



Monthly Commentary

April 2018

Overview

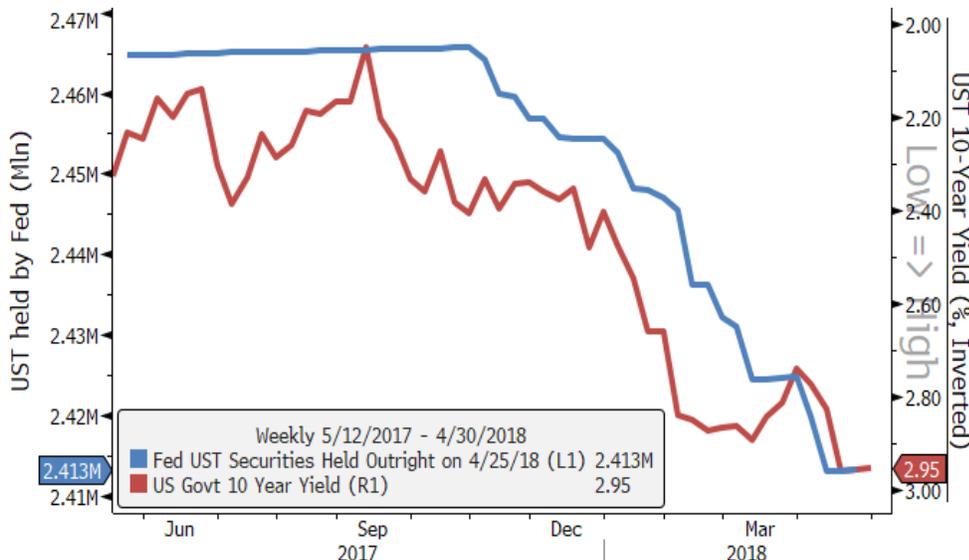
Throughout April, the same topics continued to dominate headlines namely the duration of U.S. Treasury (UST) rates and inflation expectations.

Interest rates continued to rise across the curve in April. The 10-year UST yield rose 22 basis points (bps) to 2.95% and does not come as much of a shock as the Federal Reserve (Fed) continues interest rate hiking and balance sheet reduction. According to the Bloomberg World Interest Rate Probability (WIRP), the market implies a 92.7% chance of a rate hike following the June 13th Fed meeting. At DoubleLine, we believe the main driver for headline inflation in 2018 will likely be Energy prices. Our base case is, if WTI crude oil can stabilize around \$60-65 level for the remainder of the year, we expect average Energy inflation to be 7-8% this year.¹ With this oil price assumption, headline inflation should trend higher by the middle of the year.

April's new economic data remained constructive on the U.S. economy. The Conference Board Leading Economic Index® (LEI), meant to give a sense of the future state of the economy, increased 0.3% month-over-month (MoM) in March. Consumer Confidence climbed higher, against expectations, rising to 128.7 in April from 127 a month prior, just shy of the February peak of 130. The LEI and Consumer Confidence levels suggest little chance of a recession over the near-term.

The political landscape has been rattled by President Trump's implementation of tariffs taxing steel and

Federal Reserve Treasury Holdings vs 10-Year Yield (Inverted)
May 12, 2017 to April 30, 2018



Source: DoubleLine, Bloomberg

aluminum imports in March leading to heightened geopolitical tensions. In a retaliatory move, Beijing imposed their own tariffs on U.S. imports in early April and Trump threatened a further wave of tariffs \$100 billion in size, rattling the U.S. stock markets and leading to a spike in the Chicago Board Options Exchange Volatility Index (VIX) early in the month. However, President Xi Jinping's speech at the Bo'ao Forum indicated China's move from a tit-for-tat policy response to letting the world know that China would be willing to step into any void in the global value chain that the U.S. creates. The People's Bank of China (PBoC) also announced a 100 bps cut in the reserve requirement ratio (RRR), a sign that the bank is starting to ease liquidity conditions, which should help to support growth.

Outside of the U.S., the International Monetary Fund (IMF) released their spring 2018 World Economic Outlook

in April with 2017 global growth increasing to 3.8% from 3.2% in 2016. World trade, a good barometer for global industrial production, reported an upswing in real growth of 4.9%, indicating improved investment growth rates in formerly stressed commodity exporters and a recovery in advanced economy investment and domestic demand. According to the IMF, 2018 and 2019 growth will be supported by continued momentum in Developed Markets due to ongoing recovery in investment, resilient global growth and expansionary U.S. fiscal policy.

Global equities are likely to experience higher volatility as rising rates are a headwind to global equities. We believe international equities look relatively attractive to U.S. equities given European and Japanese valuations are less expensive relative to U.S. equities and historically high valuations and higher corporate leverage for U.S. eq-

1. WTI = West Texas Intermediate

Overview

ities. If the U.S. Dollar (USD) is stable-to-weaker and financial conditions remain accommodative, we expect Emerging Markets to outperform.

