DuPont Capital

Fixed Income Market Review and Outlook

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Market Overview

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"Are we there yet?" This is a common question some of us have heard from our children when taking a long drive for a vacation. They ask because they are tired of being in a car and they want to finish the journey and start enjoying the vacation. I feel like investors keep asking "Are we there yet" to the Fed in regard to its rate increases. The Fed has been aggressively raising the Fed Funds Rate for almost a year from 0% to 4.25%. This journey has seemed much longer. Along the way, the Fed keeps raising the target, essentially making the "trip" longer and longer. We are all anxious to get to the end, but we really don't know when we will get there.

The markets are acting like we are almost to the end. Bond prices seem to be saying that the Fed will stop once we get to 5% and will cut rates later in 2023. This belief fueled a rally in risk assets including equities and all credit sectors in fixed income. This upward price action was in stark contrast to what we experienced over the first nine months of 2022 when we saw the worst nine-month period ever in fixed income. Inflation started to come down late in 2022 while the economy continued to chug along. The hope is that inflation will move toward the Fed's 2% target while avoiding a debilitating recession. Time will tell, but it was good to finally have some positive returns in the financial markets.

In the 4th quarter, the Bloomberg Aggregate Index had a return of +1.9% but was down -13.0% for the year. Credit sectors did very well with Emerging Markets Debt up +8.1%, High Yield up +4.2% and Investment Grade Corporates up +3.6%. However, despite the better 4th quarter, all sectors of fixed income had large losses in 2022.

The following tables show the returns for the various fixed income sectors and rating categories for the 4th quarter and for all of 2022:

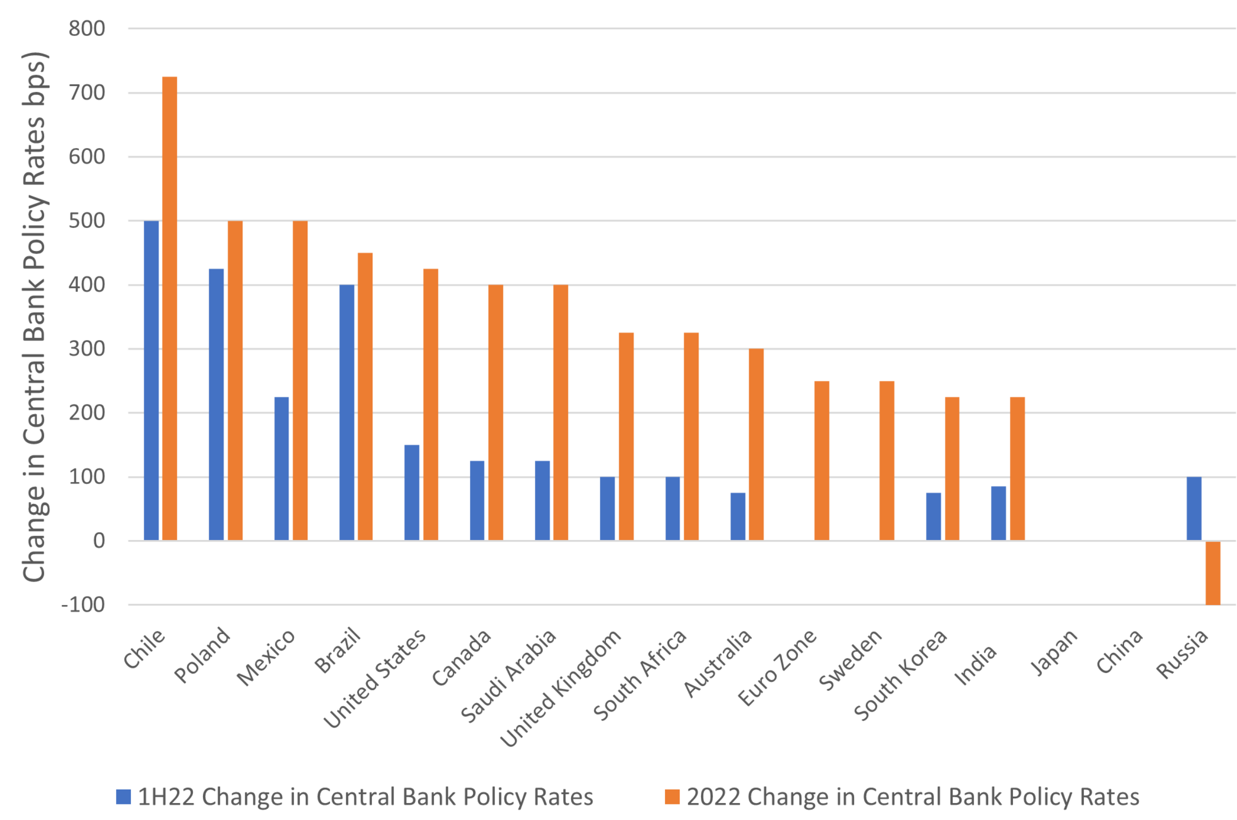
Sector	4Q Return*	YTD Return
U.S. Treasuries	0.7%	-12.5%
MBS	2.1%	-11.7%
Inv. Grade Corporates	3.6%	-15.8%
High Yield	4.2%	-11.2%
Emerging Markets Debt	8.1%	-17.8%

