuals,” and so never mature (unless called), while other issues do mature 30-50 years from issue date. This relatively short-fixed rate period, followed by a switch to floating rate, means that preferreds have very low duration, despite their long maturities. Conventional wisdom holds that most issuers will generally choose at the end of the fixed period to call the securities if rates are rising, but they are not required to do so.

Emerging markets credit

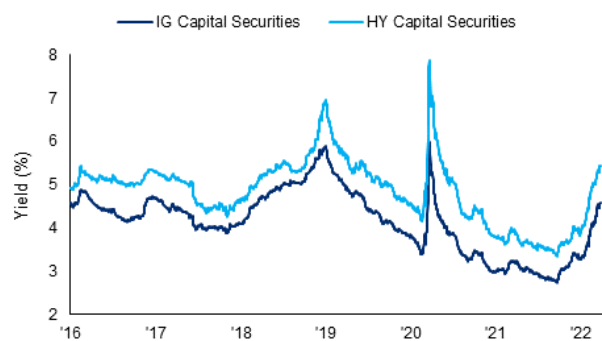
Emerging markets USD debt is a very broad category, encompassing both IG and HY debt, as well as sovereign and corporate issuers in both rating categories. There are domestic considerations in individual countries and regions, as well as industry sector considerations. Often there are “idiosyncratic” developments which can arise which can have major valuation impacts on a particular sector or country’s USD debt. We covered two of those developments – Russia USD debt issuance and China real estate developer USD debt issuance – in our [recent fixed income bulletin](#). While both of these were negative developments, the EM index (which no longer includes Russian debt) in general offers potentially favorable returns, and Brazilian USD debt seems particularly attractive.

Overall yields in EM are trading near the top of a multi-year “channel” (excluding the Covid-19 pandemic period, see **Figure 15**). With Russia being removed from the index, yields aren’t as high as they were a few weeks ago, but given the blend of rating, industry, and geographic diversification, this may be the best value in fixed income currently. While one of the considerations for EM countries currently is that higher USD rates may cause balance of payment issues as the dollar strengthens versus local currencies, in many regions and countries the opposite is actually happening since many of these countries are large commodity exporters and expected to benefit from higher commodity prices.

Bravo Brazil

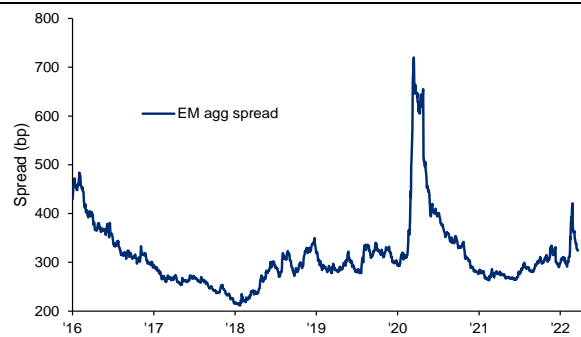
Perhaps nowhere is this more apparent than Brazil, which has seen its currency appreciate about 15% YTD through March 31. Brazil is a commodity powerhouse, though it is rated BB-. The country exports a wide variety of commodities, and many of its USD corporate bond issuers are commodity or intermediate goods producers. Although the Brazilian sovereign rating lowers many issuers’ ratings into HY as well, credit metrics for many of these companies are similar to investment grade companies operating in developed markets. The country does have potentially contentious presidential elections in the fall which may cause volatility, but with yields for many corporate issuers in the intermediate duration space in the 5%-6% range, it seems that there may be reasonable value even with the volatility.

Figure 14: US Preferred yields



Source: Bloomberg as of March 30, 2022

Figure 15: Emerging market (USD) bond spread



Source: Bloomberg as of March 30, 2022

INVERSION AND RECESSION – WHICH CURVE MATTERS?

As expected, the press is all over the story of yield curve inversion and recession just as they were the last time the curve inverted in 2018. (Did the yield curve predict the recession or did it predict Covid in 2020?)

In recent weeks, various curves inverted, and the attention jumped each time as if a “self-destruct” button was pushed. First, it was the US Treasury 5-year note above the 10. Now, it’s 2s above 10s. Yet 20s and 30s are above 2s ... So which one matters?

