Signs of Monetary Restraint

The fourth quarter marked the second anniversary of a major deceleration in money and bank credit aggregates which peaked in October 2016. As a precursor, the monetary base and excess reserves began to decline in the summer of 2014. The consequence of contracting reserve and monetary aggregates has been a pronounced flattening in the U.S. Treasury yield curve and a retrenchment in world dollar liquidity. The Federal Reserve [Fed] has raised the Fed funds rate nine times (or about 2.25%) since December 2015 which contributed to the shrinkage in the key monetary indicators. It is now evident that the Fed actions have spread through the financial sector into the broader economy as inflation wanes and the growth rate in the interest-sensitive bellwether sectors such as housing, autos and capital spending is either slowing or declining.

Pricing Power

One of the most consistently reliable indicators of the vibrancy of an economy is pricing power. If business conditions are robust, firms will take advantage of their good fortune and raise prices. If product demand is poor, or overproduction is evident, firms will pull the only lever in their command which is to lower prices. Based on such diverse items as transportation, apparel and commodities, price weakness was widespread in the fourth quarter, suggesting final demand is weak relative to productive capacity.

A fall in inflation is decidedly atypical if not unique for an economy nine-and-a-half years into expansion, suggesting that the economy entering 2019 is noticeably weaker than revealed in the robust coincident and lagging economic indicators.

In the fourth quarter, the GDP price deflator is estimated to have eased to the slowest rise since the second quarter of 2017, on par with the headline CPI. For 2018, the CPI increased 1.9%, slower than the 2.1% rise in 2017. In the 12 months ending in November, the headline personal consumption expenditures (PCE) deflator rose less than the Fed’s 2% inflation target. Measured by the annualized rate of change, the core PCE deflator has only been above the Fed’s target for one month since March 2012. When firms cut prices, they will, at least temporarily, boost demand. But if the dynamic of monetary, fiscal, demographic, indebtedness, and foreign factors are not supportive, lower prices will not be a pathway to a buoyant economy.

The loss of pricing power evident late in 2018 takes on much greater significance since historically prices have been very sticky and largely unresponsive to slowdowns in demand during aging expansions. This pattern is one of the reasons that inflation is a lagging indicator. A fall in inflation does not normally occur until the economy is in an actual recession, which was not the case last year. As such, the inflation drop is a notable development that suggests final demand is weaker than volumetric measures imply.
Economic Sectors

As 2018 ended, several high-multiplier sectors appear to have either passed their cyclical peaks or rapidly approached them. Exports, vehicle sales, and home sales exhibited characteristics of sectors in recession. Capital equipment and oil and gas drilling have also lost considerable momentum and, while remaining positive, their leading indicators are deteriorating.

Housing and Autos. Home and vehicle sales peaked over a year ago and have declined irregularly since then. New and existing home sales have fallen 23% and 7% from their recent peaks, respectively. Homebuilders have expressed concerns over the considerable weakness, while the layoffs announced by auto manufacturers are tacit confirmation of faltering sales.

International. Constant dollar exports peaked in May and have fallen sharply ever since. Strength in the dollar and poor business conditions for all the major foreign economies have resulted in a significant deterioration in the current account deficit despite numerous efforts by the Administration to achieve the opposite. The export outlook is not encouraging as global growth continues to slow. First, an important indicator of future conditions is money growth which is an extensive problem outside the U.S. as we discuss below. Second, the productivity of debt around the world has been declining for more than a decade. This additional financial burden will reinforce the monetary restraint. Third, growth in the volume of global trade, as measured by the highly regarded Netherlands Bureau of Economic Policy Analysis, eroded significantly after the first quarter of 2018, thereby diminishing international capital flows, which, in turn, further undermines growth potential.

