THE MACRO REPORT | APRIL 2019

The yield curve's blurred lines

The global economy is showing a few tentative signs of improvement, but risks remain. Manufacturing is on a downtrend worldwide, but the services sector remains relatively resilient. In the United States, warning signs are flashing. Parts of the U.S. Treasury yield curve inverted as the yield on the 10-year note dipped below the yield of the 3-month bill. However, demand dynamics are playing a role. In March, the Federal Reserve signaled no rate hikes in 2019 and downgraded its growth outlook. Despite the warning signals, we believe the probability of a recession remains low.

Meanwhile, Europe continues to face headwinds of weaker demand for its exports from China and elsewhere, and political problems closer to home. Germany, the region's largest economy, has been flirting with recession in recent months. In addition, the British parliament remains deadlocked over the way to leave the European Union. While granted a reprieve for now, a disorderly "no deal" Brexit may be enough to tip the scales and send some of the region's economies into recession.

THIS MONTH

Yield curve inversion — trouble ahead?

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Planes, trains, and automobiles

Yield curve inversion — trouble ahead?

The Treasury yield curve inversion has many on Wall Street predicting the economy will tumble into a recession.

The Treasury yield curve made headlines recently. Parts of the U.S. government bond yield curve — which plots bond yields with differing maturity dates — inverted for a few days in March. The yield on the 10-year note dipped below the yield on 3-month bills for the first time since mid-2007. But does this mean a recession is imminent? We have to analyze several factors, including statistics, economic conditions, and asset prices, to gauge this risk.

Even with the yield curve's track record for predicting recessions, there is no such thing as certainty in economic forecasting. Statistically, an inverted yield curve has signaled the past seven recessions in the United States. However, in three of the past 10 times when the curve inverted, there was no recession in the following two years. Moreover, the lead time between an inverted curve and a downturn varies: During the past seven recessions that followed an inversion, the lead time was eight to 22 months.

Global themes influence U.S. rates

So, let's think about the inversion from an economic standpoint. Some economists view the current 10-year bond yield as a projection of the future policy rate. This is when the market starts to price in a central bank rate cut that will slow any potential recession. We, however, doubt this is the right way to think about the world. The term points on the yield curve don't necessarily reflect the market's view about the federal funds rate. The United States is an open economy, and we believe the movements in the 10-year Treasury are influenced by global forces.

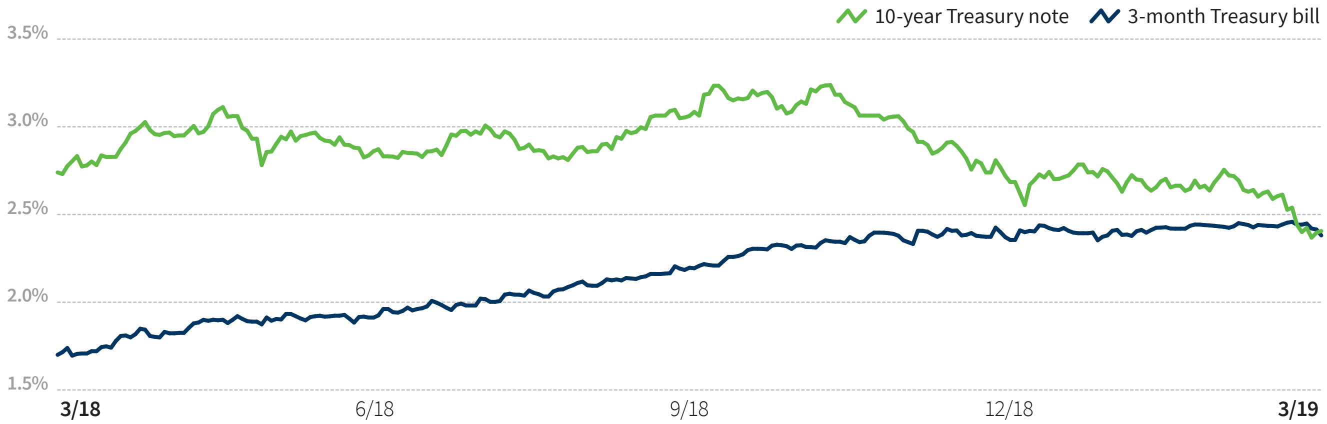
There is a global supply and demand for low-risk bonds, such as Treasuries and German Bunds. Global central banks, including the ECB and the Bank of Japan, sell, buy, and hold low-risk bonds in their reserves. Pension funds also drive the very long end of the Treasury yield curve because not many other institutions want to hold these long-duration assets. There is also demand from the international private sector. In sum, U.S. rates are increasingly determined by global — not local — factors. Global interest rates are held down by the inflows of capital from countries with current account surplus searching for safer assets and by large foreign central banks keeping their policy rates essentially at zero.

