



NEUBERGER BERMAN

Fixed Income Investment Outlook 1Q23

Reducing Altitude

The past year has seen a historic surge in inflation and interest rates, and a corresponding reset in financial asset valuations. At the start of 2023, we believe that peak inflation has passed, and anticipate a gradual reduction in pricing pressures over the course of the year, even as short-term rates remain elevated. Amid more subdued volatility, we favor a focus on quality and security selection to capitalize on the more generous yields now provided by fixed income markets.

Neuberger Berman, founded in 1939, is a private, independent, employee-owned investment manager. The firm manages a range of strategies—including equity, fixed income, quantitative and multi-asset class, private equity, real estate and hedge funds—on behalf of institutions, advisors and individual investors globally. With offices in 26 countries, Neuberger Berman’s diverse team has over 2,600 professionals. For eight consecutive years, the company has been named first or second in *Pensions & Investments* Best Places to Work in Money Management survey (among those with 1,000 employees or more). Neuberger Berman is a PRI Leader, a designation, since last assessed, that was awarded to fewer than 1% of investment firms for excellence in Environmental, Social and Governance (ESG) practices. In the 2021 PRI Assessment, the firm obtained the highest possible scoring for its overarching approach to ESG investment and stewardship, and integration across asset classes. The firm manages \$408 billion in client assets as of September 30, 2022. For more information, please visit our website at www.nb.com.

Reducing Altitude

The return of meaningful price inflation was something that many had anticipated in recent years, but the circumstances and intensity of its resurgence caught most investors by surprise in 2022. From ultra-accommodative monetary policy to a post-pandemic demand surge to supply chain disruption to the Ukraine War's impact on commodities prices, multiple forces drove inflation to 40-year highs. After initially viewing the changes as "transitory," the U.S. Federal Reserve initiated an about-face. The central bank hiked rates tentatively at first with a 25-basis-point increase, but then accelerated to 75bps per meeting for most of 2022 before slowing to a 50bps hike in December. Meanwhile, after peaking at 9.1% in June, U.S. Consumer Price Index inflation receded to 7.1% in November, while core inflation eased to 6%. Impacts of the Fed hikes and a slowing economy are appearing in pockets of the U.S. economy, notably housing, technology and manufacturing.

In Europe, inflation has been even more acute amid energy shortages, though the European Central Bank has trailed the Fed in its tightening program. Developed markets generally have been moving to curtail liquidity, driving general consensus for a global recession this year—the extent of which is subject to considerable debate.

Looking into 2023, we believe that inflation will almost certainly retreat further from peak levels, although it is likely to remain well above norms throughout the year and into 2024. As expressed in their meetings and policymaker comments, central banks understand the need to maintain tight conditions in order to tame pricing pressures. So, although we could see just a couple more hikes, U.S. short rates are likely to remain high for some time. In other words, the world of zero interest rates that was so prevalent after the Global Financial Crisis is likely over.

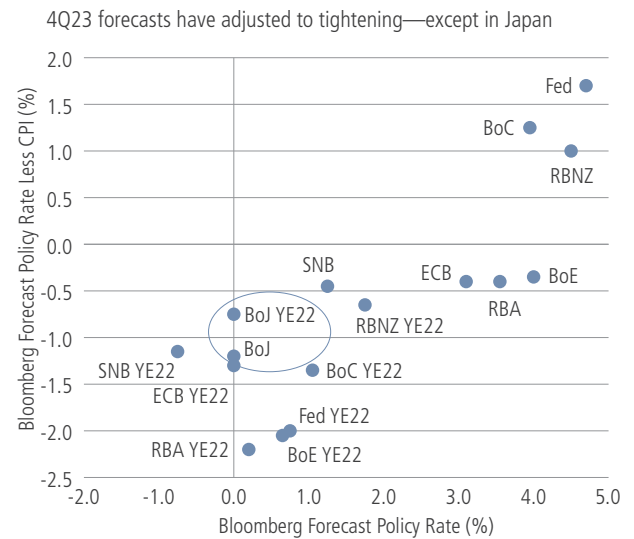
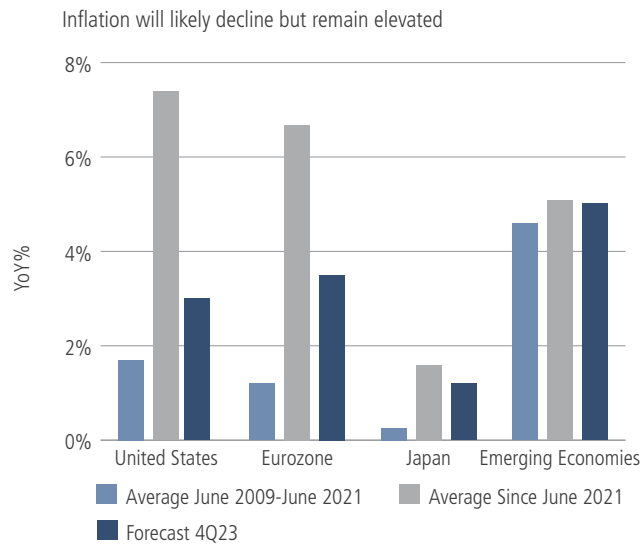
What does this mean for markets? First, interest rates will probably trade within a much tighter range than in 2022, as inflation moderates and central banks hike at a more gradual pace. Second (and related to the first point), duration exposure should be less risky than it was in 2022, with the added benefit of far more generous yields providing a cushion against potential negative total return. Finally, fundamental concerns about credit are likely to increase, not just due to macro developments, but as a function of individual issuer dynamics and financial positions. As a result, individual credit exposures could be a key driver of portfolio outcomes, making security selection more important than ever in seeking to achieve investment success.

