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ECONOMIC PERSPECTIVES

DESPITE YIELD-CURVE INVERSIONS, RECESSION APPEARS A LONG WAY OFF

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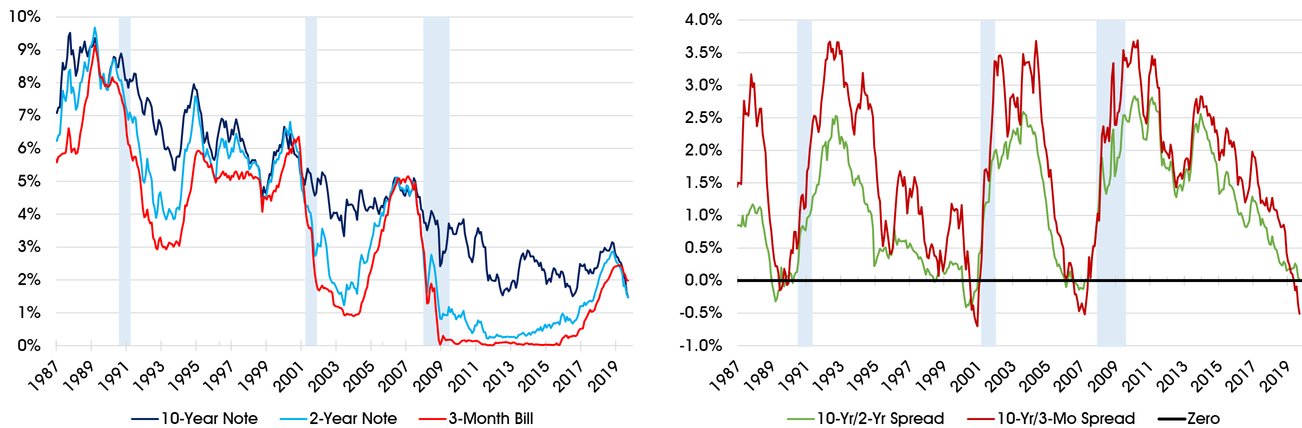
HIGHLIGHTS:

- *Inverted portions of the Treasury yield curve have heightened fears of impending recession*
- *Risk of recession based on yield curve growing; negative rates abroad contributing to inversion*
- *Yield curve inversions by themselves do not cause business cycle downturns*
- *Inventory overhang and commodity price shock absent*
- *Monetary and fiscal policy to become more accommodative*
- *Financial conditions offer few hints of an impending downturn*
- *Labor market conditions show no signs of deteriorating*

INVERTED PORTIONS OF THE TREASURY YIELD CURVE HAVE HEIGHTENED FEARS OF IMPENDING RECESSION

Even before it became the longest expansion in U.S. history in July, the longevity of the current business cycle upturn prompted market participants and commentators to look for signs of its impending demise. With real business activity ambling along at an above-trend pace and few, if any, signs of weakness evident in high-frequency data, attentions turned to the slope of the Treasury yield curve as a precursor of coming recession (see charts below). The rate spread between the government's 10-year note and 3-month bill inverted on a constant-maturity, bond-equivalent basis in late May and has moved deeper into negative territory since, but recent periodic inversions between the 10-year and 2-year maturities have been the focus of traders and investors. While true that the latter yield spread has had a longer lead time heading into the last three cyclical downturns, the temporary nature of the latest moves calls into question the veracity of the signal. Indeed, as of this writing, the constant-maturity, bond-equivalent rate at both maturities was 1.47%.

Exhibit 1: Selected Treasury Yields and Spreads *(monthly average, bond-equivalent basis)*



