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Waiting for the Recession

By Maria Vassalou, PhD and Thomas Cooley, Ph.D

One of the most popular topics of conversation these days in business and financial circles is speculation about the coming recession. The recent increase in the volatility of equity markets, the decline in growth abroad and the disruption to world trade all add to the concern about future growth in the economy and people are waiting for the other shoe to drop. But, the U.S. economy continues to be surprisingly robust.

Do we know that a recession is coming? Well, yes... That is because throughout modern history periods of economic growth have been followed by periods of decline in a recurring pattern known as the “business cycle.” Economists have studied the business cycle for many years and documented its characteristic features. Recessions followed by expansions are recurrent phenomenon that historically have displayed consistent patterns. What we don’t know is exactly when recessions (downturns) will begin or what will trigger them.

Business Cycle History

The formal study of business cycles—these recurrent patterns of recession and expansion—emerged in the 1930s when economists associated with the National Bureau of Economics Research (NBER) documented the characteristic similarities of business cycles both over time and across countries. Since that time, the NBER has been viewed as the official arbiter of business cycle dating, specifying the [dates of the turning points in the economic cycle](#). To be officially classified as a recession, the economic contraction must be widespread, affecting most sectors of the economy.

The recent expansion—the period of recovery from a recession—is definitely mature. The expansion began in June of 2009 and is now the second longest on record. But this recovery was characterized by slow growth initially and the recovery was from a very steep decline in economic activity. This “great” recession was the most severe since the 1930s and was accompanied by a widespread crisis in the financial system.

The following chart shows the path of gross domestic product (GDP) during the current business cycle compared to other recent U.S. business cycles.

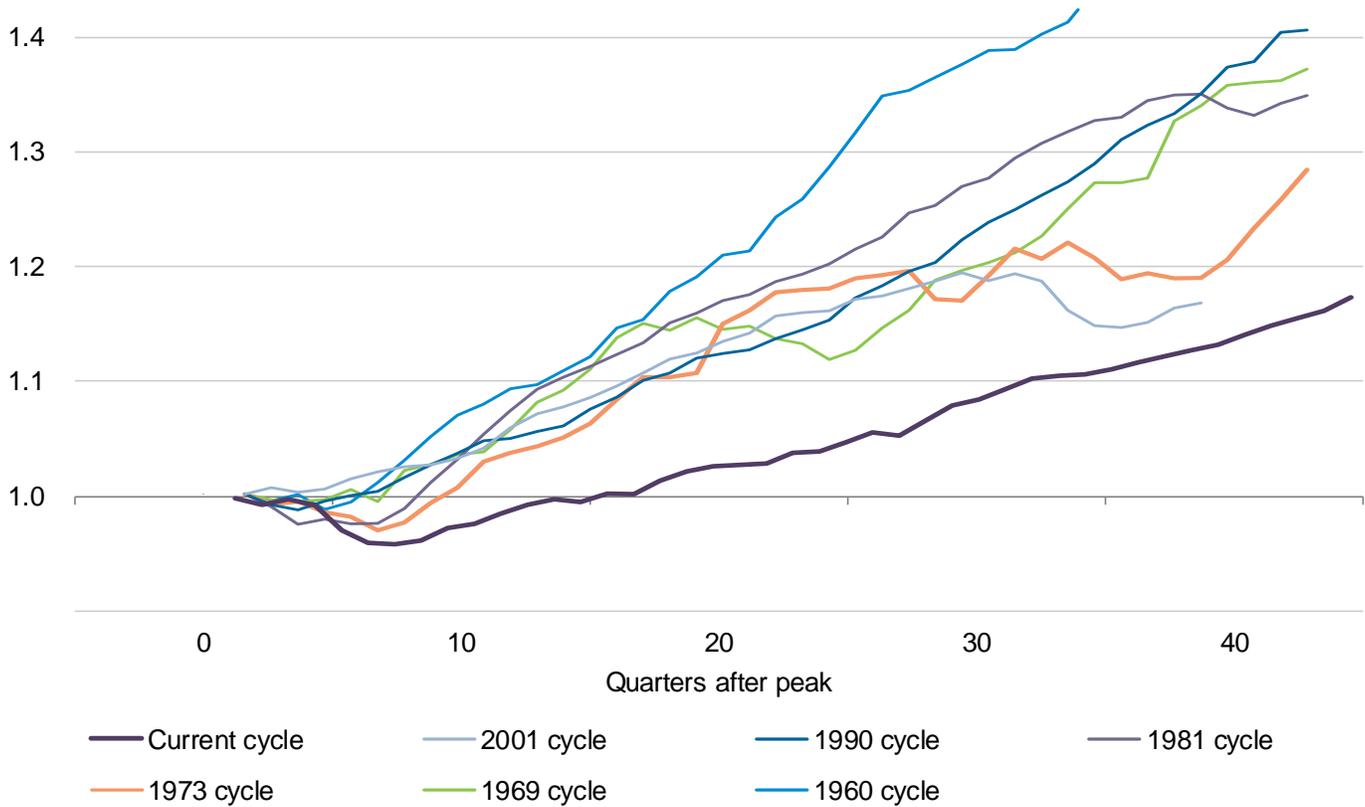
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FIGURE 1: REAL GDP

