January 2020

OREGON STATE TREASURY

Inside the Vault

Local Government Edition

Credit Market Review

With the stock market hitting record highs, and the yield curve shaking off the recent inversion, capital markets took a big leg up to close 2019—a trend that continues into the new year with the early January Phase 1 U.S.-China trade agreement. Investors are buying risk against events that historically create fear. Growing instability in the Middle East normally knocks markets for weeks—now these risks are shrugged off overnight. The VIX Index, a widely used measure of stock market risk (aka the Fear Gauge), and its cousin the MOVE Index (which tracks interest rate volatility), are trending down in the face of geopolitical risks, structural issues in the repurchase agreement—or repo—market (a critical source of overnight money), the U.S. House's impeachment of President Donald Trump, and economic projections for a slowdown.

If conditions persist, the Federal Reserve's 2019 cuts may go down as the second successful soft landing in the central bank's history (the other occurred in the mid-90s). Beyond the 75bps of rate cuts, the monetary authority intervened heavily to stave off an illiquidity crisis in the repo market. While there are a number of explanations for why the normally flush repo market dried-up, the root problem appears to be that the big four U.S. money center banks became unwilling to lend. Market participants responded by paying up for short-term liquidity, necessitating the Fed to step-up as the lender of first resort. Some of the big four U.S. banks are returning to the market, but the injections continue, resulting in an inflated Fed balance sheet. The Fed has accumulated 75% of securities sold off from its Q3 2017 reduction program.

Historically, an inverted yield curve heralds a growth slowdown within the next 18 months. A yield curve normally has an upward slope as longer maturities require a higher rate of return. For most of the summer of 2019, 10-year Treasurys traded yield under three-month Treasurys, or at a negative spread. In September, the two-year Treasury note also traded at a negative

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Interest Rates

Average Annualized Yield	
December	2.25%

Interest Rates	
December 1–31	2.25%

Upcoming Holiday

The pool will be closed on Monday, February 17, for Presidents Day. EON will be available but the system will not allow transactions to settle on the holiday.

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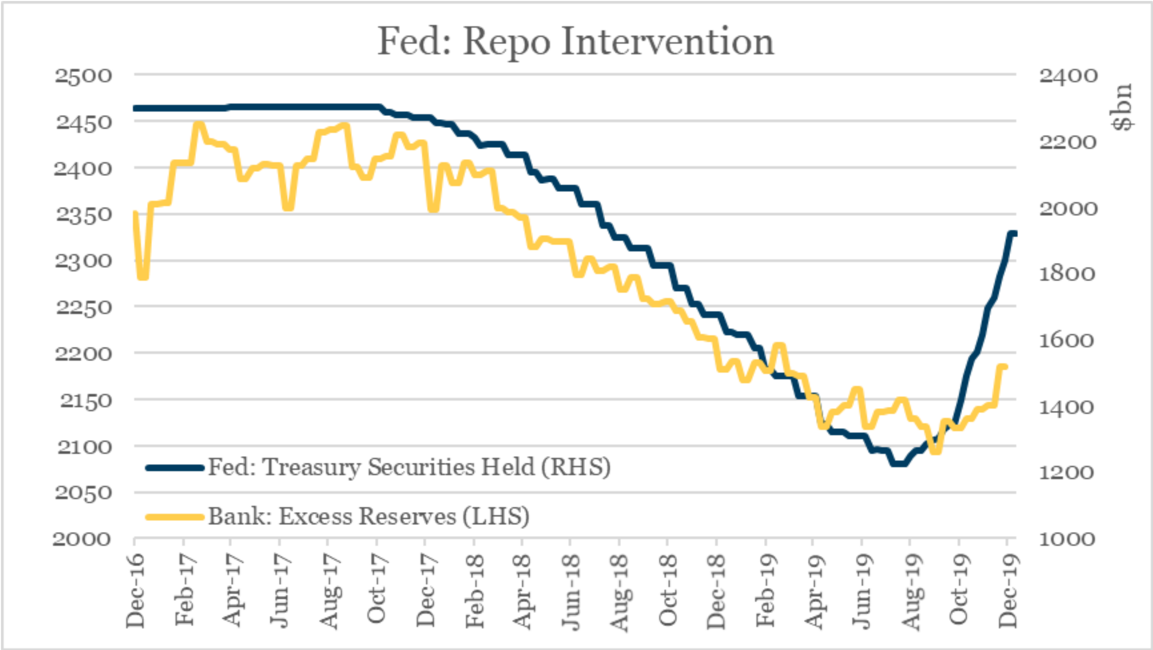
spread to 10-year paper (albeit for a very short time). Both events are considered accurate predictors of a recession. As of this print, the yield curve is flat but positively sloped from a sell-off in long dated Treasurys.

