Moody's Analytics

June 2018

Global Macroeconomic Outlook Alternative Scenarios

FROM MOODY'S ANALYTICS

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Forecast Assumptions

- » Global real GDP growth is projected to be around 3.2% in 2018 and 2.9% in 2019.
- » Temporary factors dampened GDP growth in the first quarter, but the trend remains solid.
- » Trade tensions between the U.S. and China are cause for concern and could spark a global trade war.

The global economy ended 2017 on a strong footing. World GDP expanded by 3.1% last year, accelerating sharply from the 2.3% gain in 2016 and its fastest since 2011. The momentum was underpinned by a broad-based recovery across countries, and in the spotlight was the solid performance of the euro zone countries, though the U.S., Japan and China surprised on the upside.

Temporary factors dampened GDP growth in the first quarter, but the trend remains solid. Hurricane-related base effects in the U.S., bad weather conditions in Europe, and a weak round of bonuses combined with soaring noncore inflation in Japan all played a major role. We are penciling in much better figures for the second quarter. But global growth will not accelerate much over the year as a whole, as the expansion will settle at more sustainable rates in Europe and in some Asian countries. The global manufacturing cycle has peaked, mostly because of capacity constraints in developed economies, though less accommodative monetary policy across the globe, and particularly in the U.S., should also factor into the slowdown.

The good news is that monetary stimulus measures will be removed only gradually this year, while the fiscal splurge in the U.S. and recovery in Latin America should offset the loss of momentum elsewhere. But risks to our forecast remain significant, especially that of a trade war between the U.S. and China.

The preliminary estimate of U.S. GDP growth showed that the economy expanded by an annualized 2.3% q/q in the first quarter, down from 2.9% in the fourth stanza of last year. The biggest drag on growth was a sharp slowdown in consumer spending and a decline in residential investment, while the contribution of net trade and inventories increased.

These data may seem disappointing at first glance, but they need to be seen in the context of last summer's hurricanes, which drove up domestic demand in the fourth quarter. A correction in the opening stanza was thus expected. The story was similar for net trade and inventories, as rising demand at home boosted imports and depleted inventories at the end of 2017, so a mean reversion was warranted in the three months to March.

The slowdown in the first quarter was hence mainly because of base effects related to the fourth stanza's surge in domestic demand, which at the time was not completely offset by the rise in imports. We are confident that the reported slowdown does not mark a change in the upward trend, and prospects for the U.S. economy are upbeat. We expect growth will surge to 3.3% in the second quarter, supported by a rebound in consumer spending and a further correction in imports, while the expansion should accelerate to 3.6% in the third stanza. Over the year as a whole, we expect growth will accelerate to 3%, from 2.3% in 2017.

Combined with an expected overshoot in the inflation rate, the healthy growth outlook means that the chances the Federal Reserve could tighten policy sooner rather than later this year are still high. But the expected acceleration in productivity growth, combined with the still-subdued rise in wages, should ensure that the central bank will need to add only one more hike to the three planned this year.

First quarter preliminary GDP numbers for the euro zone confirmed that the single-currency area slowed at the start of 2018. The good news is that the figures were not as bad as we had feared. The upward revision to fourth quarter growth came as a welcome surprise, helping keep yearly growth at 2.5%, a solid figure even if it marks a slight slowdown from the previous stanza's unsustainable 2.8% rate. This pace remained well above the 2.1% average for the past two years, while it is also far stronger than the 1.2% average since 2012.

The quarterly slowdown was disappointing but not unanticipated. Base effects from a roaring end to 2017 were always expected to depress the first quarter headline, particularly in manufacturing, and bad weather in February and March also took a toll on retail sales, services consumption and building. We forecast that the fading of base effects and the jump in temperatures in April should push second quarter growth to an annualized 2% quarter over quarter, up from 1.6% in the first quarter, which would fit with our expectations of a gradual return to a more sustainable yearly growth rate of around 2% by year's end.

We project the expansion to cool in most economies, particularly in Germany following its stellar performance in 2017. By contrast, France still has scope to expand solidly. Construction investment has the most room to grow since the level of construction output in the country is still well below its prerecession peak. We also expect some supply-side shift to the economy if President Emmanuel Macron succeeds in implementing his bold labour market reforms.

In Asia, we do not have first quarter figures for Japan yet, but all evidence suggests that growth also disappointed and at best flatlined at the start of the year, following a 1.2% quarter-over-quarter annualized gain in the fourth quarter. The weakness was likely broad-based across sectors, but several one-off factors are to blame. A weak round of bonuses this year took its toll on consumption spending over the first quarter, while jumps in food and energy inflation further hurt Japanese purchasing power. We expect that consumption growth slumped in the three months to March, by around 1.8% quarter over quarter annualized.

Over the year, we expect Japan's GDP growth will slow to 1% in 2018, from 1.7% in 2017. The story is similar to that in Europe: Last year's impressive pace was never expected to carry over into 2018, but 1% is still a meaningful gain as potential output growth is estimated at 0.5% to 1%. These data should lend confidence to the Bank of Japan, while there is evidence that the wage-price spiral is gaining traction.

Regarding China, our expectation is that growth over the year as a whole will slow to around 6.6%, from 6.8% in 2017, as the Chinese government is pushing quality over quantity in economic growth. Priorities for this year include improving air quality, expanding environmentally friendly industries such as electric cars, and reducing income inequality. The government's move to leave "aspiration to achieve a faster growth rate if possible" out of the 2018 official growth target was thus not completely unexpected.