In conclusion, there is certainly a risk that inflation continues to run higher than market expectations. The reflationary environment, combined with increased deficit spending and quantitative tightening, should drive interest rates higher over the medium-term. Rising interest rates should continue to lead to more volatility, especially within the equity and credit markets given their historically high valuations. We caution investors to favor defensive portfolios and underweight duration and interest rate sensitive sectors.

U.S. Government Securities

- The Bloomberg Barclays UST Index posted a loss of 0.81% in April, extending its year-to-date (YTD) loss to 1.98%.
- The 10-year yield exceeded 3% for first time since January 2014, but failed to sustain the move, ending the month at 2.95%.
- The yield spread between the long end of the 10-year bond and the short end of the 2-year note (2s10s) and the yield spread between the long end of the 30-year bond and the short end of the 5-year note (5s30s) reached their lowest levels since 2007 on April 18th.
- The 2-year, 5-year and 10-year yields rose to multiyear highs on April 25th. The 2-year yield touched 2.50%, its highest level since September 2008, the 5-year

reached 2.85%, its highest level since August 2009 and the 10-year 3.03%, its highest level since January 2014.

- Treasury Inflation-Protected Securities (TIPS) breakeven rates rose, with the 5-year reaching its highest level since March and the 10-year and 30-year reaching their highest levels since 2014.

- 30-year current coupon spreads against 5- and 10-year UST blends tightened by about 2.5 bps.
- Overall gross issuance in Agency MBS was roughly \$125 billion for April, with Collateralized Mortgage Obligation (CMO) issuance around \$25 billion; this brings YTD values to about \$525 billion, slightly less

Agency Mortgage-Backed Securities

- Aggregate prepayment speeds declined by about 2% MoM. Much of this is attributed to rising mortgage rates for most of this year. Speeds slowed down across the coupon stack, including the highly seasoned high coupon cohorts. The largest 30-year vintage cohort, 2016 FN 3.0s, were unchanged for the month in terms of speeds.
- Overall purchasing activity increased by about 2.3% while overall refinancing activity declined by about 2.2%, as measured by the Mortgage Bankers Association (MBA) Purchasing and Refinancing Activity Indices.

U.S. Treasury Yield Curve

	3/30/2018	4/30/2018	Change
3 month	1.70%	1.80%	0.10%
6 month	1.91%	2.00%	0.09%
1 year	2.08%	2.23%	0.15%
2 year	2.27%	2.49%	0.22%
3 year	2.38%	2.63%	0.25%
5 year	2.56%	2.80%	0.24%
10 year	2.74%	2.95%	0.21%
30 year	2.97%	3.12%	0.15%

Source: Bloomberg

Conditional Prepayment Rates (CPR)

2017-2018	Apr	May	June	July	Aug	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Fannie Mae (FNMA)	11.5%	12.3%	11.4%	12.4%	11.2%	12.1%	10.9%	10.6%	9.4%	8.9%	10.2%	10.0%
Freddie Mac (FHLMC)	14.5%	15.4%	14.8%	16.0%	14.6%	15.7%	15.3%	14.3%	12.9%	11.5%	12.1%	11.5%
Ginnie Mae (GNMA)	11.3%	12.1%	11.3%	12.2%	11.0%	11.8%	10.7%	10.1%	9.0%	8.4%	9.5%	9.5%

Bloomberg Barclays Capital

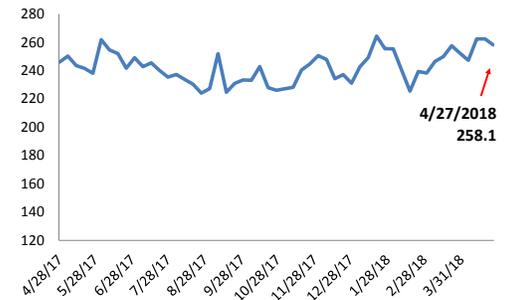
U.S. MBS Index	2/28/2018	3/31/2018	4/30/2018	MoM Change
Average Dollar Price	\$100.69	\$101.50	\$100.27	-\$1.23
Duration	5.25	5.05	5.28	0.23

Bloomberg Barclays Capital

U.S. Index Returns	2/28/2018	3/31/2018	4/30/2018
Aggregate	-0.95%	0.64%	-0.74%
MBS	-0.66%	0.64%	-0.50%
Corporate	-1.51%	0.31%	-0.91%
Treasury	-0.75%	0.94%	-0.81%

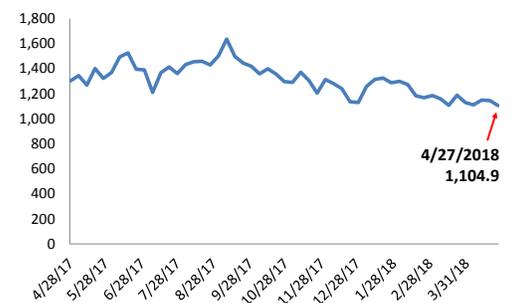
Source: eMBS, Barclays Capital

Mortgage Bankers Association (MBA) Purchase Index As of April 27, 2018



Source: Bloomberg

MBA Refinance Index As of April 27, 2018



Source: Bloomberg

than issuance for the same time period in 2017.