Peak before recession = 1



Source: BEA

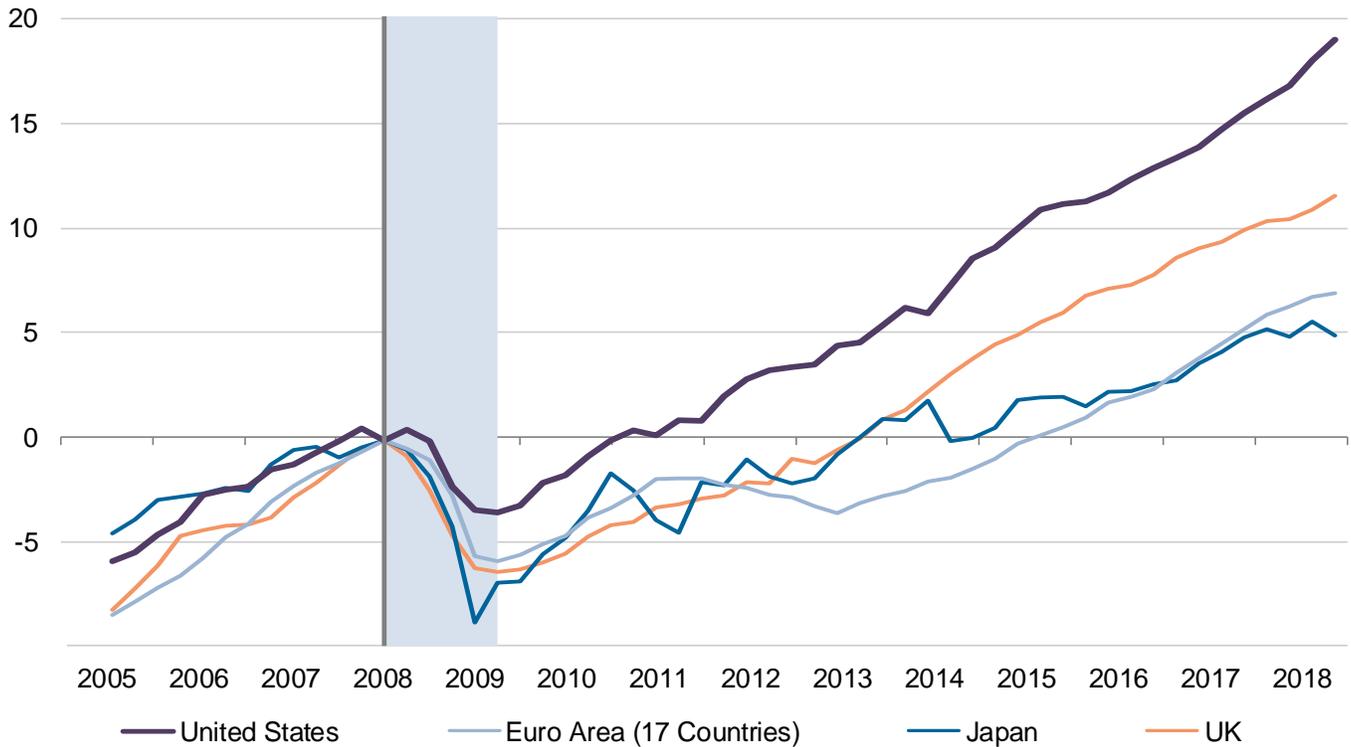
It is evident that the recession in the current cycle was deeper and more prolonged than in previous cycles and that the growth rate in the recovery phase has been much slower.¹ More to the point of the current discussion, in almost all of the previous cycles the economy had experienced another downturn by this point of maturity.