Capital Equipment. Prior to the fourth quarter, the trend in real producer-durable equipment expenditures was discouraging, with the 3.4% annual rate of increase in the third quarter well below those of 4.6%, 8.5% and 9.9% in the prior three quarters, respectively. Core capital goods orders fell in the three months ending in November and anecdotal evidence from diffusion indices derived from business surveys indicate new orders were much weaker in December than for many months prior. This slow rate of gain was a precursor of the stagnation in the fourth quarter. That such a considerable shift has occurred makes an important statement in view of the major corporate tax cut in 2018 and the ability of firms to repatriate overseas funds at low tax rates. These fiscal actions were widely anticipated to lead to a capital spending boom, which has failed to materialize. The prospects for capital equipment are bleaker since much manufacturing output is directed to international markets where conditions eroded even further towards the end of 2018. Firms operating commodity businesses are likely to cut back in view of much lower selling prices of their products.

A large segment of capital expenditures are the oil and gas related companies. Oil prices in the fourth quarter registered one of the largest three-month declines on record, dropping well below the year’s earlier levels, indicating that drilling activity is poised to move considerably lower. U.S. economic growth is now positively correlated with oil prices. Any boost in consumer spending resulting from a decline in oil prices is far outweighed by the loss in domestic, corporate and household income caused by the oil-price slump. This collinearity was not always the case, but the relationship has changed dramatically as domestic production of oil and related products surged since 2010 (Chart 1). Late in 2018, total supplied petroleum products (an approximation of the amount consumed) were 21 million barrels per day (mbpd), including
Monetary Restraint

Going forward, the economy will face past and continuing restraint of monetary actions. First, the flatter yield curve means that financial entities that borrow short and lend long will find their activities less profitable and will slow activity or increase risk premiums, and thus credit will become more expensive or less readily available. Second, world dollar liquidity [WDL] continues to decline. Third, the velocity of money, following a mild four-quarter advance, fell in the fourth quarter, possibly restarting its multi-year downtrend. Fourth, monetary restraint in the form of Fed balance sheet reduction will tighten financial conditions.

Quantitative Tightening [QT3]

By the end of January 2019, the Fed balance sheet and excess reserves [ER] of the depository institutions will decline another $50 billion as a result of QT3 with similar reductions scheduled for each of the remaining 11 months of the year. ER dropped from a peak of $2.7 trillion in August of 2014 to a recent level of $1.5 trillion (Chart 3). Since balance sheet normalization cut ER by $400 billion dollars, the remaining $800 billion dollar decrease in ER may be attributable directly and indirectly to the increases in the

oil and related products. Imports amounted to about 1.8 mbpd, meaning that domestic sources provided 89% of oil consumed domestically, which would approximate the percentage of each dollar's worth of petroleum spending that went to domestic sources. As recently as mid-2010, this amount was 48% and in earlier periods, the domestic content of petroleum usage was even lower. Thus, while consumers may benefit from lower oil prices, the aggregate U.S. economy does not as Gross Domestic Income falls.

Consumer

The January 1, 2018 tax reduction boosted consumer cash flows and continues to buoy real consumer spending which constitutes the largest subset [68%] of the economy. However, the personal saving rate (PSR) indicates this boost to the economy has been largely, if not entirely, exhausted. In the final two months of 2017, the PSR was 6.2%. Reflecting a $40 billion dollar drop in personal taxes, the PSR jumped to an average of 7.2% in the first two months of 2018 before ending at 6% in November 2018, slightly less than before the tax cut. November’s PSR was near the lowest levels since the expansion began in mid-2009 and was well below the 7% average of the more than nine-year span (Chart 2).
policy rate. If QT3 is sustained, by the end of this year, ER will fall to $0.9 trillion, assuming float, currency and other technical factors are neutralized.

Two equations show the far reach of the changes in the Fed’s balance sheet. First, \( M_2 = MB \times m \) (the money multiplier). This equation shows MB is not money but potential or high powered money. MB is not money since money must be able to serve as a medium of exchange, unit of account and store of value, whereas MB only satisfies the unit of account requirement. Second, \( WDL = MB + \text{Foreign Official Holdings of US Treasury Securities} \). Equation #2 holds, reflecting the Fed de facto position as the world's central bank.

Equation #1 means that the base is not money but that it can be turned into money by means of the money multiplier \([m]\), which is unlikely to do given the flat yield curve and the highly indebted economy. The determinants of little \( m \) are known, unlike those of the velocity of money. Currently, MB is declining and \( m \) is countervailing to a slight degree, but the drop in the base and the increased Federal funds rate has resulted in sharp slowdown in M2 growth rate from a peak of 7.5% per annum in October 2016 to slightly more than 4.0% at the end of 2018.