Credit Rating	4Q Return*	YTD Return
AAA	1.3%	-12.0%
AA	2.0%	-14.9%
A	3.2%	-15.1%
BBB	4.2%	-15.9%
BB	4.3%	-10.8%
B	4.9%	-10.3%
CCC	0.5%	-16.3%

Source: Bloomberg
* Returns are from Bloomberg indices except Emerging Markets Debt, which is from JP Morgan. All figures are as of 12/31/2022.

U.S. Treasuries

Unlike the first three quarters of 2022, Treasury yields did not change significantly in the 4th quarter. This occurred despite continued tightening by the Federal Reserve. The Federal Reserve moved the Fed Funds Rate higher by 125 bps in the 4th quarter, bringing it up to a range of 4.25% to 4.5% at the end of the year. Not only did the Fed Funds Rate rise in the U.S. but Central Bank policy rates have also gone much higher in many countries across the world. Below is a chart that shows the change in Central Bank Policy Rates for seventeen major countries both for the first half of this year and for all of 2022. As you can see, 14 of the 17 countries have increased rates this year by 200 bps points or more. And, the rate hikes are not done. For example, the U.S. has raised the Federal Funds Rate by 425 bps so far and the Fed is expected to hike by another 75 or 100 bps over the next four months. The Eurozone, Canada, the U.K., and several other countries are also expected to continue to move rates higher to combat inflation. Hopefully, the tightening will end in the first half of 2023.



* China has not changed their Policy Rate this year but has lowered their Reserve Requirement Ratio.

As of December 31, 2022

Source: Bloomberg and FactSet

In the 4th quarter, the 2-year yield rose by 22 bps and the 10-year rose by only 8 bps. The yield curve inverted early in the 3rd quarter and remained inverted through the quarter. For the year, the 2-year has risen by 371 bps and closed at 4.43% with the 10-year up by 237 with a yield of 3.88%.

Spread Products

Unlike earlier in the year, spreads tightened in the 4th quarter across the credit sectors of fixed income. Returns in the quarter were positive for the first time this year but were still very negative for the year. Below is a table that shows spreads for investment grade corporates, high yield, and EMD as of year-end 2019 (pre-COVID), the 1st quarter of 2020 (after COVID hit), the end of 2021, the end of the 3rd quarter, and the year for 2022:

Sector	12/31/2019	3/31/2020	12/31/2021	9/30/2022	12/31/2022
Investment Grade Corporates	+96	+276	+96	+172	+138
High Yield	+357	+899	+321	+562	+489
Emerging Markets Debt	+291	+626	+369	+559	+453

* Spread data are from Bloomberg indices for IG Corporates and High Yield and from JP Morgan for Emerging Markets Debt.

