

Economic growth in 2015 downgraded to another so-so year

Doug Handler, Chief US Economist
Nariman Behravesh, Chief Economist IHS

Forecast highlights

- Growth in the first quarter was a disappointing 0.2% due to both special factors and soft spot in the business cycle. Data released after the GDP report suggest that the first revision to real GDP will go negative. Moreover, there are negative ramifications in the first-quarter data for the second-quarter outlook.
- For the second quarter, weaker inventory growth and a contraction in drilling activity will restrain growth to 2.1%. Absent these two factors, the forecast would be in the vicinity of 3.5%.
- Over the next few months, lower inflation will support improved consumer buying power, although the strong dollar will encourage additional imports, partially offsetting these gains.
- The Employment Cost Index, a good measure of compensation growth on an industry-by-industry basis, increased 2.6% on a year-to-year basis in the first quarter, up from 2.2% in the previous quarter. This is a reasonable result given the tightening labor market, and most likely in line with Federal Reserve expectations.
- IHS believes the most likely time the Fed will raise interest rates will be September, although the current spate of weak growth adds an element of uncertainty to this.

Analysis

First-quarter real GDP growth came in exceptionally weak, at a 0.2% annual rate. At this writing, it looks like the first revision will see real GDP growth dip into the red. As recently as January, we had been expecting that the first

quarter would be part of a string of solid quarters in 2015. While we believe special factors assisted this growth rate downward (e.g., the February weather and the West Coast dockworkers disputes), we learned two lessons about the current economic environment: the importance of energy production to the US economy, and that consumers still retain their conservative spending stance nearly six years after the end of the Great Recession.

For the very short term, inventories and oil wells matter. The inventory number in particular contributed to our downgrade of the second-quarter GDP growth forecast to 2.1%. Inventory/sales ratios at all stages of manufacturing and distribution are at their highest levels since the end of the recession. Since the beginning of the year, the Baker Hughes oil rig count has been falling at an average rate of 4.3% per week. The real GDP component most closely associated with the rig count fell 15% in absolute terms between the fourth and first quarters. When compared to the fall in the rig count, there is more damage to be done in the next quarter or two. Absent these two factors, the second-quarter growth forecast would be in the vicinity of 3.5%.

Consumer spending also downshifted, slowing from a hot 4.4% annual rate in the fourth quarter to a so-so 1.9% rate in the first quarter. Some of this was light-vehicle sales leveling off from a strong period at the end of last year. Weaker grocery, clothing, and restaurant spending growth also contributed. Apparently, the consumer dividend from the 2014 reduction in gasoline prices had virtually no carry-forward properties in the first quarter. Our 2015 consumer outlook remains predicated on consumers recognizing their improved real buying power from steady income growth amid a weak inflation environment. This effect will drive a faster pace of spending growth in midyear, although our forecast is more muted than last month.

The high dollar has reduced the prices of non-oil imported goods by 2.7% in March versus year-earlier levels. Given the lagged effects of changes in the dollar on prices, this bit of deflation will get worse in the coming months and affect prices for domestically competing goods. The March trade report showed the level of exports to be largely similar to

Contacts

Doug Handler, Chief US Economist
doug.handler@ihs.com

Nariman Behravesh, Chief Economist IHS
nariman.behravesh@ihs.com

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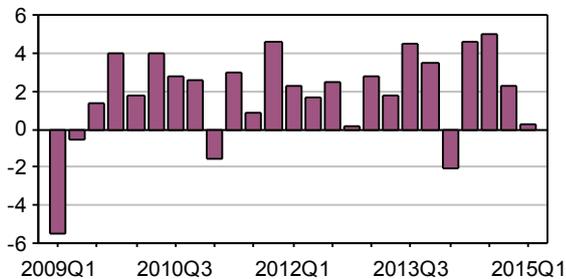
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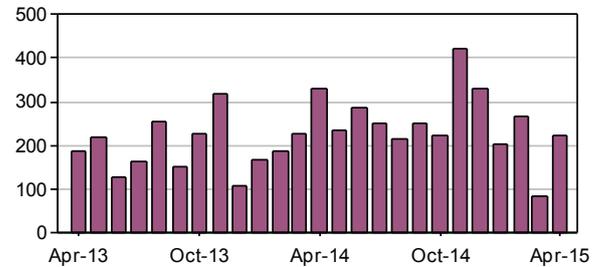
Real GDP growth

(Annualized percent change)



Nonfarm payroll employment changes

(Thousands per month)



January and February, but well below fourth-quarter levels, raising fears that export growth was impeded by a higher dollar, in addition to the West Coast dock disruptions. Meanwhile, imports surged in March to reattain their predisruption levels.