Risky assets matter

There is one other way in which an inverted yield curve matters for the outlook. The central bank and the 10-year note determine the term premiums that investors demand to hold Treasuries. A term premium is the amount by which the yield to maturity of a long-term bond exceeds that of a short-term bond. If the central bank's rate is higher than the yield on the 10-year note, market players will try to end

Part of yield curve inverts as 10-year yield drops below 3-month rate

%, daily yield



Source: Bloomberg, as of March 2019.

the inversion. Investors will reduce their duration exposure because they can get returns at the front end of the curve. In recent days, large inflows into short-term Treasuries have pushed yields lower. A term premium is, itself, a risky asset. Investors want to be compensated with higher yields for assuming the added risk of future inflation.

> A persistent inversion is a threat to the performance of risky assets.

Risky assets are correlated. When there is euphoria or a panic in the markets, risky assets trade in line with their betas (the historical measure of risk of any individual asset or portfolio). Investor appetite for risky assets and market movements is highly correlated. During normal periods, there is more dispersion around the trendline, but assets are still correlated. If the term premium is negative, risky assets provide a negative return. This is why inversions matter. A persistent inversion is a threat to the performance of risky assets. If risky assets underperform, the risk of a recession rises.

Coming full circle

As bond spreads rise and stocks decline, the corporate sector's cost of capital increases. Companies are likely to cut back on investments and borrowings. As this happens, the labor market weakens. This can lead to a drop in household confidence and wealth, prompting consumers to alter their spending habits. Before you know it, the economy is slumping. A central bank can influence this process: It can view the inversion as irrelevant and keep its policy rate on its predetermined course, or it can view the inversion as a worrying sign and respond by lowering rates.

There is a "Fed put" on asset prices; no sensible central bank would want to see sustained weakness in asset prices. The Fed put is the belief that the central bank can rescue the U.S. economy by lowering interest rates. But central banks also want to see some asset price volatility to keep market participants on their toes and to prevent inappropriate risk taking. So, a central bank can't overreact to volatility in risky assets, just as it can't overreact to pockets of weak or strong economic data.

Do inversions matter?

So, does the recent inversion matter? Maybe it does. While the inversion in and of itself it is not a harbinger of recession, it is a sign that something is awry. We would like to see a steeper curve. Long-term bond yields are unlikely to rise to produce a steeper yield curve due to the large capital surpluses in advanced economies, the lack of inflation pressures, and the lack of a clear source for global growth. The more likely path to a steeper yield curve is through interest-rate cuts. So, if long-term bond yields do not rally, the inversion returns and persists, and the Fed does not respond, we'll have a problem.

Europe at a crossroad

Europe's biggest economies, including Germany, face significant headwinds, and a no-deal Brexit may tip the scales on growth.

The eurozone's economy is showing the effects of both local and global developments. The region is flirting with an economic contraction. Brexit may also be playing a role here. The European Central Bank (ECB) said it expects its key interest rates "to remain at their present levels" at least through the end of 2019. In March, the central bank announced a new program to stimulate bank lending in the eurozone: The targeted longer-term refinancing operations (TLTRO-III) will provide loans to banks starting in September 2019 and ending in March 2021.

Worries about Germany's economy

There's no question that the German economy, the eurozone's largest, has hit a difficult patch. Germany has felt the full force of the slowdown in China, a major trading partner and export destination. Trade between the two nations has softened amid uncertainty caused by the U.S. tariff dispute with China. Germany's exports to Turkey have also slumped as the Turkish economy cools. Manufacturing in Germany looks very weak. In February, industrial production — excluding energy and construction — and manufacturing orders declined. Both export and domestic orders slumped.

The EU's limits on car pollution also posed a threat to Germany and the region's auto industry. The auto sector has failed to recover from the switch in emission standards in 2018, which included incentives to boost the sale of clean and zero-emission vehicles. The threat of U.S. tariffs on European autos has hurt business confidence in the region. In France, economic indicators have slipped because of political protests. And Italy's economy is contracting.

