PGIM FIXED INCOME

SVB Reveals Sector Cracks, Opportunities

WEEKLY VIEW FROM THE DESK | March 13, 2023

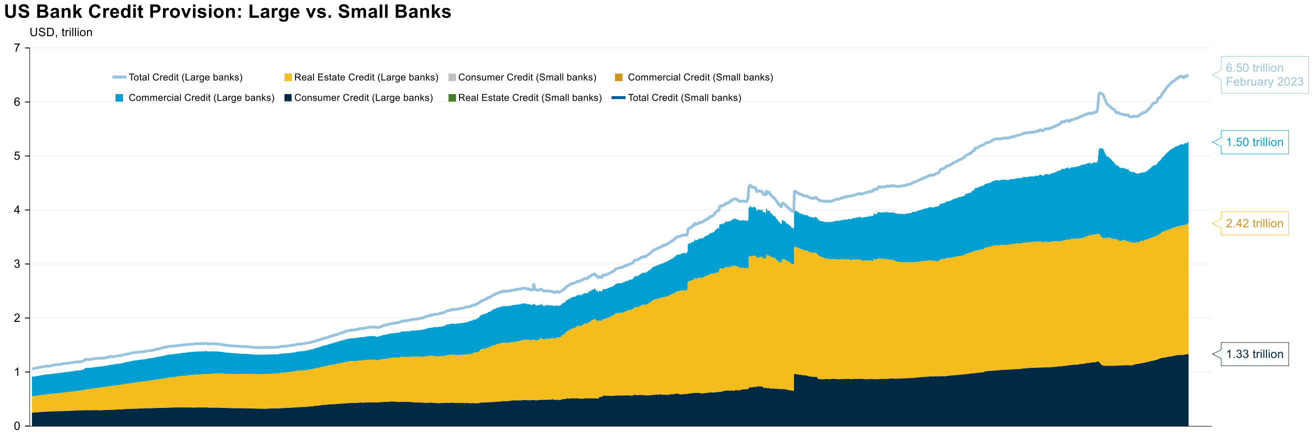
QUICK LINK TO THE RETURNS TABLE

This edition focuses on the implications from the Silicon Valley Bank (SVB) failure. Click here for additional background information.

MACRO

- The failures of SVB and Signature Bank reveal fragilities within the U.S. banking system, particularly as it pertains to regional insitutitions (see below). Yet, we believe the situation presents some positive takeaways from a bondholder perspective. The situation will likely lead to tigher banking regulation going forward, enhancing the perception of the sector's credit quality. Furthermore, we believe the economic ramifications (also below) point to less inflationary pressure going forward, which may indicate a supportive backdrop for fixed income spread sectors considering the relatively healthy economic backdrop (save for inflation).
- As we contemplate regulators' moves to stem contagion, each step raises its respective questions. For example, the Fed's Bank Term Funding Program that offers loans to depository institutions at OIS + 10 bps for eligible Treasury securities and MBS, which will be valued at par, is backed by a $25B buffer from the Treasury's Exchange Stabilization Fund to cover potential losses. In essense, we view the buffer as a form of implicit capital injection into the banking system, which carries political ramifications. In addition, the program raises the issue of the stigma associated with its use (once borrowing is made public). The situation with SVB's balance sheet and its available-for-sale securities also raises the question of how the Fed will assess borrower solvency regarding use of the program.
- We believe there will be tangible economic effects from SVB's collapse. Although about 20% of U.S. credit provision flows through banks, with the remaining majority flowing through the capital markets, the bank provisioning is signficant at about $6.5T, and a retrenchment could inhibit credit creation, especially among smaller, regional banks.
- The fallout also extends to our expectations for monetary policy. Following Friday's solid, but mixed, U.S. payroll report, we anticipated a 50 bps hike in the Fed funds target at next week's FOMC meeting. However, at this point, we see a 25 bps hike on the way to a peak Fed funds rate of 5.5%, which is consistent with our prior views. Looking toward the second half of 2023, we believe SVB's collapse adds impetus to the rationale for multiple, precautionary rate cuts towards the end of the year.
- The situation also broaches into the political realm given what we view as an implicit liquidity injection into the banking system and questions regarding government-related backstops for all unisured depositors (in addition to the issue of whether the Deposit Insurance Fund is large enough to implicitly cover uninsured investors). It otherwise opens some precarious questions about the government's role within the sector.