The global economy remains in good shape, despite the temporary slowdown in the first quarter. Global growth is projected to come in around 3.2% in 2018 and 2.9% in 2019, after expanding an estimated 3.1% in 2017. The U.S. will remain an important global growth driver as the expansion gets a boost from fiscal stimulus from tax cuts and federal government spending increases over the year. Global inflation pressures should begin to build over the next year as aggregate demand remains firm and commodity prices build on recent gains. A gradual tightening of global financial conditions and a manageable increase in market volatility are anticipated as central banks dismantle the extraordinary monetary policy measures put in place during the 2008-2009 global financial crisis. While expected fiscal stimulus measures, strong aggregate demand, and still-accommodative monetary policy will underpin global growth, risks to the outlook are tilted to the downside.

Exceptionally Strong Growth ("S0") Scenario

This above-baseline scenario is designed so that there is a 4% probability that the economy will perform better than in this scenario, broadly speaking, and a 96% probability that it will perform worse.

Scenario Summary

- U.S. fiscal stimulus substantially boosts the U.S. economy more than expected, with momentum spilling into the global economy.
- Companies around the world, and especially in the U.S., ramp up business investment as animal spirits improve markedly.
- The negotiations between the U.K. and the EU lead to an agreement that leaves the U.K. with full access to the single market.
- Asia's production cycle improves as global demand for manufactured goods, particularly electronics and motor vehicles, strengthens.
- Improvement in fundamentals in key commodity markets, including crude oil, will support prices and resource-exporting economies.

Trigger

The scenario is based on the assumption of multiple positive political developments interacting with animal spirits in producing a period of economic euphoria. In this "Exceptionally Strong Growth" upside scenario, the global economy receives a strong near-term boost as tax reform in the U.S. contributes to a larger than expected increase in business investment, lifting corporate earnings and equity prices. Meanwhile, the U.K. and the EU reach a mutually advantageous agreement on the U.K.'s departure from the EU, resulting in faster growth throughout the Continent. Additionally, Asia's production cycle improves as global demand for manufactured goods, particularly electronics and motor vehicles, strengthens.

Impact on asset prices, currencies and interest rates

The Federal Reserve accelerates the process of normalizing monetary policy compared with the baseline as the U.S. swiftly approaches full employment, but financial markets absorb the changes smoothly, and the path of increase in the 10-year Treasury yield is not much different from the baseline. The gradual nature of the increases in short- and long-term interest rates is accommodative to growth, and the expansion of credit supports above-baseline gains in the U.S. economy. This translates into a positive effect on the global economy.

The ECB also starts to raise its key policy this year. However, with a lot of the increase in economic growth driven by the increase in productivity growth, the ECB does not initiate overly rapid tightening and hence does not prevent the boom from proceeding. With no stress in the financial markets, the money market rates and the corporate lending rate copy the policy rates closely. The relaxed stance of the ECB also translates into a gradual increase in bond yields. The euro appreciates with respect to the dollar.

Impact on economy

Real GDP growth accelerates sharply in 2018 and especially in 2019, when the global economy expands by more than 4%. The economic boom meshes well with the structural improvement in labor markets, causing unemployment rates to decline faster and reach lower values than expected under our baseline scenario. Although global inflation spikes during the first several quarters of the scenario, this to a large degree reflects transitory forces such as the large jump in oil prices. After the initial shock wears off, the inflation rate decelerates, given that most of the increase in GDP is explained not by demand factors, but by an increase in productivity.

Long-term forecast

The period of rapid growth in GDP and a sustained increase in productivity growth gradually eases in the second year of the scenario. After that the economy expands at its potential growth rate.

Stronger Near-Term Growth (“S1”) Scenario

This above-baseline scenario is designed so that there is a 10% probability that the economy will perform better than in this scenario and a 90% probability that it will perform worse.

Scenario Summary

- » The global economy receives a boost from stronger than expected recoveries in the euro zone and the U.S. based on renewed confidence in European efforts to resolve the U.K. exit amicably.
- » The Federal Reserve accelerates the process of normalizing monetary policy compared with the baseline, but financial markets absorb the changes smoothly.
- » Favourable financial conditions improve sentiment and support faster growth.
- » The easing of fears about the future of the European Union post-Brexit boosts consumer and investor decisions and global trade.
- » Economic policy is under less pressure in this scenario.

Trigger

The upside scenario, “Stronger Near-Term Growth,” is based on the assumption of better than expected progress in reaching an acceptable separation agreement between the U.K. and the EU, which boosts global business sentiment and financial markets. Furthermore, Eurosceptic parties do not perform well in coming elections, and policy shifts in the U.S. propel economic activity in that country without triggering a trade war. Asia’s production cycle improves amid strengthening global demand for manufactured goods, particularly electronics and motor vehicles.

The Federal Reserve accelerates the process of normalizing monetary policy compared with the baseline as the U.S. swiftly approaches full employment, but financial markets absorb the changes smoothly, and the path of increase in the 10-year Treasury yield is not much different from the baseline. The gradual nature of the increases in short- and long-term interest rates is accommodative to growth, and the expansion of credit supports above-baseline gains in the U.S. economy. This translates into a positive effect on the global economy.

Impact on asset prices, currencies and interest rates

An easing of financial and political tensions about Britain’s decision to leave the EU and the expected policies enacted by the Trump administration boosts consumer sentiment and business investment worldwide, helping to lift global financial markets and demand. All of this leads to reduced risk aversion in global capital markets and generates a positive environment in financial markets, giving an important lift to consumer spending and business investment, and translating into a positive effect on the global economy.

An upswing in the tech cycle further supports global financial markets and trade, leading to reduced risk aversion in capital markets and stronger growth in international trade. Global commodity prices and volumes rebound at a steady pace as aggregate demand strengthens.

In response to the stronger than anticipated recovery and rising inflation pressures, most central banks start to tighten monetary policy ahead of the path outlined in the baseline. However, still-accommodative settings and the corollary expansion of credit support the above-baseline growth. For example, in Europe, interbank lending improves as financial organisations become more confident in policymakers’ ability to contain the debt crisis.

