RBC Global Asset Management

Global fixed income markets



NEW YEAR 2023



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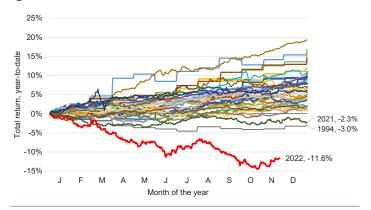
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Bonds are having by far their worst year in four decades, with currency-hedged global government bonds declining by close to 12% through November (Exhibit 1), after central banks relentlessly raised interest rates to fight surging inflation. The only other times that government bonds had calendar-year losses since the mid-1980s were in 1994 and last year, and in both cases the losses were in the low single digits. Will 2023 bring a third straight year of bond declines? We don't believe so. Bond yields are now higher than they have been since 2008. To our mind, bonds now offer their most compelling return potential since the onset of the global financial crisis, especially as inflation cools and economic activity slows. We think bonds should post returns somewhere in the mid-single digits over the next 12 months and forecast the U.S. 10-year bond yield to be 3.70% in a year's time, around the same level as now.

Losses over the past year have been spurred primarily by aggressive monetary tightening that we think is unlikely to be repeated. Policy rates are much more restrictive now, in stark contrast with the end of 2021, when they sat firmly near zero and were expected to remain low for some time. Energy prices have also declined meaningfully from their peaks, and as the one-year anniversary of Russia's invasion of Ukraine approaches in February, the boost to price pressures from energy should abate – easing pressure on central bankers. **Exhibit 1: There is no historical parallel for 2022** Year-to-date returns for currency-hedged global government bonds



Note: As of November 30, 2022. Source: FTSE Russell World Government Bond Index Total Returns (Canadian-dollar hedged). Returns since 1985.

"Over the next year, the full effect of policy-rate hikes from the past 12 months is going to be felt and bond returns are likely to be bolstered by the likelihood that most developed-market economies will fall into recession." Judging by the speed and scale of the rise in both the fed funds rate and the benchmark 30-year U.S. fixed-rate mortgage, the past 12 months have seen the most aggressive policy tightening of the past 40 years (Exhibit 2). Moreover, investor expectations for policy rates, adjusted for inflation, are as high as they have been since the global financial crisis (Exhibit 3). Almost all central banks have hiked policy rates by hundreds of basis points since earlier this year and guided investor expectations towards continued policy tightening.

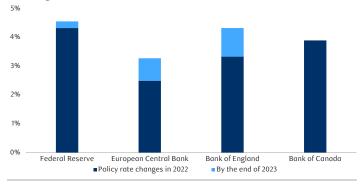
Importantly for policymakers, economic growth and inflation in some regions are showing signs of falling in response to much tighter monetary policy, and we expect the impact of higher interest rates in 2022 to become more forceful over the next year. While we do expect further interest-rate hikes

Exhibit 2: U.S. policy rates and mortgage rates have risen at a record pace – Number of days for interest rates to increase by one percentage point, after the first rate rise by the Federal Reserve



Source: The Economist, Federal Reserve, Federal Reserve Bank of St. Louis, Freddie Mac

Exhibit 4: Central banks are expected to be much less aggressive in the year ahead – Expected changes to policy rates for select central banks



Note: Data as of November 30, 2022. Source: Bloomberg

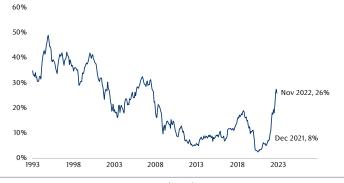
in 2023 in most markets, their pace and size should be much smaller than during the past year (Exhibit 4). Overall, the tightening cycle is much closer to the end than the beginning.

Over the next year, the full effect of policy-rate hikes from the past 12 months is going to be felt and bond returns are likely to be bolstered by the likelihood that most developed-market economies will fall into recession. At current yields, bonds offer the potential for significant price gains. A quick decline in yields back to zero, a level that they very nearly reached in March 2020 during the depths of the COVID-19 panic, would provide a 26% return based on yields prevailing near the end of November. At the beginning of 2022, the same decline in yields would have offered investors an 8% return (Exhibit 5).