US Bank Credit Provision: Large vs. Small Banks



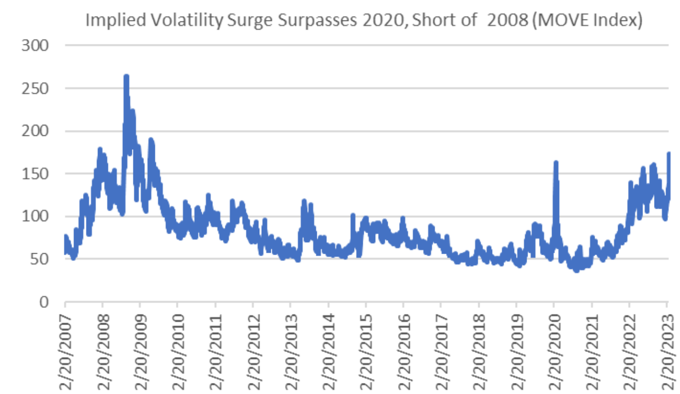
Source: U.S. Federal Reserve

BANKING SECTOR

- Our views on the implications for the U.S. banking sector include the following. We anticipate tighter regulation on deposit concentration limits as well as the removal of filters and opt-outs on accumulated other comprehensive income (AOCI) for category 3 banks (e.g., those with more than $250B in total assets or more than $75B in non-bank assets, such as Capital One and PNC).
- In addition, liquidity coverage ratios may be imposed on category 4 banks (i.e., those with $100B to $250B in total assets, which included SVB), and total loss absorbing capital rules for regional banks will likely accelerate as well. Deposit costs will also likely rise, net interest margins may shrink, and abrupt adjustments in balance sheet positioning will likely draw greater scrutiny.
- All of that said, it cannot be ruled out that there will be some—albeit limited—strain in the markets for wholesale or corporate deposit funding, especially for smaller banks. Corporate treasurers may well choose to move around deposits in the interest of diversification. This could, in turn, change the plans of a number of banks regarding how they will repay the long-term facilities put in place by central banks in the various crises of recent years (for instance TLTRO in the Euro Area and TFSME in the UK).
- From a bank client perspective, we anticipate some liquidity strain for venture capital and tech industry borrowers, possibly with some ripple effects on private credit valuation marks. But as indicated below, the consequent rally in Treasury rates was such that it could provide a welcomed boost to the mortgage and housing industries.

RATES

- Starting with the money market space, our primary focus is on the direction of flows given prime funds in the $1T market consist of anywhere from 50-90% of bank commercial paper. Importantly, we're monitoring for cracks in money market funds as spreads on banks' commercial paper is set to widen by anywhere from 50-100 bps, which is a significant move for money funds to endure, even if they're concentrated in one-year floating-rate paper. On Monday, rather than panic, the market was largely in stasis with little shift in momentum. In terms of market developments, Federal Home Loan Bank entered the market Monday with 3-4 month paper that priced at about 10 bps over SOFR whereas it usually funds at about SOFR flat.
- In extending from the money markets, our general rate view on Treasuries has deteriorated considering the significant week-over-week drop of about 45 bps on the U.S. 10-year yield and about 90 bps on the U.S. 2-year yield. Thus, we see this as contributing to a steeper yield curve going forward.
- Amid the surge in rate volatility, market liquidity was said to be strained, but available, and market pricing for Fed expectations shifted substantially as well. As recently as Thursday, market pricing indicated a Fed funds target of 5.16% by the end of the year, and that has since declined to 4.07% alongside expectations for reduced Fed tightening.
- We're holding a neutral short-term view on MBS after spreads widened last week, but we believe attractive opportunities will emerge longer term with the adjustment in bank balance sheets and an even more remote likelihood of asset sales from the Fed's balance sheet. We continue to favor coupons in the middle of the stack as opposed to lower coupon issues.