Below, we address some key themes we anticipate for fixed income in 2023. For a snapshot of our market views, see the table on page 7.

1. Volatility Seems Likely to Fade

After a year of massive global monetary tightening, we see a deceleration of inflation that is likely to continue throughout the year, with the U.S. and euro area looking at roughly 3% and 3.5% annualized core inflation rates, respectively, toward the end of 2023—much improved, but still above target levels. A notable outlier may be Japan, where forecasters appear to anticipate little upward policy adjustment even with the Bank of Japan’s recent shift in its yield-curve control policy and potential pressure for it to do more. Of course, a key wild card more broadly is whether the mixed picture in economic dynamics could lead to more inflation than anticipated—and thus more difficulty in the financial markets. This is not our base case, but it needs to be considered as we press into still uncertain territory.

ADAPTING TO A NEW RATE/POLICY MIX



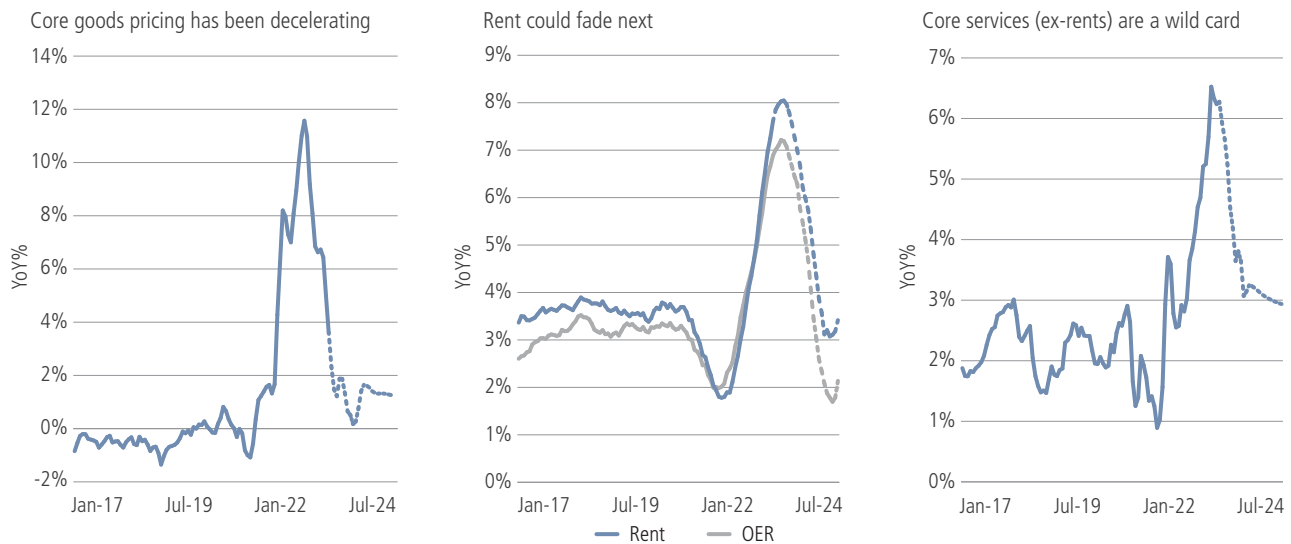
Source: Bloomberg. Monthly year-over-year averages for the U.S. and eurozone through November 2022. Emerging is quarterly year-over-year averages through 3Q22. Forecasts as of December 25, 2022.