Impact on economy

Gains in global stock markets help household consumption to advance faster and allow corporations to expand businesses. Healthy corporate balance sheets and solid profit margins, particularly in emerging markets, sustain a solid pace of business spending and hiring, helping to drive down unemployment. Easing tensions about the euro zone debt crisis further boost consumer sentiment and business investment in the world’s largest economy more strongly than in the baseline and helps to drive the U.S. unemployment rate to less than 3.5% by the end of 2018.

The faster recovery in labour markets places upward pressure on wages and prices. The rate of consumer price inflation in the near term is higher than under the baseline forecast, as the remaining slack in the economy is removed more quickly. However, inflation pressures remain well-contained, allowing most nations to maintain highly accommodative monetary policy.

Although stronger than expected inflation prompts most central banks to commence monetary tightening sooner than under the baseline, policymakers strike the right balance between tempering inflation and maintaining solid growth. Commercial lending rates also rise more quickly than under the baseline but remain low enough to support solid demand for business and residential investment financing in credit markets. Meanwhile, stronger income growth and lower unemployment lead to improved credit quality, with fewer bankruptcies.

China’s economy outperforms, reverting to a robust pace of expansion in the near term. A gradual reduction in excess capacity in export-oriented industries ensures price pressures do not spill over to export prices and other economies.

Long-term forecast

The global expansion is stronger in the near term, with respect to baseline growth, as domestic structural reforms implemented by a number of countries in recent years to improve economic management—such as balancing budgets and external accounts—have helped to rebuild policy buffers and set the foundation for faster and healthier expansion.

In the medium term, the world economy converges to a growth path similar to that in the baseline as monetary tightening starts to move interest rates gradually toward more neutral territory. The normalization of monetary conditions and the return of the global economy to potential contribute to price stability in the long term. Furthermore, fiscal and regulatory policies in most countries focus on boosting productivity to offset the impact of aging populations, by supporting investment in innovative industries and human capital.

Slower Near-Term Recovery ("S2") Scenario

In this slower-growth scenario, there is a 75% probability that economic conditions will be better, broadly speaking, and a 25% probability that conditions will be worse.

Scenario Summary

- Uncertainty about the potential negative effects on the European economy from the U.K.'s departure from the EU increases.
- Financial markets also worry that the Fed will persist with its near-term plan to raise the federal funds rate despite concerns about global growth, triggering a fresh bout of capital flight from emerging markets.
- Internationally, financial asset markets and overheated housing markets experience a moderate correction.
- The pullback in asset prices restrains consumer spending and global aggregate demand.
- Financial market volatility crimps business sentiment and causes business investment to decelerate.
- The U.S. and most emerging market economies avoid recession, but Europe slips back into a mild recession.

Trigger

This downside scenario, "Slower Near-Term Recovery," develops as uncertainty increases about the potential negative effects on the European economy from the U.K.'s departure from the EU. Additionally, concern about potential U.S. policies builds among investors, causing bond markets to sell off in the second half of 2018. Capital flows out of emerging markets, causing a moderate correction in global stock markets. The overreaction of financial markets causes exchange rate adjustments and complicates the financing of external deficits in some emerging markets. The withdrawal of liquidity also fans deflation concerns in Europe.

Impact on asset prices, currencies and interest rates

Higher global interest rates due to the withdrawal of global liquidity trigger moderate falls in asset markets worldwide, including a moderate slump in overheated housing markets, dampening consumer spending and aggregate demand in the world economy.

Internationally, asset markets fall as capital leaves emerging markets for safe havens such as short-term U.S. government bonds, causing yields to rise and spreads to widen in most countries. Capital flows back to the U.S., supporting the trade-weighted dollar.

Capital flight from emerging market economies facing balance of payments pressures such as Turkey, India and Brazil causes further exchange rate adjustments and a moderate correction in global stock markets. The main exception is China, whose capital controls shield the yuan from currency fluctuations. Although capital controls help to shield China from currency fluctuations, in this scenario, concern about the sustainability of the real estate bubble in China builds, dampening commodity markets.

In Europe, heightened risk aversion causes the sovereign debt crisis to moderately intensify. The European Central Bank's quantitative easing is expanded and extended, and the bank keeps the key interest rate at 0% longer than in the baseline. Yields on the government bonds of fiscally troubled countries such as Italy and Spain rise, widening spreads to benchmark German debt. In the highly indebted euro zone nations and most other countries, the brief liquidity shock and fears of renewed financial stress temporarily push short-term money market rates above baseline and cause money supply growth to slow. In most countries, long-term government bond yields also temporarily rise above the baseline path.

Impact on economy

Higher global interest rates due to the withdrawal of global liquidity trigger further declines in asset markets worldwide and a slump in overheated housing markets, dampening consumer spending and aggregate demand in the world economy. Low oil prices do not boost consumer spending because households remain cautious in response to rising uncertainty reflected in the slump in global equity markets.

Higher long-term interest rates in the U.S. and uncertainty about fiscal policy drag on financial markets and consumer and business confidence to the extent that growth there stagnates. The moderate correction in global stock and property prices weighs on consumer spending and aggregate demand. Business investment also starts to cool. Real GDP growth in the U.S. is slower than the baseline in the near term, but the world's largest economy avoids slipping back into recession.

In Europe, lending, especially to nonfinancial corporations, remains subdued. The region's debt problems moderately escalate, pushing much of Europe back into recession. Higher sovereign yields raise government borrowing costs and make credit more difficult to obtain for corporations and consumers, depressing domestic investment and spending. Furthermore, investor uncertainty about banks' exposure to fiscally troubled nations creates problems in the interbank market and contributes to brief liquidity shortfalls for banks.

Emerging market growth slows as a result of flight-to-safety capital flows. Despite the weaker emerging market currencies, the global downturn limits the upside for exports. China suffers from stock and house price declines, but avoids the worst of the problems other emerging markets face thanks to capital controls and its large stockpile of foreign exchange.

