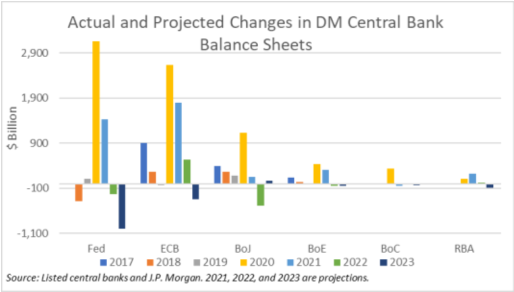
PGIM FIXED INCOME

Assessing Volatility-Driven Value Creation

WEEKLY VIEW FROM THE DESK | January 24, 2022

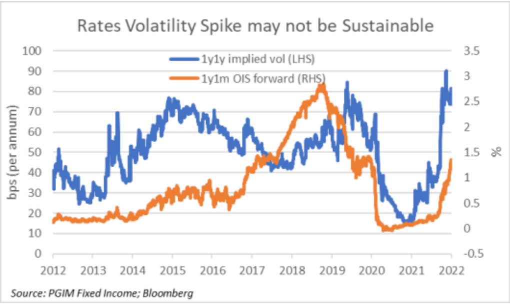
QUICK LINK TO THE RETURNS TABLE

MACRO



- The prospects for global flows and liquidity in 2022 looks quite different than in 2021. In the face of global central banks pulling support (see chart), the markets may be vulnerable to evaporating monetary liquidity. Meanwhile, last year's record-breaking retail flows of $1.2T into equities and bond funds are at risk of reversing amid the heightened volatility and reduced fiscal support to households.
- The latest COVID wave has peaked in many developed countries, and some (e.g., the UK) are ready to move on to the endemic phase of reopening. But omicron is still in the early stages in Asia, and case counts and death tolls are rising sharply in some countries, such as Australia and Singapore. Hence, given the link between the virus and inflation, COVID may continue disrupting supply chains and potentially extend the bump in inflation readings.
- Eyes will turn to Wednesday's FOMC decision given the heightened market volatility. We expect Chair Powell to reaffirm the Fed's view that the economy is near maximum employment and lay out the case for a March rate hike. The market has already priced in four hikes in 2022, and some market participants have gone as far as calling for an abrupt end to tapering at this week's meeting or the possibility of a 50 bp hike in March. These discussions signal that the market seems very close to pricing in maximum hawkishness, especially considering U.S. and global economic growth is likely to slow in the coming months.
- We see a couple of key takeaways from the recent market volatility. While it's hard to say when risk appetites will consistently return, we believe that central banks are well aware of the financial stability risks and will likely blink once inflation data subside, rather than aggressively tightening policy and generating further market volatility. Despite the uncertainty about when sentiment may turn, we believe that the recent volatility is creating meaningful value within risk assets.
- European inflation has also surprised to the upside recently following years of disinflation, putting pressure on the ECB to follow other central banks in pulling back stimulus. However, most of the euro area's inflation surprise stems from the unanticipated rise in energy costs and select consumer goods that were disrupted by supply chain issues, a contrast to the U.S. where a broad-based increase in aggregate demand helped drive soaring inflation. Also, the average contribution of services inflation, an indicator of domestically-generated inflation, was lower in 2021 than in the three years before the pandemic. A broad range of survey- and market-based measures of inflation expectations remain below the ECB's inflation target, giving the central bank ample reason to tread carefully.