The U.S. was not alone in being affected by the financial crisis and the sharp downturn in the economy. As the following chart shows the same events were much more severe for Europe and Japan.

¹ Please also see, Vassalou, M and J. Donaldson, "This Time IS Different: Potency of Monetary Policy", PWP Global Macro Insights White Paper, June 3, 2015.

FIGURE 2: REAL GDP

Percentage Change from 2008 Q1, Seasonally Adjusted

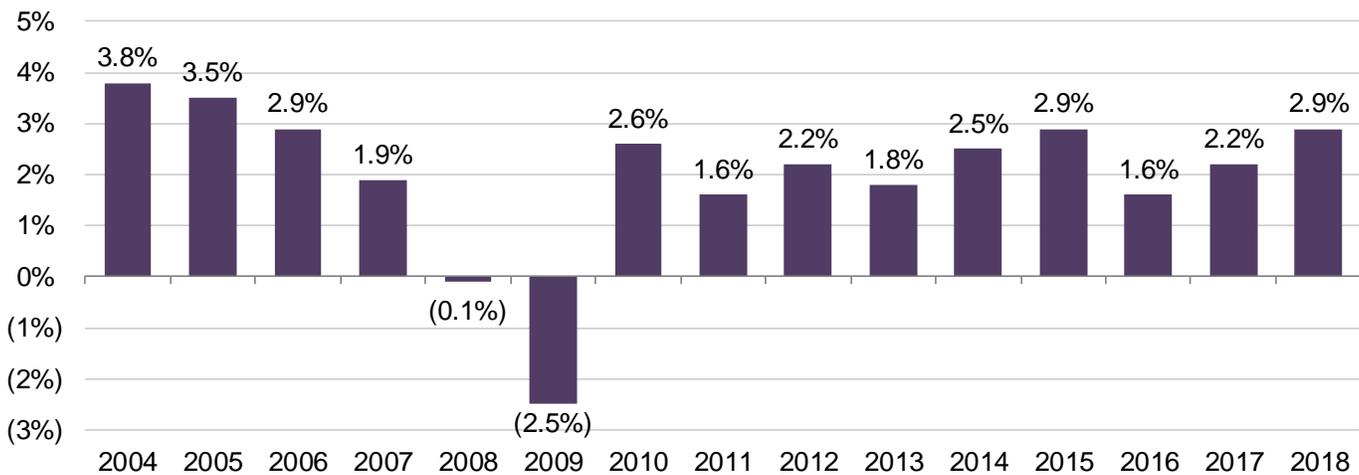


Source: BEA

In this comparison, the U.S. experience looks relatively benign compared to Europe and Japan.

The following chart shows the growth rate of U.S. GDP for each year of the recovery.