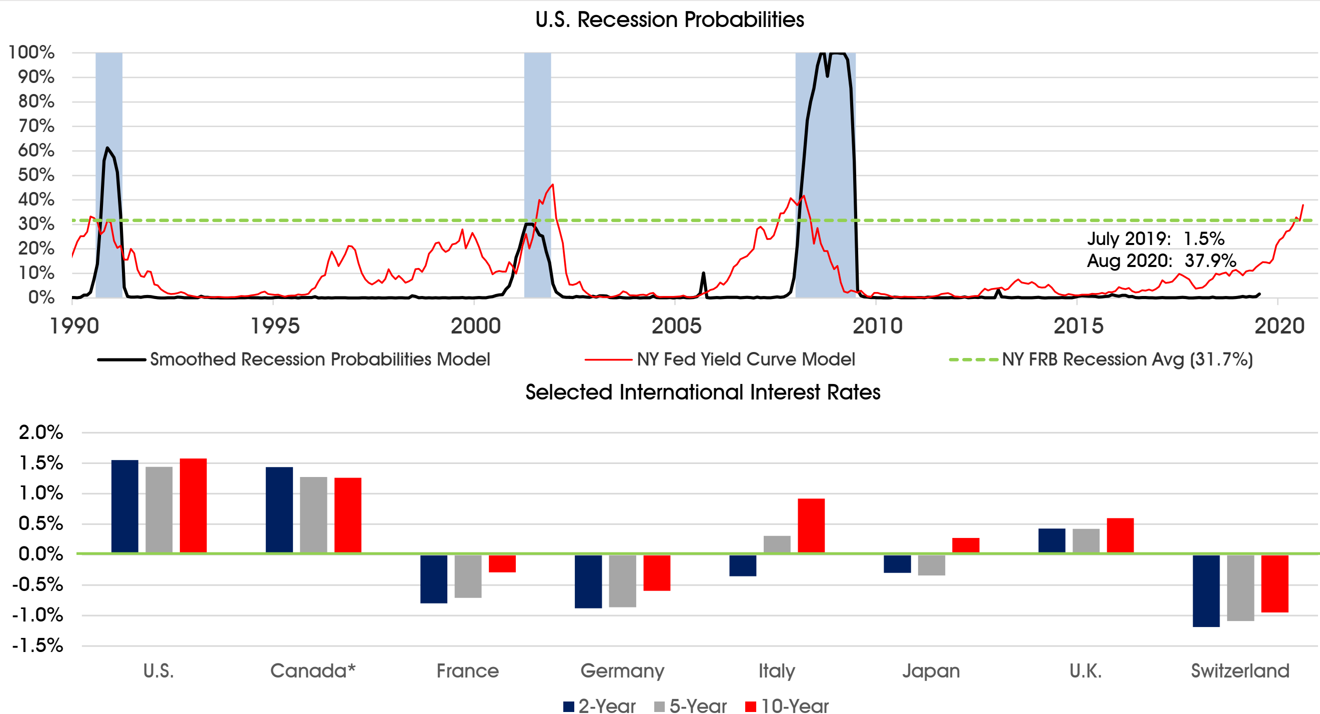
Note: Shaded areas denote recessions. Source: Board of Governors of the Federal Reserve System.

RISK OF RECESSION BASED ON YIELD CURVE GROWING; NEGATIVE RATES ABROAD CONTRIBUTING TO INVERSION

Typically, the Treasury yield curve inverts as a weakening of real business activity prompts traders and investors to anticipate a shift in monetary policy to a more accommodative stance. When the spread between 10-year notes and 3-month bills initially inverted at the end of May, neither Federal Reserve policymakers nor market participants were expecting near-term cuts in administered interest rates. The dot plot released following the Federal Open Market Committee's (FOMC) March meeting indicated that unchanged policy was the most likely outcome for 2019, with a token 25-basis-point hike in the target range for the federal funds rate projected in 2020. Market participants almost universally expected no change in policy at the June gathering and a little more than three quarters thought the federal funds target range would remain at 2.25%-2.5% after the July FOMC meeting. Since that time, the constant-maturity, bond-equivalent spread between 10-year notes and 2-year notes has gone from about 15 bps to flat, while that between 10-year notes and 3-month bills has dropped from -15 bps to -51 bps.