2. Look to Services to Gauge U.S. Inflation

The Fed continues to face a complex inflation picture. As narrow supply chain- and commodity-driven inflation segued into broader goods, housing and services inflation, the central bank was forced to change course abruptly, leading to its most intense tightening campaign in history. Today, COVID-related stimulus still needs to be squeezed out of the system, while generous fiscal outlays continue to operate as an offset to tighter monetary policy. The labor market remains a challenge, as workforce departures have contributed to a labor shortage, inhibiting productivity and adding to wage pressures.

Looking at the components of CPI, we believe that policymakers have reason to feel confident about goods inflation, which has largely been tamed since the initial pull-forward of demand during pandemic lockdowns. Shelter, which saw rapid increases with stimulus payments and rock-bottom interest rates, seems likely to turn next amid higher mortgage rates and economic slowing, although given the length of lease agreements, rents tend to be relatively slower to decline. Most uncertain at this point is services (ex-rents) inflation, which is notoriously sticky and may be reinforced by structural elements of the modern economy. Compared to past periods, goods sectors, which are most directly affected by economic weakness, make up a much lower proportion of the overall workforce. To the extent that services hold up well, that increases the likelihood of an economic soft landing, but may make it more difficult to reduce associated wage gains enough to pull inflation down to Fed targets.

ONE DOWN, TWO TO GO



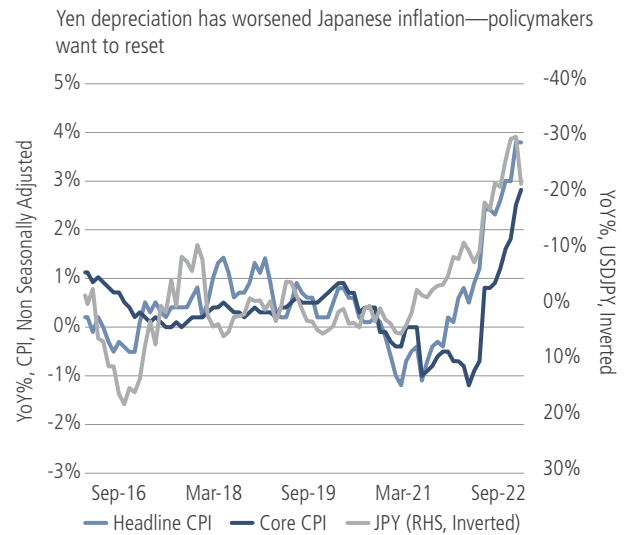
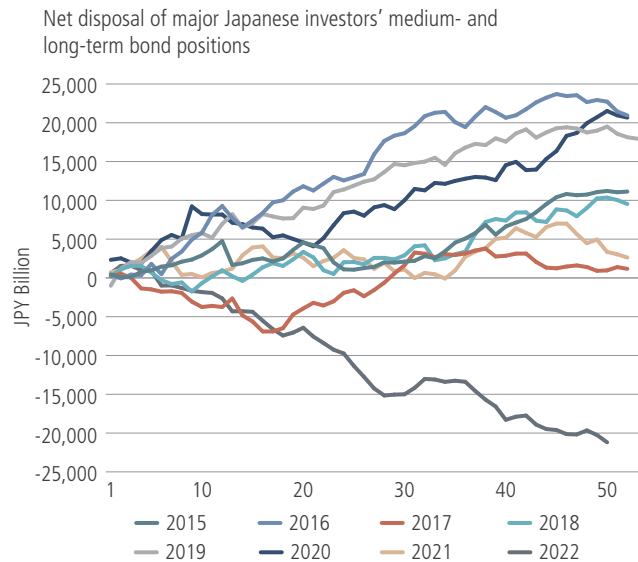
Source: Neuberger Berman calculations and forecasts, Bloomberg. Actual data as of November 2022.

3. Tail Risk in Japan

In December, the Bank of Japan unexpectedly tweaked its yield curve control policy, raising its “cap” on the 10-year Japanese government bond from 0.25% to 0.50%. The central bank explained that the move was intended to “improve market functioning and encourage a smoother formation of the entire yield curve” while maintaining accommodation. It also kept its -0.1% overnight policy rate level and announced plans for further bond-buying in the same meeting. In essence, the BoJ broadened the leeway for market moves, but maintained its status as a monetary outlier, keeping policy loose while others tighten.