RATES



- Although the specter of stimulus withdrawal continues to induce considerable volatility into the bond market, market functioning has not materially deteriorated. Yield curves continued to bear-flatten significantly among developed markets, led by last week's 18 bp rise in Australia's two-year yield. In the U.S., we suspect the spike in front-end volatility (see chart), as measured by 1y1y swaption implied volatility, is difficult to sustain, and we have become more bearish in our volatility positioning.
- We are also struck by how low the market expects the fed funds rate to be in 2024 and beyond. The market still expects the rate hike cycle to top out at around 1.7%, compared to the Fed's longer-term dot plot forecast of 2.5%, which won't be updated until March. Besides, for the four hikes that are currently priced in for this year, it's anomalous that all the rate hikes are penciled in at the end of each quarter, a tightening timeline that looks like a vestige of the past when press conferences were not held at every meeting.
- The broader picture of Treasury net supply is a focal point as the Fed's reinvestment process becomes in play. On the demand side, the timing of quantitative tightening and the size of the Fed's rolloff cap are yet to be determined. On the supply side, as the Fed stops buying, Treasury may have to adjust its auction sizes to the public sector. Nonetheless, we think Treasury will continue to reduce coupon sizes across the curve and disproportionately cut 7- and 20-year securities to help correct the cheapness in those sectors. Treasury will reveal its upcoming auction schedule at the quarterly refunding announcements on Feb. 2.
- Agency MBS spreads widened further last week amid heavy origination and lagged when Treasury yields fell later in the week. Convexity accounts became duration buyers after the Treasury 10-year yield traded below 1.8% last Thursday.

IG CORPORATES

- U.S. spreads widened slightly last week with the telecom sector underperforming as investors sold some of the more liquid sectors to raise cash. Bank spreads widened in line as about 85% of last week's $38B in issuance was from the sector.

- While we're not attempting to time the turn in market sentiment, we would likely look to start adding risk if the index were to widen by about 10 bps to the +110 bps area.
- In the absence of further catalysts, European OAS of around 100 bps (5 bps wider for the year to date) could drift wider than our full-year projection of 110 bps. While it's unclear when the volatility may conclude, we're cognizant of the value creation within the spread markets. Some yield-seeking investors re-entered the market for long-dated European IG corporate bonds, attracted by higher benchmark yields and wider spreads. Euro IG corporate issuance slowed last week, to around €10B, with new issue concessions of 5 to 10 bps. We expect this slowdown in primary activity to continue into February.

HIGH YIELD

- U.S. high yield posted negative returns and spreads widened last week with BBs underperforming amid continued rate volatility and down-in-quality paper outperforming. All high yield sectors were in negative territory, with food & beverage (-1.07%), cable (-0.94%), and retail (-0.93%) declining the most. Primary activity remained subdued, with just $4.3B pricing. January's issuance has totaled just $17B, well short of market expectations of $30-40B, which has somewhat offset weaker technical as high yield bond mutual funds saw $1.4B in outflows last week, bringing the year-to-date outflow to $4.1B.
- U.S. leveraged loans had another strong week despite macro volatility. Inflows into loan mutual funds continued, with a record-high $2.25B flowing into bank loan mutual funds last week. Furthermore, with the first fully SOFR-linked CLO pricing last week, CLO ramping has resumed following a brief holiday-hiatus, further driving demand for the asset class.
- Despite more than $10B in new issue loans pricing last week, demand continues to outstrip supply. As a result, new issues have been heavily oversubscribed, allowing issuers to tighten terms and new loans to trade well above issue price on the break. With more than 42% of loans now bid north of par, Arby's became the first issuer of 2022 to launch a repricing of its term loan.
- In contrast to last week's negative return for European high-yield bonds, European leveraged loans delivered positive returns week, helped by record levels of CLO warehousing. We see the stronger performance in European loans, compared to European high-yield bonds, continue throughout 2022. Expected default rates in both segments remain historically low. Delays in high-yield issuance in December, caused by the omicron variant, will continue to boost issuance into February.