FIGURE 3: REAL GDP: GROWTH RATE BY YEAR

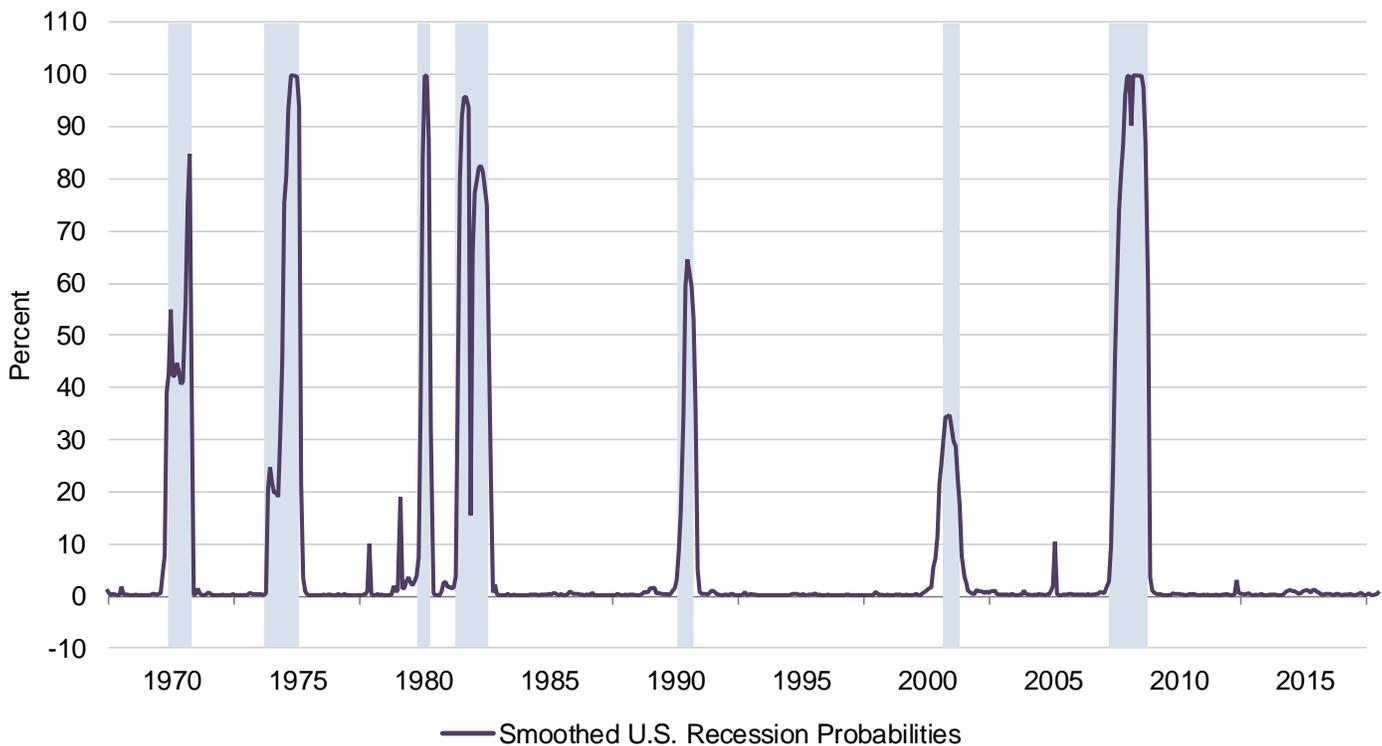


Source: BEA

Predicting Recessions

It is tempting to think that we could infer the onset of a recession from the maturity of the recovery, but business cycles have both common characteristics and significant differences—they are not all the same. Economists have long attempted to predict recessions using underlying economic data. One relatively successful approach predicts recession probabilities using a dynamic factor regime switching model—a model based on historical data that estimates the probability of a switch from growth to contraction—and it is updated regularly in the Federal Reserve Bank of St. Louis FRED data base.² The most recent estimates of the probabilities are shown in the following FRED graph.

FIGURE 4: SMOOTHED U.S. RECESSION PROBABILITIES



Shaded areas indicate U.S. recessions

Source: Piger, Jeremy Max. myf.red/g/mxlZ

As is obvious from the size of the spikes in the recent data this model estimates the probability of a recession as very small given current economic data. But, historically, the method does very well at identifying recessions but not with a lot of lead-time. So it may be that the conditions have not yet shown up in recent data.

² Smoothed recession probabilities for the United States are obtained from a dynamic-factor Markov-switching model applied to four monthly coincident variables: non-farm payroll employment, the index of industrial production, real personal income excluding transfer payments, and real manufacturing and trade sales. This model was originally developed in Chauvet, M., "An Economic Characterization of Business Cycle Dynamics with Factor Structure and Regime Switching," *International Economic Review*, 1998, 39, 969-996. <http://faculty.ucr.edu/~chauvet/ier.pdf>

The Yield Curve

Another indicator that market participants pay close attention to is the Treasury Yield Curve. An inverted yield curve, where interest rates on short-dated Treasuries rise above long-term rates, has occurred prior to some recessions – notably those in 1990, 2001 and 2008. Figure 5A shows that the gap between short- and long-term rates has narrowed significantly recently but it is not yet inverted. A flatter yield curve generally foretells slower economic growth ahead. This is not decisive however because, for example, the U.S. economy continued to grow throughout the 1980's which were characterized by a relatively flat yield curve.