Why the Treasury market sold off is largely attributed to the ongoing rally in equities, plus a pop in inflation expectations due to some lift in base commodities and the Fed's dovish rhetoric. Five- and 10-year break-evens (a measure of inflation expectations) saw a 35 and 25 bps climb over the quarter, respectively. The market is currently pricing in a solitary rate cut for 2020. The Fed's last policy statement concluded with no rate hikes until inflation breaches the 2% target; the market is buying what the central bank is selling.

Corporate credit rallied through most of the year across all rating qualities. The investment grade segment of the Barclays Aggregate index closed the year 50bps tighter; the high-yield component was 110 bps tighter. We expect heavy issuance into the new year as companies take advantage of cheap financing.

We concluded a unique year in markets, all the more so given the sell-off in 2018. Every asset class performed against economic models that predicted a recession, in particular the Treasury yield curve inversion. Current economic growth figures show high dependence on the U.S. consumer, making the record setting employment numbers crucial for sentiment. Furthermore, we have seen a strong drop in manufacturing normally associated with declines in growth. Nevertheless, the service sector stepped up and wage pressure is breaking its historical correlation with industrial activity. With the macro situation where it is, the odds remain for lower rates by year-end.



The Fed's balance sheet reduction began to shift wholesale lending responsibilities back to the market, while banks stashed excess reserves in Treasurys and agency mortgage-backed securities. The decline came to a head in September when overnight borrowing rates spiked as market participants scrambled for liquidity. The Fed rapidly began purchasing U.S. Treasurys to inject funds into the market, accumulating $300bn in

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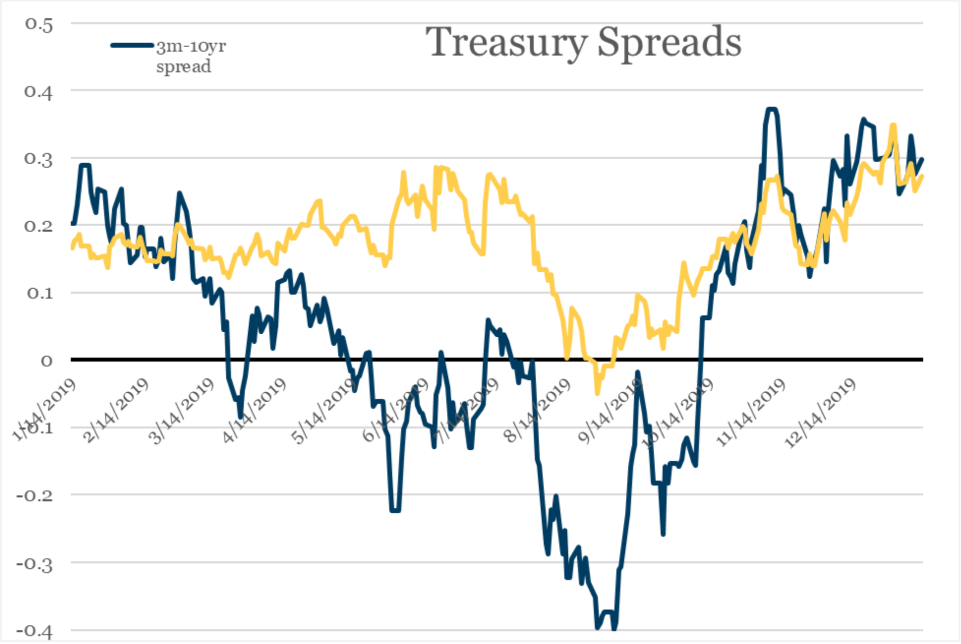
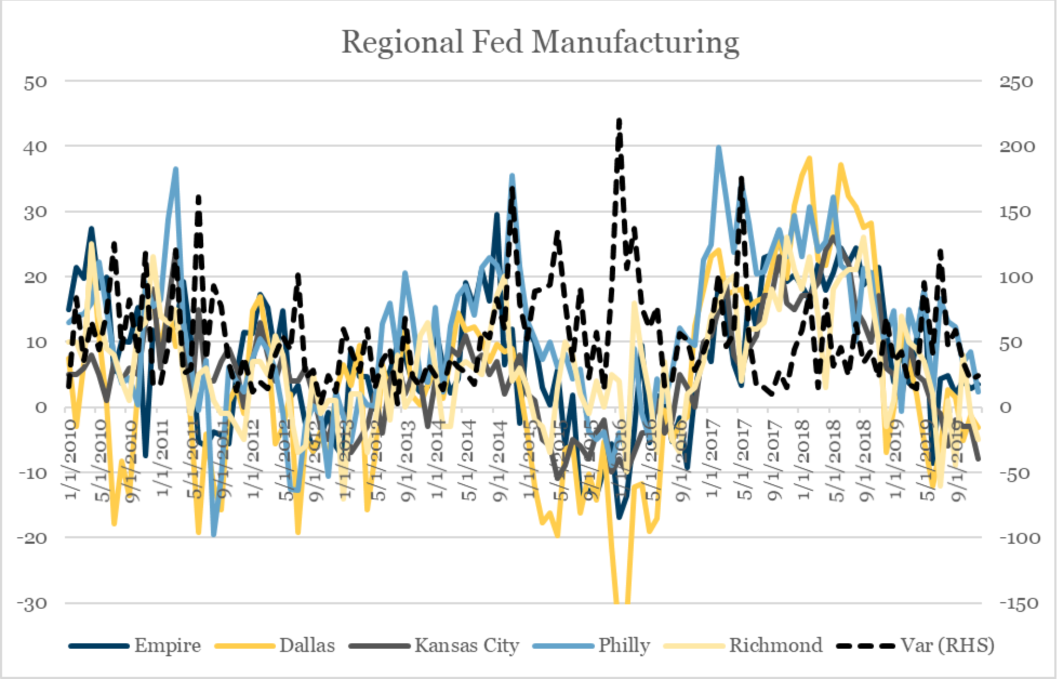
new assets (75% of the assets sold since the central bank began reducing the balance sheet). In the past week, banks are showing some build-up in excess reserves indicating some early signs of success in the program.