- The Bloomberg Barclays U.S. MBS Index returned -0.50%, outperforming the U.S. Corporate sector, as measured by the Bloomberg Barclays U.S. Corporate Index, and ended the month with a duration 5.28 years.

Non-Agency MBS

- Spreads across non-Agency MBS were flat during the month of April as the sector continues to be supported by both strong technical and fundamental factors.
- We believe near-term fundamentals remain strong for the residential housing market. The latest S&P CoreLogic Case-Shiller U.S. National Home Price NSA Index showed prices up 6.3% annually through February. A 20-year low in housing inventory coupled with below-normal levels of new housing creation has also been a tailwind to home price appreciation.
- We are favorable to shorter duration assets within the sector given our view of future interest rate hikes by the Fed and potentially higher long-term rates down the road.
- There was approximately \$5.1 billion in new issuance across non-Agency MBS including prime, non-qualifying mortgages and non-performing/re-performing collateral. Legacy pay-downs continue to outpace new supply, creating a positive technical which supports spread levels in the space.

- Bid list volume was \$3.7 billion during April compared with \$4.2 billion last month. A majority of the supply was composed of subprime collateral including a large Government-Sponsored Enterprise (GSE) list. Investors continue to tier bonds based off forbearance/settlement recoveries and call options.

Commercial MBS

- April private-label CMBS issuance totaled \$3.5 billion, bringing the YTD total to \$27.2 billion, or 54% above the same period in 2017. Three conduit deals totaling \$2.4 billion and two single-asset single-borrower (SASB) deals totaling \$1.1 billion priced during the month, the lowest monthly amount since January 2017. SASB deals continued to be the driver of new issuance, up about 125% over the same time period in 2017 as compared to conduit, which is up about 6%. The new issue market is projected to be muted through the second quarter 2018 as sustained volatility has caused some issuers to pullback in quoting loans and higher rates have led borrowers to take a wait-and-see approach. While Wall Street research analysts have not changed their forecasts for 2018, we anticipate issuance volume may decline if this trend persists; however, the lower new issuance calendar for forwards is creating a backdrop for positive market technicals for CMBS.

- Secondary Principal & Interest (P&I) CMBS trading totaled \$23.2 billion in April, increasing 2% MoM and in line with the 2018 monthly average of \$23.1 billion through the first quarter. Secondary market cash spreads generally tightened alongside mixed broader equity and debt indices, with AAA LCF (last cash flow) tightening by 4 bps to swaps +78 bps and BBBs tightening by 5 bps to swaps +325 bps. The 2012-2016 vintage mezzanine credits remain well bid as a result of net operating income (NOI) and price growth coupled with loan seasoning. According to FINRA TRACE data, buying outpaced selling by nearly \$1 billion during April, potentially attributed to the lack of new issue supply. CMBX spreads also rallied, with AAA 2012-2016 reference indices tightening by an average of 3 bps, and BBBs by an average of 42 bps.
- The outstanding private-label CMBS universe decreased by \$1.1 billion or 0.2% to \$467.1 billion in April. While the outstanding conduit universe is down around 1% over the same time period in 2017, the outstanding SASB universe is up around 16%. The CMBS delinquency rate continues to decline to 4.4%, falling 19 bps in April and 116 bps lower than the same period in 2017. The delinquency rate has fallen for nine straight months, and is only 21 bps off the post-crisis low of 4.2% in February 2016.

Asset-Backed Securities

- U.S. ABS issuance continued its brisk pace for 2018. Issuance for April totaled \$22 billion with 2018 seeing \$92 billion of ABS issuance YTD compared to \$79 billion for the same time period in 2017.
- Secondary volume dropped off sharply in April with reduced volume in Federal Family Education Loan Program (FFELP) Student Loan lists, but primary markets are still the primary driver for investors looking to gain exposure to this space.
- Spread levels across all sectors are largely unchanged. Spread widening in February in corporate markets had little impact on overall spreads in the ABS sectors.
- The forward calendar for ABS is robust with it being likely that all sectors continue to see issuance volumes following pace into the summer months of 2018. We continue to favor senior tranche, higher grade consumers, private student loans, aviation and renewable energy. Underlying credit fundamentals have largely been stable, but we are observing some increased delinquencies in lower tier consumer debt.

more than offset spread tightening. The best performing sectors were Home Construction, down 0.36% and Supranational, down 0.38%. The worst performing were Other Utility, down 1.64% and Tobacco, down 1.56%. With the rise in rates, the long end of the Index (10+ years) was down the most, with a negative total return of 2.02%, while still outperforming on an excess return basis by 2.6 bps. The shortest part of the Index (0-1 years) was up 0.27% with 1.3 bps of excess return.