If the tone of this report seems negative, it's only from the disappointment that GDP growth in 2015 will now only about match the growth in the prior three years. Consumers will still contribute at least their proportionally correct share of growth, and capital spending and housing will benefit from the still-low interest-rate environment.

With respect to Federal Reserve policy actions in 2015-16, we are holding on to our call for a first interest-rate hike in September. However, we remain vigilant that this could be moved to later in 2015 or even early 2016 if this slow growth period lingers longer than expected.

US GDP analysis

Current quarter and one quarter ahead. The weakness shown in the first quarter's 0.2% growth was bad in its own right, but it also had negative implications for the second quarter. The wider-than-expected trade deficit in March could drive growth in the first revision into a negative. (Last year's first quarter was also characterized by large, negative revisions, but for different reasons.)

The most significant feature of the second quarter will be the resolution of the inventory overhang that presented itself in the first quarter. Inventory/sales ratios are generally around their post-recession highs, connoting that a cutback in output growth is necessary. Apparently, lackluster growth in inventories still outpaced sales weakness at all stages of the supply chain, from manufacturing to retailing. We see the second-quarter inventory reduction as subtracting 1.1 percentage points from real GDP growth.

The other significant negative is investment related to drilling activities. It fell in the first quarter, but by less than what was expected, given the decline in the Baker Hughes oil rig count. As a result, we expect the other shoe to drop during the second quarter in this GDP component.

The consumer's gasoline pump price dividend is now over, with consumer expenditures on gasoline and related products now \$20 billion higher (at an annual rate) in March than in January. Absent spending on motor vehicles, the modest blip in spending that this dividend created last year is dissipating.

During 2015, we still see consumer spending driving economic growth from improved real buying power. Total compensation and wages in the first quarter increased at a 2.6% rate from year-earlier levels, according to the Employment Cost Index, which provides more of an apples-to-apples comparison of income growth than average hourly earnings. The combination of higher salaries and low inflation bodes well for gains in consumer buying power.

The core personal consumption expenditure price index that the Fed uses for guidance held steady in March, up 1.3% versus a year earlier. It has remained below 1.5% since July 2014 and currently shows no signs of edging toward the Fed's 2.0% threshold in the immediate future. However, in looking at the consumer price index (CPI), the March year-over-year growth for nonenergy commodities currently stands at -0.2%. It has been at or below zero for two years. This rate is an increase from the -0.8% we saw in January and December. But for services, year-over-year growth is 2.1%, of course driven by labor costs. This is down from 2.4% in February.

Separately, nonpetroleum import prices were down 2.7% year over year (y/y) in March. Nonpetroleum industrial materials prices were off 9.9% y/y, while the indexes for capital goods, automobiles, and consumer goods were down as well. Increases in the dollar over the past few months signal that import prices may go even lower.

While the economic momentum has clearly swung negatively over the past 2–3 months, the downshift returns 2015 growth to rates that will be similar to those seen since 2012. Beyond 2015, better growth is anticipated, largely as the deleterious effects of excessive inventories, reduced energy production, and a higher dollar (plus improved non-US growth) begin to wane.

The last question on the table is whether or not higher interest rates will choke off this growth. Currently, IHS is forecasting that the Fed will raise rates in September. However, we also expect inflation to remain in check. A long tail of possibilities exists for this seminal policy event to occur later in the fourth quarter, or even in 2016. And even when the Fed does begin to raise rates, its efforts will be modest in the beginning, and therefore will not significantly change the cost of capital for consumers or businesses. No matter what the date is, the impact on 2016 growth will be very small.

An important feature of the new first-quarter 2015 data is that the capital consumption adjustment decreased by more than \$200 billion in the first quarter, raising book profits and therefore affecting the national income versions of dividend payouts and corporate tax receipts. This is likely tied to the extension of bonus depreciation through 2014 that was passed by Washington in December.