Recovery

The slowdown in emerging markets reverses as additional monetary and fiscal support rejuvenates economic activity and foreign investment returns to emerging market regions, attracted by strong long-term growth prospects, higher yields, and low debt levels. Furthermore, after initial uncertainty, signs emerge that Britain's exit negotiations with the EU will result in a positive resolution, with the U.K. keeping access to the single market of goods and services. The euro area resumes modest growth by mid-2019, driven externally, mainly from the U.S. and emerging markets. The balanced growth path in the medium term anchors inflation around its equilibrium long-run level. Although the gap in global GDP growth swiftly narrows during the recovery period, the level of real GDP is permanently marginally lower than in the baseline.

Moderate Recession (“S3”) Scenario

In this recession scenario, there is a 90% probability that the economy will perform better, broadly speaking, and a 10% probability that it will perform worse.

Scenario Summary

- Global bond and stock markets sell off on fears that the policies of the Trump administration will weaken the U.S. and global economies.
- Falling asset prices and high debt cause households to slash borrowing and spending, reducing corporate investment and restraining government spending.
- European nations with high levels of private or public debt succumb to the deflation environment.
- Falling global financial markets and heightened volatility precipitate a sharp fall in Chinese property prices.
- The global economy sinks into recession in the second half of 2018 but starts to recover by mid-2019 as concerns about the stability of Europe and the Chinese real estate market recede.

Trigger

In this scenario, “Moderate Recession,” the global economy is influenced by a number of negative shocks and sinks back into a moderate recession. First, global equity and risky bond markets sell off as protectionist U.S. policy damages global confidence and drags on international trade (China is labeled a currency manipulator, but the U.S. administration does not increase tariffs or other nontariff trade barriers on imports from any of the trading partners). Financial markets also worry that the Fed will mistakenly begin raising the fed funds rate anyway, briefly causing a selloff in the Treasury bond market.

Furthermore, Eurosceptic parties perform well in coming elections, heightening investor concerns about the future of the single-currency project. The threat of a partial fracture of the economic and political union swiftly sends Europe back into recession.

Falling global financial markets and heightened volatility precipitate a sharp fall in Chinese property prices, sending shock waves throughout Asia. Reduced demand for energy causes oil prices to fall once again, lowering business investment in energy exploration.

Impact on asset prices, currencies and interest rates

Overly risky lending activity in China and the buildup of debt since the 2009 credit stimulus lead to debt problems and financial volatility, and as a result China suffers a substantial housing correction. This places severe pressure on Chinese banks and local government finances. Banks’ nonperforming loans rise sharply and losses mount, requiring a bailout from the national government. Local government finances similarly come under pressure as dubious and unproductive government investments are brought to light. The national government is also forced to backstop the debt. Liquidity in China’s financial markets freezes and public and private investment plummets.

Capital flows back to the U.S., supporting the trade-weighted dollar. Most emerging market currencies depreciate sharply against the dollar in the second half of 2018. However, the Japanese yen appreciates against the dollar and remains somewhat of a safe haven despite entering a deep recession as Asian trade partners stumble. The euro weakens sharply as higher than expected U.S. government bond yields and the sharp drop in euro area economic activity cause a depreciation of the single currency. In Europe and most other countries, the liquidity shock temporarily pushes short-term money market rates above those in S2 and credit rationing causes money supply growth to be lower than in S2.

Impact on economy

Rising global interest rates and financial market stress make credit more difficult to obtain for corporations and consumers and cause global investment and consumption to fall. The combination of much weaker exports, business investment and housing drives the U.S. economy into a moderate recession, with real GDP falling more than 2% peak to trough by early 2019.

Countries with high levels of private or public debt are the most vulnerable in the deflation environment. The downturn in global economic activity puts further downward pressure on prices in Europe as the negative output gap widens sharply. Deflation, particularly in the euro zone, leads to a vicious spiral in which falling prices cause firms to cut production, putting downward pressure on wages and demand, resulting in further price declines. Deflation also increases the real cost of debt, refueling the debt crisis (both public and private) in the euro zone, pushing up the yields on European government bonds and the euro lower against the dollar. For the troubled euro zone members, restructuring both public and private balance sheets may be the only solution. Households and firms find it harder to pay off existing loans, prompting them to cut spending on goods and services.

Similarly, deflation makes it harder for highly indebted governments such as Greece to reduce their liabilities to sustainable levels, increasing pressure for restructuring or fiscal austerity. Investor concern about the health of European banks escalates because Greek sovereign debt remains unsustainable, fueling fears that especially Germany will seek further write-downs of Greek and other fiscally troubled countries’ bonds. Public support for the ambitious and wildly unpopular fiscal austerity measures in Greece hits new lows. The shortfall in the budget is much larger than expected. The country’s sovereign debt becomes unsustainable. Greece’s debt is ultimately restructured, and the deal is approved by the European Commission.

China suffers a substantial housing correction; defaults among property developers spike and banks' nonperforming loans rise sharply. Local governments lose a key source of revenue in the form of land auctions. Dubious and unproductive government investments are also brought to light, imposing large losses on local governments and state enterprises. Banks recognize and write down the increasing volumes of nonperforming real estate loans on their books. As banks put repossessed and distressed properties on the market, supply will increase and push property prices down. The consequent sharp drop in fixed investment spending leads to substantial growth deceleration among China's commodity suppliers and other trading partners, notably the Asia-Pacific countries.