Investment grade corporates tightened by 34 bps in the 4th quarter to 138 over Treasuries, still wider than the historical average of about +120. Industrials and utilities outperformed financials during the quarter, while longer duration corporates had higher returns than shorter duration corporates. Corporate bond issuance was tepid in the 4th quarter. The total issuance in 2022 was down over 12% as compared to 2021, but was still one of the top five years of all time.

In mortgages, fixed-rate pass-through mortgages outperformed Commercial Mortgages (CMBS) and ABS. The CMBS market has improved over the past two years despite some uncertainty in areas of CMBS due to the problems in retail and office space. Asset-backed securities rose slightly but had lower returns due to the shorter duration.

High yield did very well aided by the rise in equity prices. Spreads tightened by 73 bps and ended the quarter at +489 which is close to the historical average of about +500. The yield of the index has risen from an all-time low of 3.75% at the end of June in 2021 to 8.96% just 18 months later. Higher-rated high yield outperformed lower quality, with BB's returning +4.2% as compared to +0.5% for CCC-rated bonds. Default activity continued to be low, with the twelve-month default rate rising 0.1% to 1.7%. This remains well below the historical default rate of 3.2%.

Emerging Markets Debt was the best performing sector in fixed income in the 4th quarter but was still the worst performer for the year. Spreads tightened by 106 bps over the quarter and closed at 453 bps over Treasuries. Lower-quality countries greatly outperformed higher-quality countries in the "risk-on" environment. Overall, yields for U.S. Dollar EMD declined by 101 basis points to 8.56%. Local currency EMD performed in-line with US Dollar sovereigns with a quarterly return of +8.5%.

The Economy

Economic activity has been surprisingly healthy in the 4th quarter after being poor in the first half of 2022. Consumer spending has slowed from the pace earlier in the year partly due to rising prices. Retail sales were down -0.6% in December after rising +1.3% in October. Manufacturing activity has declined with Durable Goods Orders falling -2.1% in November after an increase of +0.7% in October. The ISM Manufacturing Index declined during the quarter from 50.9 to 48.4, the lowest level since the beginning of the pandemic. The index was above 57 nine months ago. Overall, the demand for services has been healthy, although the ISM Services Index surprisingly declined from 56.5 to 49.6 over the last month. The economy could be in trouble if demand for services declines. The housing market has continued to be sluggish after booming late in 2020 and 2021. Much higher home prices and the highest mortgage rates in about 15 years has greatly decreased demand. Home prices have moved lower in many areas. The S&P Case-Shiller national home price index has moved lower over the last few months but is still about 9% higher over the past year.

The Federal Reserve Bank of Atlanta's GDPNow model, a running estimate of growth during the quarter, was projecting growth of +4.1% for the 4th quarter as of January 10. That is much stronger than most economists have been forecasting. This mostly includes data from October and November so it could change significantly before the first official release at the end of January.

The non-farm payroll gains remained healthy but declined as the quarter progressed. December saw an increase of 223,000 jobs which is the smallest increase since 2020. The increase is smaller than gains of 263,000 in October and 256,000 in November. The unemployment rate remained the same at 3.5% which matches a 50-year low and is the same as the pre-pandemic rate. Wage gains declined slightly but remained strong with average hourly earnings rising by 4.6% year-over-year. The four-week moving average for new unemployment claims was 213,750 at the end of December, up by over 7,000 from last quarter. As a reminder, claims were running about 215,000 before the pandemic.

Inflation

Year-over-year inflation declined but remained high and is still the main focus for the Federal Reserve and investors. The Consumer Price Index (CPI) has risen 7.0% over the past year, which is down from 8.3% three months ago. Core CPI rose only +0.2% in November and is now up 6.0% over the past year. Progress has been made but inflation has a long way to go. Oil prices did not change materially over the quarter and are up only slightly for the year. West Texas Crude rose by less than $1 a barrel to $80, down from a peak of over $120 earlier in the year. Overall, other commodity prices rose slightly, with the Bloomberg Commodity Index rising by +2% over the past three months but has still risen by 15% for the year. Although CPI data is the most commonly referred to data for inflation, the Fed's preferred measure is the price index for Personal Consumption Expenditures (PCE). This measure has come down but remained high over the last few months with an overall year-over-year increase of +5.5% and a Core PCE deflator increase of +4.7%. The core deflator has come down from 4.9% over the past three months.