The jobs growth rebound in April suggests that the March weakness was partly due to the weather. It also helps to explain why first-quarter real GDP growth was poor and why the second quarter will be better. Absent the weakness in the manufacturing and energy sectors, growth in 2015 would be a banner year. IHS sees real GDP growth coming in at 2.1% in the second quarter and improving in the second half of the year.

Consumer spending, income, and confidence. First-quarter real consumer spending growth came in at a 1.9% annual rate, a tick below last's month's forecast. Our forecast of second-quarter real consumer spending growth has been reduced to 3.0%, from last month's 3.7% rate, due to softer-than-expected April motor vehicle sales, a downgrade in real healthcare consumer spending growth, and a weaker-than-expected March bounce-back in discretionary spending. In addition, it is has become obvious that the so-called consumer gasoline price dividend has not transformed into a surge of discretionary spending. Many households are using their gasoline price savings to pay down debt or put some extra money aside. The strongest gains in real consumer spending are likely to show up in the third and fourth quarter of this year.

The auto sales unit numbers were weaker than expected for April, at 16.5 million. However, good auto months often mean not-so-good discretionary spending months, and sometimes vice-versa. When consumers place a down payment on a new automobile, they tend to shy away from purchasing other big-ticket items in that same month. And when consumer spending fundamentals are generally solid, as they are now, April's weaker auto sales hint at better discretionary spending.

The consumer outlook for the next two years is looking brighter due to elevated levels of consumer confidence, lower energy prices, and increased purchasing power. Real disposable income is expected to pick up to a 3.5% growth rate in 2015, compared with a 2.5% showing in 2014. Real consumer spending growth is expected to jump to a 3.0% rate in 2015, from a 2.5% rate in 2014, and remains in the 3% neighborhood for 2016 and 2017.

Business investment spending. Investment in information equipment had another difficult quarter, falling at an 8.0% annual rate in the first quarter. Most of the decline can be traced to computers, where nominal spending now rests at 1995 levels. Other areas of tech spending saw, more or less, flat growth. We expect improvements going forward from these low spending rates. Meanwhile, nominal spending on software and R&D items continued its strong growth. Apparently, a combination of lower prices, increased server utilization, and better applications are depressing computer spending in favor of better software tools. The strong spot for business spending was transportation equipment, which grew at a 23.7% annual rate in first quarter.

Real investment in mining and petroleum structures fell 15% on an absolute basis between the fourth and first quarters. Additional declines in the Baker Hughes rig count during March and April suggest that a similar decline (or even proportionally larger) will occur in the second quarter.

Housing and construction. A key part of the housing and construction forecast fell into place during March. The February data had been weak, mostly likely due to poor weather conditions in many parts of the country. But March weather was reasonably normal, and the residential sector bounced back as expected, sort of. Existing home sales jumped from 4.89 million units in February to 5.19 million units in March (annual rates). Surprisingly, the average and median prices increased 8.7% and 5.7%, respectively, from year-earlier levels, accelerating from last month as tight supplies provided additional leverage to sellers. The thaw has yet to encourage many builders to break ground on new housing starts, which increased

only to only 926,000 in March, from 908,000 in February (annual rates). However, single-family building permits advanced 2.7% in March (up 4.8% from March 2014). This improvement is consistent with recent advances in new home sales. Despite a sharp downward correction in March, the pace of sales averaged 513,000 for the first quarter—the fastest since the first quarter of 2008, and a solid improvement over the sales pace of the first half of 2014. Given these developments, we believe that starts will continue to make improvements as the year progresses.

Construction expenditures fell 0.6% month on month (m/m) in March due to declines in residential and public construction. Private nonresidential construction did well, increasing 1.0% m/m in March due to strength in the communications, manufacturing, lodging, and office sectors. Private nonresidential construction was up 9.0% from year-earlier levels. Real core construction spending (state and local, private nonresidential excluding mining, and single-family and multifamily construction) will increase 5.3% in 2015 and 9.6% in 2016

International trade. The March trade deficit widened to \$51.4 billion, from \$35.9 billion in February. The question, though, is how much of the movement between February and March was a correction from the backlog of dock activities and how much was due to the impact of the strong dollar. Imports rose by \$17.1 billion between the two months, explaining most of wider trade deficit. Additional consumer goods imports fueled more than half of this bulge, led by cell phones and other household goods, apparel, and furniture.