Recovery

The global recovery begins by mid-2019 as concerns about the stability of Europe and the Chinese real estate market recede. However, the recovery in most developed nations initially proceeds slowly as the sustained period of low investment in innovative industries and human capital weighs on productivity growth, erodes competitiveness, and weakens job and income gains. The lack of a fiscal stimulus, particularly in Europe, restricts the pace of recovery, stifling the rate of job creation. However, the recovery of many emerging market economies is boosted by fiscal and monetary policy stimulus measures enacted in the second half of 2018. The gap in GDP growth narrows during the recovery period, but the level of real GDP is permanently lower than in the baseline.

Protracted Slump ("S4") Scenario

In this recession scenario, there is a 96% probability that the economy will perform better, broadly speaking, and a 4% probability that it will perform worse.

Scenario Summary

- » The global economy sinks into a deep and protracted recession because of a confluence of geopolitical and economic shocks.
- » Global equity markets plunge as negotiations over the U.K.'s departure from the EU break down, causing other nations to consider leaving and global trade to weaken.
- » Additionally, global bond and stock markets sell off on fears that the protectionist policies of the Trump administration will weaken the U.S. and global economies.
- » Europe sinks into a severe and protracted recession made worse by a disorderly exit of Greece from the euro zone by early 2019.
- » The shock waves from the Greek exit are transmitted initially through financial markets. Risk aversion spikes, severely restraining the volume of credit and pushing up financial costs, slowing consumption and investment.
- » Financial market turmoil and credit tightening send the global economy back into recession.
- » China's economy enters a sustained downturn as its property market rapidly unwinds in the face of falling liquidity and declining export receipts.

Trigger

The assumptions underpinning the downside 4% scenario, "Protracted Slump," are similar to those in S3, but the outcome is much worse. The global economy sinks into a deep and protracted recession resulting from a confluence of geopolitical and economic shocks. First, global stock markets plunge amid increasing signs that negotiations over the U.K.'s departure from the EU will break down, weakening global trade and causing other European countries to consider leaving, which would result in a partial fracture of the EU. A shift in U.S. policy towards a more protectionist stance fuels fears regarding U.S. growth prospects and prompts retaliatory measures from key trade partners. China is labeled a currency manipulator, and higher tariffs are placed on Chinese and Mexican imports. China and Mexico impose trade barriers on U.S. imports to their countries. China eventually allows its currency to float more freely, but the yuan falls in value, making U.S. exports to the country even less competitive. Mexico allows the peso to fall, as much as the market wants, to reduce the loss of competitiveness. At the same time, financial markets worry about the policies of the Trump administration and mistakenly assume the Fed will still raise the federal funds rate, briefly causing a selloff in the Treasury bond market.

Europe plunges back into a deep recession as the burden of fiscal austerity forces Greece out of the euro zone and squeezes the financial systems of other heavily indebted nations, once again threatening the existence of the single-currency area. China's economy enters a sustained downturn as its property market rapidly unwinds in the face of falling liquidity and declining export receipts.

Impact on asset prices, currencies and interest rates

The breakdown in exit negotiations between the U.K. and EU causes financial volatility to spike and capital to flee emerging markets for safer havens. Capital flows back to the U.S., supporting the trade-weighted dollar and causing most emerging market currencies to depreciate sharply against the dollar. The yuan also comes under speculative attack as Chinese property prices plunge, prompting the People's Bank of China to sell some of its stockpile of U.S. Treasuries to defend the currency, causing the 10-year Treasury yield to temporarily jump above the baseline.

In Europe, weak demand causes deflation, which makes it harder for debtors to repay loans. The escalating debt burden forces Greece out of the euro zone and financial markets start to speculate that other peripheral countries could also leave. In particular, the high volume of nonperforming loans in Italy puts that nation at risk of leaving the single-currency area. Eurosceptic parties perform well in coming elections and the future of the European Union is no longer assured.

The U.S. banking system is strained as a result of its ties to the European banks, causing global credit availability to shrink significantly. The deep recessions in Europe and the U.S. not only severely depress global trade but also generate liquidity constraints and financial contagion across the globe. In Europe and most other countries, the liquidity shock temporarily pushes up short-term money market rates. Globally, asset prices drop sharply, first with stocks, and then later with house prices, which deflate for several quarters.

Impact on economy

The bubble in the Chinese housing market bursts, with residential house prices falling around 30% peak to trough. This hurts the balance sheets of Chinese banks and local governments, causing public and private investment to drop sharply and sending shock waves throughout Asia.

The global recession is initially triggered by renewed financial market turmoil and credit tightening and intensifies as Greece is forced into a disorderly default and exits the euro zone by the early 2019. The single-currency zone enters a sustained period of deflation, causing public and private debt burdens to swell and weighing heavily on demand. All the euro zone economies suffer from re-intensification of the debt crisis, fanning greater volatility and uncertainty. The euro area sinks into a deep and prolonged recession in 2016, and the highly indebted periphery countries are caught in a debt deflation trap.

Countries whose banking systems remain vulnerable following the financial crisis are amongst those hit the hardest, including countries in Central and Eastern Europe. The U.S. also experiences a deep slump, caused by the financial exposure to European debt and gridlock in Congress regarding fiscal adjustments. The U.S. recession extends through 2019, causing real GDP to fall around 5% peak to trough.

The plunge in property prices in China leads banks and local governments near insolvency, requiring government bailouts and assistance. This puts the central government under substantial strain, exacerbating financial volatility and uncertainty. This has substantial spillovers on China's commodity suppliers and other trading partners, especially in Asia.

Recovery

Slow recovery begins to take hold in most countries in 2020. The rebound in emerging market economies is the key driver of global growth. Prolonged credit restrictions and the need to repair fiscal balances in most developed countries, especially in members of the euro zone, restrict the pace of the recovery. Banks in Europe remain in a defensive mode for several years following the recession, further stifling the strength of the recovery and job creation.

