

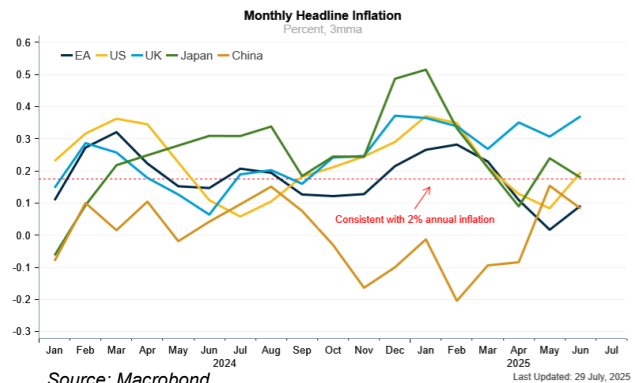
# Trade Deals Maintain the Emphasis on Carry

WEEKLY VIEW FROM THE DESK | July 28, 2025

[LINK TO WEEKLY RETURNS TABLE](#)

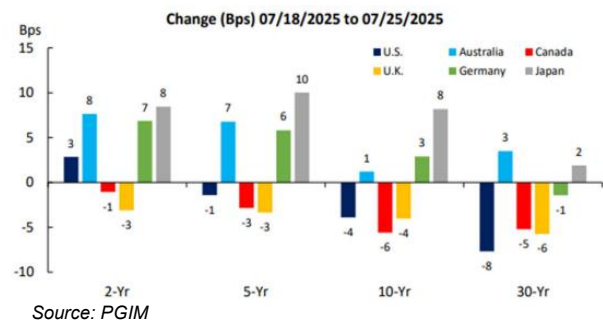
## MACRO

- Global risk sentiment received another boost from a slew of recent U.S. trade deals with the EU, Japan, Philippines, and Indonesia (South Korea could also be forthcoming). **The EU agreement** features the world's largest trading partnership given the EU's relatively open economic structure (indeed, more globally traded goods [are invoiced in euros](#) than in U.S. dollars). While many details of the pact are still to be resolved, it sets a 15% tariff baseline, including pharmaceuticals and semiconductors. Higher 50% tariffs still exist on steel and aluminum, but those could also be subject to further negotiations. The deal also includes \$250B in annual energy purchases and a pledge for a \$600B investment over the second Trump term.
- From a European vantage, **the pros** of the pact include the avoidance of threatened 30% tariffs, creation of some near-term certainty on which European businesses can build, and the lack of retaliation, which leaves the door for potential ECB rate cuts in the event economic activity slows precipitously. **The cons** of the initial agreement include room to backpedal, potentially unrealistic amounts as the EU currently imports about \$100B in U.S. energy annually, and a tariff level that is 10x higher than at the start of the year. **Our takeaway** for Europe thus far is that the deal could shave about 0.3-0.4 percentage points off of GDP growth over 1.5 years, but we believe this is largely baked into our estimates for real GDP growth of 1.1% this year and 1.2% in 2026.
- The contours of the EU deal were similar to those in the U.S. **deal with Japan**, which also set the tariff rate at 15% (including autos)—down from the threatened 25%—and included a \$550B Japanese investment package. Meanwhile, the loss of the LDP coalition's majority in Japan's upper house raises the probability of greater fiscal spending, likely adding to the pressure at the back of global DM yield curves (see the DM rates section below). The combination of the tariff deal and the country's solid economic activity suggests that further policy normalization may be forthcoming from the Bank of Japan.



## DEVELOPED MARKET RATES

- Although we believe the BoJ prefers to remain on hold, it may feel compelled to hike rates from 0.50% later this year to strengthen the yen and reduce imported inflation, which has been driving CPI above 3%. The next "live" policy meeting for the BoJ could be in October. A stronger yen could reduce imported inflation, boost household purchasing power, and potentially create a more sustainable, domestically driven inflation dynamic. The scenarios above (i.e., increased fiscal spending and a higher policy-rate structure) could continue to weigh on the back end of DM yield curves, particularly if Japanese investors start repatriating overseas assets into competitively-yielding JGBs.
- Our general DM duration view is that slowing growth, elevated but temporary inflation, and dovish leaning central banks will continue to support front-end rates. We expect two Fed cuts this year—but no cut this week—and no further cuts from the ECB this year.
- Mortgage spreads were largely unchanged last week with some recent cheapening in mid-stack coupons. Market activity has been steady with active two-way trading, especially in basis and coupon swaps. High primary rates are keeping prepayment rates modest. Production coupon rolls are trading cheap to carry, and we continue to advocate for specified pools amid better OAS and duration management compared to TBAs.