While a near-term business cycle downturn appears remote, the inverted Treasury yield curve has raised fears of a recession further out (see chart below, top). The smoothed U.S. recession probabilities model maintained by Professor Jeremy Piger of the University of Oregon, which relies on nonfarm payrolls, industrial production, real personal income excluding transfer payments, and real manufacturing and trade sales – series considered by the National Bureau of Economic Research in determining business cycle turning points – placed the probability that the U.S. economy was in recession in July 2019 at just 1.5%. However, based on the increasingly negative bond-equivalent interest rate spread between the Treasury's 10-year note and 3-month bill, the Federal Reserve Bank of New York's model put the chances that the economy will be in a recession in August 2020 at 37.9%, well above the 31.7% average prevailing ahead of the last three cyclical downturns. Moreover, with that spread widening further, the odds of recession are poised to climb again in September. In the current environment, we need to be mindful of the impact that weaker economic activity abroad may be having on the Treasury yield curve. The U.S. currently sports the highest interest rates across the Group of Seven and Switzerland. Indeed, in four of the eight countries – France, Germany, Japan and Switzerland – yields at key maturities are all below zero (see chart below, bottom). The attractiveness of investing in a steadily appreciating currency, moreover, cannot be overlooked.

Exhibit 2: Recession Probabilities (chart top) and Selected International Interest Rates (chart bottom)

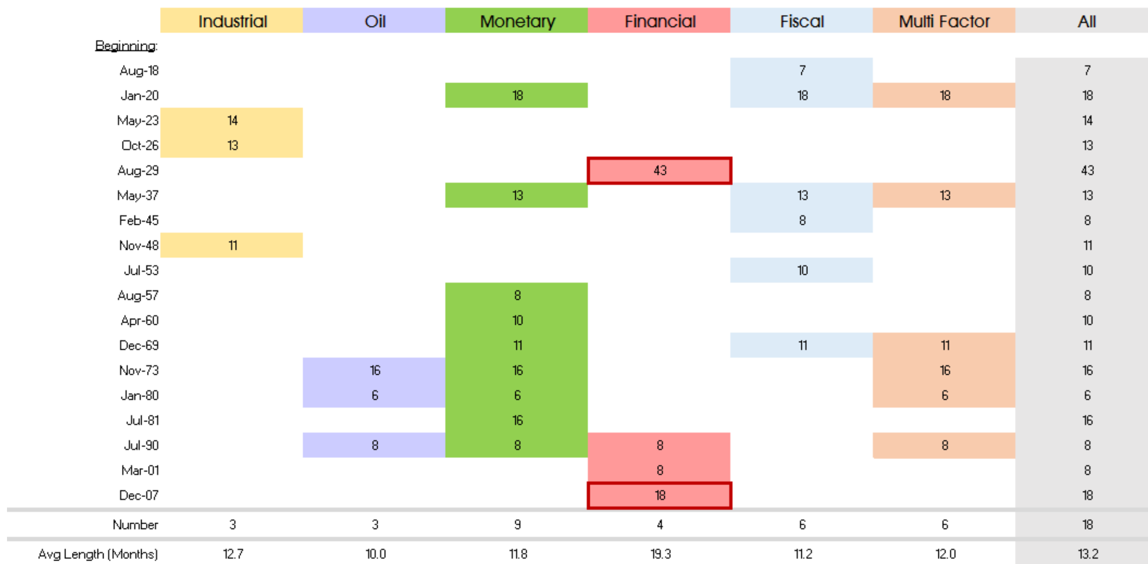


Notes: Blue shaded areas denote recessions. Asterisks denote 10-yr/2-yr yield curve inversions. Sources: Federal Reserve Banks of New York and St. Louis, Bloomberg.

YIELD CURVE INVERSIONS BY THEMSELVES DO NOT CAUSE BUSINESS CYCLE DOWNTURNS

More often than not, inversions of the Treasury yield curve are reflections of imbalances in the domestic economy and do not by themselves cause business cycle downturns. Five factors have been primary drivers of recessions in the U.S. over the past one hundred years (see diagram below): mismatches between demand and supply in the industrial sector, oil price shocks, overly restrictive monetary policy, financial crises and fiscal contractions in the wake of major military conflicts. Triggered by adverse financial-sector developments, the Great Depression and Great Recession were the longest cyclical downturns since the end of World War I, lasting 43 and 18 months, respectively. By comparison, those prompted by restrictive monetary policy have lasted 11.8 months, slightly longer than those caused by fiscal contractions.

