



PGIM FIXED INCOME

Q4 22

QUARTERLY OUTLOOK

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Individual FI Sectors	Total Returns (%)				
	Q3 22	YTD	2021	2020	2019
CMBS	-3.85	-11.81	-0.64	8.11	8.29
Municipal Bonds	-3.46	-12.13	1.52	5.21	7.54
EM Local (Hedged)	-0.42	-11.46	-5.52	6.07	9.14
U.S. Treasuries	-4.35	-13.09	-2.32	8.00	6.86
Mortgage-Backed (Agency)	-5.35	-13.66	-1.04	3.87	6.35
U.S. Leveraged Loans	1.19	-3.31	5.40	2.8	8.17
EM Currencies	-3.97	-14.24	-3.09	1.73	5.2
European Leveraged Loans	1.15	-6.56	4.87	2.4	4.38
U.S. IG Corporate Bonds	-5.06	-18.72	-1.04	9.89	14.5
European IG Corporate	-3.06	-14.58	-0.97	2.77	6.24
U.S. High Yield Bonds	-0.68	-14.62	5.36	6.2	14.4
European High Yield Bonds	-0.84	-15.52	3.32	2.9	11.4
EM Debt Hard Currency	-4.57	-23.95	-1.80	5.26	15.04
Long U.S. Treasuries	-9.63	-28.84	-1.13	17.7	14.8
U.S. Long IG Corporates	-8.65	-29.43	-4.65	13.94	23.9
Multi-Sector					
Yen Aggregate	-0.62	-3.47	-2.85	-0.8	1.64
Global Agg. Hedged	-3.34	-12.09	-0.15	5.58	8.22
U.S. Aggregate	-4.75	-14.61	-1.39	7.51	8.72
Euro Aggregate (Unhedged)	-4.59	-16.16	-4.71	4.05	5.98
Global Agg. (Unhedged)	-6.94	-19.89	-1.54	9.2	6.84
Other Sectors					
U.S. Dollar (DXY Index)	7.10	17.19	6.37	-6.69	1.35
3-Month SOFR	1.48	3.63	0.03	-1.5	-0.85
S&P 500 Index	-5.27	-24.77	28.71	18.4	32.6

Past performance is not a guarantee or a reliable indicator of future results. See Notice for important disclosures and full index names. All investments involve risk, including possible loss of capital. Sources: Bloomberg except EMD (J.P. Morgan), HY (ICE BofA), Bank Loans (Credit Suisse). European returns are unhedged in euros unless indicated. Performance is for representative indices as of September 30, 2022. An investment cannot be made directly in an index.

SECTION 1

KEY CONVICTIONS & INVESTMENT THEMES

01

KEY CONVICTIONS & INVESTMENT THEMES

- 1 An unprecedented cycle.** It's one that requires humility and an ongoing evaluation of non-consensus views.
- 2 Vast and wide probabilities.** Pervasive uncertainty has altered the bell-shaped curve of potential macro outcomes. While we see the probabilities for a soft landing, stagflation, and recession as roughly equivalent, the investment implications of each are vastly different.
- 3 A series of secular shifts.** From QE to QT. The monetary policy experimentation with zero and negative interest rates has run its course. The gradual sunset for autocracies extends geopolitical risk, while underscoring democratic desires and the U.S. dollar's influence on global policies. The efficiency and economics of global supply chains is set to be exchanged for the stability of more localized sources. Labor's return marks a shift from shareholders to workers, likely leading to narrower margins, reduced profits, and lower equity returns.
- 4 The rise of fixed income.** While it's still too early to fully embrace risk, fixed income will offer ample value when it's time. The renaissance of higher yields restores the balance to the asset allocation galaxy and will be warmly welcomed by investors and savers.



SECTION 2

BOND MARKET OUTLOOK

By Robert Tipp, CFA, Chief Investment Strategist & Head of Global Bonds

02

BRIDGE OVER FIRE

There was no shortage of fear in the global bond markets in the third quarter. Central banks aggressively pushed short rates higher in response to the worst inflation of the last half century, and the consequent bear flattening in yield curves added [to the year's steep losses](#). The bond price declines continued to fuel retail fund outflows, and given the poor liquidity conditions, led to a defensive market environment with huge intra- and inter-day swings. Investors may watch the day-to-day moves—which may be driven by any number of risks—with rapt attention. Yet, a closer look at four market issues provides context around market fragility (Issue 1 looks at the mini-UK crisis), factors contributing to inflation, currency volatility, and the evolving reset in fixed income.

ISSUE ONE

A brief bout of market anarchy in the UK

An unwelcome UK fiscal stimulus package announced by the newly installed Truss government was enough to trigger a mini-panic in the pound and the sterling bond market (gilts) as the third quarter concluded. The scale of the selloff and the ramifications for UK pensions prompted the Bank of England to intervene even as it attempts to tighten policy and temper inflation.

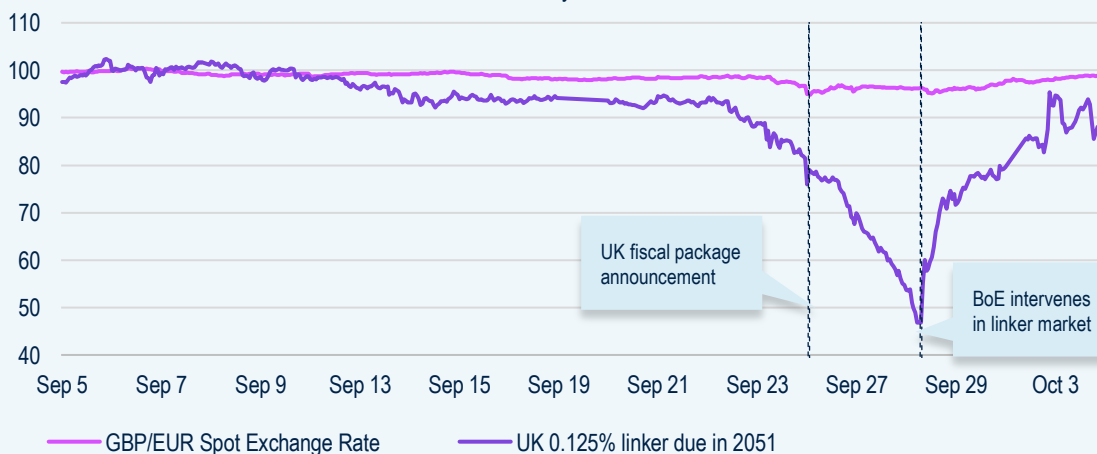
The announcement of the fiscal stimulus program came at a time when the pound and gilt prices on UK government bonds were already declining. The slide turned into a plunge, particularly in the market for UK-inflation linked bonds (linkers).

Given the long duration requirements imposed on UK pension funds, many use leverage to increase duration in addition to hedged non-UK assets to diversify and add value to their portfolios. As markets slid, long pound hedges on foreign bond investments and long interest-rate derivative positions triggered losses, margin calls, and forced sales of government bonds, thus propagating a vicious, self-reinforcing cycle.

Within hours of the epic plunge, the BoE entered the market, committing to carry out purchases as needed for the next 13 business days in order to stabilize the market, which quickly reversed the day's damages (Figure 1).

Figure 1

Although sterling stabilized vs. the euro shortly after the fiscal stimulus announcement, the price of gilt linkers remained trapped in a self-reinforcing cycle where lower prices prompted margin calls and more selling until the BoE's intervention on the 28th short circuited the vicious cycle.



Source: PGIM Fixed Income and Bloomberg.

Looking ahead, we see an ongoing limbo amidst conflicting positives and negatives—with the negatives still arguably in the lead. Continuing high inflation readings and strong job growth are likely to keep central banks aggressively raising rates and fueling hard landing fears. Further ahead, however, the inflation picture may be set to improve as both real estate and energy prices may have passed their peak levels.

More generally, the COVID-era supply / demand imbalances also appear to be correcting, suggesting lower core goods inflation (Issue 2). If one considers the lagged impact of prior rate hikes and those hikes that seem destined to come in the months ahead, there is reason for optimism that the peaks in growth, inflation, and, therefore, long-term interest rates should be at hand.

But qualifications are warranted. First, should growth and inflation continue to surprise on the upside, rates could still have another percentage point of head room—although our base case is for a top in long rates closer to current levels. Second, given the low levels of unemployment globally and the likelihood that a return to target inflation will take some time, the newly achieved, higher level of rates may persist for several quarters—there may be no quick U-turn this time.

ISSUE ONE

A brief bout of market anarchy in the UK (continued)

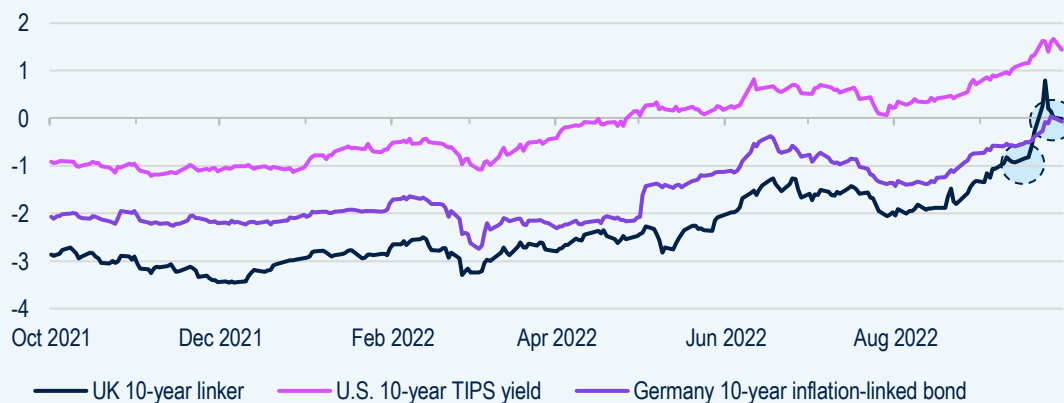
While some questioned the notion that the BoE may be easing financial conditions through bond purchases in the midst of its overall tightening process, the fact is that a free falling “risk-free asset” in a self-perpetuating loop was a cycle that clearly warranted interruption.

In the wake of the interventions, which only amounted to £22 million to start the second week of purchases, bond yields settled at seemingly rational levels that were roughly 100 bps cheaper than their pre-announcement levels. Given the fact that the fiscal stimulus will likely boost

inflation as well as the course of the policy base rate, the recent level seems quite reasonable (Figure 2).