EMERGING MARKETS

- Hard currency markets held up relatively well as spreads widened slightly last week, with all of the widening taking place in the IG portion of the index. Despite nearly $2B in outflows, technicals were helped by a relatively light week in terms of new issuance. Africa outperformed, and Ukraine tightened by -50 bps last week, but widened again as geopolitical tensions rose over the weekend. Pakistan, Honduras, and Russia were among the largest underperformers, with Russian five-year bonds now trading near 300 bps. In the short term, supply pressures and outflows could continue to pressure HC spreads. Our base case is that once the broader markets come to terms with Fed policy tightening, bottom-up, country-specific developments and valuations will again drive performance.
- EM corporate spreads were slightly wider amid the macro uncertainty. However, the China property sector staged a strong rebound on news that developers may gain access to presale escrow funds and on the recent easing of policy by the PBOC. Year to date, EM corporates have remained relatively steady compared to DM corporates, widening by just +5 bps across both HY and IG.
- Emerging market local debt yields tightened by 1 bp on the back of the retracement in U.S. Treasury yields and a better tone in EMFX. Chile outperformed, while Russia widened by 14 bps. We have modestly raised our short-term outlook on local rates as we believe the tightening of financial conditions combined with the possibility that supply side pressures will begin to ease should discourage investors from selling duration in significant size.
- EMFX remained resilient, with LatAm and high-beta currencies outperforming despite higher real yields, lower breakevens, and risk asset volatility. The sharp decline in U.S. equities is giving rise to the narrative that foreign investors are liquidating unhedged exposure and driving USD weakness. However, we continue to believe that the tightening of financial conditions in the U.S. and slowing growth remain challenges for EM currencies.

SECURITIZED PRODUCTS

- Securitized spreads were resilient amidst last week's volatility as U.S. conduit AAA CMBS spreads were only 2 bps wider. Three conduit deals are in the market this week along with plenty of SASB and CRE CLO deals. We expect the new issue market will continue to focus on floater deals in both SASB and CRE CLO while fixed rate conduit deals will remain limited.
- In the U.S., CLO spreads across the capital structure began to firm up as transactions for benchmark issuers started to price. U.S. CLO primary spreads for higher quality portfolios were ~3M SOFR+130/180/205/310/625 for AAA/AA/A/BBB/BB, respectively for 5-year reinvestment period deals. The tone in the European market was also firmer at the top of the capital structure as transactions are being subscribed in the low- to mid 3E+90 bps range after opening in the high 3E+90s.
- ABS spreads were unchanged/tighter amid solid demand for new issues, especially the lower-quality tranches. The secondary market continued to trade well amid strong interest in various subprime auto subordinate and non-benchmark sector bid lists. New issuance is expected to be lighter heading into month-end.

MUNICIPAL BONDS

- The muni market faced some headwinds last week as technicals deteriorated with $239M in outflows, marking the second consecutive week of outflows. About $6.3B priced last week, which was 91% of the five-year average (mitigated by negative net supply in January estimated at $-7B). Muni rates rose 8-12 bps and underperformed vs. Treasuries by as much as 13 bps. Many new issue deals required additional concessions with dealers taking down balances.