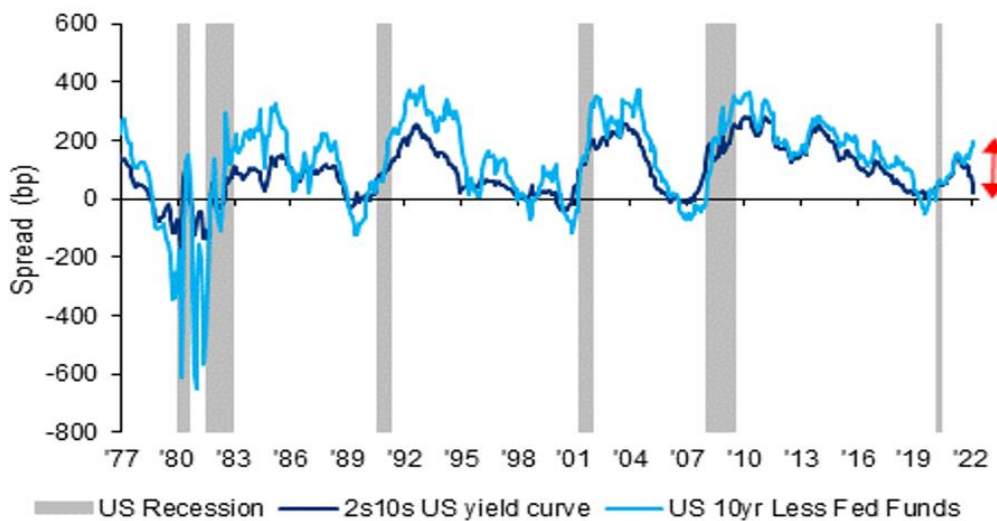
The chart below contrasts the 10s/Fed funds curve with the 10s/2s curve and is important for our understanding. **The key question is whether the Fed will actually follow through on all the tightening that is expected. It’s the Fed pushing risk free cash yields above the (risky) returns of other investments that contributes to eventual contraction in the economy.** When idle cash positions produce the highest risk-adjusted return, the incentive to invest declines. The longer the Fed persists at this, the greater the impact. Financial markets are faster than the real economy in making adjustments, hence financial markets give us lead time before recession in the real economy.

The fact that the 10s/2s yield curve is historically a good long-term leading indicator of recession (like 10s/3s, 20s/5s, etc.) is because of the general correlation of yields. The 2-year US Treasury by itself is not an important benchmark for borrowing or lending in the US economy. Yet it normally isn’t priced 2 percentage points above the Fed’s key policy rate.

We want to take the yield curve seriously for what it is, a true long-term leading indicator of recession. With the long lead time it provides, we wouldn’t take contraction calls for the US economy seriously before 2023. For financial markets, however, that’s this year’s business. Still, the stark gap between the two yield curves below shows the Fed still has the choice to follow through with what is now priced: 1) near record increases in the federal funds rate in a single year, 2) Quantitative Tightening (only the second time in modern history), and 3) tightening during a fiscal contraction.

The Fed has a choice akin to Charles Dickens’ Scrooge learning from Ghost of Christmas Future. There’s still time to take a different path.

Figure 16: US Treasury 10-Year Yield less Fed Policy Rate and 10-Year less 2-Year



Source: Bloomberg and Haver Analytics as of April 1, 2022.

APPENDIX

The charts below provide three possible scenarios, blending economic, political and central bank information and future actions. While we believe these three to be the most likely outcomes, we note that upside and downside scenarios are also possible, and there is no assurance that any scenario or performance will be achieved. Given the present level of uncertainty, the inputs to our scenarios are subject to change as are the outcomes discussed below.