## IG CORPORATES

- In the U.S., IG corporate spreads were 1 bp tighter last week—just 2 bps off their November tightness. Given high valuations, technicals continue to drive the market. Last week, demand exceeded \$3.6B, helping to push spreads tighter. On the supply side, deals totaled \$23B and were skewed toward higher quality issuance. Generally, deals were 4.3x over-subscribed and came with a 2-bp concession. Only about 11% of issuance was on the back end. This is below the long-term average of ~20%. Given this, any expectations of the IG curve steepening would require a meaningful move lower on front-end yields and/or a large pick-up in supply from M&A activity.
- In terms of sectors, financials led performance due to strong bank earnings. In addition, less-than-expected issuance from GSIBs (global systemically important banks) drove money center banks 3-5 bps tighter. Despite weaker earnings, autos benefited from tariff relief which helped tighten spreads by 5-8 bps. Energy and utilities showed resilience, while rails and chemicals underperformed due to M&A rumors and weak earnings, respectively.
- To date, about one-third of companies in the S&P 500 have reported, of which 80% beat both revenue and earnings expectations. Blended EPS growth is around 6.5%. An additional 160 companies will be reporting this week, including Microsoft and Amazon.

- In Europe, EUR IG cash spreads ended last week 4 bps tighter at OAS+81—the tightest level since Feb. 2018. Financials outperformed, and beta compression continued despite weak earnings and profit warnings from a number of cyclical issuers (e.g., chemicals and autos).
- Spreads tightened following the U.S.-Japan trade deal and gained further momentum on headlines of a potential U.S.-EU trade agreement with a 15% tariff rate ahead of the August 1 deadline. In addition, spreads benefitted from the sell-off in European government bonds following last week's ECB meeting as yield buyers stepped up their buying programs.
- Technicals remain strong due to additional inflows into EUR IG over the week. In addition, issuance slowed to just €3.5B—the second lightest week YTD. Reverse Yankee issuance remains a theme, with Pepsi, FedEx, and Athene all issuing in EUR last week, bringing the reverse Yankee share of total EUR IG corporate issuance close to 30% YTD. We expect supply to remain light this week (i.e., in the €3B-€5B range) as we approach the summer.

## LEVERAGED FINANCE

- Despite heavy primary activity, U.S. HY bond spreads tightened last week, fueled by a U.S.-Japan trade deal, solid earnings, and resilient economic data. All credit tiers edged positive, with CCCs posting the strongest gains, and Bs outperforming BBs. Among sectors, metals & mining, consumer products, and automotive were the strongest, while cable, healthcare, and food & drug retail, were the softest.
- Primary activity remained active, with \$8.9B across 11 deals coming to market. Nearly 40% of proceeds supported acquisitions or general corporate purposes. Including last week's volume, this has been busiest July primary market in at least six years. Inflows continued, with \$912M flowing into the market.
- U.S. bank loans were flat as investors absorbed the second highest weekly primary volume on record, with over \$85B across 54 transactions coming to market—largely to take advantage favorable repricing conditions. Most repricing deals cleared well, with a handful pricing wide of guidance, and many tightening inside of talk. The percentage of loans trading at or above par was around 58%, and another 18% were trading above 99.
- European HY bonds tightened around 16 bps, bringing spreads to the lowest they've been this decade to post-GFC tight. Dispersion prevails, with volatility concentrated to certain segments, while the broader market grinds tighter. Notably, cyclical and tariff-exposed sectors such as automotive and chemicals (which had underperformed in recent months) found support last week on better-than-expected earnings and trade headlines. Primary issuance is slowing as the summer lull ensues.