THE RETURNS TABLE As of January 21, 2021

Sovereign Rates	Duration	YTM	OAS	Yield/ OAS Change (BPS) WTD	QTD	YTD	Prior Year	Total Return (%) WTD	QTD	YTD	Prior Year
U.S. 2-Year	1.9	1.01	---	4	27	27	88	-0.03	-0.45	-0.45	-0.98
U.S. 5-Year	4.8	1.54	---	0	30	30	111	0.03	-1.28	-1.28	-3.68
U.S. 10-Year	9.1	1.75	---	-3	25	25	65	0.24	-2.14	-2.14	-4.05
U.S. 10-Year Breakeven	--	2.37	---	-11	-23	-23	19	---	---	---	---
U.S. 10-Year TIPS	5.0	-0.61	---	9	49	49	47	0.15	-3.41	-3.41	2.72
U.S. 20-Year	16.2	2.13	---	-4	21	21	47	0.76	-3.37	-3.37	-5.92
U.S. 30-Year	22.5	2.06	---	-5	17	17	20	1.17	-3.75	-3.75	-3.29
UK 10-Year	9.4	1.17	---	2	20	20	84	-0.17	-1.79	-1.79	-6.43
Germany 10-Year	10.1	-0.07	---	-2	12	12	43	0.19	-0.20	-0.20	-0.20
Japan 10-Year	9.8	0.13	---	-1	7	7	11	0.06	-0.12	-0.12	-0.12
Australia 10-Year	9.6	1.92	---	7	25	25	85	-0.58	-2.04	-2.04	-5.94
Canada 10-Year	8.7	1.79	---	2	37	37	92	-0.12	-3.04	-3.04	-0.48
MAJOR FI MS INDICES											
Global Aggregate Unhedged	7.5	1.47	36	0	1	1	2	-0.19	-0.94	-0.94	-4.98
Global Aggregate Hedged	7.5	1.47	36	0	1	1	2	0.04	-1.11	-1.11	-1.93
U.S. Aggregate	6.7	2.03	36	-2	0	0	1	0.05	-1.77	-1.77	-2.53
Euro-Aggregate (Unhedged)	7.6	0.28	58	1	2	2	9	0.02	-0.49	-0.49	-2.78
Japanese Aggregate	9.6	0.16	1	0	0	0	0	0.12	-0.32	-0.32	-0.37
MAJOR FI CREDIT INDICES											
Mortgage-Backed (Agency)	5.0	2.25	25	-10	-6	-6	6	-0.06	-1.54	-1.54	-2.59
Global IG Corporate Bonds	7.3	2.13	102	3	6	6	6	-0.33	-1.86	-1.86	-3.85
U.S. IG Corporate Bonds	8.5	2.66	100	4	7	7	6	-0.13	-2.50	-2.50	-2.32
European IG Corporate	5.2	0.61	100	2	5	5	10	0.01	-0.56	-0.56	-1.48
U.S. High Yield Bonds	4.2	4.83	312	19	29	29	-31	-0.68	-1.54	-1.54	2.99
European High Yield Bonds	3.6	3.20	328	17	10	10	-10	-0.40	-0.34	-0.34	2.92
U.S. Leveraged Loans	0.3	5.52	424	-1	-15	-15	-29	0.14	0.65	0.65	4.57
European Leveraged Loans	0.3	3.83	410	-4	-5	-5	-19	0.05	0.45	0.45	4.68
EM Hard Currency Sovs.	7.8	5.69	387	3	18	18	32	0.13	-2.59	-2.59	-3.11
EM Corporates	4.8	4.87	316	5	4	4	-8	-0.14	-1.29	-1.29	-0.22
EM Currencies	---	3.72	---	-39	-61	-61	163	-0.04	0.56	0.56	-2.62
EM Local Rates	5.1	5.87	6	0	0	0	2	0.18	-0.63	-0.63	-5.80
CMBS	5.1	2.14	65	-3	-3	-3	-10	0.18	-1.18	-1.18	-2.07
ABS	2.3	1.35	34	-1	-5	-5	5	0.03	-0.39	-0.39	-0.79
CLOs	---	1.04	104	-1	-5	-5	-5	0.02	0.11	0.11	-0.01
Municipal Bonds	4.8	1.43	---	10	32	32	39	-0.46	-1.38	-1.38	-0.05

Equity/Volatility	Level	Total Return (%) WTD	QTD	YTD	Prior Yr
S&P 500 Index	9221	-5.7	-7.7	-7.7	15.8
DAX	15230	-1.8	-1.8	-1.8	12.2
Stoxx 600	252	-1.4	-2.7	-2.7	17.0
Nikkei 225	27588	-2.1	-4.4	-4.4	-2.7
Shanghai Comp.	3524	0.0	-3.2	-3.2	-0.6
MSCI ACWI	368	-4.2	-5.5	-5.5	8.0
FTSE 100	7381	-0.6	1.5	1.5	15.6
MOVE Index	81	5.8	5.1	5.1	88.4
VIX Index	32	50.3	67.5	67.5	35.3

FX/Commodities	Spot	% Change WTD	QTD	YTD	Prior Year
EUR/USD	1.1	-0.59	-0.23	-0.23	-6.74
USD/JPY	113.7	-0.45	-1.22	-1.22	9.84
GBP/USD	1.4	-0.89	0.16	0.16	-1.31
USD/CHF	0.9	-0.27	-0.15	-0.15	2.96
USD (DXY)	95.6	0.50	-0.03	-0.03	6.11
Oil	77.0	2.89	12.01	12.01	62.44
Gold	1835.4	0.96	0.34	0.34	-1.85

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 BofAML), Bank Loans (Credit Suisse), and CLOs (Palmer Square). European returns are unhedged in euros unless otherwise indicated. An investment cannot be made directly in an index.