Weakness in exports

The eurozone is a slow-growing economy at the best of times, and it's also less volatile than the United States. The region's public sector is large, and automatic stabilizers are powerful; therefore, the downturns in Europe tend to be mild. Domestic demand has also held up reasonably well. In Europe, however, the weakness tends to start in the export sector, which then squeezes corporate profitability, and leads to labor market weakness. These affect household spending. Thus far, the export weakness has not been enough to completely offset the growth in domestic demand, despite Italy's self-inflicted contraction, but things are delicately poised.

Eurozone GDP remains weak

% quarter-on-quarter

Source: Putnam, as of March 2019.

We base our proprietary European GDP Nowcast on a tailored methodology that captures quarterly data releases for Europe's most essential growth characteristics. The mix of factors used may change over time as new indicators become available from data sources or if certain factors become more, or less, predictive of economic growth.

A hard or soft Brexit?

The United Kingdom's exit from the EU also poses a risk to the eurozone, especially countries that are most exposed to a breakdown in trade with Britain. A "no deal" Brexit will affect the United Kingdom and may be enough to tip the barely growing German economy into contraction. However, that is not our central case.

European leaders agreed in April to allow more time for Prime Minister Teresa May and the U.K.'s parliament to sort out the country's exit from the EU. The latest signals from London suggest a soft Brexit will be very likely. However, political tensions inside the Conservative Party are serious, and May's government has repeatedly demonstrated an inability to reach a deal. Therefore, we cannot exclude the possibility that the United Kingdom will crash out of the EU without a deal.

Inflation surprises

Brexit and slowing economies aside, the eurozone also has to contend with negative inflation surprises. Core inflation — which excludes energy and food prices — in the 19 countries sharing the euro fell to 0.8% in March from a year earlier. That is below the normal range of between 0.9% and 1.2%. The data may be concerning for the ECB because it has long predicted a pickup in core inflation, the rate that is used in the central bank's policy decisions.

The eurozone's underlying inflation is unlikely to move very much.

The eurozone's underlying inflation is unlikely to move very much. The recent downward revisions in the ECB's inflation forecasts were a reaction to the failure of core inflation to move higher in 2018. We don't believe the ECB will see anything in the March inflation report that warrants a further downward revision. Moreover, the recent uptick in oil prices and the depreciation in the euro will add just a little bit of upward pressure to headline inflation in coming months.

Planes, trains, and automobiles

Global manufacturing is on a downtrend, but the services sector remains relatively resilient amid cooling economic growth.

Manufacturing is highly integrated globally. It has been the part of the world economy that has been the most influenced by factors such as protectionist tariffs, China's economy, and political developments. In the United States, auto sales appear to have peaked, and new orders for U.S.-made capital goods remain sluggish. The auto industry had a good long run, but the expansion may be ending. The increase in U.S. interest rates last year is one key reason. There is also a problem with aircraft orders in the United States because of Boeing's troubled 737-Max planes. And capital spending has been sluggish.

In addition, vehicle sales globally are facing some headwinds. The European markets are a little weak, and China's demand for autos has fallen. To make matters worse, the United States is mulling imposing tariffs on auto imports from Europe. The Trump administration's trade war has produced a range of effects on global manufacturing. Protectionist tariffs have raised the costs for many manufacturers. The 2018 tariffs, mainly on imports from China, prompted companies to increase their imports ahead of the tariffs, creating an inventory overhang. Other factors such as the slower pace of innovation in smartphones may have also affected manufacturing.

Globally, auto sales face headwinds: European markets have been a little weak, and China's demand for autos has fallen.