- Flows into the asset class mirrored the volatility in returns. Flows in the first two weeks of the month were positive, with over \$6 billion into the asset class, reversed in the middle of the month to \$1.2 billion of outflows, to end the month with a total of \$8.9 billion of inflows. The new issue market was active in

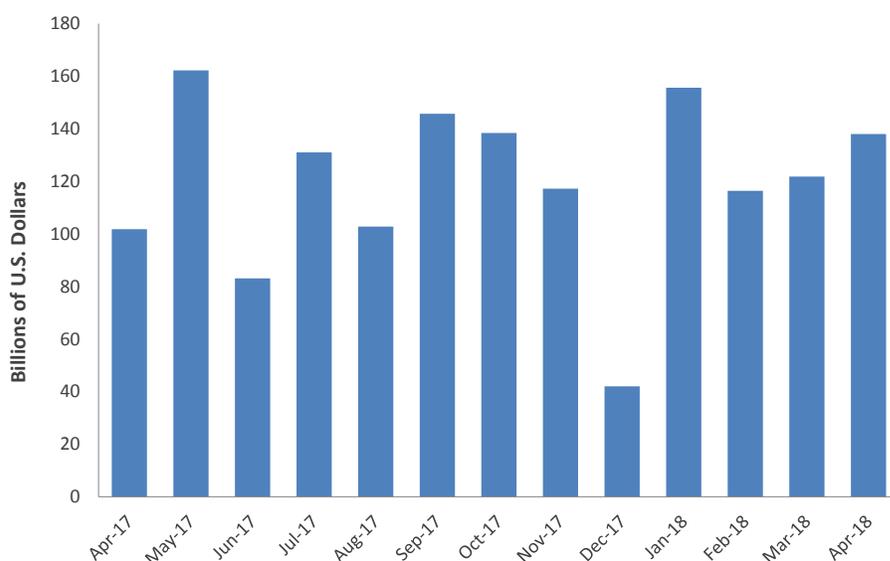
April with \$138 billion of gross new issue and \$45 billion of net new issuance. This compares to April 2017 of \$102 billion and \$41 billion, respectively.

- As of the end of the month, about 50% of the market had reported the first quarter based on information from Bank of America/Merrill Lynch (BAML). The fundamental picture remains positive, with revenue and earnings up 7.6% and 16.9%, respectively. The more global companies are outperforming with the weakness in the USD. In addition, the lower corporate tax rate is helping the bottom line. BAML calculated that the average tax rate declined from 26.3% in the first quarter 2017 versus 20.4% in the first quarter 2018.

Investment Grade Credit

- The Investment Grade (IG) market traded down in April driven by movements in the UST market. The Bloomberg Barclays U.S. Credit Index tightened 1 basis point in April, outperforming duration-matched UST by 2 bps. The Index was down 0.91%, however, as higher rates

**Total Fixed-Rate Investment Grade Supply
April 30, 2017 to April 30, 2018**



Source: Bloomberg, DoubleLine

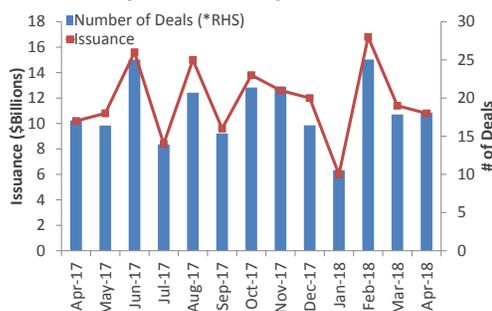
Collateralized Loan Obligations

Bank Loans

High Yield

- New issuance for CLOs was robust for April with \$10.86 billion across 18 deals. This brings YTD issuance up to \$42.95 billion with an average monthly issuance of \$10.74 billion.

U.S. CLO Monthly Issuance
April 2017 to April 2018



Source: S&P Capital IQ
*RHS = Right Hand Side

- The reset and refinance volume was particularly active as many managers wanted to refinance deals ahead of the April payment period. This month we saw \$15.97 billion in refinancing and reset activity. There has been \$41 billion YTD in refinance and reset deals.
- Due to the strong supply in new issue, refinance and reset markets, spreads widened slightly, up and down the capital stack.
- The equity market continues to face a compressed arbitrage as the underlying loan spreads continue to tighten. In addition to the tightening loan spreads, the underlying loans are able to switch from 3-month LIBOR to 1-month LIBOR which creates a mismatch between the assets and the liabilities, as the CLO debt is based off of 3-month LIBOR.