Exhibit 3: Primary Drivers of U.S. Business Cycle Downturns *(duration in months)*



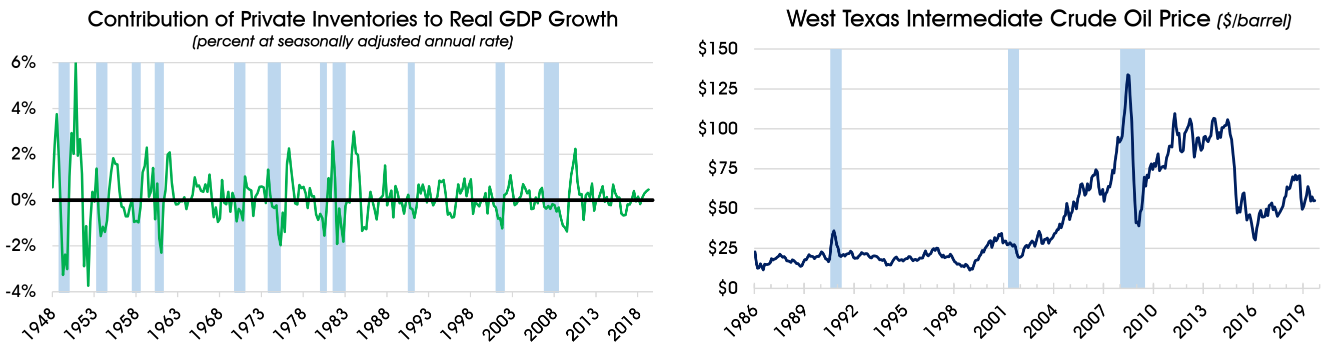
Beginning:	Industrial	Oil	Monetary	Financial	Fiscal	Multi Factor	All
Aug-18					7		7
Jan-20			18		18	18	18
May-23	14						14
Oct-26	13						13
Aug-29				43			43
May-37			13		13	13	13
Feb-45					8		8
Nov-48	11						11
Jul-53					10		10
Aug-57			8				8
Apr-60			10				10
Dec-69			11		11	11	11
Nov-73		16	16			16	16
Jan-80		6	6			6	6
Jul-81			16				16
Jul-90		8	8	8		8	8
Mar-01				8			8
Dec-07				18			18
Number	3	3	9	4	6	6	18
Avg Length (Months)	12.7	10.0	11.8	19.3	11.2	12.0	13.2

Sources: Goldman Sachs Global Investment Research, National Bureau of Economic Research.

INVENTORY OVERHANG AND COMMODITY PRICE SHOCK ABSENT

The U.S. has not experienced an industrial-centered downturn in over six decades and there is little reason to expect one anytime soon. Real manufacturing and trade inventory-to-sales ratios have been steadily rising since the end of 2017, yet remain below earlier highs during this expansion and those heading into the 2008 downturn. In addition, shortened supply chains and improved inventory management systems have markedly reduced the impact that reported swings in stock-building have on real GDP growth (see chart below, left). With ample supplies available, petroleum prices do not pose a threat to growth at present. Indeed, at roughly $55 per barrel, the price of West Texas intermediate crude oil is well below earlier highs above $100 per barrel this expansion and almost $22 per barrel below the current cycle's average (see chart below, right).

Exhibit 4: Inventories Effect on Real GDP Has Fallen Through Time (chart left); Oil Prices Remain Low (chart right)