Figure 2

After shooting up roughly 250 bps on an intraday basis, yields on UK linkers ended roughly 100 bps higher. Meanwhile, real yields in the U.S. and Germany climbed 50 bps. Thus, assuming markets are settled on the impact of the fiscal stimulus, linkers appear to have risen 50 bps on a relative basis—a reasonable estimate of the impact of the stimulus on the future path of rates. (%)



Source: PGIM Fixed Income and Bloomberg.

While the balance of factors and their trajectories suggest that the hurricane battering the bond market should weaken, unfortunately it is too soon to be sure that we are not just in the eye of the storm with further rate increases followed by a recession yet to come (see economics section). The wide range of potential outcomes has commensurately kept markets skittish as exemplified by the high levels of implied interest-rate volatility and the ongoing rally in the currency markets' favorite safe haven, the U.S. dollar, which is a trend that looks set to continue (Issue 3).

ISSUE TWO

Supply chain gain

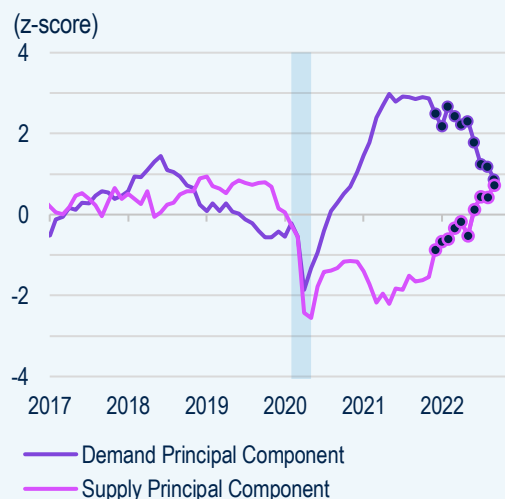
As dastardly high as the current rate of inflation may be, could it be near a peak? The answer to that question depends on the extent that it is driven by supply or demand and whether the supply/ demand imbalance is improving. For that perspective, we turn to our proprietary principal component-based analysis, which has provided a leading indication on future movements in core goods prices. Similar to prior months, September 2022 continued to show a moderation in demand along with a steady improvement in supply. Together, these components point towards a substantial easing of

core goods inflationary pressures in the months ahead—with our inflation pressure indicator now comfortably within its pre-pandemic range (Figure 3).

Of course, these improvements could about face and get worse, and they also say nothing of other non-core components like food, energy, and housing. Nonetheless, the core goods component covers a significant chunk of the key inflation measures, so relief would clearly help. And, for now, that balance is improving, suggesting at least this significant inflation driver may be past its peak.

Figure 3

3A: Principal components of manufacturing stress

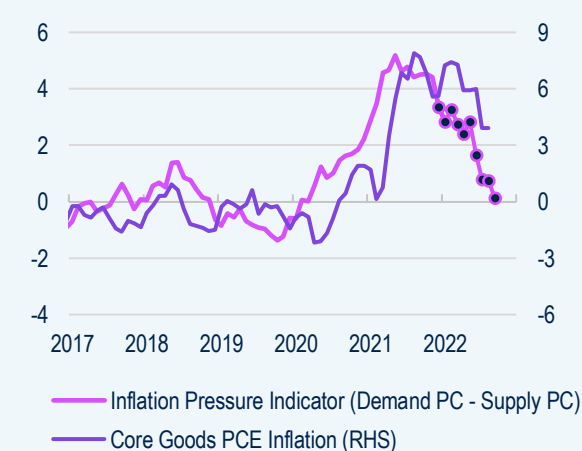


Note: Shaded indicates recessions.

Source: PGIM Fixed Income. Latest data as of September (preliminary).

3B: Inflation-pressure indicator and inflation

(LHS: difference in z-score; RHS: 6-month, % SAAR)



As nearly exigent as the day-to-day situation may appear, the issues within our outlook culminate in a broader perspective that may not be so grim. If one looks beyond economic landings — hard or soft — and the transition to the end game of the war in Ukraine — whatever that may be — what do we know about the potential economic backdrop and market configuration that lies beyond?

Economic conditions seem destined to return to a configuration more similar to the pre-COVID conditions than not: secular factors, such as an aging demographic and high debt burdens, are likely to drive a return to moderate growth and inflation, which may therefore lead to a lower interest-rate environment—albeit with some variation in the Eurozone market (Issue 4). When looking back from this future vantage point of, say, five years down the road, it will likely be clear that our current times have witnessed the highest levels of growth, inflation, and interest rates for generations to come. So, wherever rates peak — and we think it's highly likely that most of the increase in rates is behind us — it will be a level of global interest rates that will likely prove to be the high-water marks for years, decades, or maybe even generations to come. We may be seeing a mini-1980s reset in the level of rates.

ISSUE THREE

Risk aversion fuels the dollar rally and rate volatility

The broad range of outcomes has commensurately kept market expectations for wide swings—implied interest-rate volatility in particular—at unusually high levels alongside strength in the U.S. dollar (Figure 4).

Although dollar strength may continue, other currencies, such as the pound, may not be as weak as one might assume (Figure 5).

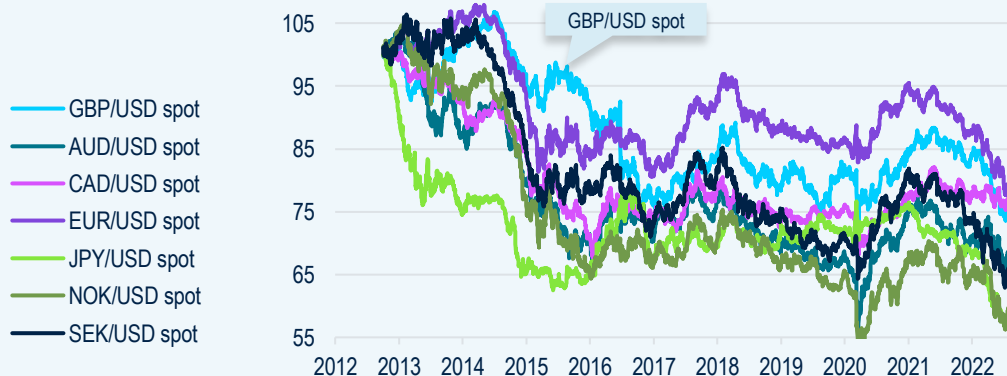
Figure 4

Uncertainty is keeping implied rate volatility at historically high levels, and the safe-haven U.S. dollar on a steady upward climb.



Figure 5

Although the decline in sterling towards parity garnered a lot of attention recently—and especially so following the accelerated slide during the recent mini-market crisis—the fact of the matter is that the pound, whether looking back 1, 5, or even 10 years, has hardly been an underperformer relative to other key world currencies, such as the euro or yen, or other significant DM currencies, such as those in Australia, Canada, Norway, or Sweden.



Source: PGIM Fixed Income and Bloomberg.

As a further positive for fixed income returns ahead, the current configuration—where spreads have widened and yields on government bonds have risen—is hardly the norm. In most cycles, when spreads are wide, there has been an economic slowdown and / or financial crisis, which has driven government bond yields lower. Conversely, when the economy has performed well and government yields are at their cycle peaks, spreads are often tight. This opens the possibility that once the fear of the central bank rate hikes passes, the bond market will present a rare opportunity of both peaking yields and spreads.

Conclusion: Risks remain high. While most of this cycle's rise in yields is almost certainly behind us, the hard landing question—and the outlook on spread products—remains clouded with risks to the downside. This bears close watching, however, as there are at least some signs of a moderation in the economic data.

ISSUE FOUR

Europe: Out of the void

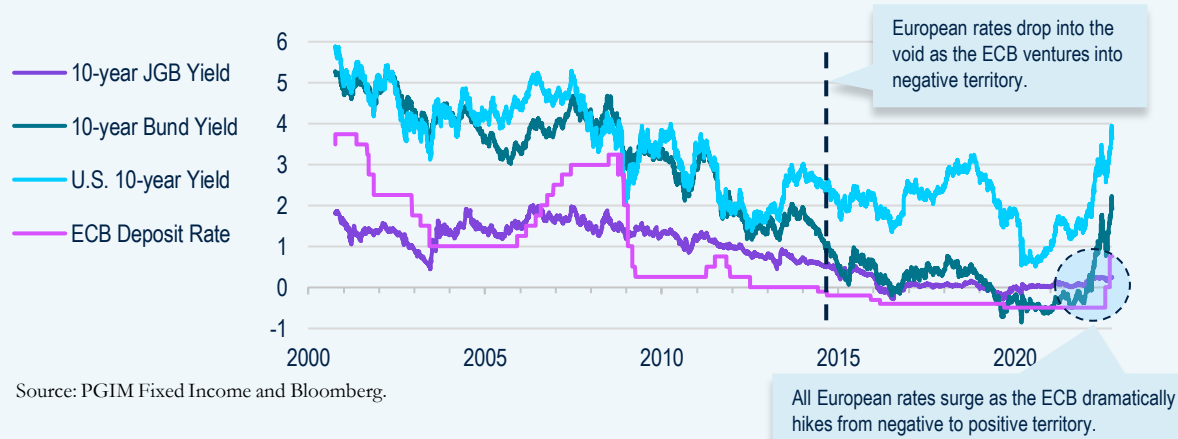
After cohabitating with U.S. rates for decades, the combination of a bad asset overhang, procyclical fiscal tightening, and aggressive ECB policies—including a negative deposit rate and an open-ended QE program—pounded bund yields down to sub-Japan levels. With Eurozone inflation seemingly stuck around 1%, it looked as if the ECB's target inflation rate of 2% might never be reached and that, as a result, QE would never end and interest rates would never clear zero.

Now, following a robust Eurozone-wide stimulus-aided recovery from the COVID lows, things have pivoted 180 degrees. Eurozone unemployment has reached record lows and, with inflation standing at 10%, one could be forgiven for wondering when and if Eurozone inflation will ever fall to 2%.

In response, the ECB pushed short rates out of negative territory with a banging 125 bps of total hikes in the third quarter, lifting European yield curves out of the void (Figure 6). Will Eurozone rates once again cohabitate with U.S. rates? Given the fundamental differences in the economies, it seems unlikely. Similarly, a return to the realm of Japan, let alone sub-zero territory, seems even more unlikely, suggesting that Bund rates will remain in a new-found middle zone between Japan and the U.S. for the foreseeable future.

Figure 6

As the ECB catapulted short rates above zero, bund yields also cleared zero, cleared JGBs, and now reside in an in-between zone, well above JGBs, but lower than U.S. Treasuries—a configuration that looks quite durable, perhaps for years to come. (%)





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WEBCAST

CATCH-23: A CONVERSATION ON WHAT'S NEXT WITH DALEEP SINGH **AIRING OCT. 12**

10AM EDT | 3PM BST | 4PM CEST | 10PM HKT | 11PM JST

A discussion on the current state of the economy and what's in focus heading into 2023. Click to register for the live webcast or for a link to the replay.