The level of imports is almost exactly at the average of the last three months of 2014, suggesting that the correction process largely ran its course in March. However, exports in March were up only \$1.6 billion m/m, consistent with the average of the January-February data, but down 4.9% from the fourth quarter. Because the Bureau of Economic Analysis (BEA) had more optimistic assumptions for the March trade data than what actually panned out, these data will contribute to a decline in real GDP growth in the first revision.

We see import volumes picking up in the second half of this year, especially for industrial materials, petroleum, and consumer goods. Exports will also grow in the second half, but at a far slower rate in reaction to better economic growth among key trading partners.

Government spending. Federal government purchases continued their weak demeanor, with nominal growth

of only 0.7% versus year-earlier levels. State and local government consumption and investment fell by nearly \$20 billion in the first quarter on a nominal basis, driven by lower energy prices and a reduced rate of construction activity. As the decline in energy prices reverses itself, state and local expenditures will be increasing at a faster pace than usual over the next couple of quarters.

On a unified budget basis, the deficit in fiscal 2015 remains on target to about match that in fiscal 2014: \$518 billion in FY 2015, versus \$483 billion in FY 2014, rising slightly to 2.9% of GDP, from 2.8%. Thereafter, improvements in economic growth will help pull the deficit down to about 2.3% of GDP in fiscal 2016 and 2017.

Monetary policy, unemployment, and inflation.

When the history of the recovery from the financial crisis is written, 2015 will be remembered as the year when speculation about the timing of the US Federal Reserve's first tightening move ran rampant. Much like "taper panic" in 2013, the anxiety about the financial reactions to a potential policy shift will be worse than the actual impact.

The most recent meeting of the Federal Open Market Committee and its subsequent policy statement offered little to clarify the matter. The Fed acknowledged that "economic growth slowed during the winter months." Nevertheless, "the Committee continues to expect that, with appropriate policy accommodation, economic activity will expand at a moderate pace"—about matching the description of our forecast scenario. Policymakers fully understand that economic growth and inflation still face ongoing headwinds from the strong US dollar, low oil prices, overseas growth risks, and continued household deleveraging. As a result, the Fed has decided to maintain as much flexibility as possible by avoiding committing to any particular timing and pace of rate increases. It is therefore up to investors and economists to project when the economic data will give the Fed sufficient confidence that it can meet its employment and inflation objectives and raise interest rates without derailing the recovery.

The prerequisites for this growth are an economy that is consistently expanding, generating jobs along the way, and an inflation rate that can be plausibly forecast to increase. We still see these preconditions being met in September. However, the risks to the magnitude and timing of this growth are outlined in other sections of this Executive Summary. While the September date remains the result of our best thinking, sufficient risks to growth are evident that could delay this timing until later in 2015, or even into 2016.

Key forecast assumptions

Fiscal policy: We assume that fiscal policy will retain its relatively neutral stance, with no debt-ceiling or budget-related impasses.

Federal Reserve: We project the Fed's first tightening action to occur in September 2015, with the federal funds rate target hitting 0.75% by the end of 2015, 2.00% by the end of 2016, and peaking at 3.75% by the end of 2017.

Non-US GDP growth: Real GDP growth for the major-currency trading partners is assumed to average 2.0% annually from 2015 through 2025. For other important trading partners, growth averages 4.1% over the next 10 years, including an apex of 4.5% toward the end of the period.

Energy: The second-quarter Brent price will remain near the first-quarter average of \$55/barrel. This will be the low point of oil prices during the forecast period as Brent prices gradually rise to \$95/barrel by 2019.

Exchange rates: The inflation-adjusted, trade-weighted value of the dollar for major trading partners is expected to rise 3.2% between first quarter 2015 and first quarter 2016. A peak value will be reached in the second half of 2015, 17.3% ahead of the second-half 2014 average. This will be followed by a very gradual 10.7% decline between 2016 and 2025.