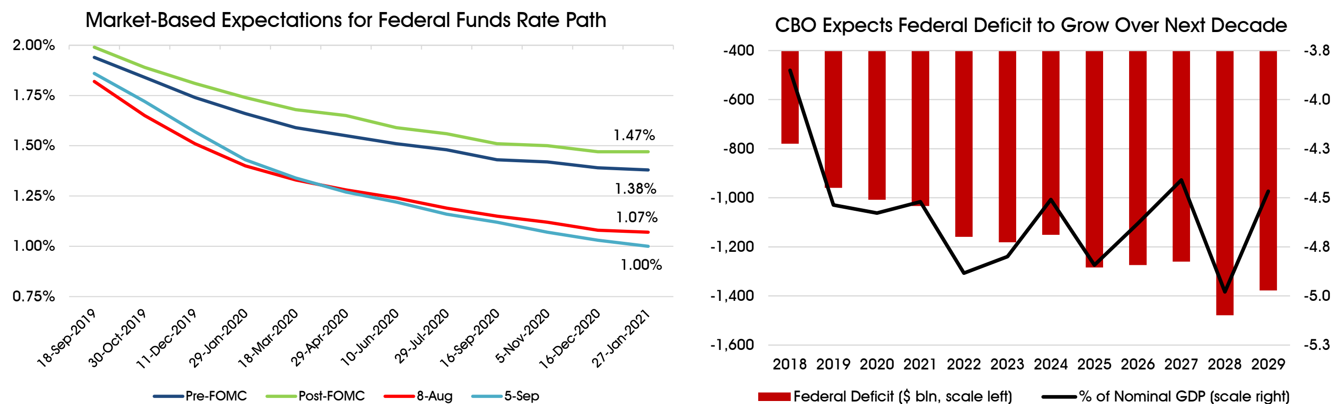


Note: Shaded areas denote recessions. Sources: Bureau of Economic Analysis and U.S. Energy Information Administration.

MONETARY AND FISCAL POLICY TO BECOME MORE ACCOMODATIVE

Prospective monetary and fiscal policies also pose little threat to the ongoing economic upturn. The FOMC reduced the target range for the federal funds rate for the first time in 11 years in July and additional cuts appear to be on the way. Traders and investors universally expect more accommodation to be delivered at the middle of this month, with the probability of a more aggressive 50 bps drop in the federal funds rate band, rising and falling with each new development on the international trade front. After the September meeting, the Fed will provide an update to the dot plot that will allow us to determine how different policymakers' expectations are from those of market participants (see chart below, left). On the fiscal policy front, projections from the nonpartisan Congressional Budget Office (CBO) following the recent budget deal revealed that the federal government budget shortfall will top $1 trillion in 2020, or two years earlier than previously thought, and will climb to 5% of nominal GDP by 2028 (see chart below, right).

Exhibit 5: Market Participants Anticipate Sizable Rate Cuts (chart left); Federal Deficit to Grow (chart right)

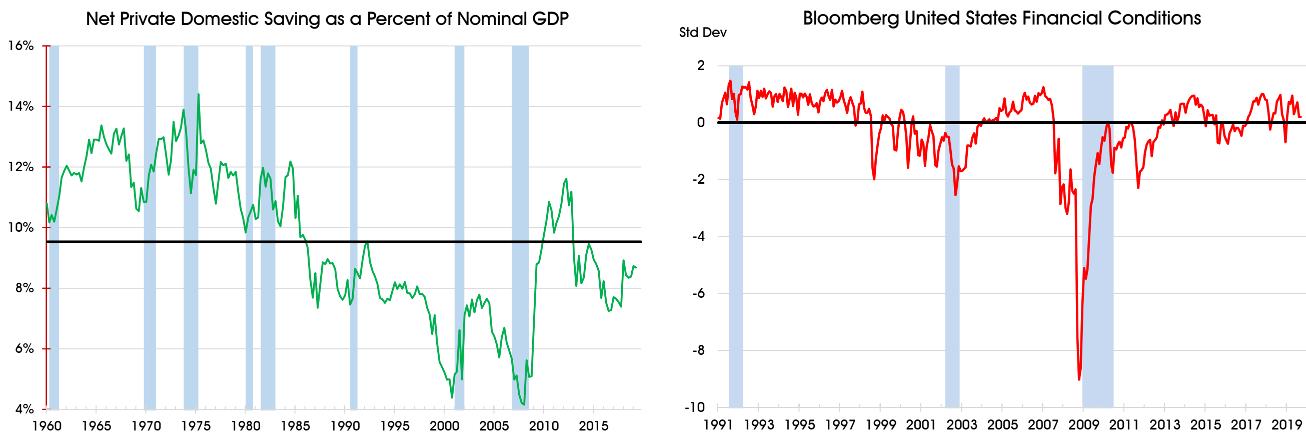


Sources: Bloomberg, Congressional Budget Office.