A sustained period of low investment in innovative industries and human capital weighs on productivity growth, erodes competitiveness, and weakens job and income gains. Skill depreciation among the long-term unemployed causes a higher rate of unemployment to gradually become built in over time, which also contributes to the lower long-run level of output. Although the gap in GDP growth eventually narrows, the level of real GDP is permanently lower than in the baseline.

Below-Trend Long-Term Growth ("S5") Scenario

With this low-performance long-term scenario, there is a 96% probability that the economy will perform better and a 4% probability that it will perform worse.

Scenario Summary

- The global recovery remains intact, but the growth rate is below the baseline pace for an extended period, as elevated risk aversion, a result of heightened concern over the U.K.'s departure from the EU, weighs on asset prices and business and consumer confidence.
- Weaker long-term growth and below-target inflation weigh on spending and investments.
- Credit markets continue to function effectively, but the supply of and demand for additional credit are restrained.

Trigger

The downside 4% scenario, "Below-Trend Long-Term Growth," is based on concerns about policy challenges such as the repercussions of the U.K. referendum, expectations of difficult U.K.-EU negotiations, and insufficient structural changes resulting in a slow advance in European economies. Furthermore, U.S. growth is below the baseline pace as the economic policies of the Trump administration increase uncertainty among households. The global recovery remains intact, but the growth rate is below the baseline pace through most of the decade. Lower economic growth reduces fiscal revenues, forcing some governments to adjust public spending.

Impact on asset prices, currencies and interest rates

Elevated risk aversion among foreign investors, a casualty of the lingering European sovereign debt crisis and U.S. policy challenges, weighs on asset prices and business confidence. Less risk-taking is manifest in lower stock prices and subdued appetite for high-return investment projects.

Financial markets report volatility but function effectively because problems are more of a structural nature. Although credit markets function effectively, both the supply of and demand for additional credit are restrained. Reacting to the slower growth, most major central banks maintain a slightly looser overall monetary stance than under the baseline.

Impact on economy

Slow growth in equity and house prices and tighter credit conditions dampen consumer spending. In particular, spending on vehicles and other durables remains weaker than under the baseline for an extended period, further weakening demand for global manufacturing. Firm investment on machinery and equipment slows as expectations of profit growth are revised downward. Reduced borrowing and investment in the economy result in slower growth over the medium term.

A below-average U.S. recovery—a result of budget constraints, persistent weakness in the housing market, and consumer confidence—limits the performance of global economic activity in the short and medium term, particularly in the absence of structural changes in most major economies.

The lack of reforms in Europe and the U.S. weakens global fundamentals and erodes countries' capacity to expand, preventing the economy from returning to the baseline path. Furthermore, an increasing lack of confidence in the pace of growth and aging demographics cause a structural shift in household behavior from spending toward saving. Consumer spending on autos and other durables, in particular, is weaker than in the baseline.

As countercyclical power is virtually nonexistent in most western nations, governments are unable to stimulate the domestic market. Business investment in machinery and equipment slows as expectations of profit growth are revised downward. Lower real returns on equity investment and more risk aversion in financial markets increase corporate borrowing costs. As a result, capital accumulation and productivity gains are lower than in the baseline. This, in turn, results in the trend growth rate of investment spending falling below the baseline. Reduced investment spending sustains the weaker trend in productivity growth through the forecast horizon.

The global economy closely follows the U.S. cycle of lower growth in the medium term, with little possibility of acceleration without developing macroeconomic imbalances. This imposes restrictions on the use of policy to stimulate most major economies beyond the long-term trend. The global economy does not slip back into recession but reports a limited performance for an extended period, with some nations accumulating additional social pressures from the slower growth outlook over the medium term. Limited countercyclical power in most advanced nations restricts governments' ability to stimulate the domestic market to compensate for external weakness.

Recovery

Real global GDP growth is lower than in the baseline over most of the decade because supply-side constraints in most major economies prevent a strong rebound. This contrasts with most other downward scenarios, in which pent-up demand generates a return to the baseline trend. Although the gap in the GDP growth rate subsequently closes and the rate ultimately matches the baseline pace, the level of real global GDP is permanently lower than in the baseline. The use of policy to stimulate the economy beyond the long-term trend is restricted by limited countercyclical power in most advanced nations.

Stagflation (“S6”) Scenario

With this stagflation scenario, there is a 90% probability that the economy will perform better and a 10% probability that it will perform worse.

Scenario Summary

- This downside scenario is based on a global stagflation scenario.
- An unexpected wage-price spiral in the U.S. and other major economies combined with the jump in energy prices pushes up global consumer and producer prices.
- West Texas Intermediate oil prices peak around $87 in early 2019.
- Major central banks tighten monetary policy into 2019 in response to the upward pressure on core prices.
- Monetary tightening together with higher inflation harms global economic activity.
- The global economy slips back into recession in 2019. Most central banks are faced with stagflation but start to lower key policy rates in 2019 to revive the economy.

Trigger

The downside 10% “Stagflation” scenario assumes that an unanticipated wage-price spiral starts to develop as the U.S. and other major economies approach full employment. Additionally, global oil demand rebounds faster than expected, and as a result oil prices rise faster than in the baseline, peaking around $87 per barrel in early 2019. Pressures on core consumer prices increase as the higher oil prices push up the costs of delivering goods and services, prompting many central banks to tighten monetary policy into 2019.

Impact on asset prices, currencies and interest rates

Pressure on core prices in most countries begins to build and the beginnings of a wage-price spiral emerge in a range of countries. Inflation surges well above target in many countries, prompting many central banks to tighten monetary policy into 2019. Money market rates and yields on sovereign bonds rise sharply in most countries as a result of the unexpected swift monetary tightening.

Higher interest rates and rising inflation cut heavily into discretionary income around the world, and consumer confidence declines significantly, causing global consumer spending to weaken sharply. Firms are squeezed between rising costs and tepid demand, and corporate profitability and stock prices start to fall.