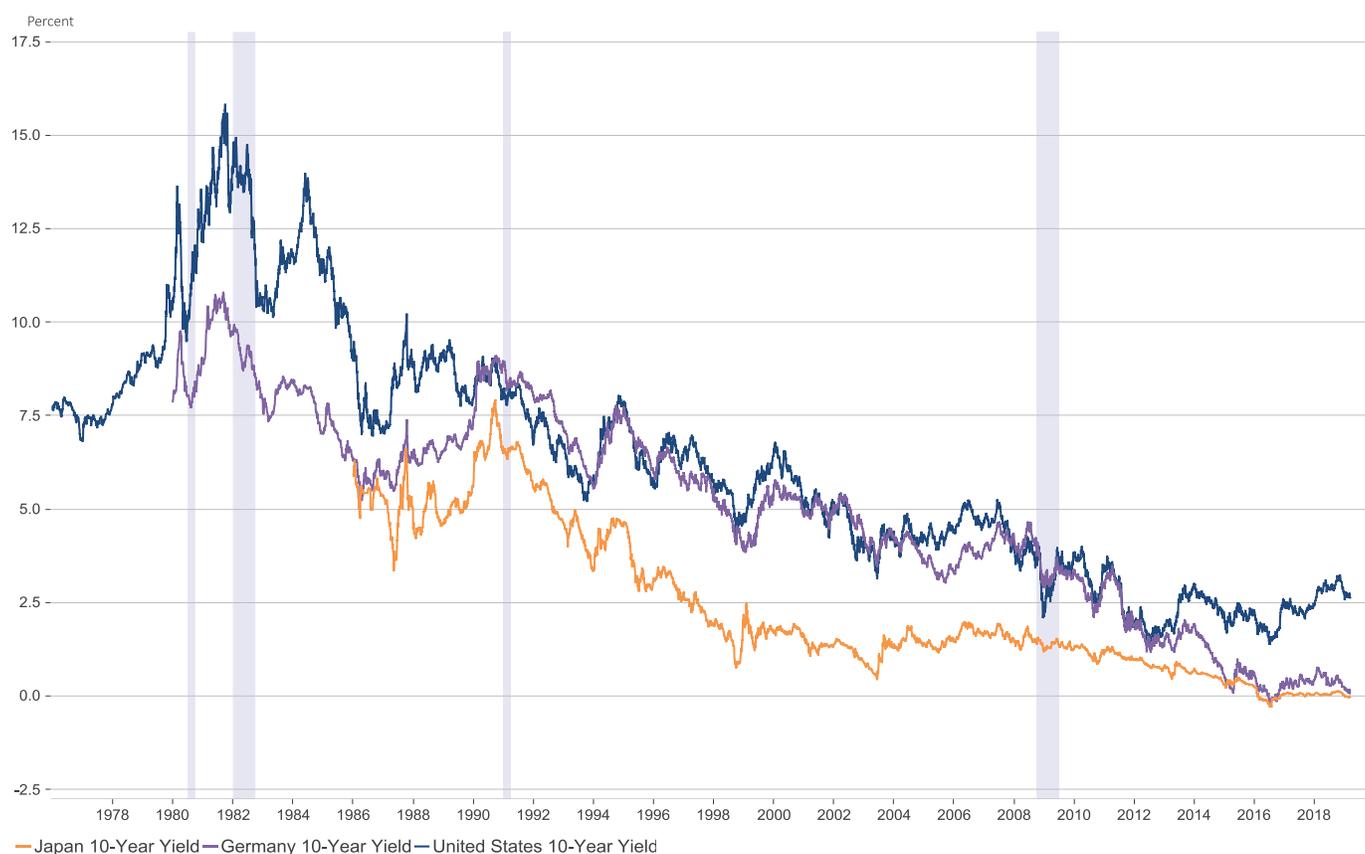
In addition, as we see in Figure 5B, the level of the US 10yr yield hasn't risen materially since the Fed initiated its tightening policy in December 2015. The 10yr yield is higher by a mere 30 basis points compared to that in December of 2015, despite the Fed having raised interest rates by 225 basis points. At the same time, the 10yr yields in Germany and Japan are close to zero. Low long-term rates suggest that the market expects low inflation going forward and that the "neutral" rate – the rate that implies that the economy is growing at its long-term growth trend – has drifted lower. In other words, the long-term yields suggest that both inflation and the trend growth rate of output are expected to stay low. An environment of persistent low inflation and low growth is an environment of increased probability of a recession as the fall in output required for the economy to dip into recession is relatively small.