BLOG POST

WINTER IS COMING: A Q&A ON EUROPE'S ENERGY CRISIS

With Europe's energy crisis to intensify this winter, we outline the key points regarding the economic and market effects from Europe's precarious situation.



BLOG POST

SHORT-TERM PAIN, LONG-TERM GAIN

The FOMC hiked the Fed funds rate 75 bps at its September meeting and significantly ratcheted up its expected path for the Funds rate over the next few years.



SECTION 3

GLOBAL MACROECONOMIC OUTLOOK

By Daleep Singh, Chief Global Economist & Head of Global Macroeconomic Research

03

TURNING DARKER IN Q4 BEFORE THE DAWN

Our lived experience of the past few years has reminded us that predicting is hard, and the failure of forecasters' imagination is laid bare at each unexpected turn of events. We think about the complex interplay of macroeconomics, geopolitics, and policy with a humble mindset, and have come away with a growing conviction that the global economy will fare much worse in the fourth quarter and into next year – culminating in a global recessionary environment – before things can possibly get better.

In this piece, we first summarize our outlook for the U.S. economy before discussing the various domestic and international forces at play. Starting with inflation, we expect the persistence and potency of core services prices – especially in shelter categories – will compel the Federal Reserve to raise its target rate to 4.25% by year-end, with risks skewed to a slightly higher level. Our reasoning is two-fold: First, Chair Powell does not wish to be known as the Fed leader who squandered decades of hard-earned inflation-fighting credibility; second, forward-looking inflation models have proven woefully inadequate at predicting the upside supply-side shocks that have plagued the

global economy since the pandemic. Putting these factors together, the Fed's risk-minimizing strategy is to front-load rate hikes until the spot inflation data show clear evidence of relief, with the annualized core PCE falling toward 3.5%, for example.

Our sense is it will likely take another quarter to see a material downtrend in the key categories of services inflation (Figure 1). Such relief would come from a combination of a slowdown of labor demand, in line with other slowing measures of aggregate demand, and incremental gains in labor supply, as workers with lower balances of savings are drawn back into the workforce. Together, these drivers will help to restore balance in the labor market and allow for nominal wage growth to slow from the current 5-5.5% range toward 4-4.5% by year-end.

Our fourth-quarter internal macro survey sought opinions about the direction of U.S. inflation. The answers from the 225 global respondents are as follows:

When will U.S. headline CPI fall decisively?¹

(% of respondents)

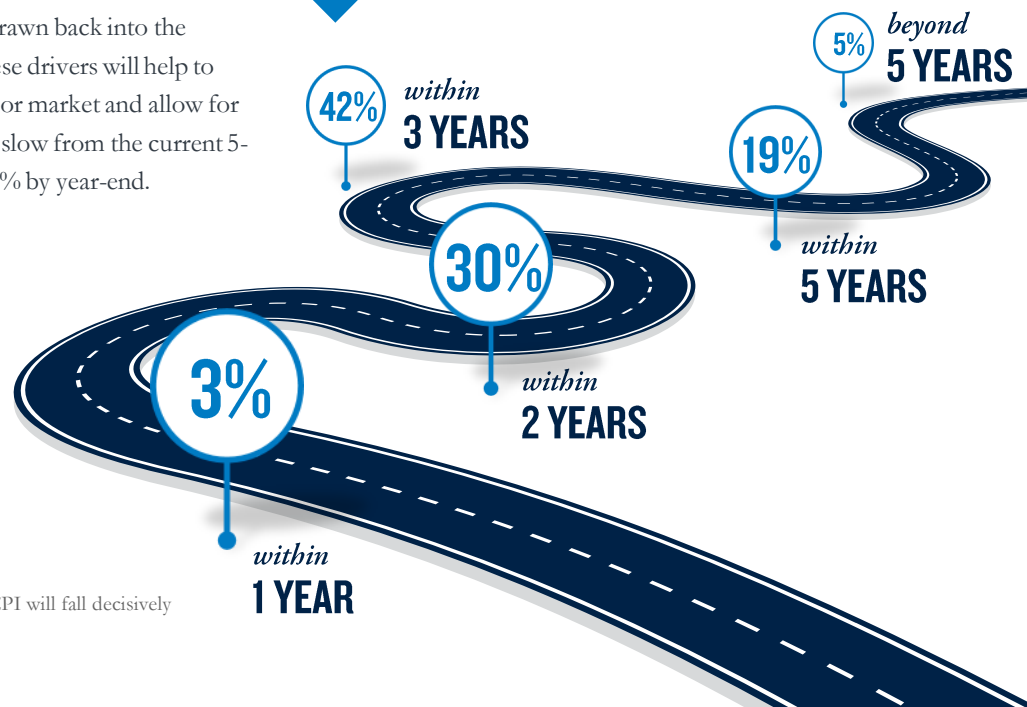
40%
H1 2023

49%
H2 2023

10%
2024 OR LATER

When will U.S. inflation get back to target?²

(% of respondents)



¹ We define “decisively” as below 5.5%. Less than 1% of respondents believe that U.S. headline CPI will fall decisively in Q4 2022. ² Target = 2% PCE

As Fed policy is tightened to increasingly restrictive levels, the cyclical slowing in the U.S. economy will become more evident – even outside of interest-rate-sensitive sectors such as housing. **The lynchpin for this view is the U.S. consumer. Real disposable income began to flatline early last year, and it's now falling in sequential terms to more than 5% below the pre-pandemic trend. As real income falls, consumers have increasingly relied upon savings, which on a flow basis has also fallen well below the pre-pandemic level. We expect the combination of a slowing labor market, falling real income, thinner savings buffers, and worsening sentiment to exert downward pressure on consumption as we approach the next year: In fact, we're already starting to see early signs of stress among lower-income consumers in their ability to meet expenses and rising credit card balances.**

Unlike recent episodes of cyclical slowing, however, we do not expect another round of fiscal expansion to cushion the downturn. The most likely outcome of the November midterm elections is for a divided government, in which Republicans gain control of one or both chambers of Congress and can, therefore, block any new efforts by the White House to stimulate the economy through government spending or tax cuts. The political context is analogous to the fiscal gridlock and austerity politics that characterized the 2010-2016 period.

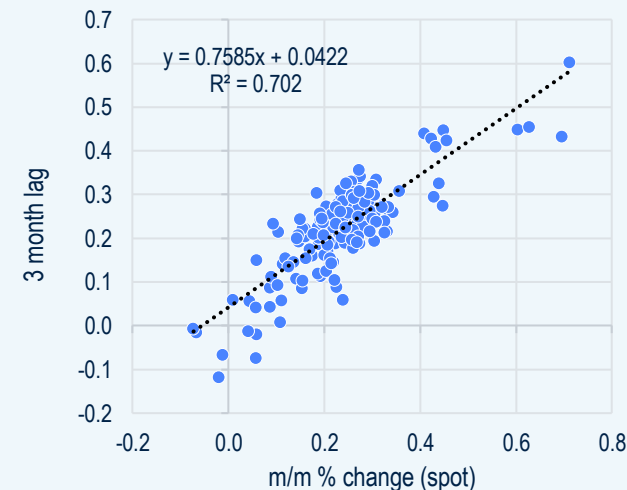
A final factor to consider in the U.S. outlook is the mounting external headwinds that will place a further drag on growth. In Europe (discussed more below), we anticipate euro area GDP to slow markedly, adding to the 15% cumulative shortfall from the region's trend GDP. China, for its part, has made a clear commitment to policy restraint, making any additional impulse to the global economy marginal (also discussed below).

Beyond Europe and China, the strained global backdrop is reflected in the rising cost to obtain various forms of dollar liquidity, from the soaring dollar exchange rate (Figure 2) to the drastically higher short-term borrowing costs for emerging-market nations and corporates. The Fed will likely look past the global spillovers of a strong dollar and take comfort in the dollar's ability to cool inflation at home via lower import prices and narrower corporate margins. Yet, officials will still be highly alert to the need to step in, or even change policy course, should the liquidity crisis of any major foreign borrower cause investors to flee from the broader market, including from fiscally-sound debtors that are long-term solvent, which is a dynamic reminiscent of the 1994 Mexico crisis.

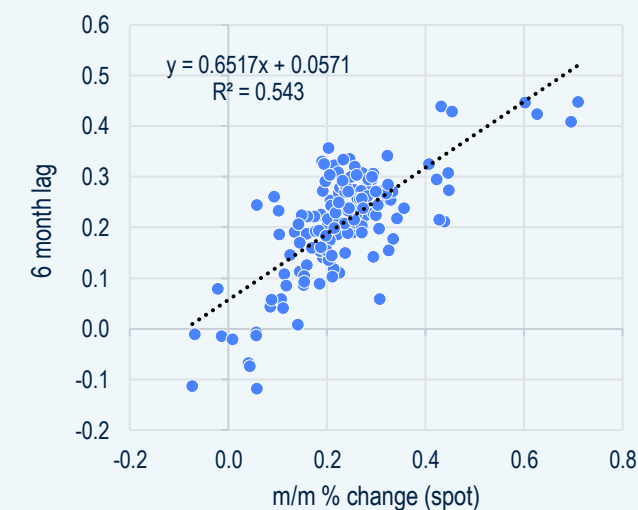
Figure 1

The cost of shelter (owners' equivalent rents) can be inertial and highly correlated with historical readings

1A. OER spot vs. 3-month lag



1B. OER spot vs. 6-month lag



Source: PGIM Fixed Income and Haver.

Domestically, although the U.S. rate hike cycle and quantitative tightening are in full swing, various forms of short-term borrowing for banks and businesses remain cheap and reserves in the banking system still look ample. But it isn't difficult to see a dash-for-cash scenario materializing in the U.S. when an unexpected shock prompts banks to hoard cash and, in turn, causes the circulation of short-term liquidity in the real economy to grind to a halt. International and domestic liquidity crises are not difficult to imagine at all, and these events will force the Fed to respond and even loosen policy if officials are forced to factor financial stability into their policymaking. Our forecast for the fed funds rate to peak only modestly above 4% accounts for the fragile state that the global financial system is already in and the plethora of

potential global shocks that may force central banks to change course in the future.