Higher interest rates and tighter credit conditions cause a noticeable softening in real estate activity, subduing property development. House prices in most countries contract into 2019 as the combination of falling credit availability and poor income growth cuts into demand.

The combination of higher global inflation and downward pressure on the dollar puts upward pressure on emerging market currencies, weighing on competitiveness. The slowdown in China and major emerging markets puts downward pressure on international commodity prices in 2019. Central banks quickly reverse course and switch to a pro-growth stance, lowering interest rates again, although persistent inflation limits their flexibility. Higher inflation dampens consumer spending in real terms. Businesses also find it harder to invest given the rise in input costs.

Central banks also provide even more liquidity to impaired money markets and the broader financial system. Deleveraging and declining demand for new credit render monetary policy impotent, and fiscal stimulus measures are severely constrained in most western nations. The fiscal disequilibrium accelerates with the fall in tax revenues, forcing some governments to implement further budget cuts. Some economies suffer not only from the external shock generated by high oil prices but also from the policy adjustment.

Impact on economy

The weakening of the U.S. dollar, together with higher U.S. bond yields and spiking real oil prices, has a mixture of effects on the global economy. Higher interest rates and rising inflation cut heavily into discretionary income around the world, and consumer confidence declines significantly, causing global consumer spending to weaken sharply. Higher energy costs also dampen international trade flows.

The global economy decelerates and enters a recession in 2019. Most of the major economies are net oil importers and therefore are also hit hard by higher oil prices. Stronger currencies vis-à-vis the dollar do not fully offset the rise in oil prices, and rising commodity costs boost the import bill.

Deteriorating revenue prompts businesses to cut back on staff and idle investment plans. Rising unemployment and a concomitant retrenchment in consumer spending limit the runup in demand- and wage-driven inflation pressures. Weak consumer spending also eventually helps to ease price pressures and inflation expectations, resulting in a slowdown in global consumer price growth in 2019.

Recovery

The global downturn begins to dissipate after oil prices decline and major central banks cut interest rates, supporting global aggregate demand. Inflation expectations decline in 2019 and the global economy recovers to baseline levels over the next several years. Pent-up demand released as housing markets start to recover helps GDP growth to temporarily accelerate above trend.

GLOBAL MACRO S6 SCENARIO—FORECAST SUMMARY										
	Units	18Q2	18Q3	18Q4	19Q1	2017	2018	2019	2020	2021
Real GDP	09$ bil, SAAR	72,622.39	72,924.94	72,974.13	72,757.07	70,681.24	72,641.13	72,366.77	72,834.58	75,583.87
Change	*%YA*	*3.14*	*2.75*	*2.01*	*0.99*	*3.05*	*2.77*	*-0.38*	*0.65*	*3.77*
Industrial Production	2005=100, SA	126.63	126.88	126.42	124.77	122.92	126.41	122.69	121.59	127.08
Change	*%YA*	*3.55*	*2.96*	*1.20*	*-0.74*	*3.20*	*2.84*	*-2.94*	*-0.90*	*4.52*
Total Employment	Mil, SA	2,429.63	2,431.71	2,434.00	2,432.92	2,408.02	2,430.05	2,428.22	2,441.93	2,480.13
Change	*%YA*	*0.98*	*0.88*	*0.75*	*0.33*	*0.99*	*0.91*	*-0.08*	*0.56*	*1.56*
Unemployment Rate	%, SA	5.16	5.29	5.41	5.68	5.23	5.25	6.21	6.69	6.36
Total Wages Index	%YA	2.13	0.90	-0.53	-2.32	2.09	1.31	-3.67	-1.40	3.56
Consumer Price Index	%YA	3.61	4.79	5.82	6.65	3.03	4.39	6.16	2.52	1.59
Producer Price Index	%YA	5.10	6.43	6.95	7.33	4.80	5.59	5.96	0.85	0.80

Low Oil Price ("S8") Scenario

This above-baseline scenario is designed so there is a 10% probability the economy will perform better than in this scenario, broadly speaking, and a 90% probability it will perform worse.

Scenario Summary

- This scenario assumes that the price of U.S. West Texas Intermediate stays around $35 per barrel until mid-2021.
- Rising global energy supply remains the principal factor pushing oil prices lower, though the strengthening U.S. dollar also drags on oil prices.
- Low energy prices provide a moderate stimulus to world GDP as households gain purchasing power and firms pull in larger profits, which in turn boosts factory conditions.
- Large net energy-importing countries will benefit the most from the fall in oil prices.
- The impact of low oil prices is a net positive for most countries in Asia.
- Most European countries benefit from low oil prices, but the onset of deflation prompts the region's central banks to act aggressively to avoid a deflation trap.
- Latin America will experience a net loss from the recent sharp slide in global oil prices.

Trigger

The "Low Oil Price" scenario assumes that the price of West Texas Intermediate remains around $35 per barrel for four years until mid-2021 as increases in supply more than offset the rise in demand. Rising global energy supply remains the principal factor pushing oil prices lower, though the strengthening U.S. dollar also drags on oil prices. Sustained low oil prices act like a tax cut in oil-importing countries and boost aggregate demand and world GDP in the next few years because oil importers tend to spend more and save less than oil exporters. Large net energy-importing countries benefit the most from the fall in oil prices. However, large net energy-exporting countries are made worse off as their trade balances deteriorate, government revenues fall, and fixed investment contracts.

Impact on asset prices, currencies and interest rates

Asset prices, including equity and real estate, in most countries benefit from the sustained pullback in energy prices due to the pickup in investment in nonenergy-related industries. Households gain purchasing power and firms reap larger profits, which in turn will boost global industrial production.