That said, the BoJ is under pressure to follow other central banks given cost-of-living increases in Japan and the movement of investment capital elsewhere to follow more generous yields. Indeed, 2022 saw a net disposal of medium- and long-term bond positions by major Japanese investors. All told, we would anticipate gradual movement toward higher rates over time. This could stabilize fund flows, but also reduce interest on the part of Japanese investors in overseas fixed income assets—creating, in turn, a modest dampening of overall demand for global fixed income over the coming years.

COURSE CORRECTION?



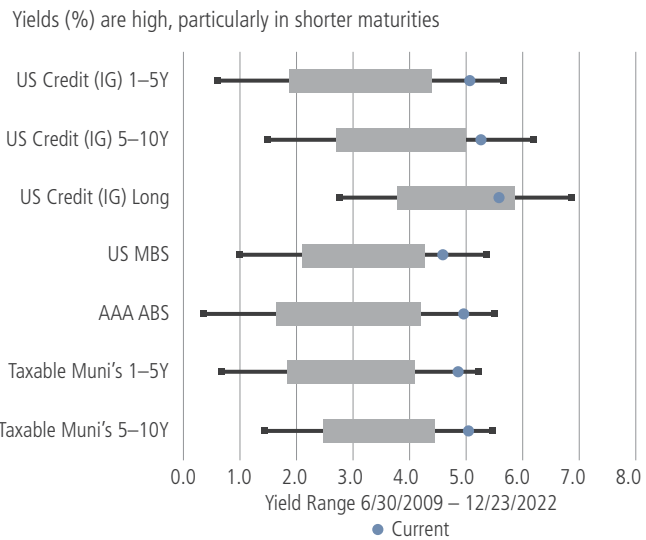
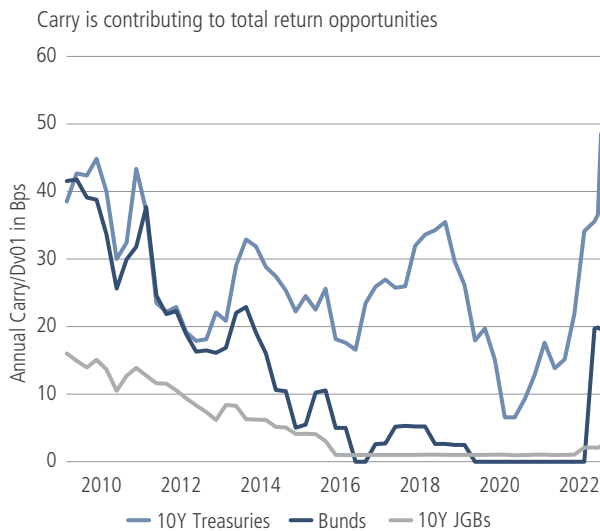
Source: Bloomberg. Flow data through December 16, 2022. Inflation and yen data through November 2022.

4. An Appealing Opportunity Set

With much of the Fed’s heavy lifting in the rearview mirror, we anticipate that 2023 will see quieter fixed income markets. This could create significant opportunity to capture higher yields with limited risk, especially given the added yield cushion that last year’s setbacks have created.

The focal point of our enthusiasm is the investment grade market. For years, investors needed to push the envelope on duration and credit risk to make up for the exceptionally low yields provided by government and other high-quality issues. To illustrate, with nearly 50bps per dollar duration of annual carry in 10-year U.S. Treasuries, their total return opportunity hasn’t been greater in over a decade. Meanwhile, the additional spreads provided by many quality corporate bonds and other strong credits translate into their highest absolute yields since the Global Financial Crisis.

HIGH QUALITY STANDS OUT



Source: Bloomberg. Quarterly values for dollar duration (Dv01) until September 2022 and monthly thereafter, through November 2022. Yields as of December 23, 2022.

5. Still, Fundamental Credit Risk Is Rising

Despite potential for economic deterioration this year, the picture for default risk is relatively benign. Corporate leverage remains generally lower and cash levels higher than prior to the pandemic. New issuance patterns have been less aggressive, both in their use of proceeds and ratings cohorts. Moreover, given ultralow yields in recent years, many companies were able to extend their maturities at low interest rates prior to the current Fed tightening campaign; as such, relatively few names will be maturing in 2023 and 2024.