Note: Data as of November 22, 2022. Source: Bloomberg, University of Michigan

Exhibit 5: U.S. Treasuries offer vastly improved potential for returns – Return to U.S. government bond index if yields declined to 0%



Note: As at August 26, 2022. Source: Bloomberg, RBC GAM

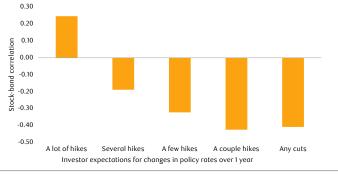
The increase in potential returns for bonds coincides with our belief that the beneficial relationship between stock and bond returns should make a comeback. Our research suggests that the positive correlation between stocks and bonds over the past year is very much the result of the exceptionally fast pace of monetary-policy tightening in response to an inflation surprise (Exhibit 6). As investors scale back their expectations of rate hikes to a range of two to three hikes per year, or even fewer, the historical relationship should reassert itself.

In so far as the rise in yields has hurt bondholders, it also has the potential to be particularly impactful for governments, by meaningfully raising the costs of issuing debt. Governments have enjoyed a three-decade run during which their debts and budget deficits ballooned but debt-servicing burdens did not as interest rates fell (Exhibit 7). In the U.S., for example, government debt has more than tripled since 1990, but debtservicing costs have fallen by half over the same period.

Yields on government bonds in most major markets are now significantly higher than the coupons that governments currently pay (Exhibit 8). If governments reissued their debt at current market rates, the cost of debt would increase by more than 50% for Australia and the U.K. In the U.S. and Canada, it would more than double.

Of course, government debt-servicing costs won't change overnight, but will over time as existing debt matures and new bonds are issued in their stead – like the renewal of a mortgage at a higher rate. In some cases, governments have issued long-term debt and locked in low borrowing costs. For the U.K., the average government bond matures over 15 years from now. In the U.S., by contrast, more than a quarter of Treasury bonds will mature before the end of 2024 (Exhibit 9).

However, as the U.K bond market's recent experience demonstrates, while a long-maturity debt profile can shield a government from investor skepticism, it is no guarantee. In October, the government of then-Prime Minister Elizabeth Truss floated a poorly conceived economic plan that would have led to significant deterioration in an already poor fiscal outlook. Bond investors responded swiftly, driving government bond prices sharply lower – the U.K. gilt maturing in 2073 lost 35% over the course of a week – and forcing a U-turn from the government. Truss lasted 44 days in office, the shortest tenure ever for a U.K. leader. Exhibit 6: When investors expect a lot of hikes, stocks and bonds move together – Stock-bond return correlation based on the number of hikes expected by investors over the subsequent year



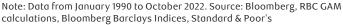
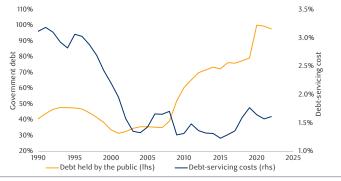
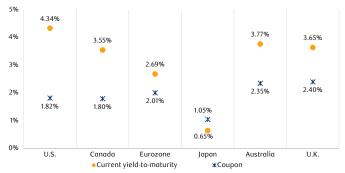


Exhibit 7: Since 1990, debt costs fell by 50%, even as debt rose by 200% – U.S., publicly-held government debt and debt-servicing cost, percentage of GDP



Note: Data as of September 2022. Source: Congressional Budget Office (CBO)





Note: Data as of November 2022. Source: Bloomberg, RBC GAM calculations

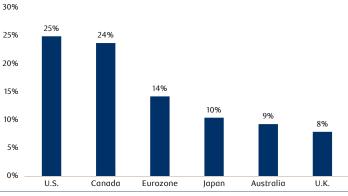


Exhibit 9: Governments face very different realities when it comes to maturing debt – Share of publiclyheld debt maturing before the end of 2024