FIGURE 5A: US TREASURY 10YR-2YR YIELD SPREAD



Source: Macrobond

FIGURE 5B: 10-YEAR YIELDS FOR THE US, GERMANY AND JAPAN



Source: Macrobond

Volatility and Uncertainty

The recent increase in volatility in the stock markets has also stimulated a lot of concern about the economic future and investors are facing higher risk because of its uncertainty. We highlight some of the major sources of uncertainty and concern here.

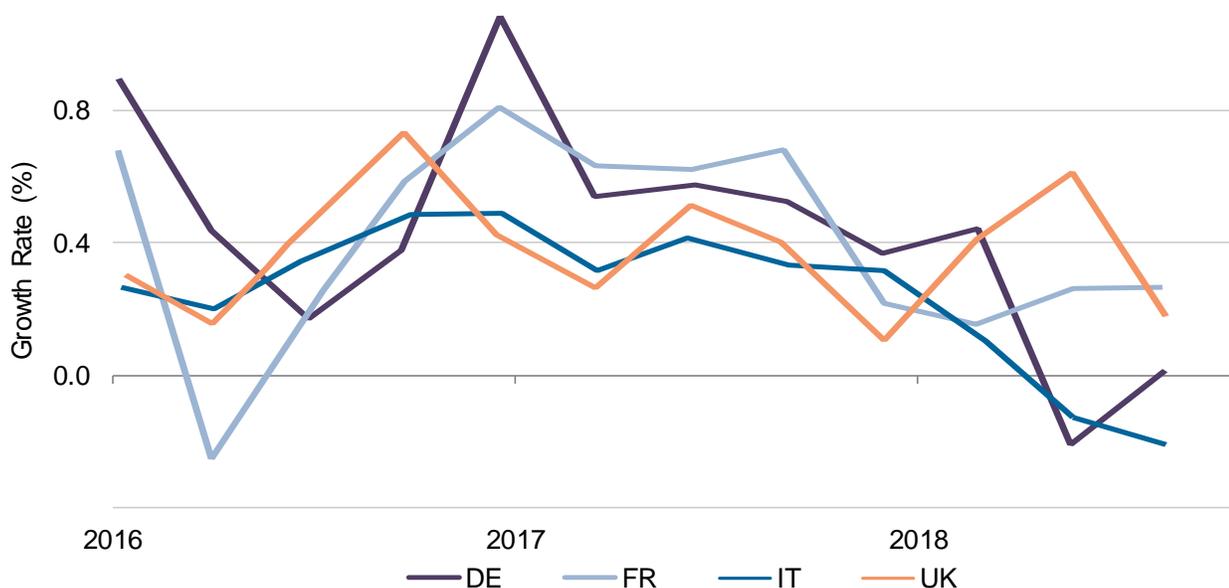
- The huge increase in corporate debt.** In 2007 corporate debt in the U.S. was \$4.9 trillion, by late 2018 it had ballooned to \$9 trillion fueled in large part by low interest rates policies of the Federal Reserve.³ Many corporations have begun to suffer consequences of their heavy borrowing and will find it increasingly difficult to manage the debt burden if the U.S. and world economies slow down. Examples abound but the most visible is General Electric, which in 2009 had a triple-A rating on its debt and now teeters closer to “junk.”
- A big increase in federal debt.** The total outstanding federal debt is now nearly \$22 trillion – 103% of GDP. At debt levels this high the government does not have much flexibility to address future crises or undertake new programs like infrastructure investment. Nor is there much room for spending to stimulate the economy in the event of a downturn. Many view the uptick in GDP growth last year as the result of the stimulus provided by the tax cuts but question whether they will continue. The federal debt is only part of the picture. State and local pension liabilities are hugely

