

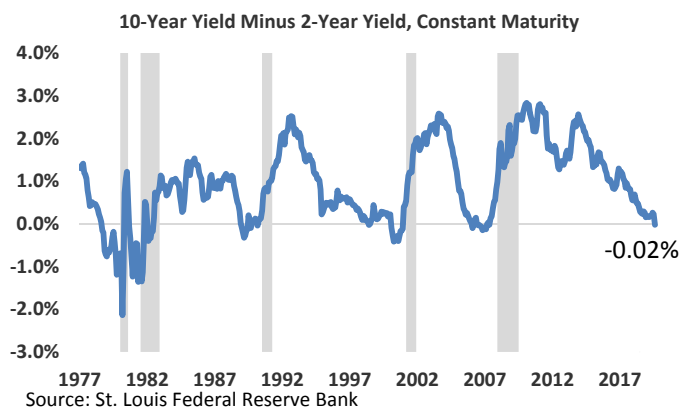
Date	Indicator	For	Estimate	Consensus*	Previous Period
21-Aug-2019	Existing Home Sales	Jul	5.30m	5.38m	5.27m
21-Aug-2019	FOMC Meeting Minutes	31-Jul			
22-Aug-2019	Initial Jobless Claims	17-Aug	217k	NA	220k
22-Aug-2019	Markit US Manufacturing PMI	Aug P	50.5	50.5	50.4
22-Aug-2019	Markit US Services PMI	Aug P	52.7	52.8	53.0
22-Aug-2019	Markit US Composite PMI	Aug P	NA	NA	52.6
22-Aug-2019	Leading Index	Jul	0.1%	0.2%	-0.3%
22-Aug-2019	Kansas City Fed Manufacturing Activity	Aug	2.0	NA	-1.0
23-Aug-2019	New Home Sales	Jul	640k	640k	646k

*Consensus from Bloomberg

The Recession Countdown Clock Is Ticking

The yield of the 10-year U.S. Treasury fell below that of the 2-year note this week, a strong bond market signal that the U.S. recession countdown clock is ticking. However, you probably have some time to run a few more plays before time expires.

2-10 Spread Inversions Often Precede Recessions



There were hyperbolic headlines and language being thrown about in the news media about an impending U.S. recession this week. Stocks had their worse selloff in a year and investors fled into perceived safe havens, ranging from long-term U.S. Treasury bonds, gold, and cash. In reality, we will need to see a deeper and more prolonged 2-10-year spread inversion before it would be a truly reliable recession signal. In past cycles, the 2-10-year spread has inverted by an average of 40 basis points for 13 consecutive months before a recession has occurred. One day of inversion by two basis points doesn't cut it.

We share the markets' widespread concerns about slowing U.S. and global economic growth and recognize the risk of recession in the U.S. in the coming year is elevated. I was one of the earliest economists on Wall Street to actually forecast it. However, Thursday's robust July retail sales report reminds us that a U.S. economic recession, if it is coming, is probably not imminent. Our economic and financial fate for 2020 is not yet sealed.

Many of the fears driving bond yields lower and daily stock market volatility higher are being driven by perceived economic policy failures. The U.S.-China trade war escalation and the heightened level of uncertainty this creates for consumers and businesses is the primary suspect. However, growing concern that the Federal Reserve and other global central banks may be behind the curve in responding to the slowdown is another area that deserves honorable mention.

Economic troubles from abroad were already percolating in early 2018 before the U.S.-China trade war really escalated. Around the same time, the Fed put quarterly interest rate hikes on auto pilot. It was eager to finally move U.S. interest rates further from zero and offset perceived inflationary threats from low unemployment rates and the additional fiscal stimulus from the Tax Cuts and Jobs Act of 2017. The Fed also began shrinking its balance sheet, which hurt U.S. bank margins and

tightened liquidity in the banking system. At the time, we argued the combination of accelerated interest rate hikes and balance sheet shrinkage might be too much monetary tightening, too soon. We started forecasting a U.S. economic slowdown for 2019 and below-trend growth for 2020 well before most saw it coming.

Since economic policy errors are man-made, there is a chance that economic policies can be adjusted in the months ahead to head-off a worst-case scenario for 2020. I am not optimistic that we will reach a comprehensive trade agreement with China before the U.S. election next year. Furthermore, the prospect of additional fiscal stimulus is equally unlikely. That leaves the Federal Reserve to shoulder the burden of sustaining this economic expansion for as long as they can.