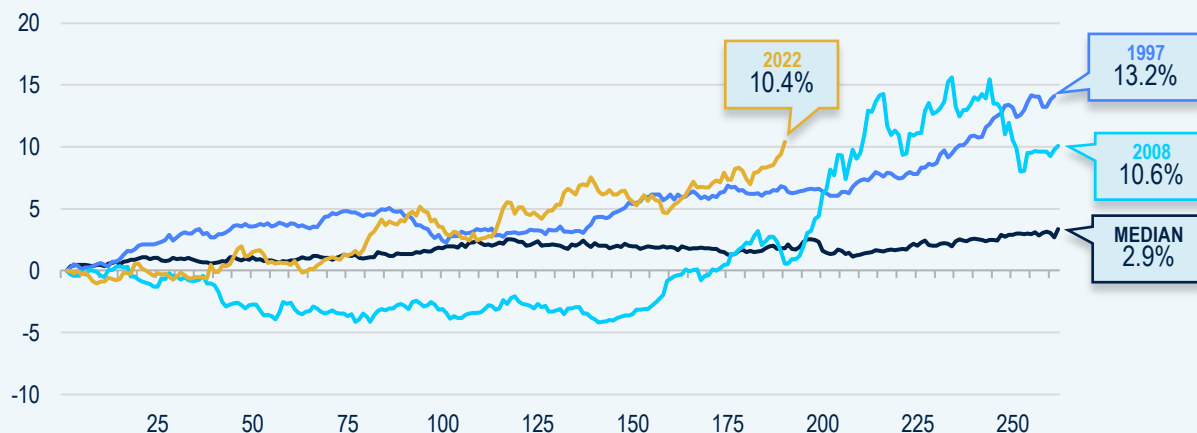
Looking ahead to early 2023, we expect the Fed will pause for much of the first half of the year, before making precautionary cuts at the end of Q2 2023 back toward the Fed's perceived level of the neutral rate. If this scenario plays out, we expect the Fed will soon begin placing more emphasis on downside risks to economic growth and expressing more foresight on the risks of overtightening, pointing to the deepening slowdown abroad, as well as potential financial stability concerns.

Our gloomy outlook for Europe is roughly in line with consensus. We see euro area GDP contract by 1.4% in 2023, adding to the 15% cumulative shortfall from the region's GDP

trends (Figure 3). A price cap on Russian oil will likely be unveiled by G7 nations in conjunction with other notable economies such as South Korea, Australia, and New Zealand. A global retreat in aggregate demand offers no reprieve to overall growth, as Europe is much more prone to terms-of-trade shocks than, say, the U.S., and its proximity to Russia's war on Ukraine only adds to the uncertainties. The energy shortage poses a significant shock to inflation, which we expect to be at 8.4% this year and 2.8% in 2023. The ECB will likely continue raising interest rates to about 1.5% by year-end before they peak slightly above 2%, which is the high end of our estimate of the economy's neutral rate. Meanwhile, conditions

Figure 2

The appreciation of the dollar has been unprecedented (nominal broad dollar index; YTD performance by # of days)

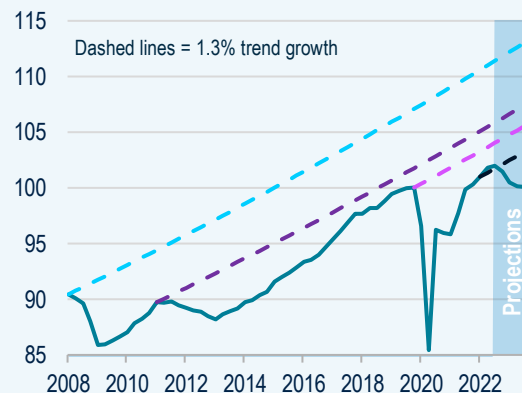


continue to deteriorate as record-low consumer confidence and a pessimistic outlook for businesses further amplify the negative economic feedback loop through reduced consumption and investment.

In **China**, we see nothing but structural headwinds: Deleveraging the property sector risks a further plunge in prices at a time when investor confidence has already taken an unprecedented hit; demographics have further worsened since COVID despite the government prodding citizens into having more children (Figure 4A); the effects of deglobalization likely mean China's share in global exports is plateauing, as the world shifts from global supply chains that prioritize efficiencies to those that are more geared toward geopolitical alliances and can withstand various types of externals shocks. Setting aside its waning ability to generate growth through capital accumulation or increase in the labor force, the most worrying aspect of China's long-term growth case is the sharply curtailed total factor productivity. If history is any guide, China's TFP (Figure 4B) has slowed to a pace that seems insufficient to escape the middle-income trap. Over the near-term, Chinese policymakers have clearly signaled they intend to pursue a policy of restraint — that is, enough stimulus to put a floor under China's growth, but not enough to provide a meaningfully positive impulse to global growth.

Figure 3
Euro area GDP trends and GDP shortfalls

3A. Euro area GDP (index, 2019 Q4=100)



Source: Macrobond.

3B. Percentage-point contribution to GDP shortfall by 2023 (pp)

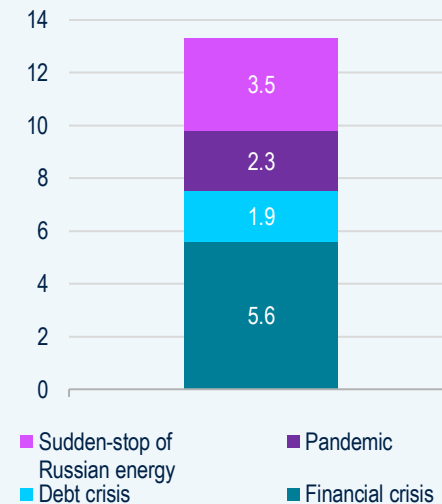
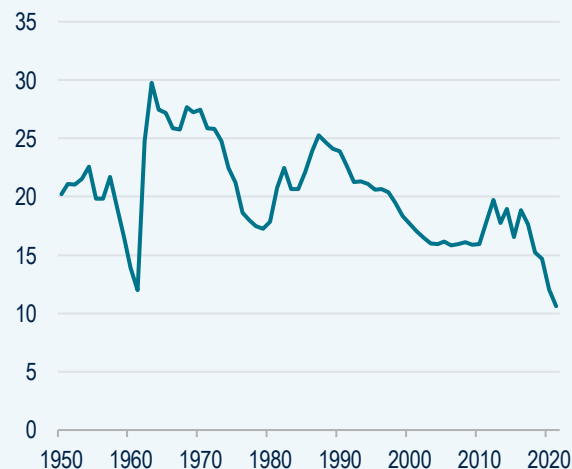


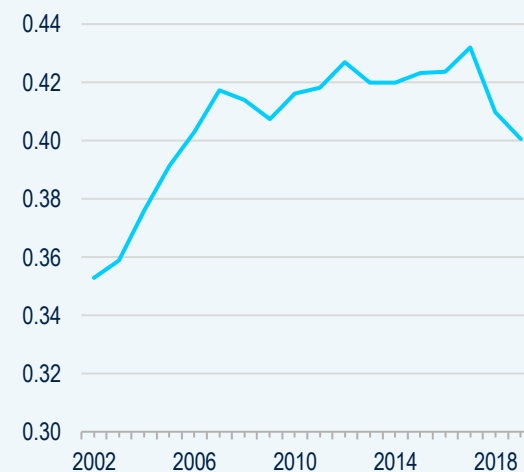
Figure 4

4A. China's newborns are declining in numbers (# of births, mln)



Source: Penn World Tables.

4B. China's total factor productivity plateaus



Meanwhile, the core problem with the UK government's recent proposal to save the economy is the math simply doesn't add up. Even after the government decided to reverse course on the most controversial tax cut, the announcement still puts the debt-to-GDP ratio on an upward trajectory due to policies that disproportionately benefit the highest earners. The new fiscal plan has also sent the pound on a downward spiral, unfortunate timing for an economy that contains over 30% of imported goods in its consumption basket. We have revised our 2023 GDP forecast down to a 1.4% contraction, from -0.1% previously.

The Bank of England was forced to step in and buy long-dated gilts to avoid triggering a financial stability event. The move was enough to calm the market but it put the BoE, and its plan to shrink the balance sheet at the end of this month, in an awkward position. Over the long term, the tricky optics of the latest intervention run the risk of costing the central bank credibility and independence. We think interest rates will need to rise significantly more to bring inflation back to target, put a floor under the currency, and restore the BoE's credibility.

More than ever, economic forecasts should invite a healthy dose of debate, as the history of this brief decade has been punctuated by our collective failure of imagination. The outlook we

sketched out is one of relative order, from inflation finally going the Fed's way in several months to the economy slipping into a manageable recession next year. But we are also highly cognizant of the political and economic problems that will likely transpire from many sides, and we continue to commit ourselves to considering all the various possible scenarios as we try to navigate these difficult economic questions.



SECTION 4

GLOBAL SECTOR OUTLOOKS

04

DEVELOPED MARKET RATES

Outlook: Cautiously optimistic. After the bond market rout, we are paying close attention to bond market functioning and increasing irregularities in the Treasury repo market.

■ The rout in global sovereign rates escalates, and the drastic selloff in certain asset classes, such as UK linkers, is beginning to cause global correlations to break down. The 250 bp increase in the UK front end last quarter was staggering, dwarfing the 105 bp and 90 bp moves in U.S. Treasuries and German bunds, respectively.

■ In the U.S., the market priced in another 100 bp increase for the fed funds rate last quarter as inflation shows no signs of abating and Fed officials ramp up their commitments to bring inflation down. The tone for Fed expectations next year has drastically changed, as the market traded substantial rate cuts in 2023 for further increases to a terminal rate of 4.4% by May. The

BOE is priced in to hike as high as 5.9% in a similar time frame, while the peak of the ECB's hiking cycle is expected to be reached in September at around 3.2%.

■ Liquidity in the bond market continues to worsen and the cost of trading has become surprisingly high, even though market functioning has been gradually deteriorating in recent past. A liquidity gauge that measures deviations of the U.S. Treasury yield curve from model fair value has deteriorated to a level last seen in March 2020, when the market breakdown was so acute that the Fed had to step in to buy Treasuries. It's likely that liquidity will continue to deteriorate as quantitative tightening continues to exert pressure on the private sector to absorb Treasuries.

■ The illiquidity also embroils relative value relationships, causing on-the-runs to richen versus more aged issues and Treasury futures to

trade better than cash Treasuries. As reserve managers, who hold significant dollar reserves, sell short-maturity Treasuries to defend their currencies, the relationships between the front-end Treasury curve and money market rates, such as SOFR and fed funds, could be disrupted. We continue to favor going long on the Treasury 20-year against WN and US futures contracts, while shorting deep off-the-run 10-year notes against seven-year securities.