That said, general consensus is for an increase in high yield defaults this year, particularly if the recession turns out to be worse than anticipated. Defaults are likely to see further deterioration in 2024, again below historical norms, as more issuers face maturity deadlines.

What does that mean for portfolio positioning in credit markets? Credit differentiation will rise as the impact of higher rates and a slower economy filter into actual corporate earnings and outcomes. We expect credit markets to morph from something that was more tied to “macro” outcomes in 2022 to something more tied to fundamental outcomes.

U.S. HIGH YIELD DEFAULT EXPECTATIONS

NB Bottom-Up Default Analysis ¹			Sell-Side Default Estimates		
	Base Case	Downside Case	Firm	2022	2023
Assumptions	Mild Recession (Real GDP: U.S. -1% / EU -2% / Asia -1%)	Recession (Real GDP: U.S. -2.5% / EU -5% / Asia -2.5%)	JP Morgan ²	1.85%	3.0%
2022	1.5%	1.5%	Barclays ²	1.25%	3.5% – 4.0%
2023	1.5% – 2.5%	1.5% – 2.5%	Bank of America ³	1.60%	5.0%
2024	2.5% – 3.5%	6.5% – 7.5%	Citi ³	1.40%	5.0%

Source: Neuberger Berman, JP Morgan, Bank of America, Citi and Barclays. Data as of October 31, 2022.

¹ Represents NB bottom-up default analysis. Base case assumptions include 2023 U.S. real GDP of -1%, EU real GDP of -2%, and Asia real GDP of -1%. Downside case assumptions include 2.5% real GDP contraction in U.S., 5% real GDP contraction in the EU, 2.5% real GDP contraction in Asia.

² JP Morgan and Barclays default estimates are based on bottom-up analysis.

³ Bank of America and Citi default estimates are based on top-down analysis.

Anticipating a Smoother Ride

The fixed income environment has taken a sharp turn over the past year. Central bank balance sheets are moving in reverse while rates have risen sharply off ultra-accommodative lows. At the same time, inflation has been sloping downward, although still at levels unacceptable to central banks. For investors, the result may be a less volatile flight pattern, with the ability to dial back emphasis on inflation or correlation bets and instead focus on earning income—particularly in higher-quality names and shorter maturities. Opportunities will also be available in lower-quality areas of the market, but with an emphasis on security selection amid an unsettled economy.

Market Views

Next 12 Months

	UNDER --	-	NEUTRAL ◇	+	OVER ++	CHANGE NOTES
GOVERNMENT BOND MARKETS						
United States	○	○ → ●	○	○	○	With the Fed closer to ending the hiking cycle, we expect a rangebound rate; the labor sector remains tight in a resilient economy.
United Kingdom	○	● ← ○	○	○	○	Active BOE bond sales and continued reluctant policy tightening should drive yields higher.
Germany	○	●	○	○	○	
France	○	●	○	○	○	
Italy	○	●	○	○	○	
Spain	○	○	●	○	○	
Japan	○	●	○	○	○	
Canada	○	●	○	○	○	
New Zealand	○	○	●	○	○	
Australia	○	○	●	○	○	
U.S. TIPS	○	○	●	○	○	
INVESTMENT GRADE SECTOR						
U.S. Agencies	○	○	●	○	○	
U.S. Agency MBS	○	○	○	○ → ●	○	Attractive combination of limited call risk and relatively high spreads for current-coupon MBS.
U.S. CMBS	○	○	○ → ●	○	○	Slowing policy headwinds, improved yields, relative quality profile.
U.S. ABS	○	○	○ → ●	○	○	Slowing policy headwinds, improved yields, relative quality profile.
U.S. Mortgage Credit	○	○	○ → ●	○	○	Slowing policy headwinds, improved yields, relative quality profile.
U.S. Credit	○	○	○	●	○	
Europe Credit	○	○	○ → ●	○	○	Improved risk/reward despite potential for further tightening.
U.K. Credit	○	○	○ → ●	○	○	Improved risk/reward despite potential for further tightening.
Hybrid Financial Capital	○	○	○	●	○	
Municipals	○	○	●	○	○	

Market Views (continued)