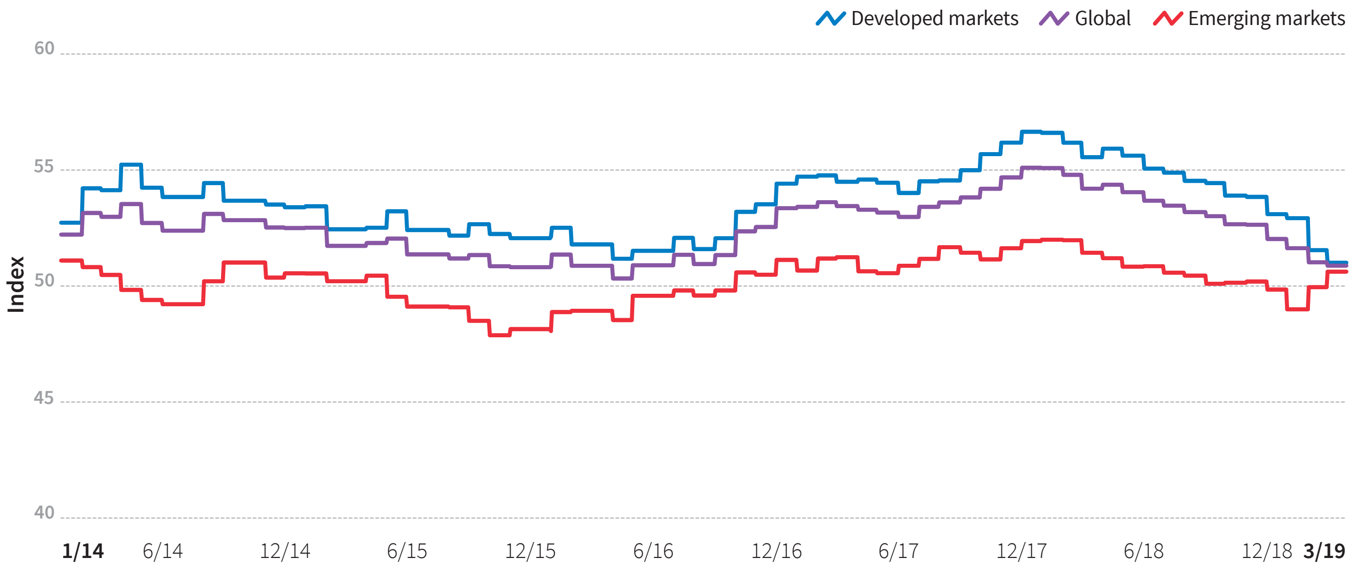
Despite the weakness, there are a few tentative signs that manufacturing PMIs are stabilizing. China's PMI rose in March. Also, East Asian economies that are tightly linked to the global cycle showed small improvements in the sector. The manufacturing sector in the United States is doing a little better than that of many other countries. We believe the global manufacturing sector is likely to improve, but the recovery will be modest and halting. The risks are to the downside.

Gap between services and manufacturing

On the other hand, the services sector in many parts of the world remains quite strong. "Service workers" is a very broad category that includes retail clerks, truck drivers, architects, bankers, doctors, and others. There is a gap between manufacturing and non-manufacturing purchasing managers indexes (PMIs) in the United States, the eurozone, and many other places. According to JPMorgan's global PMI data, the gap between manufacturing and services is about as large as it gets.

Global manufacturing shows downtrend

IHS Markit Manufacturing PMI, aggregated, month-on-month



Sources: IHS Markit, Bloomberg, Putnam, as of March 2019.

Note: Data is country-specific IHS Markit Manufacturing Purchasing Managers Index (PMI) and aggregated with GDP weights globally and by region. Markit's Manufacturing PMI is a diffusion index: A reading above 50 indicates expansion in the sector; below 50 indicates contraction.

For now, the labor markets are in good shape in the United States, the eurozone, and Japan due to the resilience in the services sector. Growth in this sector has supported household income and consumer spending. While the gap between the manufacturing and services sectors can continue, we believe it will eventually be resolved. Either manufacturing will improve or prolonged weakness in manufacturing will weaken the labor markets and drag down the services sector.

The resilience in the services sector is keeping labor markets in good shape in the United States, the eurozone, and Japan.

A delicate balance

All these issues together make the economic data flow hard to read. There is too much going on, and that is distorting the data flow. Our central scenario remains the same. The U.S. economy is slowing, but we don't expect a recession in 2019. The eurozone will limp along. China's growth will pick up. A truce will be reached between the United States and China on trade. Global growth will remain strong enough to avoid recession, but weak enough to keep central banks on hold in the absence of inflation.

Risks include economic risks, the valuations in equity markets, and the almost-inverted yield curve. The Fed has signaled it is on hold. Central bank officials have started to discuss the conditions under which the Fed may lower interest rates. While it is possible the Fed will cut rates by the end of this year, this is not our central case. Things are certainly delicately balanced now.