³ Non-Financial corporate debt ballooned from \$3.3 trillion to \$6.3 trillion.

underfunded. Medicare and Social Security represent enormous future liabilities that seem to be of little concern to the current administration.

- **Slower growth in our major trading partners.** There is now broad evidence that the Chinese economy has begun to slow down and the U.S. and China are inexorably linked. Growth in Europe has also slowed dramatically as the earlier chart (Fig. 2) shows. Italy and Germany are officially in recession according to the most recent data and the U.K. is slowing down. These are bound to have some feedback effects on the U.S. economy.

FIGURE 6: REAL GDP GROWTH



Source: Eurostat, EuropeanSnapshot.com

- **Trade Wars, Government Shutdowns, Nuclear Threats, the Middle East, and the Rise of Populist Governments.** The chaotic state of politics in the United States and the decline of the “Davos World Order” of engagement and globalization has raised uncertainty significantly. The stability of coalitions like the E.U. are seriously threatened not just by Brexit but by the perilous state of Italian banks and the huge level of Italian debt as well as weakness elsewhere in the Eurozone. The European Central Bank has pretty much exhausted its capacity for stimulating the economy with further quantitative easing and its recent projections downgraded growth and pushed back the time for a reversal in its accommodative monetary policy.

The Next Recession May Be Shallow But Prolonged

The low growth-low inflation environment experienced since the financial crisis, as well as the market’s low expectations about future growth and inflation, as reflected in the term structure of interest rates, imply that this muted economic environment may be endemic rather than a lingering symptom of the crisis.

The inability of the unprecedented monetary policy accommodation to provide more vigor to the economy suggests that a policy error going forward may have a bigger socioeconomic cost than in the past, as central bank policy is less potent in stimulating the economy than has been historically the case. The risk therefore is that of a prolonged, potentially shallow, recession that saps the dynamism of the society. In such a case,

policy makers may be unable to return the economy in a trajectory of growth, as high debt levels would constrain fiscal policy and low interest rates and the digitalization of the economy constrain monetary policy.

What the Fed Should Do

Part of the argument for the Fed's monetary policy normalization has been that interest rates have to be higher so policy makers have room to cut to stimulate the economy in the event of a recession. However, after a 225 basis points increase in the Fed Funds Rate, we observe that: a. inflation still hovers below the 2% target rate, b. long-term interest rates remain persistently low, and c. signs of an economic slowdown have started appearing in the horizon. These observations suggest that continuing tightening may not be justified by the fundamentals.

Even worse, the risk is that inflation expectations may be anchored at a level below 2%, further constraining the ability of policy makers to conduct monetary policy going forward. Clearly, the Fed is looking for ways to reassure the market that their 2% inflation target is symmetric. But after undershooting inflation for such a long time, how much should inflation exceed 2% and for how long for the market to be convinced that the symmetry around the target indeed applies? We suggest that a one-year rolling window for measuring inflation and deviations from the target would be a good approach to both allow inflation to temporarily overshoot and signal that this overshooting will be limited both in size and duration. In other words, the Fed should allow the economy to run "hot" in a very well defined and controlled manner to both maintain its credibility and reassure the market that the true inflation target is indeed 2%. Otherwise, they risk plunging the economy in a Japanese-style stagnation that, as their colleagues in Japan have experienced, is very hard to reverse.

Conclusions

There is no way to clearly foretell whether a recession is in sight based on the information at hand. However, the biggest risk at this point is that of a Fed policy error that may carry great socioeconomic costs that could be with us for a long time. Therefore, we believe that the prudent Fed policy at this point is to remain accommodative and allow the economy to generate inflation above the 2% level in a controlled way and for a well-defined period of time.

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