Note: Data as of November 2022. Source: Bloomberg

The U.K. experience is unlikely to repeat elsewhere in the G10, but it does highlight that most developed-market governments possess unflattering debt-to-GDP profiles. Over the long term, high government-debt loads will likely act as a drag on growth and necessitate a fiscal adjustment through tax rises, spending cuts, or both. Central banks may find themselves called upon to backstop government credibility in order to ensure financial stability. The combination of sluggish growth and central-bank intervention will likely keep government-bond yields relatively low over the long term, as has been our view for several years now. With this in mind, the current set of high yields, driven by central banks focused on tamping down inflation, look particularly attractive.



Direction of interest rates



We are expecting the Fed to hike all the way to 5.00% next year, from the 3.75% level reached in November.

United States

Since reaching as high as 4.30% in October, the U.S. 10-year bond yield has declined to around 3.70%. At the same time, investor expectations for how high the U.S. Federal Reserve (Fed) will need to hike rate to tame inflation have declined by around 40 basis points. We are likely to be entering a stage of the economic cycle where concerns about flagging economic activity will need to be more keenly weighed in the year ahead against the necessity of hiking interest rates to tame currently high inflation.

The U.S. labour market remains quite strong, bolstering demands from workers that employers more fully offset losses in purchasing power. The Fed is very motivated to stop this inflation-wage growth feedback loop from becoming entrenched, justifying the aggressive pace of tightening thus far. It also means that the Fed is likely to be slow to shift its attention from fighting inflation to supporting growth. We are expecting the Fed to hike all the way to 5.00% next year, from the 3.75% level reached in November. We do see encouraging signs that some of the main drivers of inflation during the pandemic – snarled supply chains and goods prices – are abating. Softening economic growth and slowing inflation mean that the yield on the 10-year Treasury bond will likely be around 3.70% in a year's time – putting the yield curve into a deep inversion, with long-term yields well below short-term ones.



We now see the policy rate in Europe rising as high as 3.00%. Meanwhile, the yield on 10-year German government bonds will stretch to 2.40% from around 2.00% at the time of writing.

Eurozone

Policymakers at the European Central Bank (ECB) face a difficult 12 months. Double-digit inflation, a land war in Europe and the question of how to unwind its massive balance sheet even as governments ramp up issuance to support economic activity pose particularly prickly problems. Inflation has continued to rocket higher, with prices in Germany rising by 11.3% in November from a year ago. The vast majority of price pressures in the eurozone are related to soaring energy costs, as the continent's major supplier, Russia, restricts supplies. Normally, the ECB would prefer to view price pressures related to energy as temporary, but the size of the shock makes that approach all but impossible this time. What's more, the strength of the labour market means that there is a greater-than-usual chance that the current bout of high inflation will become embedded in wage agreements for years to come. Governments, meanwhile, are buttressing consumer pocket books via direct transfers - making the ECB's attempts to curtail economic activity via rate hikes that much more difficult. The result of these various economic factors is that the ECB will need to be more aggressive than previously expected in its efforts to slow activity and keep inflation expectations anchored. We now see the policy rate in Europe rising as high as 3.00%. Meanwhile, the yield on 10-year German government bonds is expected to stretch to 2.40% from around 2.00% at the time of writing.



Our base case remains no change to the policy rate at -0.10% and no change to the target range for the 10-year government bond yield between -0.25% and +0.25%.