■ Meanwhile, dynamics in the Treasury repo market are also out of the ordinary. Investors who short Treasuries are turning to the repo market to borrow specific securities, causing repos for some on-the-run issues to trade special or even negative. The Fed's balance sheet runoff will likely exacerbate the specialness of some securities as the supply of on-the-runs at the Fed's securities lending operations dries up.

Figure
Treasury market liquidity index (average intraday yield error)



AGENCY MBS

Outlook: For the first time in 2022, we are recommending an overweight to agency MBS vs. interest rates. Higher rates and implied volatility pushed sustained sector valuations to the most attractive levels since late 2008. Valuations appear cheap vs. high-quality credit, such as CMBS and corporates.

- The third-quarter's surge in rates, implied volatility, and forced selling pushed MBS valuations to their most attractive levels vs. interest rates in more than a decade (there was a momentary blip at these levels in Q1 2020). At this point, financing conditions and redemption needs generally remain orderly, which also raises the question of whether MBS might be a more efficient way to gain exposure to duration. MBS durations have extended across the coupon stack into the rate selloff, resulting in positive convexity for the Bloomberg MBS index on average.

- Furthermore, buying MBS implies that one is selling implied volatility at the highest levels since 2013. Although we prefer older vintage MBS, perhaps the most efficient way to gain sector exposure is to take delivery of recently originated bonds with higher loan counts and originator diversification.

- Despite prior concerns, the FOMC has yet to consider MBS sales from the Fed's balance sheet.

Given market expectations that the fed funds rate may hit a terminal rate by mid-year 2023, potential MBS sales may not even happen until the second half of 2023. Hence, as the full balance sheet runoff continues, it is unclear if the Fed will ever start MBS sales.

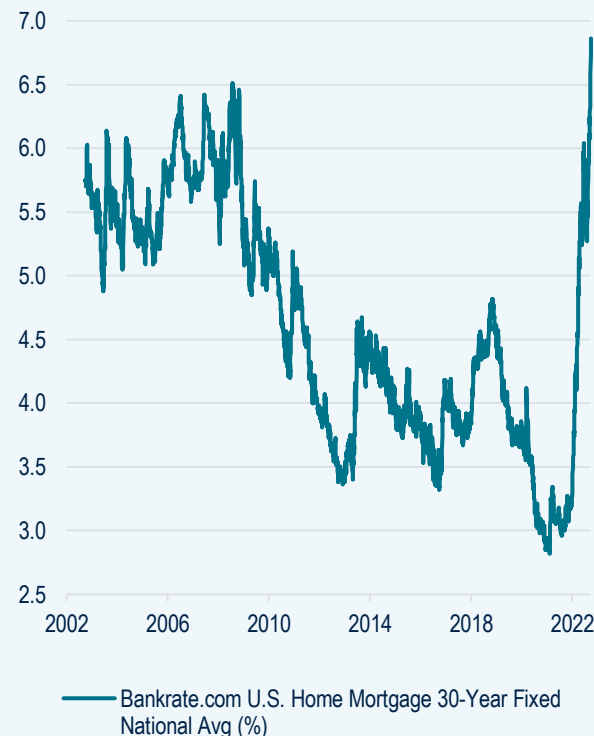
- From a supply perspective, new home mortgage originations are set to decline further given the 20-year high in mortgage rates, the lack of affordable housing, and the seasonal slowdown in housing activity. Refinancing activity is virtually non-existent as less than 0.5% of all loans are eligible to refinance at today's rates.

- Overall, the relatively positive fundamental view of the sector outweighs its lingering headwinds, the foremost of which consist of further increases in interest rates and implied volatility. Further, without Fed purchases, the value of the TBA market will likely deteriorate amid adverse loan selection.

- Other scenarios could also pressure the sector, including worsening inflation that prompts the Fed to intensify its tightening cycle and launch balance sheet sales, a general lack of bank demand, worsening broker/dealer activity, and sales from overseas investors in an attempt to defend their currencies against dollar strength.

Figure

The Surge in 30-year Fixed Mortgage Rates



Source: PGIM Fixed Income and Bloomberg.

ENVIRONMENTAL, SOCIAL, AND GOVERNANCE

■ Our view of the ESG issues pertains to many of the themes introduced thus far, which also carry through to the subsequent credit sectors. The following considerations influence our proprietary ESG Impact Ratings and determine an issuer's suitability for PGIM Fixed Income's ESG-oriented strategies.

■ Although Russia's invasion of Ukraine is the primary cause of Europe's energy crisis, the summer's drought worsened the situation as France switched off nuclear plants due to a lack of cooling water, low water levels on the Rhine and Danube affected fuel transportation, and the depletion of hydro reservoirs curtailed electricity exports.

■ At this point, we are already seeing an increase in European coal use, so many utilities will probably see their emissions rise in 2022 vs. 2021, and these emissions could stay elevated for some time depending on how the situation plays out. Furthermore, Europe's buying spree of liquified natural gas has pushed many emerging market countries back towards coal and crude oil. For EMs on particularly tight budgets, the increase in fuel prices has also created incentives to purchase Russian fuel at a discount.

■ In addition to the environmental aspect, the crisis underscores the energy security offered by renewables as emphasized by policy initiatives in Europe—REPower EU—and the United States—the U.S. Inflation Reduction Act (IRA).

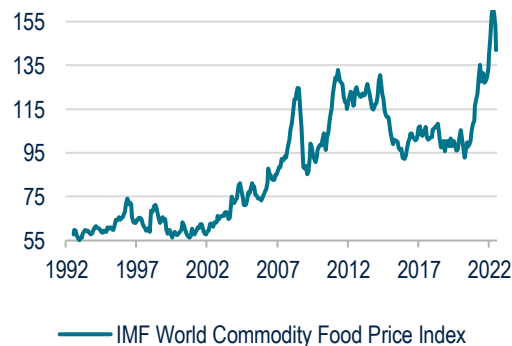
■ While the four pillars of the EU's plan are ambitious, the continent's energy situation, its consequent economic downturn, and its commitment to renewables bolsters the plan's long-term credibility. That said, several issues with supply chain and infrastructure capacity will need to be overcome. The U.S. IRA takes an "all of the above" approach by targeting renewable deployment as well as significant incentives for nuclear, carbon capture, and hydrogen. In a typical quid pro quo, the Act also includes provisions that make federal leases for renewables contingent on the government offering new leases for fossil fuel projects.

■ The combination of energy and food price inflation is creating significant hardship and financial stress in many EMs with a recent study indicating that the number of people suffering from acute hunger has doubled to about 345 million since COVID emerged.

■ Coming only a little more than a decade after the last food crisis, a key consideration is that the current food system is no longer fit for purpose—it can deliver improvements if a host of variables break favourably, but it is far from resilient.

■ These will be some of the issues raised in November's COP27 in Egypt. The conference is expected to focus on "Loss & Damage," which is a demand by lower-emitting developing countries for compensation from higher-emitting advanced economies for climate change damage. Most advanced economies—except for Denmark—seem reluctant to address this point, which could block progress on other critical initiatives, such as climate negotiations.

Surging food prices worsen the inflation burden



SECURITIZED CREDIT

Outlook: While credit performance remains robust, elevated interest rates continue to place downward pressure on real estate valuations meanwhile inflation crimps lower tier consumer credits. Further financial tightening will not leave securitized product immune to volatility. Challenges facing UK LDI pension schemes provide opportunities to source bonds at lower levels. We remain constructive on select higher-quality securities as conditions at the top of capital structures should remain resilient.

■ Commercial real estate faces several challenges leading us to have a bias at the top of the **CMBS** capital stack along with select single-asset/single borrower bonds across the capital stack. By sector, we're the most cautious on offices as companies adjust their physical footprint, and non-prime buildings will likely underperform. A weakening economy could affect class B/C malls in retail as well as leisure and business travel in hospitality despite a recovery in revenue per available room to pre-Covid levels. Slowing rent growth could affect multi-family valuations despite recent strong growth. Industrial demand remains solid, but new supply may slow net operating income growth and increase vacancies at the margin. Rising rates could pressure capitalization rates as well as commercial real estate valuations. We're selectively adding the highest-quality discount conduit issues with

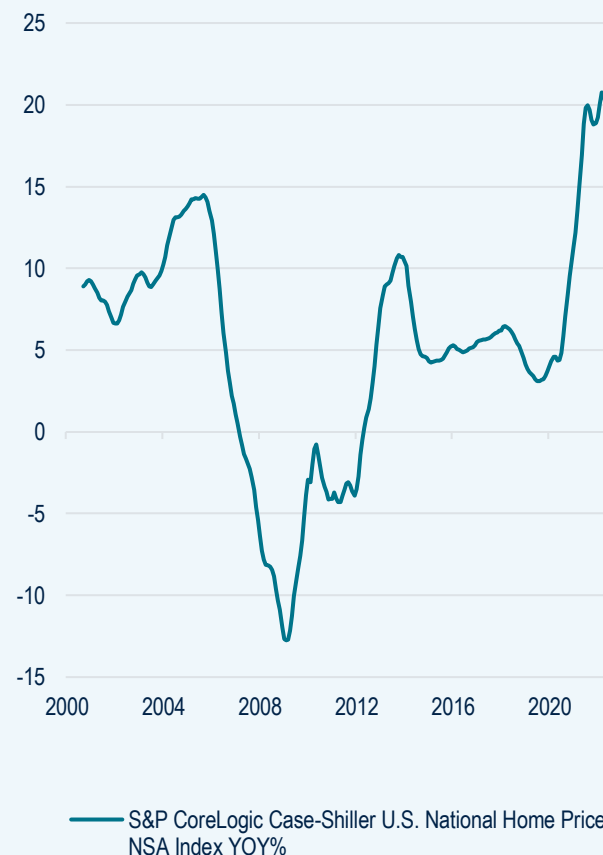
limited extension risk, and we remain selective on single-asset single-borrower issues with a focus on secondary opportunities with embedded price appreciation.

■ Rapidly rising mortgage rates have led to lower housing demand and a moderation in home price appreciation (HPA). Our base case is for U.S. housing to decline in the high single digits from now through year end 2023, which would bring housing back to year-end 2021 levels. Despite negative HPA, mortgage defaults and delinquencies are expected to remain low due to conservative underwriting and embedded homeowner equity. Market volatility and heavy supply earlier this year pushed **RMBS** bond spreads to cycle wides, creating long-term value. We are gradually legging into positions, particularly in seasoned collateral (pre-2022), which has the benefit of embedded HPA.

■ Secondary U.S. **CLO** spreads widened throughout Q3 as elevated supply and broad market volatility pressured valuations across the capital structure, and senior CLO tranches were used as a source of liquidity by many investors looking to raise cash. Despite secondary market widening, primary issuance in Q3 persisted and should continue as there are more than 200 open warehouses.