## EMERGING MARKETS

- EM hard currency spreads tightened last week and are now at the tight of the year. The single-B-and-below segment saw strong performance with spread compression continuing as the market responded favorably to trade deals and macro data in the current "reach for yield" environment. Mexico announced it would support the issuance of \$7-10B of PCaps for Pemex—a step closer to an explicit guarantee. While not entirely off-balance-sheet, the structure facilitates Mexico's domestic, political, and local financing strategies, as well as helping with near-term supplier maturities. Pemex spreads were 35-90 bps tighter and the spread between Mex and Pemex collapsed by ~100 bps in some maturities, with the relevant spread now between +250-270 bps along the curve. The issuance supports our long-held thesis that the preferred way to get exposure to the Mexican HC complex is through the quasi sovereign and corporates.
- EMFX gained last week, with Europe leading and Asia lagging. Within regions, CEE3 currencies posted strong returns, with HUF, CZK, and PLN leading. MXN was the standout performer within LatAm while COP lagged all currencies as a steady decrease in the implied yields reduced its relative carry. Meanwhile, EGP saw another week of steady inflows, driving the currency to YTD higher versus the dollar. The TRY posted positive total returns following a 300 bp rate cut by the CBRT.
- In EM local rates, the index yield was flat last week. Big movers were South Africa (tighter), Turkey (tighter), Colombia (wider), and China (wider). Both bonds and swaps in South Africa performed well last week due to positive developments on the budget and the stability of the GNU. Colombian local bonds sold off 10-15 bps following recent outperformance. In China, headlines around various fiscal support programs continued to put some pressure on local yields.
- EM corporate spreads were slightly tighter, with HY paper outperforming. Turkish corporates outperformed, driven by the sovereign upgrade to BB-/Ba3 while Brazil underperformed due to pressure on Braskem. The market is now basically back to the end of March levels, reversing the widening from tariff headlines.

## SECURITIZED PRODUCTS

- CMBS conduit AAA, SASB AAA, and CRE CLO AAA spreads tightened last week, as did their respective subordinate tranches. Two transactions priced—one conduit and one agency. The SASB and CRE CLO pipelines continue to build as spreads retrace from April widening.
- In RMBS, heavy new issuance pressured non-QM spreads wider while CRT spreads held steady on light new issuance. Ten deals totaling \$3.6B priced, of which \$2.2B across five deals were Non-QM, followed by three second-lien deals totaling \$900M. Home prices are up by about 1.93% YTD for the month of April.
- U.S. CLO primary and secondary markets remained active: Primary investors absorbed \$12.5B across 25 transactions, including nine new issues, 10 resets, and six refinancings, while secondary market activity was elevated. Europe's primary market also remained active, with €2.9B across seven deals, including four new issues, and three resets pricing. Activity in the European secondary market increased after a quieter period the previous week.
- ABS spreads tightened while the ABS premium over U.S. corporates edged 1 bp wider to 42 bps. Primary activity picked up—including auto, unsecured consumer, fleet and equipment transactions—with most deals pricing tighter than guidance. We're anticipating a quiet primary market into the month-end.

## MUNICIPALS

- Tax-exempt munis finally saw some outperformance vs Treasuries last week amidst the risk-on sentiment from broader markets as the U.S. closed in on trade deals. M/T yield ratios on the 5-year, 10-year and 30-year ended the week at 65%, 76%, and 96%, respectively. Notably, long end municipal rates still look historically attractive, as does the slope of the muni curve.
- Overall fund flows turned positive after the prior week's negative print. Inflows totaled \$574M, bringing the YTD supply to \$14.7B, with \$11.6B from ETFs and \$3.1B from open-end funds. Fund flows have created a disparity in performance between IG and HY and short and long funds. On the headlines, we view Columbia's settlement as a positive for the sector that modestly impacts university balance sheets in the short term but offers more clarity over the future.