The yield spread on 10-year Treasurys with 2-year and 3-month Treasurys is one of the most successful early indicators of an economic growth recession. A negative 2-year to 10-year spread predicted every slowdown for the last 60 years, and happened in September 2019. Spreads only briefly dipped below zero and are now positive. An opinion of growing popularity is that the dip is from Fed interventions in the short-end of the curve, and therefore this is not a legitimate signal of a growth slump. Slowdowns tend to occur within 18 months, so it will take until the end of 2020 before we can truly declare that "this time is different."



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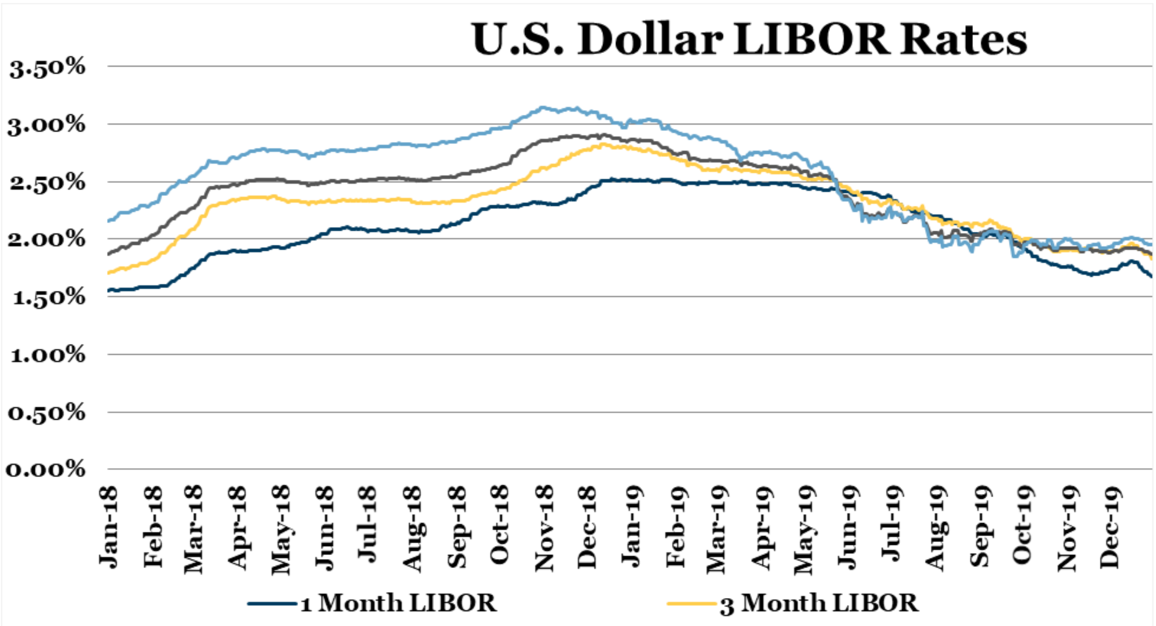
Regional Fed indicators of economic activity showed a slow-down in the fourth quarter; moreover, the variance between regions also declined. The numbers are corroborated by the ISM PMI data, which most recently printed at 47.2 (less than 50 marks a contraction). The disruption to trade from the escalation of tariffs between the U.S. and China are partially to blame for the decline in activity, but as yet no indices are showing recovery. If this trend continues after the Phase 1 of the U.S.-China trade deal is signed, expect a sudden reappraisal of the bull market.