NOTICE: IMPORTANT INFORMATION

Source(s) of data (unless otherwise noted): PGIM Fixed Income as of January 2022

PGIM Fixed Income operates primarily through PGIM, Inc., a registered investment adviser under the U.S. Investment Advisers Act of 1940, as amended, and a Prudential Financial, Inc. ("PFI") company. Registration as a registered investment adviser does not imply a certain level or skill or training. PGIM Fixed Income is headquartered in Newark, New Jersey and also includes the following businesses globally: (i) the public fixed income unit within PGIM Limited, located in London; (ii) PGIM Netherlands B.V., located in Amsterdam; (iii) PGIM Japan Co., Ltd. ("PGIM Japan"), located in Tokyo; (iv) the public fixed income unit within PGIM (Hong Kong) Ltd. located in Hong Kong; and (v) the public fixed income unit within PGIM (Singapore) Pte. Ltd., located in Singapore ("PGIM Singapore"). PFI of the United States is not affiliated in any manner with Prudential plc, incorporated in the United Kingdom or with Prudential Assurance Company, a subsidiary of M&G plc, incorporated in the United Kingdom. Prudential, PGIM, their respective logos, and the Rock symbol are service marks of PFI and its related entities, registered in many jurisdictions worldwide.

These materials are for informational or educational purposes only. The information is not intended as investment advice and is not a recommendation about managing or investing assets. In providing these materials, PGIM is not acting as your fiduciary. Clients seeking information regarding their particular investment needs should contact their financial professional. These materials represent the views and opinions of the author(s) regarding the economic conditions, asset classes, securities, issuers or financial instruments referenced herein. Distribution of this information to any person other than the person to whom it was originally delivered and to such person's advisers is unauthorized, and any reproduction of these materials, in whole or in part, or the divulgence of any of the contents hereof, without prior consent of PGIM Fixed Income is prohibited. Certain information contained herein has been obtained from sources that PGIM Fixed Income believes to be reliable as of the date presented; however, PGIM Fixed Income cannot guarantee the accuracy of such information, assure its completeness, or warrant such information will not be changed. The information contained herein is current as of the date of issuance (or such earlier date as referenced herein) and is subject to change without notice. PGIM Fixed Income has no obligation to update any or all of such information; nor do we make any express or implied warranties or representations as to the completeness or accuracy or accept responsibility for errors. **All investments involve risk, including the possible loss of capital. These materials are not intended as an offer or solicitation with respect to the purchase or sale of any security or other financial instrument or any investment management services and should not be used as the basis for any investment decision. No risk management technique can guarantee the mitigation or elimination of risk in any market environment. Past performance is not a guarantee or a reliable indicator of future results and an investment could lose value. No liability whatsoever is accepted for any loss (whether direct, indirect, or consequential) that may arise from any use of the information contained in or derived from this report. PGIM Fixed Income and its affiliates may make investment decisions that are inconsistent with the recommendations or views expressed herein, including for proprietary accounts of PGIM Fixed Income or its affiliates.**