- April was a coupon-clipping month for the loan market. The S&P/LSTA Leveraged Loan Index returned 0.41%, with prices declining -0.02% and interest contributing 0.44%. The Index returned 1.97% YTD. The market backdrop remained fundamentally strong. The percentage of loans trading above par rose to 74.53% from 72.01% in March.
- After a very robust month of new issue activity in March, April saw new issue figures fall by roughly 40%. With \$28.6 billion of new issue, April was below the trailing 12-month average of \$30.3 billion.
- Investor demand for the asset class continued to be robust. U.S. loan funds have seen inflows for 10 weeks in a row totaling \$3.8 billion. As a result, the loan market hit a milestone in April, reaching \$1 trillion in size.
- The default rate in April remained low at 1.95% and was up slightly from 1.93% in March.
- Lower credit quality loans underperformed in April, with CCC-rated loans returning -0.04% relative to returns of 0.47% for single-B rated loans and 0.41% for BB-rated loans.
- The best performing sectors in April were Non-Ferrous Metals-Minerals, Food & Drug Retailers and Surface Transport with returns of 1.40%, 0.82% and 0.75%, respectively. The only negative returning sectors in the month were Food Products and Publishing with returns of -0.25% and -0.13%, respectively.

- High Yield (HY) bond prices rebounded in April despite UST yields hitting new cycle highs. That said, prices did ease late in the month once 10-year UST yields approached and crossed 3%. Overall, economic fundamentals remain broadly supportive while investors digest an ongoing Fed tightening cycle and concerns over potential global trade conflicts.
- For April, the Bloomberg Barclays U.S. High Yield Index returned 0.65%, a decrease of 21 bps YTD. As one would expect in a rate sell-off, lower-duration HY bonds outperformed with the Caa subindex up 99 bps and B subindex up 95 bps, while the higher-duration Ba subindex gained just 13 bps. Sector leaders were Energy (WTI ended March at \$65 and ended April at \$68) and Telecom (Sprint, among the largest issuers in HY, announced a credit-enhancing merger with T-Mobile) while the worst performing sectors over the month were Auto and Paper.
- According to Barclays, HY mutual funds and exchange-traded funds (ETFs) saw April inflows of \$402 million, modestly offsetting YTD outflows which ended the month at \$19.1 billion.
- According to JP Morgan, two U.S. companies defaulted in April totaling an eight-month low \$1.1 billion in bonds and loans. So far in 2018, 16 companies have defaulted with \$18.3 billion in bonds, increasing the par-weighted default rate modestly to 2.26%, up 98 bps this year

and up 85 bps from the same time period last year.

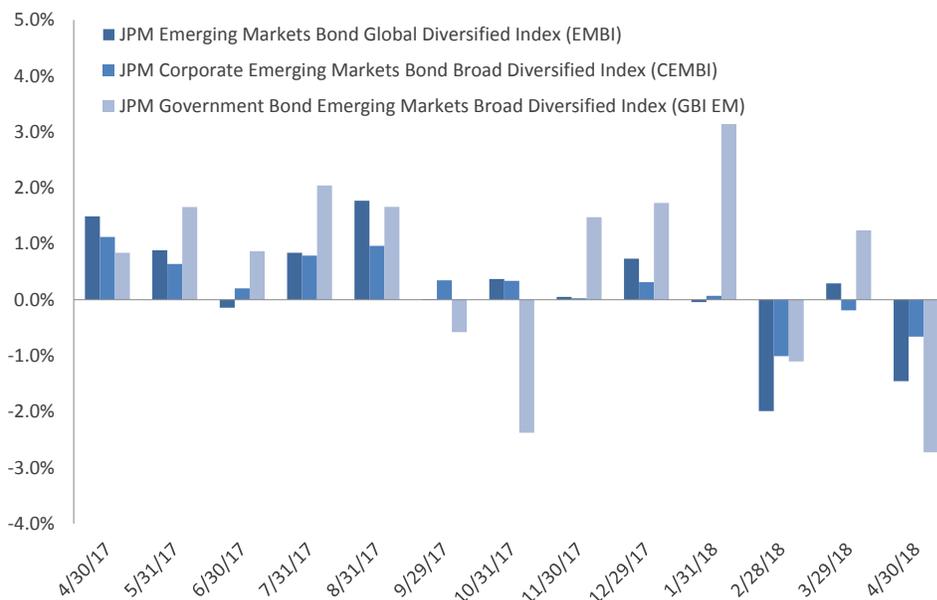
Commodities

- In April, the broad commodity market rallied 2.42% and 4.87% as measured by the Bloomberg Commodity Index (BCOM) and S&P Goldman Sachs Commodity Index (S&P GSCI), respectively. The Agriculture sector rallied 2.68% during the month, with Kansas Wheat the best performer with a return of 10.98% and Sugar the worst performer with a return of -5.32%.
- The Energy sector, as measured by the S&P GSCI Energy Index, rallied 6.32% in April as Brent Crude and WTI Crude led the entire distillate complex higher, with returns of 8.56% and 5.66%, respectively.
- Precious Metals, as measured by the S&P GSCI Precious Metals Index, returned -0.51%. The sector was mixed as Gold declined 0.61% while Silver increased 0.39%.
- Industrial Metals, as measured by the S&P GSCI Industrial Metals Index, rallied 4.12% as Aluminum surged 13.68% while Copper and Nickel also increased with returns of 1.16% and 2.45%, respectively.
- The Livestock sector, as measured by the S&P GSCI Livestock Index, increased 0.81% with Live Cattle rallying 3.44% while Lean Hogs declined 5.03%.