# THE RETURNS TABLE As of July 25, 2025

Sovereign Rates	Duration	YTM	OAS	Yield/ OAS Change (BPS)				Total Return (%)			
				WTD	QTD	YTD	Prior Year	WTD	QTD	YTD	Prior Year
U.S. 2-Year	1.83	3.93	---	5	20	-32	-51	0.00	-0.12	2.56	4.49
U.S. 5-Year	4.43	3.96	---	1	16	-43	-17	0.11	-0.45	4.16	4.61
U.S. 10-Year	7.86	4.39	---	-3	16	-18	15	0.43	-0.92	4.06	3.02
U.S. 10-Year Breakeven	--	2.42	---	0	14	8	15	---	---	---	---
U.S. 10-Year TIPS	4.51	1.97	---	-1	4	-26	0	0.27	0.07	5.87	5.04
U.S. 20-Year	12.38	4.93	---	-6	15	6	35	1.04	-1.30	1.42	-0.71
U.S. 30-Year	15.47	4.93	---	-6	16	15	45	1.29	-1.80	0.31	-2.90
U.S. SOFR	---	---	---	6	-9	-13	-99	0.08	0.30	2.51	4.76
UK 10-Year	7.56	4.63	---	-4	15	7	51	0.38	-0.80	1.69	1.69
Germany 10-Year	8.71	2.72	---	2	11	35	30	-0.15	-0.32	-0.32	-0.32
Switzerland 10-Year	9.75	0.41	---	-4	0	14	-7	0.30	0.02	-0.64	1.50
Japan 10-Year	8.55	1.60	---	7	18	52	55	-0.52	-1.38	-1.38	-1.38
Australia 10-Year	8.42	4.34	---	1	18	-2	3	0.02	-1.24	2.94	4.50
Canada 10-Year	8.29	3.52	---	-5	25	30	15	0.46	-1.85	1.89	1.89
<b>MAJOR FI MS INDICES</b>											
Global Aggregate Unhedged	6.48	3.58	30	-1	-2	-5	-8	0.39	-0.77	6.45	6.19
Global Aggregate Hedged	6.48	3.58	30	-1	-2	-5	-8	0.15	-0.33	2.47	4.71
U.S. Aggregate	6.07	4.64	30	0	-2	-4	-8	0.37	-0.40	3.60	4.49
Euro-Aggregate (Unhedged)	6.35	2.85	49	-2	-3	-13	-17	-0.01	-0.27	0.57	3.12
Japanese Aggregate	8.48	1.53	0	0	0	0	0	-0.37	-1.32	-3.87	-3.74
<b>MAJOR FI CREDIT INDICES</b>											
Mortgage-Backed (Agency)	5.93	5.07	37	1	0	-6	-8	0.31	-0.47	3.74	4.62
Global IG Corporate Bonds	5.95	4.49	80	-2	-8	-8	-21	0.57	-0.12	7.27	7.86
U.S. IG Corporate Bonds	6.91	5.07	76	-2	-7	-4	-18	0.56	-0.11	4.06	5.63
European IG Corporate	4.55	3.04	81	-4	-11	-21	-29	0.02	0.32	2.12	5.10
U.S. High Yield Bonds	3.22	7.03	274	-9	-16	-13	-29	0.35	0.48	5.07	9.12
European High Yield Bonds	2.93	5.34	295	-15	-26	-22	-81	0.25	0.68	2.99	7.88
U.S. Leveraged Loans	0.3	8.12	446	2	-13	-29	-56	0.08	0.82	3.80	7.75
European Leveraged Loans	0.3	7.06	454	0	-9	-18	-20	0.09	0.44	2.83	6.33
EM Hard Currency Sovs.	6.48	7.50	302	-7	-20	-23	-92	0.76	0.81	6.35	9.53
EM Corporates	4.29	6.71	251	-2	-15	10	-22	0.34	0.65	4.71	7.43
EM Currencies	---	6.02	---	0	1	-2	-1	0.36	-0.09	10.33	9.80
EM Local Rates	5.30	5.99	6	0	0	0	0	0.14	0.50	4.93	7.02
CMBS	3.88	4.82	80	-1	-4	0	-17	0.18	-0.17	4.32	6.35
ABS	2.71	4.51	52	-1	-5	8	-6	0.13	0.06	2.99	5.47
CLOs	3.80	4.97	136	0	-1	-5	-12	0.09	0.38	3.09	5.98
Municipal Bonds	7.04	4.02	---	-5	7	28	45	0.40	-0.65	-0.99	-0.42