Figure

After prior gains, we anticipate housing prices in 2023 will revert back to 2021 levels.



Source: PGIM Fixed Income.

■ From a fundamental perspective, we continue to monitor the impact of higher interest rates and inflation on companies' balance sheets and whether it will lead to an uptick in negative credit migration. However, we believe senior CLOs continue to offer attractive relative value compared to many other fixed income alternatives on a spread and yield basis. We remain cautious on lower mezzanine tranches as we believe the market is still underpricing recoveries on bank loans as well as the associated cashflow volatility of structurally levered tranches.

■ European CLO spreads were wider across the capital structure in Q3. Notably secondary spreads on AA bonds were pressured into quarter end as UK LDI managers sold CLOs to raise cash for margin calls. Despite potential short-term volatility, we remain constructive on the long-term fundamentals of senior tranches and believe current valuations offer attractive risk-adjusted returns.

■ In **ABS**, a tight labor market continues to buoy consumers, though we expect lower-credit cohorts will be challenged by elevated inflation and real wage reduction. Credit performance has trended to pre-COVID levels as expected, and new issue deals continue to clear at wider spreads, despite diminished market depth. We remain cautious on consumer ABS, are highly selective around additions, and are opportunistic sellers across asset classes. In commercial ABS, we

anticipate stable performance—which could change in a downturn—given the assets' short durations and the importance of issuance to the underlying businesses. We are cautious on UK risk as higher mortgage rates and inflation have tempered the housing market, while real wage pressure is affecting affordability. Additionally, LDI pension-related secondary supply is expected to remain a negative technical, creating the potential for more attractive entry points.

INVESTMENT GRADE CORPORATES

Outlook: Broadening relative-value opportunities in Europe given its underperformance. While U.S. IG has remained resilient, spreads—particularly those on cyclicals and BBBs—may be vulnerable to moderate widening in an economic downturn.

■ Since the Jackson Hole conference, U.S. IG has outperformed equities, which contributes to our cautious approach to the sector. Although fundamentals appear sound—leverage and interest coverage levels are a bit better vs. 2019 while revenues and earnings are far better—ratings downgrades exceeded upgrades in July and August and we expect that trend could continue in the months ahead.

■ From a valuation perspective, when spreads reached 150-160 bps over the summer, buyers emerged. We are somewhat skeptical of a repeat in the next move wider given the prospects for deteriorating fundamentals and additional volatility. Our base case is for spreads to widen to the 170-180 bps area as the Fed continues raising rates, financial conditions tighten further, and earnings soften. Even with BBBs trading 75 bps wider than As, we believe that basis could widen further, particularly if economic conditions deteriorate.

■ As hedging costs have climbed—three-month JPY hedging cost have risen from 30

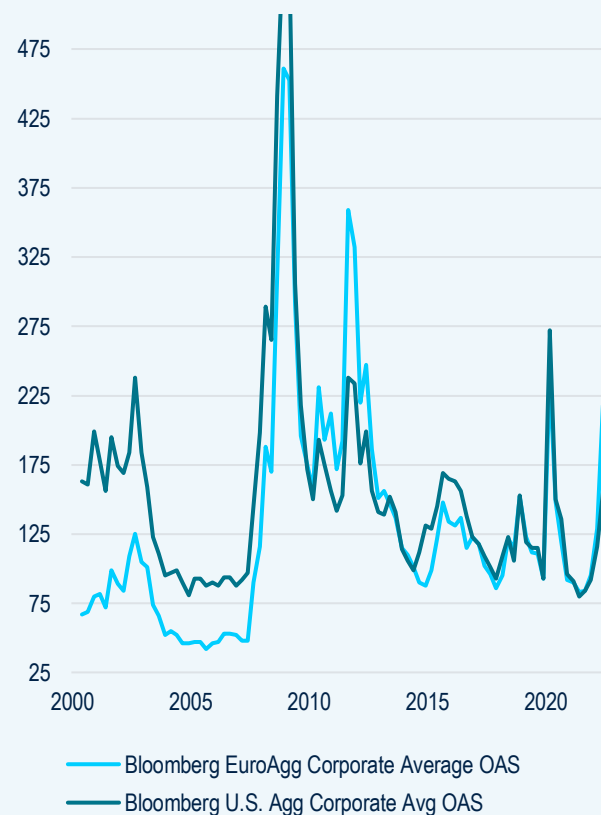
bps to about 380 bps and three-month EUR hedging costs have risen from 70 bps to about 260 bps over the last year—net overseas buying has decreased, but has continued and helped support technicals along with moderate dealer holdings and an easing in primary issuance.

■ In terms of positioning, we're considering reducing some cyclical and BBB exposure given the expected fundamental deterioration in a downturn. That said, the move higher in rates, along with the widening in spreads, has made the dollar price and convexity of certain bonds more attractive.

■ Although the banking sector appears undervalued with A-rated banks trading more like BBB-rated industrials, we are considering a modest reduction to the sector as it can be sensitive to technicals considering its heavy year-to-date issuance, which could continue, and its relative liquidity compared to other sectors. That said, the banking sector remains very well capitalized with strong fundamentals.

Figure

The expanded gap between Euro and U.S. IG spreads broadens the relative-value opportunities in Europe (bps)



Source: PGIM Fixed Income and Bloomberg.

GLOBAL SECTOR OUTLOOK

- Uncertainty continues to surround the European IG market, but at this point, we believe spreads reflect much of the perceived downside risk. From a historical perspective, spreads haven't spent a lot of time at these levels before mean reverting and tightening. The euro market's underperformance vs. the U.S. leaves EUR spreads generally trading at more attractive levels, and the relative-value opportunities are broadening with the ongoing volatility. As we comb through individual credits within the sector, the increased credit dispersion enhances the set of single-name alpha opportunities.

- In terms of positioning, spread duration in European portfolios remains slightly underweight, and we see room for financial spreads to compress towards corporates. We also see value in corporate hybrids and BBBs where spreads have moved materially wider. We continue to prefer non-CSPP eligible paper as it generally trades with more spread, but without additional credit risk.

- Global IG portfolios are also slightly underweight spread duration (but overweight risk in general), and the underperformance of euro-denominated paper vs. dollars opens up opportunities between the currencies.

GLOBAL LEVERAGED FINANCE

Outlook: Geopolitical, inflation, and recession risks present meaningful concerns. We are positioned for further spread widening, but see relative-value opportunities and value in idiosyncratic situations. Active management and accurate credit selection will be rewarded given the likelihood for continued volatility.

■ While strong credit fundamentals continue to sustain low **U.S. high yield** default rates, we have grown more cautious in light of the Fed's aggressive pace of tightening, elevated inflation, and increased recession risk. Corporate earnings are expected to continue declining from peak levels as margins are pressured by rising labor and commodity prices. While the near-term maturity wall appears manageable and the technical backdrop remains supportive due to a high supply deficit, we remain cautious over

both the near-term and the longer-term. Given the rising risk of either recession or stagflation, we increased our default rate expectations. Should the economy follow our base case stagflation scenario, we anticipate high yield defaults to rise to 6% over the next 12 months and to 10% over the next 24 months. Under our more benign shallow recession scenario, we would expect default rates to be marginally lower than we forecast in a stagflation scenario.

■ Although we remain defensive and are prepared for further spread widening, we don't expect defaults to be as severe as in previous downturns due to the favorable positions of most issuers with manageable debt serviceability, favorable maturity profiles, and strong cash flows. Moreover, the market is of a higher quality today than in prior cycles, as many of the

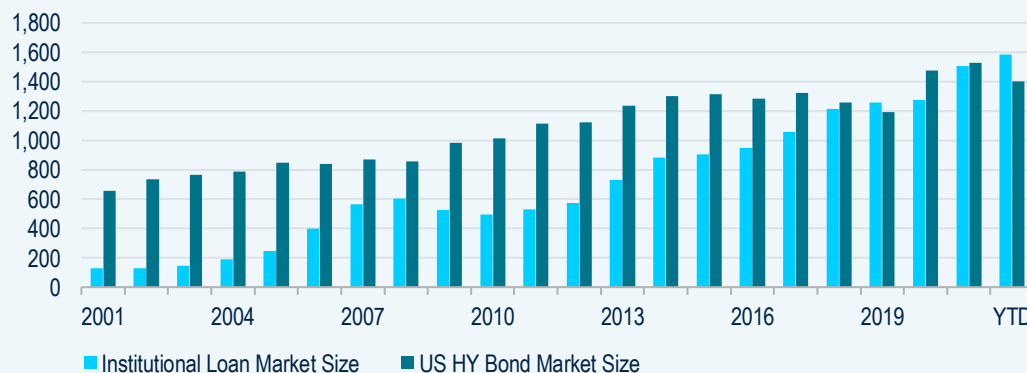
weaker credits were purged during the COVID shutdown and more middle market credits migrated to the loan market. That said, the pace of credit ratings upgrades to downgrades continues to slow and we expect ratings agencies to downgrade issuers more quickly than in prior cycles.

■ If inflation subsides sooner than expected and/or the Fed engineers a soft landing, there is meaningful upside in the market given wider-than-average spreads and significant price discounts. As such, we believe about 100 bps would place the market close to fair value in a balance of risk and reward.

■ In terms of positioning, we are reducing our allocation to lower-quality issuers and maintaining higher cash balances as part of a

Figure

U.S. high yield market has contracted while the loan market has grown in 2022 (par amount outstanding, \$B)



Source: PGIM Fixed Income and J.P. Morgan.

risk-reduction regime. We are also maintaining overweights to independent energy and power producers, housing, and gaming issuers.

■ For **U.S. leveraged loans**, while we only see a modest (1.5%-2%) uptick in issuer defaults in 2023 given the lack of near-term maturities, rating downgrades have started to pick up, and we expect ratings agencies to be quicker to downgrade than to upgrade going forward. While CLO formation has started to pick up again, it remains well off the record pace of 2021. Meanwhile, outflows from loan mutual funds have now reversed nearly all the inflows posted through the first half of 2022. While our outlook is tempered by recession risk and price volatility, we expect higher-quality loans to post positive total returns in Q4, with any expected price decline to be offset by currently high all-in coupons. Given our ongoing macro concerns, we favor public, BB and high single-B loans over sponsor-owned, low single-B and CCC loans as we expect the decompression trade that took place during the latter part of Q3 to continue into Q4. We believe that credit selection and deep, fundamental credit research/modeling is becoming increasingly important and that the avoidance of defaults will be the biggest driver of alpha over the next 12–24 months.