Japan

Like most places in the world, inflation in Japan continues to run hot – the price of a basket of consumer goods rose by nearly 4% in October from a year ago. Even though these inflation figures are modest compared with the double-digit inflation in the U.K. and the eurozone, they represent a multi-decade high for the island nation. Unlike most other central banks, the Bank of Japan (BOJ) has held firm to its extremely easy stance on monetary policy, citing a lackluster economic recovery and little evidence of rising wage demands. The chances of policy tightening in the near term remain about as low as they have been for the past several years: little to none. However, the odds over the next year that the BOJ will tighten policy are as high as they have been for at least half a decade. Indeed, both foreign and domestic bondholders have been raising bets that a shift in policy is in the offing. For foreign investors, selling pressure on 10-year government bond futures has pushed yields on these instruments as high as 0.75% – far above the top of the BOJ's target range at 0.25%. The Japanese yield curve has steepened dramatically, with the gap between the 10-year and 20-year yields widening to 100 basis points – a level rarely seen.

Over our forecast horizon, the odds of a policy shift are rising and will probably be highest sometime in the early summer of 2023. The change would coincide with the end of Haruhiko Kuroda's term as BOJ governor. Recall that Kuroda himself is the architect and most ardent proponent of the current policy framework. Nevertheless, it is still more likely than not that policy in Japan remains unchanged because economic growth is likely to stay lacklustre. Our base case remains no change to the policy rate at -0.10% and no change to the target range for the 10-year government bond yield between -0.25% and +0.25%.





We forecast that the policy rate will reach 4.50% within the next year and that the Canadian 10-year government bond yield will be at 3.00% in that time frame.



Our forecast is for the bank rate to rise all the way to 5.25% sometime over the next 12 months from 3.00% at the end of November.

Canada

In October, the Bank of Canada (BOC) surprised financial markets with a smallerthan-expected 0.50% rate hike that raised the policy rate to 3.75%. BOC Governor Tiff Macklem emphasized that central bank was likely approaching the end of its hiking cycle but reiterated that interest rates would rise further in the months ahead and the BOC's commitment to bring inflation down remained as firm as ever. We expect policymakers to hike several more times over the coming months, and that the policy rate will eventually reach 4.50%.

Strong employment data and stubborn inflation should prevent the BOC from pausing rate hikes before the middle of next year. The BOC's own economic forecasts suggest that the bank expects economic growth to slow over the coming year, leading the central bank to slash its 2023 growth forecast by nearly half to 1.0% from 1.8% in inflation-adjusted terms. The central bank also forecasts that inflation will decline from around 7% to within the target band of 1% to 3% by the end of next year. The marked slowdown in price pressures raises the possibility that the BOC could start cutting rates by next fall. We forecast that the policy rate will reach 4.50% within the next year and that the Canadian 10-year government-bond yield will be at 3.00% in that time frame.

United Kingdom

Among its developed-market peers, the U.K.'s financial situation appears to be the worst. The U.K. economy is likely already contracting, which is remarkable considering it is the only G7 economy that has failed to surpass its pre-pandemic size. Meanwhile, inflation, which at over 10% is already the highest among developed nations, looks set to ratchet even higher over the months ahead. Inflation has been running above 9% since April and will likely stay in the double digits through the new year. Inflation is exacerbating the economic pullback by cutting into consumer-spending power. Meanwhile, the Truss government's dramatic missteps cratered any hope of government support for the economy and have necessitated a policy about-face by her replacement, Rishi Sunak. Instead of targeted tax relief to bolster the most vulnerable and perhaps provide a fillip to consumer spending, the government has been forced into spending cuts and tax hikes – neither of which are likely to turn around the economy.

Meanwhile, the Bank of England (BOE) remains under pressure to continue raising interest rates to combat inflation. The government's earlier mistakes also mean that the BOE is being forced to uphold confidence in the U.K. bond market, meaning monetary policy may have to be kept tighter than would otherwise be the case. We expect the gilt market to be particularly volatile over the coming months, as the BOE sells bonds from its massive portfolio and the government continues to issue large amounts of debt.

Our forecast is for the bank rate to rise all the way to 5.25% sometime over the next 12 months from 3.00% at the end of November.