Source: PGIM Fixed Income, Bloomberg

IG CORPORATES

- U.S. IG corporate bond spreads widened 16 bps to 136 bps, compared to 130 bps at the start of the year. Spreads on bonds of U.S. financial firms widened around 20 bps last week, with average spreads on bonds of large, money-center banks like JPMorgan 25-30 bps wider, week over week. That's a remarkably moderate rise for money-center banks because a) many investors already considered these firms' bond spreads high, even before last week's events and b) because large, money-center banks stand to benefit from last week's events. We added bonds of all six money-center banks and some industrial bonds to our portfolios. By contrast, industrial firms' bond spreads widened just 14 bps last week and 15-25 bps week over week.
- In Europe, IG corporate bond spreads widened 6 bps last Friday, on thin trading volumes, to end last week 15 bps tighter for the year to date. Spreads tightened marginally this Monday as brokers took a wait-and-see approach for U.S. markets to open, and market making volumes cratered.
- Overall, European IG bonds appear to have underperformed U.S. IG bonds on weak market liquidity. Hence, we see the potential for a broader opportunity set in the European banking sector.
- European tier-2 bonds widened 30-40 bps compared to last week, U.S. banks' European bond spreads 25-30 bps, banks from peripheral countries like Italy 20-25 bps and weaker banks such as Credit Suisse by around 100 bps. Spreads on last week's new issues also widened, e.g. from 173 bps last Monday to 225 bps this Monday for Morgan Stanley, of which 25 bps today. As in the U.S., corporate industrial and utilities' IG bond spreads also widened, but less so than financials, and higher-beta credits underperformed.

HIGH YIELD

- The high yield bond market has almost no exposure to Regional Banks and around 1% exposure to banks, most of which is capital securities of European banks and some small, odd lot financials. While the broad high yield market is quoted lower, trading activity since SVB's collapse has been somewhat muted. Given the recent move in high yield spreads, we now view high yield as being closer to fair value and expect the up-in-quality preference for BBs to continue until there is clarity around 1) how the Fed plans to arrive at its terminal rate, 2) the longer-term impact of Quantitative Tightening on the various fixed income asset classes, and 3) the impact of SVB's failure on markets and the economy are known.
- Early last week the U.S. high yield bond market was relatively quiet but somewhat weaker. The collapse of SVB into the weekend then elevated risk premiums and pushed high yield spreads to their widest levels since the end of December. By quality, all ratings tiers posted negative returns, with BBs outperforming and lower-quality credits underperforming. Returns were also negative across all high yield sectors, with cable (-1.96%), telecom (-1.82%), and healthcare (-1.52%) the worst performers.
- U.S. high yield bond funds reported an inflow $10M for the week ended Wednesday and outflows of $841M based on daily data for the week ended Friday. YTD, outflows now total $11.8B. The high yield market ground to a halt with only one refinancing deal pricing—a $400M senior secured note issue for Ba1/BB+ rated issuer Popular Inc., with the 7.25% notes due 2028 pricing to yield 7.338%.
- On Friday, the U.S. loan market weakened, with higher-quality loans quoted down about 25 bps and lower-quality loans quoted down about 50-100 bps. The weakness persisted into Monday's trading session, with lower-quality loans down 75 bps to 200 bps. While Regional Bank exposure is de minimis in the bank loan market, we are mindful that Regional Banks may be holders of some higher-quality loans, which could possibly lead to some selling pressure should they become forced sellers.
- European high yield posted negative returns last week as hawkish central bankers dominated the first half of the week, which was followed by headlines out of the U.S. around SVB. However, leveraged loans posted a positive one-week return. We remain cautious on European high yield given our belief that current spread levels don't justify the risk premium and instead expect strong credit selection to be rewarded.