■ We remain cautious on **European high yield** and **European loans** given our base case

scenario of a recession in Europe, and we expect spreads to widen over the next three to six months. European gas supply constraints create significant economic headwinds and will have knock-on effects globally, while a re-escalation of the Russian/Ukraine war could further complicate the economic situation. Although an earnings recession and/or increased interest costs can quickly erode fundamentals, we don't expect to see a material pickup in defaults over the next 12-24 months given the lack of near-term maturities, strong corporate liquidity, and high percentage of BB credits within the market.

■ In terms of positioning, we are generally underweight risk, particularly in cyclical sectors, lower conviction credits, and credits that are sensitive to rising interest costs, while we are maintaining elevated cash balances. We are also opportunistically adding carefully selected credits that have dislocated from fair value and present compelling relative-value opportunities. Ultimately, we think active management and accurate credit selection will be rewarded as volatility continues.

EMERGING MARKET DEBT

Outlook: Rising interest rates, slowing growth, and geopolitical tensions will continue challenging the EM debt sector, thus we are cautiously positioned. Signs that negative risk sentiment has peaked may first appear in U.S. dollar moderation and recoveries in EM local-currency bonds followed by EM hard-currency spreads. Investors' defensive positioning and attractive bond prices help mitigate some of the downside risk. EM price action has been front-loaded: we believe that current valuations provide an attractive opportunity for investors who have a longer-term horizon.

■ We expect **EM hard currency sovereign spreads** to remain volatile as financial conditions will probably tighten until inflation cools, unemployment rises and/or growth slows. EM assets need peak hawkishness from the Fed before they can mount a significant recovery. Until then, we expect returns to continue to vary by credit quality: lower-rated issuers have weaker fundamentals, which are priced into their wider spreads. Investment grade issuers are likely to weather this storm, which is also priced into their relatively tighter spreads.

■ Single-B bonds and those of fundamentally weaker governments have experienced significant stress: a dozen of them trade at

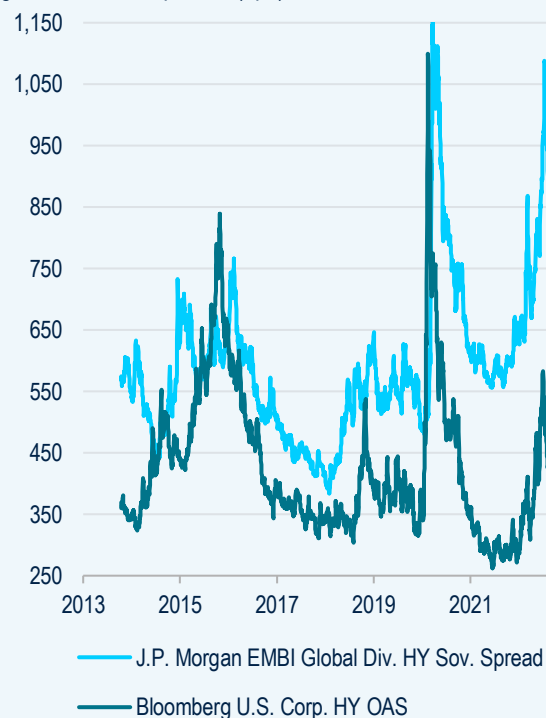
spreads wider than 1,000 bps and prices for single-B issuers currently imply a default rate of approximately 40% (assuming a recovery rate of around 35% of par) compared to their long-term average of around 15%. These distressed issuers have limited currency reserves, no market access, and incidences of balance-of-payment stress.

■ The opportunities in B-rated issues and below are few, but compelling: many are trading at dislocated prices, but have limited financing needs and can weather this volatility. We see opportunities in single-B sovereigns, such as Angola, Iraq, Mozambique, and Gabon – countries that currently benefit from favorable terms of trade and can fund themselves.

■ Higher-quality issuers' spreads have fared better as their fundamental strength generally dampens the impact of rising funding costs. Most of these countries have large domestic markets where they have continued to issue bonds. They also have access to the U.S.-dollar market, and new issuance has been met with strong demand.

Figure

The Historically Wide—and Widening—Gap Between EM and U.S. High Yield Credit Spreads (bps)



Source: Bloomberg.

■ We see value in BB-rated issuers, such as Serbia and the Dominican Republic, all of which are fundamentally solid, but trading at attractive valuations. We also see value in strong and improving Middle East IG issuers, like Qatar and Saudi Arabia. The energy shock is impacting issuers across central and eastern Europe, such as Hungary and Romania, but there are notable differences in the degree of impact as well as policy makers' responses. In Latin America, politics dominates, but issuers may fare better in the short run versus other regions.

■ **EM corporate bonds** continue to outperform, but tighter financial conditions and slower growth have clouded their fundamental outlook. However, maturities are manageable over the next two years, profitability has been robust, new issuance has plummeted (expected net financing of –US\$200 billion+ this year) and spreads have widened 70 bps year-to-date—so some negatives are priced in.

■ The asset class has higher quality and lower duration than corporate bonds in developed markets, but its spread over developed markets is at the wider end of the historical range (e.g., BB-rated EM corporates trade 150 bps wider than BB-rated U.S. corporates). So, we believe that EM corporate bonds' medium- to long-term prospects are favorable.

■ We remain focused on relative value and continue to prefer higher-quality high-yield and BBB-rated EM corporate bonds from countries such as India, Israel, Thailand, Mexico, and Peru. This focus on BB-rated bonds worked well as spreads tightened in Q3.

■ Lower-rated EM high-yield bonds are more vulnerable in a stagflation/recession scenario, so we are highly selective in those rating categories. We are underweight small and medium-sized enterprises, metals & mining, bank capital, and domestically-oriented corporates in vulnerable countries, such as Argentina and Turkey.

■ We continue to find value in quasi-sovereign issues, like Mexico City Airport and India's Power Finance Corporation. Issuers such as these benefit from government support and attractive spreads. However, we trimmed our portfolios' positions in Petrobras when it started trading in line with Brazilian government bonds.

SPOTLIGHT

EM themes we are watching

- 1 Defaults in EM sovereigns will likely increase with lower recovery values relative to the past 20 years. But circumstances matter: we expect the official sector will attempt to work with bilateral lenders, including China and the private sector, in order to make restructurings effective.
- 2 China's changing role within EMD has implications for EM growth, trade, investment flows, and currency performance. While we expect China stimulus to put a floor under growth, we acknowledge that the measures will not impact EMD as they have historically considering that the initiatives will be more inwardly focused. The stimulus will potentially have implications for the performance of commodity sensitive assets.
- 3 We also consider the role that the strong dollar has on posing funding challenges for many EM issuers, and what it could mean for balance-of-payment flows. It helps that many EM sovereign and EM corporate issuers do not face significant funding needs through year-end. In fact, net financing needs are negative, and there is a good amount of cash flow coming from the asset class.

■ As Q4 commences, our bias in **EM local rate** positioning is gravitating towards neutral and exploiting differences in monetary policies across countries. After the recent selloff, we remain opportunistic as we plan to trade tactically, and if we see a reversal in the U.S. dollar on the back of a Fed pivot, we will be quick to change from short duration to long duration.

■ The theme of yield curve flattening continues. Many EM yield curves are inverted, reflecting cutting cycle to start after a year or so. This situation favors underweight positions at the front end. If our positions are more underweight in the 1–to 3-year part of the yield curve, then those positions earn positive roll and carry, in the event Central Banks do not cut rates more than what is priced in.

■ Chile and Poland are our favorites in this category: more than 300 bps of interest rate cuts are priced into their yield curve a few years out, although inflation is still high and sticky. Poland is a special case of unorthodox policy with a loose fiscal and loose monetary stance as the central bank has turned dovish too soon. In Chile, a trifecta of currency weakness, sticky inflation and robust domestic demand has forced the central bank to turn hawkish again, and the end of its hiking cycle now appears far off.

■ We are constructive on duration in Brazilian real: inflation declined after the central bank hiked

more than 1,000 bps since Q1 2021, and the bank is now on hold. But we are keeping our Brazilian overweight position small due to the upcoming presidential election.

■ In Asia, we continue to favor Korea and Indonesia over Thailand and Malaysia based on relative risk premiums priced into their yield curves. After the recent selloff, we are neutrally positioned in Hungary, South Africa, China, and Mexico.

■ In early Q4, we remain cautious on **EM currencies**. But we see relative-value opportunities and keep an open mind about EM currencies strengthening amid an expectation that China will increase its stimulus. Concerns are growing that the Fed's latest hawkish communication and dot plot are going to steer the U.S. economy into recession. Other important central banks, like the ECB, are also prioritizing inflation ahead of growth.

■ However, if risk assets sell off in Q4, this might tighten financial conditions excessively, which may prompt the Fed to pause its rate hikes. Such a pause would be a welcome development for EM currencies, in which case we would shift our exposure and eliminate our long U.S.-dollar bias.

■ On the other hand, we might get more of the same in Q4: sticky inflation and a hawkish Fed, but limited U.S. job losses. In that case, we would

expect financial conditions to keep tightening and the U.S. dollar to continue to benefit.

■ We continue to view Asian EM currencies as the weakest, as all central banks in the region are lagging the Fed. China is the biggest outlier, where the central bank has moved in the opposite direction and cut rates. Geopolitical concerns related to China/Taiwan are also reducing capital flows. We prefer to underweight the Chinese renminbi, Taiwan dollar, Thai baht, Singapore dollar, and Philippine peso.

■ Away from Asia, our underweights include the Mexican peso. We don't think the peso's recent outperformance among EM currencies can continue as the U.S. economy slows and impacts remittances.

■ Against some of our currency underweights, we overweight several higher-carry EM currencies, such as the Hungarian forint and, to a lesser extent, the South African rand and Colombian peso.

MUNICIPAL BONDS

Outlook: Neutral to cautiously optimistic. Higher rates and rate volatility pose technical challenges, but municipal performance should improve once Treasury yields peak.

■ While higher interest rates have led to record municipal bond mutual fund outflows so far in 2022, credit quality remains strong and state tax collections, while slowing, are still nearly 20% higher than pre-COVID levels. As the Fed approaches the end of its hiking cycle, the technical headwinds that have led to underperformance should begin to dissipate, with additional upside if a deterioration in

economic conditions results in a quicker pivot for the Fed. With tax-equivalent yields appearing increasingly attractive, the tax-exempt market should start to generate interest once technicals improve.

■ Although we believe we are heading into a more opportunistic market environment, we believe it is still premature to increase interest-rate and credit risk exposure in the immediate future. However, if we see further widening of spreads or rates continue to march higher without any indication of a prolonged Fed cycle, we will begin increasing our risk exposure.