Regional outlook

Overall, we are overweight U.S. government bonds and underweight German bunds. In the U.S., inflation is on a path to gradually decline after the Fed went through a phase of aggressive policy tightening, and this approach has afforded bond yields some room to fall from current levels. We believe that German bunds are likely to underperform over the next year as inflation pressures and still accommodative policy stances leave more room for the ECB to tighten. Barring a deeper slowdown than we expect, elevated price pressures will outweigh concerns regarding economic growth, likely sending European bond yields higher.

> In the U.S., inflation is on a path to gradually decline after the Fed went through a phase of aggressive policy tightening.

Underweight German bunds VS. Overweight U.S. Government bonds

Interest rate forecast: 12-month horizon

Total Return calculation: December 1, 2022 – November 30, 2023

| U.S. | | | | | | | |
|---------------------------------|-----------|--------|--------|---------|---------|---------------------------|--|
| | 3-month | 2-year | 5-year | 10-year | 30-year | Horizon return (local) | |
| Base | 5.00% | 4.75% | 4.10% | 3.70% | 3.60% | 3.25% | |
| Change to prev. quarter | 1.50% | 1.55% | 1.00% | 0.70% | 0.45% | | |
| High | 6.00% | 6.15% | 5.50% | 5.00% | 5.00% | (3.82%) | |
| Low | 4.00% | 3.90% | 3.50% | 3.25% | 3.50% | 5.24% | |
| Expected Total Return US\$ hedg | ged: 2.7% | | | | | | |

Germany Horizon return 3-month 2-year 5-year 10-year 30-year (local) Base 3.00% 2.75% 2.80% 2.40% 2.20% (2.28%) Change to prev. quarter 1.50% 1.35% 1.65% 0.90% 0.80% High 4.00% 3.75% 3.30% 2.75% 2.50% (5.39%) Low 1.50% 1.65% 1.65% 1.50% 1.50% 6.80%

Expected Total Return US\$ hedged: 0.2%

| Japan | | | | | | | |
|-------------------------|---------|---------|---------|---------|---------|---------------------------|--|
| | 3-month | 2-year | 5-year | 10-year | 30-year | Horizon return (local) | |
| Base | (0.10%) | 0.10% | 0.10% | 0.25% | 1.65% | 0.26% | |
| Change to prev. quarter | 0.00% | 0.05% | (0.10%) | 0.00% | 0.35% | | |
| High | 0.10% | 0.25% | 0.35% | 0.50% | 1.80% | (2.14%) | |
| Low | (0.10%) | (0.10%) | 0.00% | 0.00% | 1.20% | 6.49% | |

Expected Total Return US\$ hedged: 5.4%

| | | Can | ada | | | |
|--------------------------------|------------|--------|--------|---------|---------|---------------------------|
| | 3-month | 2-year | 5-year | 10-year | 30-year | Horizon return (local) |
| Base | 4.50% | 4.00% | 3.30% | 3.00% | 3.00% | 2.53% |
| Change to prev. quarter | 1.00% | 0.75% | 0.40% | 0.25% | 0.20% | |
| High | 5.50% | 5.50% | 4.70% | 4.50% | 4.30% | (6.04%) |
| Low | 4.00% | 3.75% | 3.00% | 3.25% | 3.35% | 1.43% |
| Eveneted Total Deture LICC had | mad. 1 (0/ | | | | | |

Expected Total Return US\$ hedged: 1.6%

| U.K. | | | | | | | |
|---------------------------------|-------------|--------|--------|---------|---------|---------------------------|--|
| | 3-month | 2-year | 5-year | 10-year | 30-year | Horizon return (local) | |
| Base | 5.25% | 4.75% | 5.00% | 4.50% | 4.00% | (4.75%) | |
| Change to prev. quarter | 2.25% | 1.35% | 2.00% | 1.75% | 0.90% | | |
| High | 6.00% | 5.25% | 5.30% | 4.75% | 4.00% | (5.93%) | |
| Low | 2.50% | 2.75% | 3.00% | 3.00% | 3.25% | 5.72% | |
| Expected Total Return US\$ hedg | ged: (3.4%) | | | | | | |

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Source: RBC GAM

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