Next 12 Months

	UNDER --	-	NEUTRAL ◇	+	OVER ++	CHANGE NOTES
HIGH YIELD & EMERGING MARKETS						
U.S. Full-Market High Yield	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	
U.S. Short-Duration High Yield	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
Pan-Euro High Yield	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Floating-Rate Loans	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	
U.S. CLO	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
EM Hard-Currency Sovereigns	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	
EM Hard-Currency Corporates	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	
EM Hard-Currency Short Duration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
EM Local-Currency Sovereigns	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	
CURRENCY*						
U.S. Dollar	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Euro	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Pound	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Yen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
Swiss Franc	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Australian Dollar	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Swedish Krona	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
Norwegian Krone	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Canadian Dollar	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Underperformed other G10 currencies last quarter; even with slower rate hikes, yield differentials remain favorable; housing weakness and energy prices are key variables.
Mexican Peso	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
South African Rand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Political risk premium should dissipate with president's reelection; rand undervalued based on terms of trade and real effective exchange rates.
Brazilian Real	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Chinese Yuan	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Growth and interest rate differentials should improve with reopening and reduced policy accommodation, though not enough to move the yuan beyond a narrow trading range.

Views expressed herein are generally those of the Neuberger Berman Fixed Income Investment Strategy Committee and do not reflect the views of the firm as a whole. Neuberger Berman advisors and portfolio managers may make recommendations or take positions contrary to the views expressed. Nothing herein constitutes a prediction or projection of future events or future market behavior. Due to a variety of factors, actual events or market behavior may differ significantly from any views expressed. See additional disclosures at the end of this material, which are an important part of this presentation.

*Currency views are based on spot rates, including carry.

Talk to Neuberger Berman

For more information, please contact your Neuberger Berman representative or visit www.nb.com.

FIRM HEADQUARTERS

New York
800.223.6448

REGIONAL HEADQUARTERS

Hong Kong
+852 3664 8800

London
+44 20 3214 9000

Tokyo
+81 3 5218 1930

PORTFOLIO MANAGEMENT CENTERS

Atlanta	New York
Bermuda	Paris
Boston	Philadelphia
Buenos Aires	San Francisco
Chicago	Shanghai
Dallas	Singapore
Hong Kong	The Hague
London	Taipei
Los Angeles	Tokyo
Milan	Toronto

OFFICES

AMERICAS

Atlanta
Bermuda
Bogota
Boston
Buenos Aires
Chicago
Dallas
Los Angeles
Morristown
New York
Philadelphia
San Francisco
São Paulo
Tampa
Toronto
West Palm Beach
Wilmington

EUROPE, MIDDLE EAST & AFRICA

Dubai
Dublin
Frankfurt
London
Luxembourg
Madrid
Milan
Paris
Rome
Stockholm
Tel Aviv
The Hague
Zurich

ASIA PACIFIC

Hong Kong
Melbourne
Mumbai
Seoul
Shanghai
Singapore
Sydney
Taipei
Tokyo

This material is provided for informational purposes only and nothing herein constitutes investment legal accounting or tax advice or a recommendation to buy sell or hold a security. This material is general in nature and is not directed to any category of investors and should not be regarded as individualized a recommendation investment advice or a suggestion to engage in or refrain from any investment-related course of action. Neuberger Berman is not providing this material in a fiduciary capacity and has a financial interest in the sale of its products and services. Neuberger Berman as well as its employees does not provide tax or legal advice. You should consult your accountant tax adviser and/or attorney for advice concerning your particular circumstances. Information is obtained from sources deemed reliable, but there is no representation or warranty as to its accuracy completeness or reliability. All information is current as of the date of this material and is subject to change without notice. Any views or opinions expressed may not reflect those of the firm as a whole. Neuberger Berman products and services may not be available in all jurisdictions or to all client types. Investing entails risks including possible loss of principal. Investments in hedge funds and private equity are speculative and involve a higher degree of risk than more traditional investments. Investments in hedge funds and private equity are intended for sophisticated investors only. Indexes are unmanaged and are not available for direct investment. **Past performance is no guarantee of future results.**

The views expressed herein are those of the Neuberger Berman Fixed Income Investment Strategy Committee. Their views do not constitute a prediction or projection of future events or future market behavior. This material may include estimates, outlooks, projections and other "forward-looking statements." Due to a variety of factors, actual events or market behavior may differ significantly from any views expressed. This material is being issued on a limited basis through various global subsidiaries and affiliates of Neuberger Berman Group LLC. Please visit www.nb.com/disclosure-global-communications for the specific entities and jurisdictional limitations and restrictions. The "Neuberger Berman" name and logo are registered service marks of Neuberger Berman Group LLC.

NEUBERGER	BERMAN
-----------	--------

Neuberger Berman
1290 Avenue of the Americas
New York, NY 10104-0001