Figure A: Characteristics of Our 3 Scenarios

	ROBUST		RESILIENT	RECESSION	
	5%	25%	40%	25%	5%
US economy	Stronger outcomes	US growth exceeds 2.5% in both 2022, 2023	US growth slows toward 2% in 2022-2023, with brief periods below	US recession in 2023 after 2% growth in 2022	Weaker outcomes
Global economy		Europe in very brief contraction within 1H, other regions firm	Europe contracts for half year, weaker US imports slow Asia's recovery	Europe contracts, US import weakness causes global trade retrenchment in 2023	
Inflation		US CPI decelerates from 8% to 2.5% or below in 2023	US CPI peaks above 8.5% near term, stays above 3% on average in 2023 before slowing	US CPI peaks above 8.5%, decelerates to average 3% in 2023, weaker beyond	
Fed		Raises rates 25 bps per meeting, begins QT. Fed slows tightening in response to slower US growth and inflation in 2H 2022	Raises rates at each meeting (50 bps, then 25 per meeting) begins QT, keeps tightening until inflation slows sharply	Raises rates 25 or 50 bps per meeting, begins QT, keeps tightening until recession drives inflation down.	

Global equities	Rally 10% to end 2022 positive, poised for 2023 gains	Single-digit EPS and dividend growth drive broad markets toward near-flat 2022 return. Fed tightening stems sharp rallies along the way.	US equities fall a further 20%, global equities -25% by late 2022
US yields	10-year yield reaches 3% and stays sustainably above 2.5%; Fed funds rate stays at or below 2% during 2023.	10-year yield reaches 2.5%-3% range, but can't sustain above 2.5% with market volatility driving bond inflows (despite Fed QT)	10-year yield peaks near 2.5%, falls to 1.5% by early 2023 on future Fed easing steps. Yield curve inverts sharply
Russia/Ukraine	Both sides make a compromise agreement to end warfare resulting in minor sanctions relief.	No presumptions of end point for Russia/Ukraine hostilities; Russia/Ukraine commodity exports decline sharply but not entirely	Russia hostilities spread, attacks widen. Russia/Ukraine commodity exports decline very sharply.
China	Purchases Russian exports without sanctions, limiting the global supply shock while other producers ramp up production.	Purchases Russian exports without sanctions, but quantities limited. Producers from outside region gradually ramp up supplies over 2 years.	US-Europe/China economic relations devolve further including possible economic sanctions against China.

Note: All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Past performance is not indicative of future returns. For illustrative purposes only.

Figure B: Our possible return profiles for fixed income based on our 3 Scenarios

Estimated Fixed Income Outcomes Under Three Scenarios (as of 3/31/22)			
	ROBUST	RESILIENT	RECESSION
10yr US Treasury (2.35% yield)	10yr UST to end 2022 at a 3.1% yield; This would result in an implied annualized total return of roughly -5.5%	10yr UST to end 2022 at a 2.3% yield; This would result in an implied annualized total return of roughly +3%	10yr UST to end 2022 at a 1.5% yield; This would result in an implied annualized total return of roughly +12%
US IG corporates (116bps spread, 8yr duration)	Spreads tighten to 90-110bps on improving credit from growing economy	Roughly flat spreads in 110-130bps range as issuers have easy access to capital/refinancing needs	Roughly 100-150bps of widening would bring IG spreads in-line with the previous three recessions
US HY corporates (325bps spread, 4yr duration)	Spreads tighten to 290-310bps as economy improves and financing cost increase is more gradual	Slightly wider spreads in 310-370bps range, though lower-rated issuers/sectors may find it more difficult to meet capital/refinancing needs	Roughly 400-500bps of widening would bring HY spreads to +700-800bps
EM USD debt (320bps spread, 7yr duration)	Spreads tighten to 250-270bps as dollar appreciation slowed	Roughly flat spreads in 300-340bps range	Roughly 200-300bps of widening would bring EM spreads to +500-600bps

Source: Source: OCIS. Calculations and estimates based on 3 Scenarios. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Past performance is not indicative of future returns. For illustrative purposes only.

DISCLOSURES

This email contains promotional materials. If you do not wish to receive any further promotional emails from Citi Global Wealth Investments, please email donotspam@citi.com with "UNSUBSCRIBE" in the subject line. Email is not a secure environment; therefore, do not use email to communicate any information that is confidential such as your account number or social security number.