Portfolio Positioning

In the **Government** sector, our Core and Core Plus portfolios have durations that are in-line with the benchmark. We were positioned shorter than the benchmark for over a year but moved close to the benchmark after interest rates moved much higher earlier in 2022. We continue to have a large underweight to Treasuries as we find better value in the other sectors. We also hold a small position in inflation-indexed U.S. Treasuries (TIPS).

In the **Mortgage** sector, the higher mortgage rates have impacted the housing market significantly with existing home sales down 35% YOY and are now 2.4 standard deviations below their 5-year average. Not only are homeowners finding it more difficult to transition to different homes because of higher mortgage rates, their home equity is not rising as fast as year-over-year home price appreciation has fallen over the last several months. The 30-year fixed rate mortgage rate has moved up from 3.31% to 6.58% in the past year. The mortgage treasury basis is now 127 bps and the current coupon 30-year rate is 4.97% with 6% representing the largest security production cohort. The higher rates have caused mortgage securities to extend as demonstrated by the Bloomberg Aggregate Mortgage Index duration moving from 4.63 to 5.75 years in 2022. The same applies for CMBS whose underlying loans have been extending beyond their initial contractual maturities. Our overall mortgage exposure is positioned on the shorter side in terms of duration, and we have taken advantage of security structures that have provided higher yields while still maintaining credit risk protection. Most of this activity has been in the CMBS sector which is somewhat less sensitive to interest rate volatility.

Our **Investment Grade Corporate** strategy focuses on companies with the potential to outperform the benchmark on a risk-adjusted basis. Investment grade corporate spreads tightened by 34 basis points during the quarter and are trading slightly wider than historical averages. We believe that investment grade corporate bonds represent the best value in the investment grade fixed income market. We currently hold an overweight of close to 10% to corporates in our Core Fixed Income portfolios. We favor the basic industry, insurance, communications, energy, and consumer cyclicals sectors. Regarding ratings, we are overweight BBB-rated corporates. In Long Duration, we had very little exposure to long corporates at the beginning of 2020 and greatly increased our allocation due to the much more attractive spreads. We continue to make additional purchases in long corporates as we find opportunities.

High Yield rallied in the 4th quarter as the equity market rose. Spreads have widened significantly this year and are close to long-term averages. We were very cautious coming into 2022 and had positioned the portfolio more defensively. We are selectively finding opportunities and continue to look to identify companies with attractive valuations that could provide strong returns over the long-term.

Emerging Markets Debt gained significantly in the 4th quarter due to stable interest rates, declining inflation in some countries and the risk-on environment. Spreads for EM sovereigns tightened by 106 basis points during the quarter but widened 84 bps for the year. It is prudent to be cautious, but opportunities exist due to the wider, more attractive spreads. Our research continues to focus on identifying key positive drivers for EM countries that could lead to future credit improvement. Currently our primary overweights are Brazil, Mexico, Argentina, Ukraine, and Turkey. We are underweight some of the higher quality countries such as Philippines, Qatar, and UAE. In local currency our main allocations are to Brazil, Mexico, South Africa, and Poland.

The Look Forward

Are we there yet? This is what investors want to know.

The focus remains squarely on the Federal Reserve. The Federal Reserve will most likely move the Fed Funds Rate higher by 50 to 100 bps over the next two meetings in February and March. There could be another 25 bps move in May, but that would be it. This would bring the Funds Rate over 5% for the first time since 2007. So, in our opinion, we are almost there. Of course, the other question is whether once we get there, will it be a good vacation (soft landing) or will the vacation have difficulties (recession).

U.S. economic growth was very sluggish earlier in 2022 caused by very high inflation, much higher global interest rates, supply chain problems, the Omicron variant, and the conflict in Ukraine. We expect U.S. growth to continue to be sluggish over the next year. High interest rates will weigh on spending, both by consumers and businesses. Hopefully, the strong labor market will help keep the economy moving slowly forward. A recession is definitely a possibility, and the probability increases if the Federal Reserve hikes the Funds Rate above 5%.