Accordingly, M2 growth should continue to work irregularly lower even though M2 growth was better in November and December. Late in 2018, surging deposits into money market mutual fund shares (MMMFS) boosted M2. While MMMFS are spendable balances, they do not support a sustaining increase in bank credit. The gain in MMMFS apparently resulted from a large movement from stocks rather than motivated by a need for increased transaction balances. This is confirmed by the decreased velocity of money.

The second equation means that WDL declines when the base falls unless it is offset by an increase in foreign official holdings of Treasury securities. Both of these components constitute tier one capital and can be leveraged. Thus, the ongoing reduction in WDL forces a deleveraging, the tangible signs of which include: a sharp slowdown in M2 growth in Japan, the Eurocurrency zone and China, a drop in world stock and commodity prices, and a synchronized deceleration in major foreign economies. Chinese money growth recently fell to the lowest in four decades while Japanese money growth dropped below the trough in two of the last three recessions. The Chinese just announced their fourth reduction in reserve requirements since the start of 2018 in an attempt to try to reverse the weakness in money and credit growth. European money growth slowed in 2017 and 2018 even though the ECB was, like the BOJ, still engaged in quantitative easing. The velocity of money also fell in all three of these economies. Interestingly, velocity was less than one in all three, meaning that the stock of money did not completely turn over during 2018 in these three economic regions. M2 velocity in the U.S. is about 1.45.
Return to the Zero Bound

In view of the increasingly restrictive monetary conditions, a change in Federal Reserve policy is in the offing. The historical record indicates even a quasi-recession would necessitate a significant decrease in the Federal funds rate. However, the Fed will not be able to deliver the same rate cut as historically has been the case since the Funds rate would be truncated by the zero bound. Even a quasi-recession would lead to such diminished inflation that the U.S. economy could face zero inflation or outright deflation. Zero inflation would imply that some sectors would be in deflation and that the real burden of the debt levels would become onerous enough to eventually turn a slowdown into a more persistent and/or deeper economic funk.

We looked at three time periods when sufficient economic difficulties arose that a major Fed response was required although a full-fledged recession did not materialize: 1966-67, 1984-86, and 1995-99 (Table 1). All three cases have important similarities. Each period was preceded by a monetary deceleration and included a notable bankruptcy, in order: Westec (also known as Western Equities), Continental National Bank of Illinois and Long-Term Capital Management. There are four key differences this time compared to past episodes which cast doubt on the Fed’s current capability to turn the economy around with already current low interest rates. First, money velocity was much higher in all cases and was not in a secular downturn as presently. Second, indebtedness was far less. Third, demographics were robust and in stark contrast to the population growth that was only 0.6% in 2018 and an eighty-one year low. Fourth, foreign business conditions were far superior to the synchronized slowdown currently apparent.

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<th>Federal Funds Rate and Inflation During Quasi-Recessions of 1966-67, 1984-86 and 1995-99</th>
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<td>1. Oct-66 5.8%</td>
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<td>6. Jan-99 4.6%</td>
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<td>8. Average</td>
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On average, during those episodes, the Federal Funds rate and the U.S. inflation rate, decreased by 300 basis points and 1.3 percentage points, respectively. Interest rates and inflation were much more elevated during these previous episodes. However, as noted, our current lower rate and inflation circumstances are due to lower velocity of money, higher debt, and poor demographics. Therefore, a larger percentage decline in inflation and interest rates can be expected. Even a mild recession in 2019 would put the Fed in an untenable situation.

It is conceivable that the Fed, constrained by the zero-bound interest rates and in attempting to raise economic activity, could engage in another untested experiment with unforeseen consequences to boost debt levels. If that occurs, the U.S. debt overhang would worsen and the country would follow a path pursued by other heavily indebted countries such as Japan, Europe and China. The risk is rising that the U.S. will not only return to zero short rates but, as they have in Japan, might remain there for several years.

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