FINANCIAL CONDITIONS OFFER FEW HINTS OF AN IMPENDING DOWNTURN

Financial conditions suggest that the current expansion will continue over the foreseeable future. While net saving of private domestic businesses, households and institutions as a percentage of nominal GDP is currently running below its long-run average of 9.5%, the spring quarter's reading of 8.7% remains well above the levels recorded immediately prior to the last three recessions (see chart below, left). Financial conditions indexes based on equity prices, interest-rate spreads and market-volatility measures have admittedly tightened since the Administration decided to impose tariffs on the remaining Chinese products not previously levied, yet remain in accommodative territory and well above the readings experience before the two most recent cyclical downturns (see chart below, right).

Exhibit 6: Domestic Saving a Bit Below Long-Term Average (chart left); Financial Conditions Neutral (chart right)

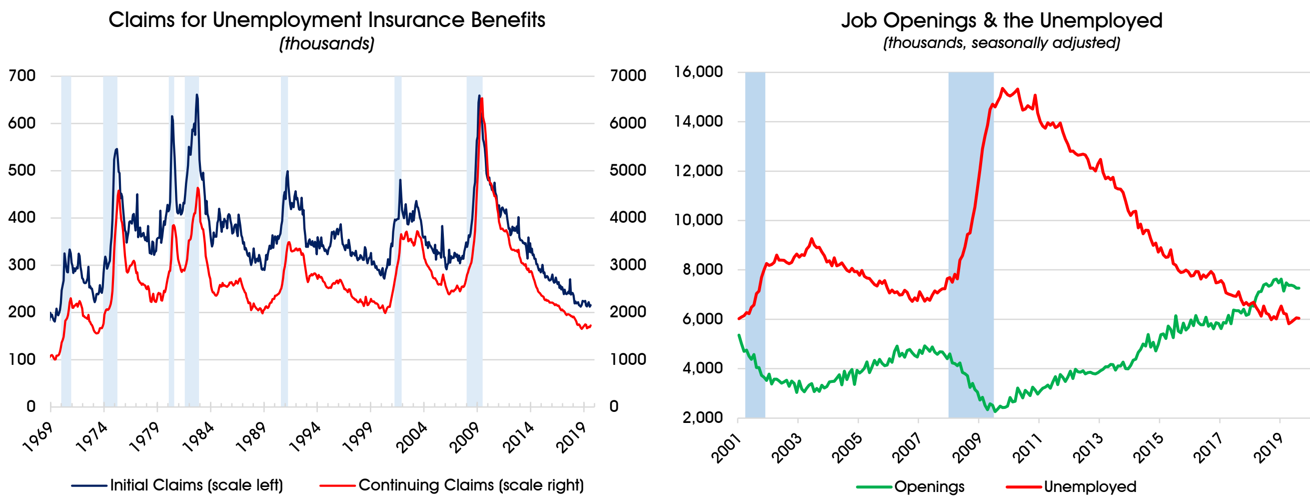


Note: Shaded areas denote recessions. Sources: Bureau of Economic Analysis, Bloomberg.

LABOR MARKET CONDITIONS SHOW NO SIGNS OF DETERIORATING

Consumer spending's share of real GDP climbed to an all-time high of 69.7% in the second quarter. In order to make a meaningful dent in domestic business activity, you need to take a bite out of personal spending or the primary factor driving it, healthy labor market conditions. The employment situation, however, remains exceptionally strong with few, if any, signs of fatigue. At 3.7%, the civilian jobless rate is running well below economists' and policymakers' estimates of full employment. Traditional leading indicators of labor-market activity such as unemployment insurance claims remain at multi-generational lows (see chart below, left). Worker demand continues to outstrip available supply, with the number of available positions eclipsing the unemployed by an estimated 1.3 million in July (see chart below, right). Despite uncertainties created by the ongoing trade dispute with China, consumers remain largely unfazed. Indeed, the percentage of respondents to the Conference Board's monthly survey characterizing jobs as plentiful less those believing positions are "hard to get" stood at 39.4% in August – the highest level since November 2000. In concert with the factors above, the ongoing strength of the labor market cautions against reading too much into any inversion of the Treasury yield curve as a signal of imminent recession.

Exhibit 7: Jobless Benefits (chart left); Job Openings and Unemployed (chart right)



Note: Shaded areas denote recessions. Sources: U.S. Department of Labor.

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