The opinions and recommendations herein do not take into account individual client circumstances, objectives, or needs and are not intended as recommendations of particular securities, financial instruments or strategies to particular clients or prospects. No determination has been made regarding the suitability of any securities, financial instruments or strategies for particular clients or prospects. For any securities or financial instruments mentioned herein, the recipient(s) of this report must make its own independent decisions.
Conflicts of Interest: PGIM Fixed Income and its affiliates may have investment advisory or other business relationships with the issuers of securities referenced herein. PGIM Fixed Income and its affiliates, officers, directors and employees may from time to time have long or short positions in and buy or sell securities or financial instruments referenced herein. PGIM Fixed Income and its affiliates may develop and publish research that is independent of, and different than, the recommendations contained herein. PGIM Fixed Income's personnel other than the author(s), such as sales, marketing and trading personnel, may provide oral or written market commentary or ideas to PGIM Fixed Income's clients or prospects or proprietary investment ideas that differ from the views expressed herein. Additional information regarding actual and potential conflicts of interest is available in Part 2A of PGIM Fixed Income's Form ADV.

In the **United Kingdom**, information is issued by PGIM Limited with registered office: Grand Buildings, 1-3 Strand, Trafalgar Square, London, WC2N 5HR. PGIM Limited is authorised and regulated by the Financial Conduct Authority ("FCA") of the United Kingdom (Firm Reference Number 193418). In the **European Economic Area** ("EEA"), information is issued by PGIM Netherlands B.V., an entity authorised by the Autoriteit Financiële Markten ("AFM") in the Netherlands and operating on the basis of a European passport. In certain EEA countries, information is, where permitted, presented by PGIM Limited in reliance of provisions, exemptions or licenses available to PGIM Limited under temporary permission arrangements following the exit of the United Kingdom from the European Union. These materials are issued by PGIM Limited and/or PGIM Netherlands B.V. to persons who are professional clients as defined under the rules of the FCA and/or to persons who are professional clients as defined in the relevant local implementation of Directive 2014/65/EU (MiFID II). In certain countries in **Asia-Pacific**, information is presented by PGIM (Singapore) Pte. Ltd., a Singapore investment manager registered with and licensed by the Monetary Authority of Singapore. In **Japan**, information is presented by PGIM Japan Co. Ltd., registered investment adviser with the Japanese Financial Services Agency. In **South Korea**, information is presented by PGIM, Inc., which is licensed to provide discretionary investment management services directly to South Korean investors. In **Hong Kong**, information is provided by PGIM (Hong Kong) Limited, a regulated entity with the Securities & Futures Commission in Hong Kong to professional investors as defined in Section 1 of Part 1 of Schedule 1 (paragraph (a) to (i) of the Securities and Futures Ordinance (Cap.571). In **Australia**, this information is presented by PGIM (Australia) Pty Ltd ("PGIM Australia") for the general information of its "wholesale" customers (as defined in the Corporations Act 2001). PGIM Australia is a representative of PGIM Limited, which is exempt from the requirement to hold an Australian Financial Services License under the Australian Corporations Act 2001 in respect of financial services. PGIM Limited is exempt by virtue of its regulation by the FCA (Reg: 193418) under the laws of the United Kingdom and the application of ASIC Class Order 03/1099. The laws of the United Kingdom differ from Australian laws. In **South Africa**, PGIM, Inc. is an authorised financial services provider – FSP number 49012. In **Canada,** pursuant to the international adviser registration exemption in National Instrument 31-103, PGIM, Inc. is informing you that: (1) PGIM, Inc. is not registered in Canada and is advising you in reliance upon an exemption from the adviser registration requirement under National Instrument 31-103; (2) PGIM, Inc.'s jurisdiction of residence is New Jersey, U.S.A.; (3) there may be difficulty enforcing legal rights against PGIM, Inc. because it is resident outside of Canada and all or substantially all of its assets may be situated outside of Canada; and (4) the name and address of the agent for service of process of PGIM, Inc. in the applicable Provinces of Canada are as follows: in **Québec:** Borden Ladner Gervais LLP, 1000 de La Gauchetière Street West, Suite 900 Montréal, QC H3B 5H4; in **British Columbia:** Borden Ladner Gervais LLP, 1200 Waterfront Centre, 200 Burrard Street, Vancouver, BC V7X 1T2; in **Ontario:** Borden Ladner Gervais LLP, 22 Adelaide Street West, Suite 3400, Toronto, ON M5H 4E3; in **Nova Scotia:** Cox & Palmer, Q.C., 1100 Purdy's Wharf Tower One, 1959 Upper Water Street, P.O. Box 2380 - Stn Central RPO, Halifax, NS B3J 3E5; in **Alberta:** Borden Ladner Gervais LLP, 530 Third Avenue S.W., Calgary, AB T2P R3.