Emerging Markets

- Emerging Market (EM) sovereign and corporate external bonds both

JP Morgan Emerging Markets Bond Index Performance April 30, 2017 to April 30, 2018



Source: JP Morgan

posted negative performance in the month of April. The negative performance of external EM debt was driven by rising UST yields and wider credit spreads.

- The JP Morgan Emerging Markets Bond Index (EMBI) Global Diversified's credit spread widened by 9 bps to 313 bps over the month, while 10-year UST yields increased by 21 bps over the month.
- Over 2018, we see the potential for higher volatility, possibly driven by inflation surprises or the withdrawal of developed market central bank liquidity, which could cause a sell-off in global rates. We also see the potential for geopolitical and policy risks, and a heavy election calendar across EM where negative surprises may drive credit spreads wider.

International Sovereign

- Global government bonds posted negative returns in the month of April, driven primarily by foreign currency losses against the USD.
- The USD, as indicated by the U.S. Dollar Index (DXY), rose against most of its G-10 peers due to generally positive U.S. economic data compared to moderating global economic data, a continued rise in U.S. interest rates and some signs of flexibility in the Trump Administration's trade stance. UST rates backed up during the month, with the 10-year UST yield reaching its highest level in over four years.
- The Euro fell against the USD over the month against a backdrop of moderating economic data across the Euro Area. The European Cen-

tral Bank (ECB) left its monetary policy and forward guidance unchanged, maintaining its asset purchase program until at least September 2018, with rates on hold well past that date.

- The Canadian Dollar was the best performing G-10 currency this month, with improving sentiment around the renegotiation of NAFTA, and expectations of a broad agreement being reached soon.
- The Japanese Yen fell this month with the Bank of Japan (BoJ) keeping its accommodative monetary policy unchanged. The BoJ's Governor Haruhiko Kuroda removed the projected timing in reaching the central bank's 2% inflation target, which was interpreted by some market participants as a dovish signal of continued extremely accommodative monetary policy.

Infrastructure

- Investor demand for Infrastructure-related assets remained strong in April with spreads tightening slightly and rates moving higher.
- Within Infrastructure-related ABS, primary markets were active with two new deals coming to market related to solar energy and maritime shipping.
- U.S. Utility and Energy spreads tightened MoM; however, the shift higher in UST yields negatively impacted both sectors.
- Internationally, new issue deal volume was slow during April, however Infrastructure-related assets re-

main well bid on the secondary market.

U.S. Equities

- April saw the start of the first quarter earnings release season for U.S. publically-traded companies. By month-end and with slightly more than half the companies of the S&P 500 Index having reported earnings, it appeared the first quarter was one of the best earnings quarters in recent years. Despite earnings and revenue results that were unusually strong relative to published estimates, the S&P 500 was essentially flat for the month. This indicates the good news was already discounted in stock prices.
- At the end of April, results YTD indicated the constituents of the S&P 500 grew first quarter earnings by over 23%, substantially higher than the 17% expected at the beginning of the reporting cycle, according to FactSet. In fact, the percentage of companies exceeding Wall Street estimates so far in the earnings season is the highest since FactSet began tracking the metric ten years ago and the growth rate itself is the highest since 2010.
- Some of this is likely due to the failure of Wall Street estimates to fully include the after-tax margin benefit of the Tax Cuts and Jobs Act of 2017; however, reported revenues were also strong. At month-end, it appears S&P 500 revenues will have grown over 8% YoY, and accelerated from the 2017 pace.

- Equity market returns seemed constrained by the increase in inflation expectations and interest rates – the same mix that prompted the extreme volatility and declines of February.
- Volatility, as measured by the Chicago Board Options Exchange Volatility Index (VIX), remained between 15 and 24 (closing levels) during the month. This is a level that is fairly typical by long-term standards, but very elevated compared to the single-digit levels of 2017.

Global Equities

- Global equities rallied in April. The Morgan Stanley Capital International All-Country World Index (MSCI ACWI) returned 1.01% during the month. U.S. equities underperformed the broader market with the S&P 500 and Dow Jones Industrial Average (DJIA) returning 0.38% and 0.34%, respectively. The Russell 2000 and NASDAQ Composite both produced positive returns, 0.86% and 0.08%, respectively.
- In Europe, equities outperformed with the Eurostoxx 50 returning 5.98% during the month. Core European equities rallied with the DAX returning 4.26% and CAC returning 7.23%. In the periphery equities edged higher with the FTSEMIB 7.38% and IBEX 4.83%. UK equities, as measured by the FTSE 100, were 6.79%.
- Asian equities were mixed in April. Japanese equities, as measured by

the Nikkei 225 Index, returned 4.72%. Chinese equities, as measured by the Shanghai Composite, returned -2.71%. Hong Kong equities, as measured by the Hang Seng, returned 2.53%. Korean equities, as measured by the KOSPI, returned 2.84%.