Inflation was at the highest level in 40 years just a few months ago. Some prices have started to stabilize and should continue to moderate over the rest of 2023. We expect inflation to continue coming down over the next several months and could get closer to 3% by year-end. There are still a lot of uncertainties. China's reopening could put pressure on commodity prices and service prices have not stabilized due to high demand. In addition, wages could remain high due to continued high job openings. Despite the uncertainties, we are optimistic inflation will come down.

The good news is that the Treasury market is already pricing in several more rate hikes. In addition, as mentioned, we believe the Federal Reserve will stop raising rates after either the March or May meetings. Because of this, we believe that Treasury yields are close to fair value and may not move much higher in 2023.

In addition, the Fed commenced Quantitative Tightening early in 2022 and increased it in September. It is hard to estimate how much QT impacts rates and the economy, but it could be the equivalent of an additional 50 bps in tightening. So, when thinking about the amount that the Fed has tightened, you should not just focus on the Funds Rate, but also factor in the Quantitative Tightening.

For investment grade corporate bonds, spreads widened in 2022 and are slightly wider than historical averages. High yield spreads have also moved much wider, and the markets reflect the weaker economic environment. We believe volatility could remain high in credit and that spreads could widen further if the economy heads into a recession. However, spreads look attractive for long term investors. In all credit markets, security and country selection will be extremely important due to the increased volatility and uncertainty. We will continue to add credit positions to our portfolios as we find opportunities with good long-term value.

We are almost there. Valuations in fixed income, across all sectors, are much cheaper than they were a year ago. While that is good news, the future course of interest rates and credit spreads are uncertain. Inflation needs to be tamed and that will take time and a higher Fed Funds Rate. The Fed waited far too long before raising rates but have made up for its earlier mistake by hiking rates more aggressively. We are hopeful that much of the pain in fixed income has already occurred and that rates and spreads may not get higher over the next few months. We will continue to keep duration close to the benchmark and will selectively buy credit as we find opportunities.

SUMMARY

To summarize our outlook:

1) The U.S. economy may enter a recession in 2023 due to high interest rates and inflation. If it does, it should be mild and short-lived.
2) The Federal Reserve will increase the Funds Rate by an additional 50 to 100 bps over its next two meetings but will most likely discontinue rate hikes before summer.
3) Inflation will decline as the year progresses and we expect core inflation to be closer to 3% for all of 2023.
4) U.S. Treasury yields rose significantly in 2022 and already reflect some additional rate hikes. Yields are currently close to fair value.
5) Credit spreads are more attractive than earlier this year. While spreads could widen if economic growth declines, we are overweight IG corporates due to relatively good fundamentals and the improved valuations.
6) We believe most of the pain in fixed income is over. Fixed income could provide an attractive return over the next few years.

About our Firm

DuPont Capital Management is an SEC registered investment advisor based in Wilmington, Delaware. Since the firm's establishment in 1993, we've had a long history of developing global investment opportunities in both traditional and alternative strategies across equity, fixed income and alternative investments. Our investment team structure gives us the ability to be flexible and adapt to changing market conditions. DuPont Capital's focus is delivering consistent investment management results for our clients. Our history of institutional asset management is rooted back to 1942 when our former parent company, DuPont, established a pension plan for its employees. Corteva Inc. succeeded DuPont as sponsor of the DuPont Pension Plan in 2019. DuPont Capital is a wholly owned subsidiary of Corteva and continues to manage the legacy DuPont Pension Plan.

DuPont Capital's President and CEO, Valerie Sill believes in education and diversity of experience as represented in our investment teams which are comprised of PhDs, engineers, medical doctors, and scientists. We believe their global expertise creates a portfolio implementation edge that benefits our clients.

Fixed Income Team Summary

- 8 Portfolio Managers
- 3 Research Analysts/Traders
- 1 Portfolio Specialist

Fixed Income Capabilities

- Core Fixed Income
- Emerging Markets Debt

For additional information please contact:

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