The Putnam Global Risk Appetite (RA) Index is a proprietary quantitative model that aims to measure investors' willingness to invest in risky assets, including equities, commodities, high-yield bonds, and other spread sectors. With a composite view of risk-appetite signals across a broad mix of asset types, Putnam's RA Index provides a framework for discussing investor preferences and can signal trend changes in broad market sentiment.

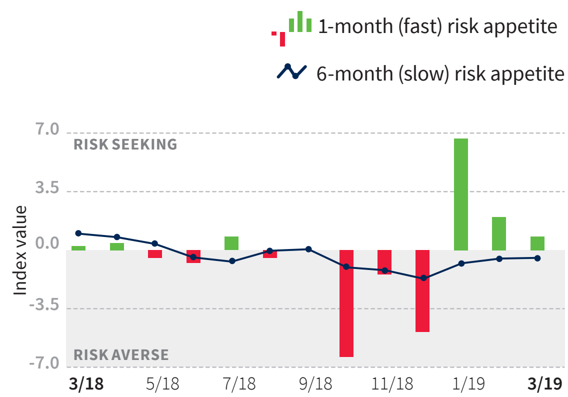
Risk appetite edges up slightly

SHORT-TERM TREND

March was another risk-on month

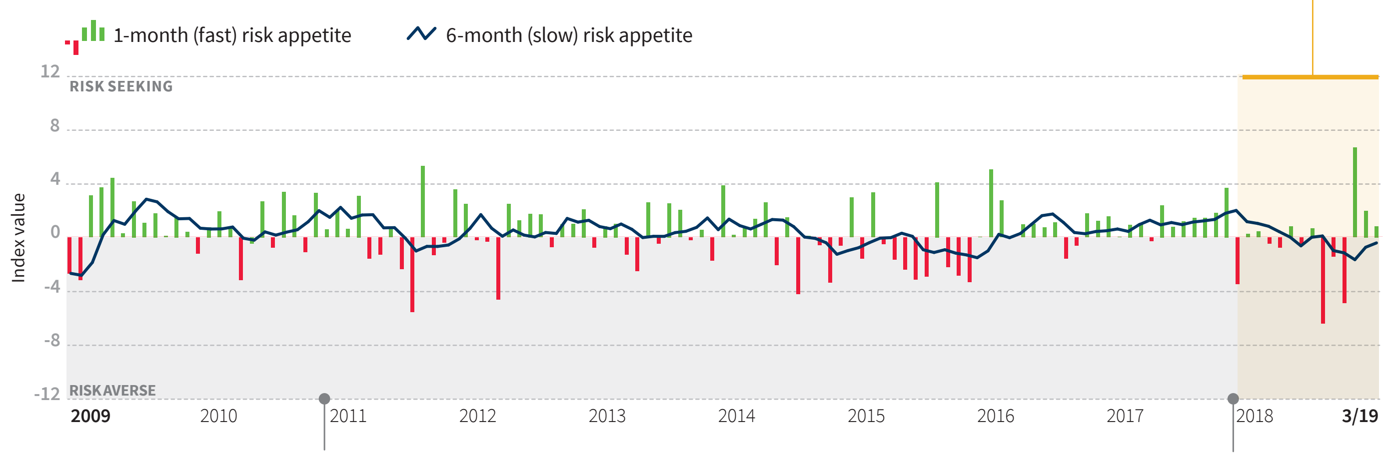
Risk **ON** OFF

- Many fixed-income assets generated positive returns amid low volatility
- U.S. small-cap stocks underperformed other equities
- The dollar rose, contributing to the underperformance of emerging-market assets
- U.S. real rates rallied the most as investors worried about growth in Europe



LONG-TERM CYCLE

This 10-year illustration captures the cyclicality of investors' appetite for risk.



Sept–Nov '11
Eruption and subsequent clearing of concerns over EU sovereign debt crisis, U.S. debt ceiling, and fear of China hard landing drive major risk sell-off and rally.

March '16–Jan '18
Risk assets rally amid improving commodity prices, perceived stability in China's macro data, and expectations for gradualist Fed policy.

Source: Putnam. Data as of March 31, 2019. To create the Global Risk Appetite Index, we weigh the monthly excess returns of 30 different asset classes over 3-month T-bills relative to the trailing 2-year volatility of each asset class. The higher the excess return and the lower the volatility, the greater the risk appetite; conversely, the lower the excess return and the higher the volatility, the stronger the risk aversion.