This Communication is prepared by Citi Global Wealth Investments ("CGWI") which is comprised of the Investments and Capital Markets capabilities of Citi Private Bank, Citi Personal Wealth Management and International Personal Bank U.S.

Citi Private Bank and Citi Personal Wealth Management are businesses of Citigroup Inc. ("Citigroup"), which provide clients access to a broad array of products and services available through bank and non-bank affiliates of Citigroup. Not all products and services are provided by all affiliates or are available at all locations. In the U.S., investment products and services are provided by Citigroup Global Markets Inc. ("CGMI"), member FINRA and SIPC, and Citi Private Advisory, LLC ("Citi Advisory"), member FINRA and SIPC. CGMI accounts are carried by Pershing LLC, member FINRA, NYSE, SIPC. Citi Advisory acts as distributor of certain alternative investment products to clients of Citi Private Bank. Insurance is offered by Citi Personal Wealth Management through Citigroup Life Agency LLC ("CLA"). In California, CLA does business as Citigroup Life Insurance Agency, LLC (license number 0G56746). CGMI, Citi Advisory, CLA and Citibank, N.A. are affiliated companies under the common control of Citigroup. Outside the U.S., investment products and services are provided by other Citigroup affiliates. Investment Management services (including portfolio management) are available through CGMI, Citi Advisory, Citibank, N.A. and other affiliated advisory businesses. These Citigroup affiliates, including Citi Advisory, will be compensated for the respective investment management, advisory, administrative, distribution and placement services they may provide.

International Personal Bank U.S. ("IPB U.S."), is a business of Citigroup which provides its clients access to a broad array of products and services available through Citigroup, its bank and non-bank affiliates worldwide (collectively, "Citi"). Through IPB U.S. prospects and clients have access to the Citigold® Private Client International, Citigold® International, International Personal, Citi Global Executive Preferred, and Citi Global Executive Account Packages. Investment products and services are made available through either Citi Personal Investments International ("CPII"), a business of Citigroup which offers securities through CGMI, member FINRA and SIPC, an investment advisor and broker-dealer registered with the Securities and Exchange Commission; or Citi International Financial Services, LLC ("CIFS"), member FINRA and SIPC, and a broker-dealer registered with the Securities and Exchange Commission that offers investment products and services to non-U.S. citizens, residents, or non-U.S. entities. CGMI and CIFS investment accounts are carried by Pershing LLC, member FINRA, NYSE, and SIPC. Insurance is offered by CPII through CLA. In California, CLA does business as Citigroup Life Insurance Agency, LLC (license number 0G56746). Citibank N.A., CGMI, CIFS, and CLA are affiliated companies under common control of Citigroup Inc.

[Read additional Important Information](#)

Past performance is not indicative of future results. Real results may vary.

Citi and its employees are not in the business of providing, and do not provide, tax or legal advice to any taxpayer outside Citi. Any statement in this Communication regarding tax matters is not intended or written to be used, and cannot be used or relied upon, by any taxpayer for the purpose of avoiding tax penalties. Any such taxpayer should seek advice based on the taxpayer's particular circumstances from an independent tax advisor.

MBS are also sensitive to interest rate changes which can negatively impact the market value of the security. During times of heightened volatility, MBS can experience greater levels of illiquidity and larger price movements.

Important information, including information relating to risk considerations can be found in the link above.

Views, opinions and estimates expressed herein may differ from the opinions expressed by other Citi businesses or affiliates, and are not intended to be a forecast of future events, a guarantee of future results, or investment advice, and are subject to change without notice based on market and other conditions. Citi is under no duty to update this presentation and accepts no liability for any loss (whether direct, indirect or consequential) that may arise from any use of the information contained in or derived from this presentation.

© 2021 Citigroup Inc., All Rights Reserved. Citi, Citi and Arc Design and other marks used herein are service marks of Citigroup Inc. or its affiliates, used and registered throughout the world.

<p>INVESTMENT PRODUCTS: NOT FDIC INSURED • NOT CDIC INSURED • NOT GOVERNMENT INSURED • NO BANK GUARANTEE • MAY LOSE VALUE</p>
--