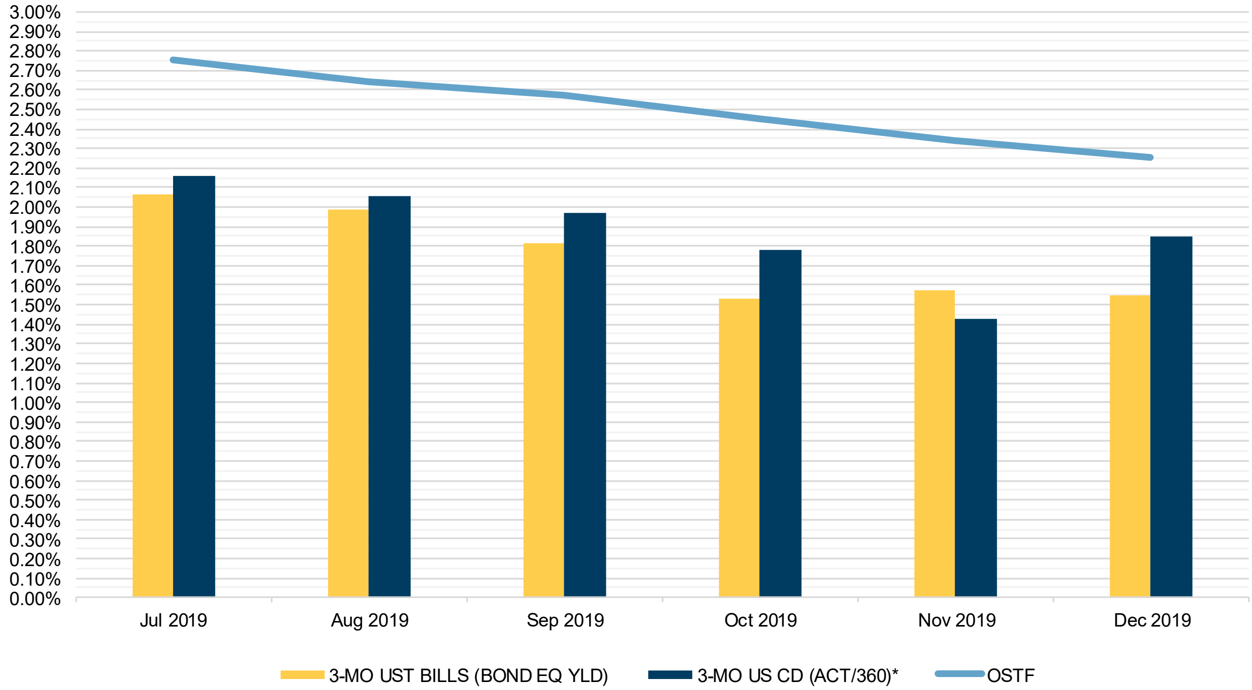


Rates continued to decline over the quarter, in particular one-month Libor. The three- to twelve-month rates traded in a narrow range—mimicking the flatness of yields out to five years. While the normalization of rates is better than the previous quarter, we are still a ways from a normally sloping curve and will have to wait for further economic data to clarify the macroeconomic picture.