Equity/Volatility	Level	Total Return (%)				Prior Yr	% Change					
		WTD	QTD	YTD	FX/Commodities		Spot	WTD	QTD	YTD	Prior Year	
S&P 500 Index	6,389	1.5	3.0	9.4	19.9	EUR/USD	1.2	1.0	-0.4	13.4	8.3	
DAX	24,218	-0.3	1.3	21.6	32.3	USD/JPY	147.7	-0.8	2.5	-6.0	-4.1	
Stoxx 600	550	0.6	1.7	11.3	11.9	GBP/USD	1.3	0.2	-2.1	7.4	4.6	
Nikkei 225	41,456	4.1	2.4	5.0	11.6	EUR/CHF	0.9	0.2	-0.1	-0.7	-2.4	
Shanghai Composite	3,594	1.7	5.1	9.3	27.9	USD/CHF	0.8	-0.7	0.3	-12.3	-9.8	
MSCI ACWI Index	941	1.4	2.6	13.2	20.4	USD (DXY)	97.6	-0.8	0.8	-10.0	-6.4	
FTSE 100	9,120	1.4	4.1	14.0	15.5	Oil	66.1	-1.8	1.5	-7.8	-16.9	
MOVE Index	82	-1.4	-9.1	-16.9	-17.1	Gold	3337.3	-0.4	1.0	27.2	41.1	
VIX Index	15	-9.0	-10.8	-13.9	-19.1	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.						

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 (S&P), 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 as of June 2025.

**For Professional Investors only. Past performance is not a guarantee or a reliable indicator of future results and an investment could lose value. All investments involve risk, including the possible loss of capital.**

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 of 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. PGIM Fixed Income as a general matter provides services to qualified institutions, financial intermediaries and institutional investors. Investors seeking information regarding their particular investment needs should contact their own 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.

Any forecasts, estimates and certain information contained herein are based upon proprietary research and should not be interpreted as investment advice, as an offer or solicitation, nor as the purchase or sale of any financial instrument. Forecasts and estimates have certain inherent limitations, and unlike an actual performance record, do not reflect actual trading, liquidity constraints, fee. 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. 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.

Investing in the **bond market** is subject to risks, including market, interest rate, issuer, credit, inflation risk, and liquidity risk. The value of most bonds and bond strategies are impacted by changes in interest rates. Bonds and bond strategies with longer durations tend to be more sensitive and volatile than those with shorter durations; bond prices generally fall as interest rates rise, and low interest rate environments increase this risk. Reductions in bond counterparty capacity may contribute to decreased market liquidity and increased price volatility. Bond investments may be worth more or less than the original cost when redeemed. **Mortgage- and asset-backed securities** may be sensitive to changes in interest rates, subject to early repayment risk, and while generally supported by a government, government agency or private guarantor, there is no assurance that the guarantor will meet its obligations. **High yield, lower-rated securities** involve greater risk than higher-rated securities; portfolios that invest in them may be subject to greater levels of credit and liquidity risk than portfolios that do not. Investing in **foreign-denominated and/or -domiciled securities** may involve heightened risk due to currency fluctuations, and economic and political risks, which may be enhanced in emerging markets. Currency rates may fluctuate significantly over short periods of time and may reduce the returns of a portfolio. **Commodities** contain heightened risk, including market, political, regulatory and natural conditions, and may not be suitable for all investors. **Diversification** does not ensure against loss.

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 including those available 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 **Switzerland**, information is issued by PGIM Limited, London, through its Representative Office in Zurich with registered office: Kappelerstrasse 14, CH-8001 Zurich, Switzerland. PGIM Limited, London, Representative Office in Zurich is authorised and regulated by the Swiss Financial Market Supervisory Authority FINMA and these materials are issued to persons who are professional or institutional clients within the meaning of Art.4 para 3 and 4 FinSA in Switzerland. In certain countries in **Asia-Pacific**, information is presented by PGIM (Singapore) Pte. Ltd., a regulated entity with the Monetary Authority of Singapore under a Capital Markets Services License to conduct fund management and an exempt financial adviser. 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 of the Securities and Futures Ordinance (Cap.571). In **Australia**, information is issued by PGIM (Australia) Pty Ltd ("PGIM Australia") for the general information of its wholesale clients (as defined in the Corporations Act 2001). PGIM Australia is an Australian financial services ("AFS") licence holder (AFS licence number 544946). 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 3R3.

© 2025 PFI and its related entities.

**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:** The iBoxx USD Leveraged Loan index family represents the main sections of the USD leveraged loan market. Index constituents are derived using selection criteria such as loan type, minimum size, liquidity, credit ratings, initial spreads and minimum time to maturity.

**European Senior Secured Loans:** The index universe of the S&P UBS Western European Leveraged Loan Index is meant to represent assets or activity in Western Europe, and includes loans denominated in EUR, GBP, or USD.

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, fixed rate 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.