U.S. Investment Grade Corporate Bonds: Bloomberg Barclays U.S. Corporate Bond Index: The Bloomberg Barclays U.S. Investment Grade Corporate Bond Index covers U.S.D-denominated, investment-grade, fixed-rate or step up, taxable securities sold by industrial, utility and financial issuers. It includes publicly issued U.S. corporate and foreign debentures and secured notes that meet specified maturity, liquidity, and quality requirements. 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.

European Investment Grade Corporate Bonds: Bloomberg Barclays European Corporate Bond Index (unhedged): The Bloomberg Barclays 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: ICE BofAML European Currency High Yield Index: This data represents the ICE BofAML Euro High Yield Index value, which tracks the performance of Euro denominated below investment grade corporate debt publicly issued in the euro domestic or eurobond markets. Qualifying securities must have a below investment grade rating (based on an average of Moody's, S&P, and Fitch). Qualifying securities must have at least one year remaining term to maturity, a fixed coupon schedule, and a minimum amount outstanding of €100 M. ICE Data Indices, LLC, used with permission. ICE DATA INDICES, LLC IS LICENSING THE ICE DATA INDICES AND RELATED DATA "AS IS," MAKES NO WARRANTIES REGARDING SAME, DOES NOT GUARANTEE THE SUITABILITY, QUALITY, ACCURACY, TIMELINESS, AND/OR COMPLETENESS OF THE ICE DATA INDICES OR ANY DATA INCLUDED IN, RELATED TO, OR DERIVED THEREFROM, ASSUMES NO LIABILITY IN CONNECTION WITH THEIR USE, AND DOES NOT SPONSOR, ENDORSE, OR RECOMMEND PGIM FIXED INCOME OR ANY OF ITS PRODUCTS OR SERVICES.

U.S. Senior Secured Loans: Credit Suisse Leveraged Loan Index: The Credit Suisse Leveraged Loan Index is a representative, unmanaged index of tradable, U.S. dollar denominated floating rate senior secured loans and is designed to mirror the investable universe of the U.S. dollar denominated leveraged loan market. The Index return does not reflect the impact of principal repayments in the current month.

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: JP 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 Index may not be copied, used, or distributed without J.P. Morgan's prior written approval. Copyright 2021, J.P. Morgan Chase & Co. All rights reserved.

Emerging Markets Local Debt (unhedged): JPMorgan 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: JP 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: JP Morgan Emerging Local Markets Index Plus: The JP Morgan Emerging Local Markets Index Plus (JPM ELMI+) tracks total returns for local currency–denominated money market instruments.

Municipal Bonds: Bloomberg Barclays 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 Barclays U.S. Treasury Bond Index: The Bloomberg Barclays 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.

Mortgage Backed Securities: Bloomberg Barclays U.S. MBS - Agency Fixed Rate Index: The Bloomberg Barclays U.S. Mortgage Backed Securities (MBS) Index tracks agency mortgage backed pass-through securities (both fixed-rate and hybrid ARM) guaranteed by Ginnie Mae (GNMA), Fannie Mae (FNMA), and Freddie Mac (FHLMC). The index is constructed by grouping individual TBA-deliverable MBS pools into aggregates or generics based on program, coupon and vintage.

Commercial Mortgage-Backed Securities: Bloomberg Barclays CMBS: ERISA Eligible Index: The index measures the performance of investment-grade commercial mortgage-backed securities, which are classes of securities that represent interests in pools of commercial mortgages. The index includes only CMBS that are Employee Retirement Income Security Act of 1974, which will deem ERISA eligible the certificates with the first priority of principal repayment, as long as certain conditions are met, including the requirement that the certificates be rated in one of the three highest rating categories by Fitch, Inc., Moody's Investors Services or Standard & Poor's.