The worse-than-expected economic data this week out of China (industrial production and retail sales) and Germany (GDP), the world's second- and fourth-largest economies, reveal the global economy's ills are much more pressing than those here in the U.S. While those problems could come home to roost here too, it will take some time to develop. Meantime, economic policy makers around the world are finally waking up to the threat to global growth. More than 30 central banks have already loosened monetary policy by reducing their benchmark interest rates this year. Clearly, more rate cuts and fiscal stimulus are needed to turn this global economic ship around. Nevertheless, this monetary medicine will probably have some soothing effect on the global economy's ills between six months to a year from today, even if we do not anticipate an outright cure.

Yield spreads invert when investors think interest rates in the future are going to be lower. This can be because they think the Fed will be cutting the Fed funds rate substantially in the future or because investors have a dim view of future growth and/or inflation prospects. In practice, these monetary and economic conditions are rarely mutually exclusive and both are often present right before a recession. Since 1976, the 2-10-year spread has inverted every time before a recession, with an average

lead time of 15 months and median lead time of 16 months. The only false warning was a modest 2 basis point inversion in June 1998 that was reversed a month later.

2-10 Inversions Have Occurred Well Before Recessions

10 Year Yield Minus 2 Year Yield, Constant Maturity						
Recession Period	Did Yield Curve Invert	Month of Inversion	Number Of Months Before Recession	Length of Inversion in Months	Average Inversion (basis points)	Median Inversion (basis points)
Feb 80 - Jul 80	Yes	Sep-78	16	20	-0.74	-0.68
Aug 81 - Nov 82	Yes	Sep-80	10	14	-0.80	-0.78
Aug 90 - Mar 91	Yes	Jan-89	18	8	-0.16	-0.14
Apr 01 - Nov 01	Yes	Feb-00	13	11	-0.27	-0.28
Jan 08 - Jun 09	Yes	Jun-06	18	12	-0.06	-0.04
Median	NA	NA	16	12	-0.27	-0.28
Average	NA	NA	15	13	-0.40	-0.39

Of course, history is an imperfect guide and the Treasury yield curve should not be the only indicator by which you run your monetary policy, business, or make important investment decisions. Indeed, there is a unique factor that needs to be considered. There is a record \$16 trillion worth of sovereign bonds trading with negative nominal yields today. So with a 10-year Treasury yield of 1.5% and a strengthening dollar, U.S. Treasury bonds are an attractive investment for foreign investors. This flood of global capital could be exaggerating the recession signal that the 2-10-year spread is giving us today. With that caveat, I would be wary of arguments that tell you things are different this time. If not imminent recession, the signal that U.S. and global bond markets are reliably sending to us today is to expect much slower growth ahead, and—by the way—get used to very low and for some countries even negative interest rates. They might be here for a long time.

Now is not the time to panic but to prepare. In fact, given the stronger-than-expected July retail sales report, we are raising our estimate of third quarter real consumer spending growth to 3.4%, and GDP growth to 2.0%. Still, as long as these global growth and policy headwinds remain in place, the U.S. outlook next year is for slower growth that is below the long-term trend. The U.S. recession countdown clock is ticking, but with a strong policy response there is still time to keep this expansion going a bit longer.