LGIP Dividends: Leap Year

If you are verifying your Local Government Investment Pool dividends each month, be sure to use 366 days in your calculation since 2020 is a leap year.

Oregon Short Term Fund Analysis



	Jul 2019	Aug 2019	Sep 2019	Oct 2019	Nov 2019	Dec 2019
TOTAL OSTF AVG DOLLARS INVESTED (MM)	20,480	20,294	20,660	20,706	23,771	23,870
STATE GOV PORTION (MM)	12,995	12,573	12,960	13,189	13,339	13,105
LOCAL GOV PORTION (MM)	7,485	7,721	7,700	7,517	10,432	10,765
OSTF ANNUAL YIELD (ACT/ACT)	2.75	2.64	2.57	2.45	2.34	2.25
3-MO UST BILLS (BOND EQ YLD)	2.07	1.98	1.82	1.54	1.58	1.55
3-MO US CD (ACT/360)*	2.16	2.06	1.97	1.78	1.43	1.85

NOTE: The OST ANNUAL YIELD represents the average annualized yield paid to account holders during the month. Since interest accrues to accounts on a daily basis and the rate paid changes during the month, this average rate is not the exact rate earned by each account.

3-MO UST BILLS yield is the yield for the Treasury Bill Issue maturing closest to 3 months from month end. 3-MO US CD rates are obtained from Bloomberg and represent a composite of broker dealer quotes on highly rated (A1+/P1/F1+ from Standard & Poor's Ratings Services, Moody's Investors Service and Fitch Ratings respectivley) bank certificates of deposit and are quoted on a CD equivalent yield basis.

This material is available in alternative format and media upon request.

Market Data Table

	12/31/2019	1 Month	3 Months	12 Months		12/31/2019	1 Month	3 Months	12 Months
7-Day Agency Discount Note**	1.29	1.49	1.74	2.26	Bloomberg Barclays 1-3 Year Corporate YTW*	1.96	2.05	2.11	3.28
30-Day Agy Nt Disc**	1.43	1.55	1.80	2.29	Bloomberg Barclays 1-3 Year Corporate OAS*	0.43	0.47	0.50	0.86
90-Day Agy Nt Disc**	1.52	1.58	1.83	2.31	Bloomberg Barclays 1-3 Year Corporate Modified Duration*	1.83	1.86	1.85	1.86
180-Day Agy Nt Disc**	1.47	1.55	1.79	2.43					
360-Day Agy Nt Disc**	1.88	1.59	1.78	2.49	7-Day Muni VRDN Yield**	1.61	1.10	1.58	1.71
					O/N GGC Repo Yield**	1.35	1.66	1.83	2.57
30-Day Treasury Bill**	1.40	1.57	1.75	2.30					
60-Day Treasury Bill**	1.47	1.54	1.73	2.35	Secured Overnight Funding Rate (SOFR)**	1.55	1.65	2.35	2.46
90-Day Treasury Bill**	1.49	1.54	1.75	2.36					
6-Month Treasury Yield**	1.59	1.61	1.82	2.47	US 10 Year Inflation Break-Even**	1.79	1.63	1.52	1.73
1-Year Treasury Yield**	1.58	1.59	1.76	2.58					
2-Year Treasury Yield**	1.57	1.61	1.62	2.52	1-Day CP (A1/P1)**	1.56	1.50	1.90	2.36
3-Year Treasury Yield**	1.61	1.61	1.56	2.50	7-Day CP (A1/P1)**	1.55	1.53	1.92	2.39
					30-Day CP (A1/P1)**	1.62	1.68	1.97	2.52
1-Month LIBOR**	1.76	1.70	2.02	2.52					
3-Month LIBOR**	1.91	1.91	2.09	2.80	30-Day CD (A1/P1)**	1.65	1.60	2.02	2.43
6-Month LIBOR**	1.91	1.90	2.06	2.87	90-Day CD (A1/P1)**	1.86	1.88	2.08	2.70
12-Month LIBOR**	2.00	1.95	2.03	3.01	6-Month CD (A1/P1)**	1.91	1.92	2.08	2.88
Sources: *Bloomberg Index Services, **Bloomberg					1-Year CD (A1/P1)**	1.93	2.12	1.99	3.02

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