Palmer Square AAA CLO DM Index represents the discount margin of CLO AAA rated tranches in the Palmer Square CLO Senior Index, which is designed to reflect the investable universe of U.S CLO senior original rated AAA and AA debt issued after Jan 1, 2011.

Global Aggregate Bond Index is a measure of global investment grade debt from twenty four local currency markets. This multi-currency benchmark includes treasury, government-related, corporate and securitized fixed-rate bonds from both developed and emerging markets issuers.

U.S. Aggregate Bond Index: Bloomberg Barclays U.S. Aggregate Bond Index: The Bloomberg Barclays 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.

Euro Aggregate Bond Index is a broad-based flagship benchmark that measures the investment grade, euro-denominated, fixedrate bond market, including treasuries, government-related, corporate and securitized issues. Inclusion is based on currency denomination of a bond and not country of risk of the issuer.

Japanese Aggregate Bond Index The Japanese Aggregate Index contains fixed-rate investment-grade securities denominated in Japanese yen and registered as domestic bonds. The index is composed primarily of local currency sovereign debt but also includes government-related, corporate, and securitized bonds.

The S&P 500® is widely regarded as the best single gauge of large-cap U.S. equities. There is over U.S.D 9.9 trillion indexed or benchmarked to the index, with indexed assets comprising approximately U.S.D 3.4 trillion of this total. The index includes 500 leading companies and captures approximately 80% coverage of available market capitalization.

The DAX Index is a total return index of 30 selected German blue chip stocks traded on the Frankfurt Stock Exchange. The equities use free float shares in the index calculation. The DAX has a base value of 1,000 as of December 31, 1987. As of June 18, 1999 only XETRA equity prices are used to calculate all DAX indices.

The STOXX 600 Index is derived from the STOXX Europe Total Market Index (TMI) and is a subset of the STOXX Global 1800 Index. With a fixed number of 600 components, the STOXX Europe 600 Index represents large, mid and small capitalization companies across 17 countries of the European region.

The Nikkei 225 Index is a price-weighted average of 225 top-rated Japanese companies listed in the First Section of the Tokyo Stock Exchange. The Nikkei Stock Average was first published on May 16, 1949.

Shanghai Composite Index is a capitalization-weighted index. The index tracks the daily price performance of all A-shares and B-shares listed on the Shanghai Stock Exchange. The index was developed on December 19, 1990.

MSCI ACWI is a free-float weighted equity index. It was developed with a base value of 100 as of December 31 1987. MXWD includes both emerging and developed world markets.

FTSE 100 is a capitalization-weighted index of the 100 most highly capitalized companies traded on the London Stock Exchange. The equities use an investibility weighting in the index calculation. The index was developed with a base level of 1000 as of December 30, 1983.

MOVE Index is a yield curve weighted index of the normalized implied volatility on 1-month Treasury options. It is the weighted average of volatilities on the CT2, CT5, CT10, and CT30. (weighted average of 1m2y, 1m5y, 1m10y and 1m30y Treasury implied vols with weights 0.2/0.2/0.4/0.2, respectively).

VIX Index is a financial benchmark designed to be an up-to-the-minute market estimate of the expected volatility of the S&P 500® Index, and is calculated by using the midpoint of real-time S&P 500 Index (SPX) option bid/ask quotes.

Bloomberg Commodity Index Bloomberg Commodity Index (BCOM) is calculated on an excess return basis and reflects commodity futures price movements. The index rebalances annually weighted 2/3 by trading volume and 1/3 by world production and weight-caps are applied at the commodity, sector and group level for diversification. Roll period typically occurs from 6th-10th business day based on the roll schedule.

The U.S. Dollar Index indicates the general international value of the USD. The USDX does this by averaging the exchange rates between the USD and major world currencies. The ICE US computes this by using the rates supplied by some 500 banks.

2022-0669