Key Economic and Interest Rate Forecasts

Economic Data	History						Forecast						Yr/Yr % chg or Annual Avg.			
	2018.1	2018.2	2018.3	2018.4	2019.1	2019.2	2019.3	2019.4	2020.1	2020.2	2020.3	2020.4	2017	2018	2019	2020
Real GDP*	2.5	3.5	2.9	1.1	3.1	2.1	2.0	1.7	1.2	0.6	0.5	0.5	2.4	2.9	2.3	1.2
Personal Consumption Expenditures*	1.7	4.0	3.5	1.4	1.1	4.3	3.4	2.3	1.7	1.0	1.0	1.0	2.6	3.0	2.6	1.9
Non-residential Fixed Investment*	8.8	7.9	2.1	4.8	4.4	-0.6	1.7	2.0	1.0	1.0	1.0	1.0	4.4	6.4	3.0	1.2
Private Housing Starts (000s units)	1,321	1,260	1,233	1,185	1,213	1,263	1,230	1,180	1,165	1,150	1,135	1,130	1,208	1,250	1,222	1,145
Vehicle Sales (mill. Units, annualized)	17.1	17.1	16.9	17.5	16.9	17.0	16.7	16.5	16.2	15.9	15.6	15.9	17.2	17.1	16.8	15.9
Industrial Production*	2.3	4.6	5.2	3.9	-1.9	-1.2	-0.8	-0.5	-1.0	-1.0	-1.0	-1.0	2.3	3.9	0.8	-0.9
Nonfarm Payroll Employment (mil.)	148.0	148.7	149.4	150.1	150.7	151.1	151.5	151.9	152.3	152.3	151.9	151.8	146.6	149.1	151.3	152.1
Unemployment rate	4.1	3.9	3.8	3.8	3.9	3.6	3.7	3.8	3.9	4.2	4.5	4.8	4.4	3.9	3.8	4.4
Consumer Price Index* (percent)	3.2	2.1	2.0	1.5	0.9	2.9	1.3	1.7	1.7	1.7	1.7	1.6	2.1	2.4	1.7	1.7
"Core" CPI* (percent)	2.7	1.9	2.0	2.2	2.3	1.8	2.0	2.0	2.0	1.9	1.8	1.8	1.8	2.1	2.1	1.9
PPI (finished goods)* (percent)	3.8	2.7	2.0	0.4	-2.3	4.6	-3.0	1.2	1.2	1.3	1.3	1.3	3.2	3.1	0.4	0.9
Trade Weighted Dollar (Fed BOG, major)	86.2	88.2	90.2	91.4	91.5	92.2	91.9	92.5	92.0	91.8	91.5	90.0	91.1	89.0	92.0	91.3
Crude Oil Prices -WTI (\$ per barrel)	63	68	70	60	55	60	56	53	52	51	50	50	51	65	56	51

*Quarterly Data Percent Change At Annual Rate; Annual Data Year-on-Year % Chg, or Annual Average.

Financial Data	History						Forecast						Annual Average			
	2018.1	2018.2	2018.3	2018.4	2019.1	2019.2	2019.3	2019.4	2020.1	2020.2	2020.3	2020.4	2017	2018	2019	2020
S & P 500	2,733	2,703	2,850	2,699	2,721	2,882							2,449	2,746		
Dow Jones Industrial Average	25,127	24,556	25,595	24,916	25,147	26,096							21,745	25,048		
Federal Funds Rate (effective)	1.45	1.74	1.92	2.22	2.40	2.40	2.04	1.63	1.54	1.29	1.13	1.13	1.00	1.83	2.12	1.27
Treasury-3 Month Bills (yield)	1.58	1.87	2.07	2.36	2.44	2.35	1.97	1.58	1.49	1.24	1.08	1.09	0.95	1.97	2.09	1.22
Treasury-2 Year Notes (yield)	2.16	2.48	2.67	2.80	2.49	2.13	1.78	1.46	1.35	1.19	1.21	1.25	1.40	2.53	1.96	1.25
Treasury-5 Year Notes (yield)	2.53	2.77	2.81	2.88	2.46	2.12	1.75	1.40	1.37	1.35	1.41	1.46	1.91	2.75	1.93	1.39
Treasury-10 Year Notes (yield)	2.76	2.92	2.92	3.04	2.65	2.34	1.99	1.60	1.58	1.57	1.68	1.78	2.33	2.91	2.15	1.65
Treasury-30 Year Notes (yield)	3.03	3.09	3.06	3.27	3.01	2.78	2.48	2.15	2.13	2.15	2.26	2.38	2.90	3.11	2.61	2.23
Prime Rate	4.53	4.80	5.01	5.28	5.50	5.50	5.40	4.75	4.64	4.39	4.26	4.26	4.10	4.90	5.29	4.38
Libor 3-Mo. U.S. Dollar	1.93	2.34	2.34	2.62	2.69	2.51	2.25	1.84	1.76	1.47	1.33	1.32	1.26	2.31	2.32	1.47
Mortgage-30 Year (yield)	4.28	4.54	4.57	4.78	4.37	4.01	3.81	3.57	3.57	3.60	3.71	3.86	3.99	4.54	3.94	3.68
BAA Corporate (yield)	4.47	4.78	4.81	5.14	4.97	4.60	4.22	3.98	4.48	4.65	4.96	5.26	4.44	4.80	4.44	4.83

Source: Bank of the West Economics, Bloomberg, Federal Reserve