- EM equities underperformed the broader market in April with MSCI EM Index returning -0.43%. Brazil's Ibovespa rallied 0.88%. Russian equities, as measured by MSCI Russia Index, declined -7.43%. Indian equities, as measured by MSCI India, returned 6.65%.

Basis Point - A basis point (bps) equals to 0.01%.

Bloomberg Barclays U.S. Credit Index—The US Credit component of the U.S. Government/Credit Index. This index consists of publicly-issued U.S. corporate and specified foreign debentures and secured notes that meet the specified maturity, liquidity, and quality requirements. To qualify, bonds must be SEC-registered. The US Credit Index is the same as the former US Corporate Investment Grade Index.

Bloomberg Barclays U.S. Corporate Index - An index that measures the investment grade, U.S. dollar-denominated, fixed-rate taxable bond market, including Treasuries, government-related and corporate securities.

Bloomberg Barclays U.S. High Yield Index - A market value-weighted index which covers the U.S. non-investment grade fixed-rate debt market. The index is composed of U.S. dollar-denominated corporate debt in Industrial, Utility, and Finance sectors with a minimum \$150 million par amount outstanding and a maturity greater than 1 year. The index includes reinvestment of income.

Bloomberg Barclays U.S. MBS Index—An index that measures the performance of investment grade fixed-rate mortgage-backed pass-through securities of the Government-Sponsored Enterprises (GSEs): Ginnie Mae (GNMA), Fannie Mae (FNMA), and Freddie Mac (FHLMC).

Bloomberg Barclays U.S. Treasury Index -The Barclays Capital U.S. Treasury Index is the U.S. Treasury component of the U.S. Government Index. Public obligations of the U.S. Treasury with a remaining maturity of one year or more.

Bloomberg Commodity Index (BCOM) - An index calculated on an excess return basis that 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.

Bloomberg World Interest Rate Probability (WIRP) - A Bloomberg function based on futures trading data that gives probabilities of rate increases by central bank meeting date.

Chicago Board Options Exchange Volatility Index (VIX) - An index that represents the cash-pay securities of the Citigroup High-Yield Market Capped Index, a modified version of the High Yield Market Index, by delaying the entry of fallen angel issues and capping the par value of individual issuers at \$5 billion par amount outstanding.

Conference Board Leading Economic Index (LEI) - An index used as an predictor for global economic movements. The index is composed of 10 economic components whose changes tend to precede changes in the overall economy.

Cotation Assitee en Continu 40 (CAC) - The CAC 40 Index which is a French stock market index. It tracks 40 of the largest French stocks on the Paris Bourse, or stock exchange.

Deutsche Borse AG German Stock Index (DAX) - The German stock index, which represents 30 of the largest and most liquid German companies that trade on the Frankfurt Exchange.

Dow Jones Industrial Average (DJIA) - A price-weighted average of 30 significant stocks traded on the New York Stock Exchange and the Nasdaq.

Eurostoxx 50 Index - A stock index of Eurozone stocks designed by STOXX, an index provider owned by Deutsche Borse Group and SIX group, with the goal of providing a blue-chip representation of Supersector leaders in the Eurozone.

Financial Times Stock Exchange 100 (FTSE 100) - A capitalization-weighted index of the 100 most highly capitalized companies traded on the London Stock Exchange.

Financial Times Stock Exchange Milano Italia Borsa (FTSE MIB) - The benchmark stock market index for the Borsa Italiana, the Italian national stock exchange, which superseded the MIB-30 in September 2004. The index consists of the 40 most-traded stock classes on the exchange.

G-10 - A group of the major industrialized countries whose mission is to create a more stable world economic trading environment through monetary and fiscal policies. The group is comprised of: Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, the United Kingdom and the United States.

Hang Seng Index - A free-float capitalization-weighted index of a selection of companies from the Stock Exchange of Hong Kong. The components of the index are divided into four subindices: Commerce and Industry, Finance, Utilities, and Properties.

Ibovespa - This accumulation index represents the present value of a portfolio begun on 2 January 1968, with a starting value of 100 and taking into account share price increases plus the reinvestment of all dividends, subscription rights and bonus stocks received.

Indice Bursatil Espanol (IBEX) - The official index of the Spanish Continuous Market. The index is comprised of the 35 most liquid stocks traded on the Continuous market. It is calculated, supervised and published by the Sociedad de Bolsas.

JP Morgan Corporate Emerging Markets Bond Broad Diversified Index (CEMBI) -This index is a market capitalization weighted index consisting of US-denominated Emerging Market corporate bonds. It is a liquid global corporate benchmark representing Asia, Latin America, Europe and the Middle East/Africa.