Improving technical in December should provide an additional tailwind.

■ Airports is a sector that maintains its fundamental integrity, but has been selling off due to technicals, and we believe long-term opportunities exist. We remain cautious around the healthcare sector given the prevailing headwinds. Otherwise, we will continue to approach sector as an “alpha over beta” opportunity set. Meanwhile, we view taxable munis as a good portfolio diversifier and expect spreads to mostly follow corporates as liquidity is still thin and new issuance remains light.

Figure

Municipal bond yields have now either returned to or surpassed the May highs, with AAA muni yields now closing in on 4%. With tax-equivalent yields on A munis now trading north of 8%, valuations appear increasingly attractive and should begin to garner more interest once rate volatility subsides.

	AAA Muni	2-year	5-year	10-year	20-year	30-year
AAA Muni	9/23/2022	2.92%	2.95%	3.11%	3.58%	3.73%
	5/18/2022	2.31%	2.60%	3.02%	3.24%	3.37%
	12/31/2021	0.24%	0.59%	1.03%	1.30%	1.49%
Treasury	9/23/2022	4.21%	3.98%	3.69%	3.89%	3.61%
	5/18/2022	2.67%	2.89%	2.89%	3.27%	3.07%
	12/31/2021	0.73%	1.26%	1.51%	1.94%	1.90%
Ratios	9/23/2022	69%	74%	84%	93%	103%
	5/18/2022	87%	90%	104%	99%	110%
	12/31/2021	33%	47%	68%	67%	78%





















Source: PGIM Fixed Income.



SECTION 5

SUMMARIES

05

Sector	Outlook	Asset class views*			
DM Sovereign Rates	Cautiously Optimistic. After the bond market rout, we are paying close attention to bond market functioning and increasing irregularities in the Treasury repo market.	U.S.		UK	
		Germany		Canada	
		Japan		Australia	
Agency MBS	For the first time in 2022, we are recommending an overweight to agency MBS vs. interest rates. Higher rates and implied volatility pushed sustained sector valuations to the most attractive levels since late 2008. Valuations appear cheap vs. high-quality credit, such as CMBS and corporates.	Agency MBS			
Securitized Credit	Selective in high-quality issues. Conditions at the top of capital structures should remain resilient in the event that an economic downturn affects real estate, corporate loans, and consumer health. Primary issuance presents opportunities, and spreads on highly-rated issues remain attractive from a long-term perspective.	CMBS		CLOs	
		Non-Agency		ABS	
Global IG Corporates	Broadening relative-value opportunities in Europe given its underperformance. While U.S. IG has remained resilient, spreads—particularly those on cyclicals and BBBs—may be vulnerable to moderate widening in an economic downturn.	U.S. Corps.		European Corps.	
Global Leveraged Finance	Geopolitical, inflation, and recession risks present meaningful concerns. We are positioned for further widening but see value in idiosyncratic situations and relative value opportunities. Active management and accurate credit selection will be rewarded with continued volatility.	U.S. High Yield		Euro High Yield	
		U.S. Leveraged Loans		Euro Leveraged Loans	
EM Debt	Cautiously positioned. Rising interest rates, slowing growth and geopolitical tensions will continue to challenge EM debt assets. Continued supply chain pressures, energy shocks and higher food prices impact EM countries' macroeconomic context and could lead to social unrest. We believe that headwinds will continue, so we are cautiously positioned across EM segments. Signs that negative risk sentiment has peaked will probably first appear in the U.S. dollar, followed by better performance in EM local-currency bonds and EM hard-currency spreads. Investors' defensive positioning and attractive prices help mitigate some of the downside risk across the EM debt space.	Sov. Hard Currency		Local Rates	
		Corporates		EMFX	
Municipal Bonds	Neutral to cautiously optimistic. Higher rates and rate volatility pose technical challenges, but municipal performance should improve once Treasuries peak.	Tax-Exempt		Taxable	

SUMMARY OF MARKET PERFORMANCE

Sector		Subsector	Spread change (bps) Q3	Spread change (bps) YTD	SOFR OAS 9/30/22
CMBS	CMBS: Conduit AAA	First-pay 10-year	3	74	168
	CMBS: Conduit BBB-	BBB-	293	-20	669
	CMBS: SASB – Senior	AAA	45	134	225
	CMBS: SASB - Mezz	BBB-	60	164	400
	CMBS: Agency Multifamily	Senior	22	50	102
Non-Agency RMBS	Legacy	RPL Senior	-5	84	180
	Legacy	'06/'07 Alt-A	15	149	280
	GSE Risk-Sharing	M2	35	325	475
CLOs	CLO 2.0	AAA	10	68	210
	CLO 2.0	AA	10	94	290
	CLO 2.0	BBB	85	209	550
ABS	Unsecured Consumer Loan ABS	Seniors	0	115	201
	Unsecured Consumer Loan ABS	Class B	-5	135	246
	Refi Private Student Loan	Seniors	15	100	191
	Credit Card ABS	AAA	-10	38	71

Source: PGIM Fixed Income.

	Total Return (%)		Spread Change (bps)		OAS (bps)
	Q3	YTD	Q3	YTD	9/30/22
U.S. Corps.	-5.06	-18.72	9	72	164
European Corps.	-3.06	-14.58	5	129	224

Source: Bloomberg. Represents data for the Bloomberg U.S. Corporate Bond Index and the Bloomberg European Corporate Bond Index (unhedged).

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	Total return (%)		Spread / yield change (bps)		OAS (bps)/ yield %
	Q3	YTD	Q3	YTD	9/30/22
EM Hard Currency	-4.57	-23.95	17	191	559
EM Local (Hedged)	-0.42	-11.46	25	160	7.31
EMFX	-3.97	-13.42	307	435	8.68
EM Corps.	-2.64	-16.21	0	92	404

Source: J.P. Morgan.

	Total return (%)		Spread change (bps)		OAS/ DM (bps)
	Q3	YTD	Q3	YTD	9/30/22
U.S. High Yield	-0.68	-14.62	-44	233	543
Euro High Yield	-0.84	-15.52	-14	295	632
U.S. Leveraged Loans	1.19	-3.31	10	229	668
Euro Leveraged Loans	1.15	-6.56	9	354	769

Source: ICE BofAML and Credit Suisse.

	Total return (%)	
	Q3	YTD
High Grade Tax-exempt	-3.46	-12.13
High Yield Tax-exempt	-4.83	-16.03
Long Taxable Munis Agg Eligible	-7.90	-24.06

Source: Bloomberg. Represents the Bloomberg Municipal Bond Indices.

IMPORTANT INFORMATION

Source of data (unless otherwise noted): PGIM Fixed Income and Bloomberg as of July 2022.

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U.S. INVESTMENT GRADE CORPORATE BONDS

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EUROPEAN INVESTMENT GRADE CORPORATE BONDS

Bloomberg European Corporate Bond Index (unhedged): The Bloomberg Euro-Aggregate: Corporates bond Index is a rules-based benchmark measuring investment grade, EUR denominated, fixed rate, and corporate only. Only bonds with a maturity of 1 year and above are eligible.

U.S. HIGH YIELD BONDS

ICE BofAML U.S. High Yield Index: The ICE BofAML U.S. High Yield Index covers 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, and at least one year remaining term to final maturity as of the rebalancing date.

EUROPEAN HIGH YIELD BONDS

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EUROPEAN SENIOR SECURED LOANS

Credit Suisse Western European Leveraged Loan Index: All Denominations EUR hedged. The Index is a representative, unmanaged index of tradable, floating rate senior secured loans designed to mirror the investable universe of the European leveraged loan market. The Index return does not reflect the impact of principal repayments in the current month.

EMERGING MARKETS U.S.D SOVEREIGN DEBT:

J.P. Morgan Emerging Markets Bond Index Global Diversified: The Emerging Markets Bond Index Global Diversified (EMBI Global) tracks total returns for U.S.D-denominated debt instruments issued by emerging market sovereign and quasi-sovereign entities: Brady bonds, loans, and Eurobonds. It limits the weights of those index countries with larger debt stocks by only including specified portions of these countries' eligible current face amounts of debt outstanding. To be deemed an emerging market by the EMBI Global Diversified Index, a country must be rated Baa1/BBB+ or below by Moody's/S&P rating agencies. Information has been obtained from sources believed to be reliable, but J.P. Morgan does not warrant its completeness or accuracy. The Index is used with permission. The

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EMERGING MARKETS LOCAL DEBT (UNHEDGED)

J.P. Morgan Government Bond Index-Emerging Markets Global Diversified Index: The Government Bond Index-Emerging Markets Global Diversified Index (GBI-EM Global) tracks total returns for local currency bonds issued by emerging market governments.

EMERGING MARKETS CORPORATE BONDS

J.P. Morgan Corporate Emerging Markets Bond Index Broad Diversified: The CEMBI tracks total returns of U.S. dollar-denominated debt instruments issued by corporate entities in Emerging Markets countries.

EMERGING MARKETS CURRENCIES

J.P. Morgan Emerging Local Markets Index Plus: The JP Morgan Emerging Local Markets Index Plus (JPM ELMPI+) tracks total returns for local currency-denominated money market instruments.

MUNICIPAL BONDS

Bloomberg Municipal Bond Indices: The index covers the U.S.D-denominated long-term tax-exempt bond market. The index has four main sectors: state and local general obligation bonds, revenue bonds, insured bonds, and pre-refunded bonds. The bonds must be fixed-rate or step ups, have a dated date after Dec. 13, 1990, and must be at least 1 year from their maturity date. Non-credit enhanced bonds (municipal debt without a guarantee) must be rated investment grade (Baa3/BBB-/BBB- or better) by the middle rating of Moody's, S&P, and Fitch.

U.S. TREASURY BONDS

Bloomberg U.S. Treasury Bond Index: The Bloomberg U.S. Treasury Index measures U.S. dollar-denominated, fixed-rate, nominal debt issued by the U.S. Treasury. Treasury bills are excluded by the maturity constraint but are part of a separate Short Treasury Index.

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COMMERCIAL MORTGAGE-BACKED SECURITIES

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U.S. AGGREGATE BOND INDEX

Bloomberg U.S. Aggregate Bond Index: The Bloomberg U.S. Aggregate Index covers the U.S.D-denominated, investment-grade, fixed-rate or step up, taxable bond market of SEC-registered securities and includes bonds from the Treasury, Government-Related, Corporate, MBS (agency fixed-rate and hybrid ARM passthroughs), ABS, and CMBS sectors. Securities included in the index must have at least 1 year until final maturity and be rated investment-grade (Baa3/ BBB-/BBB-) or better using the middle rating of Moody's, S&P, and Fitch.

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