EMERGING MARKETS

- We're leaving our long-term outlook on EM hard-currency government bonds unchanged but we're lowering our outlook on EM corporate and quasi-sovereign bonds: the situation surrounding U.S. regional banks could lower growth and credit creation there, which could spread to emerging markets. Overall, however, our reduction in risk is marginal and we continue to focus on relative value opportunities in this sector e.g., corporates versus sovereigns. EM hard-currency bond spreads widened, EM local-currency yields fell in line with U.S. Treasury yields, and EM currencies posted a mixed performance, relative to the U.S. dollar.
- EM local-currency bond yields fell in line with U.S. Treasury yields, especially after solid U.S. jobs data but slowing wage data on Friday. Because these bonds tend to correlate with U.S. Treasuries, we reduced our portfolios' underweight allocation to short-dated EM local-currency bonds in countries, such as Poland, Mexico, and Chile. As a result, we find our portfolios slightly long EM local-currency duration. If U.S. policymakers are set to become less hawkish, then EM central banks will get more opportunities to cut rates, especially because disinflation in those countries is more advanced.
- EM currencies were mixed last week, but we reduced our outlook and returned to a neutral stance versus the U.S. dollar. The U.S. dollar has been relatively weak recently, because short-term dollar interest rates are lower than those in many EM countries. Even some of the lower-yielding currencies in Asia have performed well recently. But if the Fed continues to hike rates despite last week's events, that will support a rising interest rate differential between the U.S. dollar and EM currencies.

SECURITIZED PRODUCTS

- U.S. conduit 10-year AAA CMBS spreads were ~20 bps wider with BBB- CMBS ~150-250 bps wider. In general, the issuers are saying closing loans has been difficult so new issue deals for the next couple months should remain limited. We believe spreads for U.S. CLO benchmark issuers are now ~3M SOFR+180/245/320/525/875 for AAA/AA/A/BBB/BB, respectively. Recently, non-benchmark issuers have crossed the finish line on deal terms as many of these managers utilize dedicated equity capital rather than third party investors. ABS spreads were 15-20 bps wider on limited trading as the market reassesses valuations as a result of SVB. Some broker dealer leads for new issue deals in the marketing phase are asking investors to reaffirm orders and/or indicate refreshed levels where they would care. The increase in near-term supply coupled with SVB makes ABS spreads more vulnerable to further widening.

MUNICIPAL BONDS

- Within the muni market, AAAs tend to underperform in credit events, and high-grade issues have traded better on the duration move, while high-beta remained mostly unchanged from Friday (despite lower rates). We expect high grade issues to continue to outperform credit in this market environment.