JP Morgan Government Bond Emerging Markets Broad Diversified Index (GBI EM) -This index is the first comprehensive, global local Emerging Markets index, and consists of regularly traded, liquid fixed-rate, domestic currency government bonds to which international investors can gain exposure.

JP Morgan Emerging Markets Bond Global Diversified Index (EMBI) -This index is uniquely-weighted version of the EMBI Global. 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. The countries covered in the EMBI Global Diversified are identical to those covered by EMBI Global.

An investment cannot be made directly in an index.

Korea Composite Stock Price Index (Kospi) - A market capitalization weighted index of all common stocks traded on the Stock Market Division—previously, Korea Stock Exchange—of the Korea Exchange. It is the representative stock market index of South Korea, similar to the Dow Jones Industrial Average or S&P 500 in the United States.

Last Cash Flow (LCF) – The last revenue stream paid to a bond over a given period.

Markit CMBX Index (CMBX) - A synthetic tradable index with 6 subindices referencing a basket of 25 commercial mortgage-backed securities offerings issued in 2012.

Morgan Stanley Capital International All Country World Index (MSCI ACWI) -A market-capitalization-weighted index designed to provide a broad measure of stock performance throughout the world, including both developed and emerging markets.

MSCI India Index - An index designed to measure the performance of the large and mid cap segments of the Indian market. With 69 constituents, the index covers approximately 85% of the Indian equity universe.

MSCI Russia Index - A free-float capitalization-weighted index used to track the equity market performance of Russian securities on the MICEX Stock Exchange.

Mortgage Bankers Association (MBA) Purchase Index - An index that includes all mortgage applications for purchases of single-family homes. It covers the entire market, both conventional and government loans and all products.

Mortgage Bankers Association (MBA) Refinance Index - An index that covers all mortgage applications to refinance an existing mortgage. It includes conventional and government refinances.

NASDAQ - A stock market index of the common stocks and similar securities (e.g. ADRs, tracking stocks, limited partnership interests) listed on the NASDAQ stock market with over 3,000 components. This index is highly followed in the U.S. as an indicator of the performance of stocks of technology companies and growth companies. Since both U.S. and non-U.S. companies are listed on the NASDAQ stock market, the index is not exclusively a U.S. index.

Nikkei 225 Index - A price-weighted index comprised of Japan's top 225 blue-chip companies on the Tokyo Stock Exchange. The Nikkei is equivalent to the Dow Jones Industrial Average Index in the U.S.

Russell 2000 Index - A subset of the Russell 3000 Index representing approximately 10% of the total market capitalization and measuring the performance of the small-cap segment of the U.S. equity universe.

S&P/CoreLogic Case-Shiller U.S. National Home Price NSA Index - A composite calculated monthly of single-family home price indices for the nine U.S. census divisions with the goal of measuring changes in the total value of all existing single-family housing stock

S&P Goldman Sachs Commodity Index (GSCI) - Standard & Poor's Goldman Sachs Commodity Index, or GSCI, is a composite index of commodity sector returns which represents a broadly diversified, unleveraged, long-only position in commodity futures.

S&P GSCI Precious Metals - A sub-index of the S&P GSCI that represents the Precious Metals sector, currently comprised of gold and silver.

S&P GSCI Industrial Metals - A sub-index of the S&P GSCI that represents the Industrial Metals sector, currently comprised of aluminum, copper, zinc, nickel and lead.

S&P GSCI Energy - A sub-index of the S&P GSCI that represents the Energy sector, currently comprised of West Texas Intermediate (WTI) light sweet crude oil, Brent crude oil, gas oil, heating oil, RBOB gasoline and natural gas.

S&P GSCI Livestock - A sub-index of the S&P GSCI that represents the Livestock sector.

S&P GSCI Agriculture - A sub-index of the S&P GSCI that represents the Agriculture sector, currently comprised of wheat, Kansas wheat, corn, sugar, soybean, coffee, cocoa, and cotton.

S&P 500 Index - Standard & Poor's US 500 Index, a capitalized-weighted index of 500 stocks.

S&P/LSTA Leveraged Loan Index - An index designed to track the market-weighted performance of the largest institutional leveraged loans based on the market weightings, spreads and interest payments.

Shanghai Composite Index - A capitalization-weighted index that tracks the daily performance of all A-shares and B-shares listed on the Shanghai Stock Exchange. The index was developed on December 19, 1990 with a base value of 100.

Spread - The difference between yields on differing debt instruments, calculated by deducting the yield of one instrument from another. The higher the yield spread, the greater the difference between the yields offered by each instrument. The spread can be measured between debt instruments of differing maturities, credit ratings and risk.

U.S. Dollar Spot Index (DXY) -A weighted geometric mean of the United States dollar's value relative to a basket of 6 major foreign currencies, including the Euro, Japanese yen, Pound sterling, Canadian dollar, Swedish krona and Swiss franc.

An investment cannot be made directly in an index.

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