The Putnam Global GDP Nowcast Index is a proprietary GDP-weighted quantitative model that tracks key growth factors across 25 economies. This index and individual country indexes are used as key signals in Putnam's interest-rate and foreign-exchange strategies.

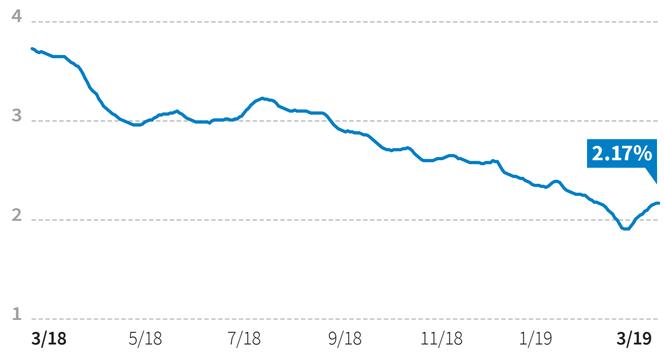
Global growth shows signs of improvement

SHORT-TERM TREND

Economic expansion picks up, but risks remain

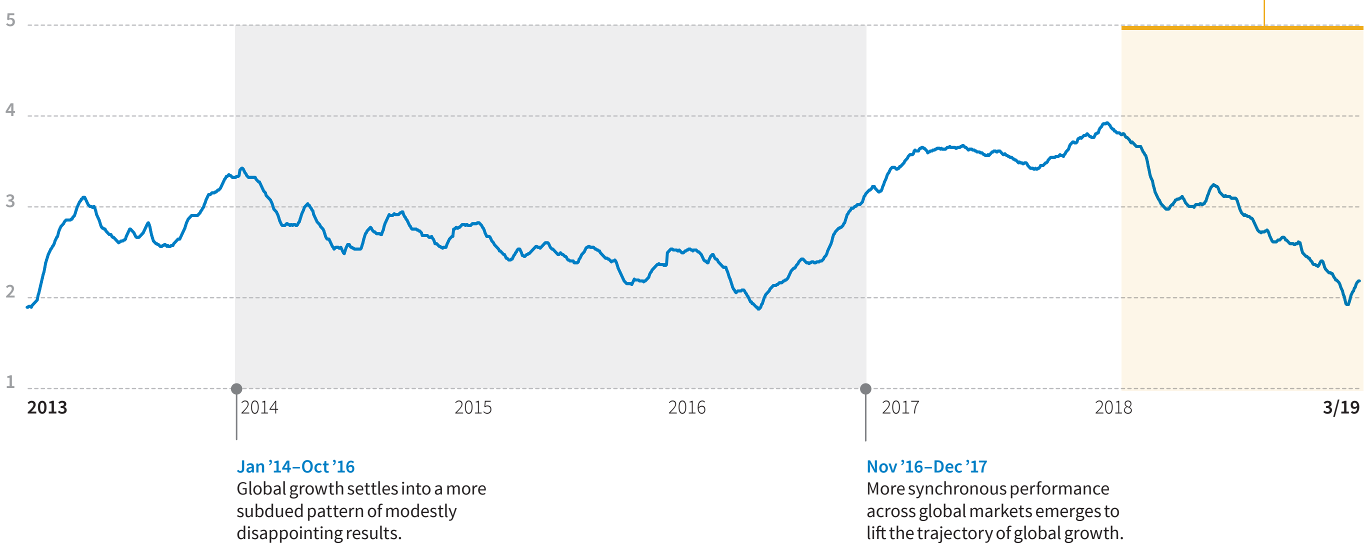
▲ 2.17%

Growth bounced back in March due to improvements in the eurozone and China. In the eurozone, manufacturing and industrial production gained. In the United States, disappointing housing market data, consumer spending, and consumer confidence outweighed job growth and retail sales. Latin America's growth held steady. In China, rising industrial output contributed to growth.



LONG-TERM CYCLE

This six-year illustration captures GDP gyrations since the financial crisis.



Source: Putnam. Data as of March 31, 2019. We base our Global GDP Nowcast on a tailored methodology that captures daily data releases for the most essential growth characteristics for each of 25 countries — including purchasing managers' index data, industrial production, retail sales data, labor market metrics, real estate price indexes, sentiment indicators, and numerous other factors. The mix of factors used for each market may change over time as new indicators become available from data sources or if certain factors become more, or less, predictive of economic growth.

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