THE RETURNS TABLE As of March 10, 2023

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	4.59	---	-27	16	16	289	0.60	0.28	0.28	-2.35
U.S. 5-Year	4.5	3.95	---	-28	-4	-4	204	1.43	0.54	0.54	-6.52
U.S. 10-Year	8.3	3.69	---	-25	-18	-18	171	2.34	1.76	1.76	-11.11
U.S. 10-Year Breakeven	--	2.29	---	-23	-1	-1	-60	---	---	---	---
U.S. 10-Year TIPS	4.6	1.41	---	-3	-17	-17	231	0.53	1.53	1.53	-14.39
U.S. 20-Year	13.8	3.89	---	-20	-24	-24	146	3.12	3.69	3.69	-17.31
U.S. 30-Year	18.2	3.68	---	-17	-26	-26	134	3.60	5.39	5.39	-21.59
UK 10-Year	8.3	3.64	---	-21	-3	-3	211	1.83	1.00	1.00	1.00
Germany 10-Year	8.8	2.50	---	-21	-6	-6	223	1.88	-2.29	-2.29	-2.29
Switzerland 10-Year	8.5	1.34		-17	-24	-24	102	1.50	2.54	2.54	-7.69
Japan 10-Year	9.5	0.40	---	-10	-1	-1	21	0.90	0.97	0.97	0.97
Australia 10-Year	8.0	3.58	---	-32	-47	-47	122	2.68	4.64	4.64	-6.73
Canada 10-Year	8.5	2.99	---	-35	-31	-31	106	3.08	3.28	3.28	-0.90
MAJOR FI MS INDICES											
Global Aggregate Unhedged	6.9	3.73	51	4	0	0	4	1.31	0.96	0.96	-11.02
Global Aggregate Hedged	6.9	3.73	51	4	0	0	4	1.10	1.58	1.58	-6.09
U.S. Aggregate	6.6	4.67	55	8	4	4	7	1.17	1.45	1.45	-7.35
Euro-Aggregate (Unhedged)	6.7	3.47	81	3	-7	-7	2	1.40	1.00	1.00	-12.76
Japanese Aggregate	9.3	0.52	1	0	0	0	1	0.23	0.92	0.92	-3.24
MAJOR FI CREDIT INDICES											
Mortgage-Backed (Agency)	6.3	4.71	60	13	8	8	31	0.85	1.04	1.04	-7.78
Global IG Corporate Bonds	6.4	5.13	144	12	-3	-3	-2	1.06	1.66	1.66	-8.35
U.S. IG Corporate Bonds	7.4	5.41	136	16	6	6	-5	0.77	1.69	1.69	-6.99
European IG Corporate	4.7	4.26	152	5	-15	-15	0	0.91	1.19	1.19	-8.35
U.S. High Yield Bonds	4.3	8.83	450	53	-19	-19	60	-0.90	1.87	1.87	-4.46
European High Yield Bonds	3.4	7.65	451	22	-61	-61	-5	-0.02	3.09	3.09	-3.40
U.S. Leveraged Loans	0.3	9.81	589	4	-64	-64	131	0.02	3.31	3.31	3.40
European Leveraged Loans	0.3	6.83	604	-13	-109	-109	133	0.42	4.43	4.43	2.53
EM Hard Currency Sovs.	6.8	8.62	474	22	21	21	-25	0.26	0.92	0.92	-6.16
EM Corporates	4.3	7.25	347	20	1	1	-79	0.41	1.76	1.76	-2.44
EM Currencies	---	7.41	---	0	0	9	1	-0.27	1.43	1.43	-2.31
EM Local Rates	4.9	6.72	7	0	0	0	1	0.62	1.34	1.34	-0.27
CMBS	4.7	5.20	107	5	-12	-12	19	1.20	1.65	1.65	-5.90
ABS	2.9	5.06	52	-2	-24	-24	-2	0.82	1.29	1.29	-1.29
CLOs	---	1.53	153	1	-32	-32	26	-0.07	0.90	0.90	-0.53
Municipal Bonds	6.1	3.59	---	-14	-4	-4	140	0.94	1.31	1.31	-3.24

Equity/Volatility	Level	Total Return (%) WTD	QTD	YTD	Prior Yr
S&P 500 Index	3,862	-4.5	0.9	0.9	-7.8
DAX	15,022	-1.0	10.8	10.8	14.8
Stoxx 600	257	-2.3	7.7	7.7	12.9
Nikkei 225	27,833	0.8	7.9	7.9	12.0
Shanghai Comp.	3,269	-3.0	4.6	4.6	0.7
MSCI ACWI	324	-3.6	2.1	2.1	-6.5
FTSE 100	7,581	-2.4	4.8	4.8	13.0
MOVE Index	140	14.3	15.2	15.2	33.0
VIX Index	29	34.1	14.4	14.4	-18.0

FX/Commodities	Spot	% Change WTD	QTD	YTD	Prior Year
EUR/USD	1.1	0.1	-0.6	-0.6	-3.1
USD/JPY	135.0	-0.6	3.0	3.0	16.3
GBP/USD	1.2	0.0	-0.4	-0.4	-8.1
EUR/CHF	1.0	-1.5	-0.9	-0.9	-4.1
USD/CHF	0.9	-1.7	-0.4	-0.4	-1.0
USD (DXY)	104.6	0.1	1.0	1.0	6.2
Oil	77.0	-3.8	-4.5	-4.5	-27.7
Gold	1868.3	0.6	2.4	2.4	-6.4

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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

Source(s) of data (unless otherwise noted): PGIM Fixed Income as of March 2023. Chart sources are also PGIM Fixed Income

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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, 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.

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