Low energy prices put downward pressure on consumer and producer prices in most countries, despite currency depreciation. Easing global inflation pressures have varying implications for central banks across the world. Sustained low oil prices prompt an aggressive program of quantitative easing from the European Central Bank to prevent the economy from sliding into a deflation trap. Meanwhile, deflation is not a concern in the U.S. and the Fed sees the benefits of lower oil prices outweighing the costs and begins its intended policy of gradual normalization of interest rates.

Most emerging market central banks respond to easing consumer and producer prices by lowering interest rates, providing a significant boost to domestic demand. Oil-induced disinflation provides Asia's central bankers with room to cut interest rates.

Impact on economy

Sustained low oil prices provide a moderate boost to world GDP, by boosting the bottom line for households and firms, which fuels global factory activity. Lower oil prices have the same effect as a tax cut, increasing the disposable income of households and improving the profitability of enterprises. With improved financial situations, companies expand their investment plans and increase their workforce, pushing the unemployment rate down.

Large net energy-importing countries will benefit the most from lower oil prices. However, low oil prices weigh heavily on the terms of trade for the resource-rich countries and add to the downward pressure on commodity currencies and contribute to political instability in some nations, such as Russia and Venezuela.

Asia will be the biggest winner on net, especially those countries with large heavy industrial industries. Low energy prices provide a boost to China, the primary driving force in the Asia-Pacific region. China is one the world's largest importers of oil. Lower oil prices help to lift investment and consumer demand within China. Easing inflation allows the PBoC to ease monetary policy further, defusing tensions in China's financial and real estate markets.

Most other Asian central banks also respond to easing consumer and producer prices by lowering interest rates, providing a boost to domestic demand. Furthermore, governments in a number of countries lower or remove fuel subsidies, allowing some Asian governments to increase expenditure on infrastructure development. The impact of low oil prices is a net positive for most countries in Asia except Malaysia—the region's biggest oil exporter.

Europe also benefits from the fall in oil prices. Stronger exports support the region's recovery, while domestic demand rebounds faster than in the baseline thanks to less restrictive fiscal policy and accommodative monetary policy. Improved confidence boosts manufacturing and household spending through lower unemployment and above-baseline wage growth. The faster growth also prompts banks to ease credit conditions in the belief that the worst losses from loan defaults and write-offs have passed, boosting household and business borrowing.

However, not all regions benefit from low oil prices. Latin America will experience a net loss from the slide in global oil prices. Although cheaper oil will help dampen the rise of core inflation in Latin American countries in the near term, this windfall will be largely offset by weakening currencies. Latin America's large net oil exporters—Venezuela, Mexico and Colombia—are hurt as the decline in income slows GDP growth and governments are forced to cut spending. Venezuela is hit the hardest, with about 97% of its export revenue stemming from oil. The net impact of cheaper oil is not significant in Peru, Argentina and Brazil, because these countries are mostly self-sufficient with regard to oil. Chile and Uruguay are the biggest winners.

Long-term forecast

Oil prices begin to gradually rise again from 2022 as the supply-demand imbalance narrows. Low prices eventually force cuts in production, mostly where costs are high such as the North Sea and the Arctic. Global oil-related investment and production in some low-cost producers also weaken, including investment in low-cost U.S. shale.

Rising oil prices in the final years of the decade sway central banks in most countries to raise interest rates and lead to a deceleration in real GDP growth for several years before global growth returns to the baseline trend rate for the remainder of the forecast horizon.

Consensus (“CF”) Scenario

This scenario is designed to incorporate the central tendency of a range of baseline forecasts produced by various institutions. Since the result is itself a baseline, by definition the probability that the economy will perform better than this consensus is equal to the probability that it will perform worse.

The “Consensus” scenario is based on the review of a variety of surveys of baseline forecasts. Moody’s Analytics creates consensus targets for GDP and CPI for each country for the first four years of the scenario, since that is the most typical duration in the surveyed results. Unemployment rate consensus targets were created where availability permits. Forecast sources include the International Monetary Fund, the World Bank, the USDA, central banks, and Focus Economics. These surveys vary in date of latest vintage, number of updates per year, list of variables forecast, and duration of forecast. Thus, not every target is made up of all sources, but a combination of a minimum of two. Greater consideration is given to whatever forecasts were produced most recently since they will include the most up-to-date historical information and to those variables for which the number of surveyed responses is largest. The aggregated projections were applied to the historical data used in Moody’s Analytics baseline forecasts to create consensus targets.

Consensus targets for GDP and CPI were run through the Moody’s Analytics global model in order to estimate the paths for all other variables. Moody’s Analytics has now included 64 of the individual country models into a single globally linked macroeconomic forecast model to facilitate the production of more consistent and accurate alternative scenarios.

In the consensus scenario, global economic growth accelerates slightly this year to 3.2% from an estimated 3.1% in 2017. The global economic expansion cools slightly over the next few years, with real GDP growth slowing to 3% in 2019 and 2.8% in 2020. The consensus real GDP growth path is consistent with the Moody’s Analytics baseline forecast in 2018 and 2019, though we expect a sharper slowdown in global growth in 2020, to 2.4% because of a sharp slowdown in U.S. economic growth after the policy-induced expansion fades.

In the consensus scenario, global inflation also accelerates this year and subsequently eases through the rest of this decade as the effect of increased oil prices eases. Compared with our baseline, the inflation rate is similar in 2018 and slightly lower through the rest of this decade. Much like our baseline, the global consensus scenario projects a gradual improvement in the labour market over the next few years.

Given the similarities between the baseline and consensus forecast for the key macroeconomic variables, the remaining forecasts are very close to our baseline forecast. Bigger differences are in the forecast for financial variables. The consensus scenario has a path for monetary policy that is somewhat lower in the beginning of the tightening cycle.

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Moody's Analytics added the economic forecasting firm Economy.com to its portfolio in 2005. This unit is based in West Chester PA, a suburb of Philadelphia, with offices in London, Prague and Sydney. More information is available at www.economy.com.

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