Selected average exchange rates

	2015	2016	2017	2018
Brazilian reais per dollar	3.05	3.08	3.07	3.07
Canadian dollars per US dollar	1.23	1.22	1.18	1.13
Chinese yuan per dollar	6.3	6.55	6.58	6.52
Euros per dollar	0.91	0.9	0.84	0.78
UK pounds per dollar	0.67	0.66	0.64	0.62
Japanese yen per dollar	120.46	123.66	126.65	126.6
Mexican pesos per dollar	14.84	14.31	13.62	13.38

Source: IHS

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The “Great Divergence” is creating winners and losers within countries and across countries

One of the most remarkable features of the global economy in the past four years has been the stability of growth—between 2.5% and 3.0%, despite multiple economic and geopolitical crises. However, the composition of global growth has changed fundamentally. There has been a (very) gradual growth acceleration in the developed world and an

alarming deceleration in the growth of emerging markets. These two developments have largely offset each other. What has come to be called the “Great Divergence” in the global economy has been driven by four developments: 1) debt and deleveraging cycles; 2) the plunge in the price of oil and other commodities; 3) the different paths being followed by key central banks; and 4) the surge of the US dollar (at least until recently) and the declines (or precipitous drops) in most other currencies. The combined effect of these developments has created winners and losers, both within countries and across the economies of the world.

Four trends that are behind the divergent performances of economies and sectors

Of the many crosscurrents that have buffeted the world economy in recent years, four stand out as having had a major impact on the performance of key economies.

- **Debt and deleveraging.** Over the past decade and a half, global debt levels have more than doubled—from about \$90 trillion in 2000 to \$200 trillion in 2014. Initially, this surge was concentrated in the developed world—accounting for nearly 80% of the increase in debt outstanding from 2000 to 2007. However, since 2007, roughly half of the new debt has been generated in the emerging world—with a substantial portion in China. The good news is that, in some developed economies (especially the United States, United Kingdom, and Germany), private-sector debt levels have been reduced substantially since the 2008–09 recession. This includes household, corporate, and financial sector debt. Unfortunately, government debt has risen in most advanced economies, even in the ones where private-sector debt has fallen.
- **The plunge in the prices of oil and other commodities.** Despite the recent run-up in the price of oil, most commodity prices (including oil) are still around 40% below year-ago levels. This continues to represent a substantial transfer of wealth from commodity exporters to commodity importers. With ongoing structural oversupply conditions in many commodity markets, the downward pressure on prices will not be relieved soon. Over the past half year, IHS has discussed the impact of plunging commodity prices in many conferences, webcasts, and publications, including the US and Global Executive Summaries (in particular, please refer to the November 2014 issues).
- **Central banks moving in different directions.** In the aftermath of the 2008–09 financial crisis and recession, almost all of the world's central banks eased monetary

policy substantially by cutting interest rates and/or putting in place aggressive bond-buying programs. Since then, most advanced economies have continued to keep the monetary spigots open. While the Federal Reserve has ended its bond purchases, it has continued to keep interest rates at historically very low levels—and will likely continue to do so for a few more months. Meanwhile, the European Central Bank and the Bank of Japan are on track to provide more liquidity additions. At the other extreme, many of the large emerging markets have embarked on credit-tightening cycles—very aggressively in the case of Brazil and Russia. Recently, however, central banks in India and Russia have begun cutting rates, and Brazil may follow soon.

- **The dollar up, other currencies mostly down.** Since the summer of 2011, the US dollar has risen steadily against most major currencies. Despite some recent softness, it is up about 30% on a trade-weighted basis over the past four years. Among advanced-economy currencies, the yen has fallen the most against the greenback, followed by the euro and the Canadian dollar. Some emerging-market currencies have been hit even harder—including the Brazilian real, Russian ruble, South African rand, and Turkish lira. Others—in particular, the Indian rupee—have fallen much less. Still others, such as the Chinese renminbi, are tightly managed against the dollar. As the dollar has risen in recent years, so have these managed currencies.

Who is helped and who is hurt?

Not surprisingly, the above four trends have had disparate effects within countries and across countries.

- **A mixed impact on the US economy, with consumers being the biggest beneficiaries.** The United States is one of a handful of countries that has made significant progress in private-sector deleveraging. This means that households and businesses are in good financial shape to spend, and that banks are in a good position to lend. In turn, lower oil prices are helping consumers and energy-intensive industries, but hurting oil producers in states such as North Dakota and Texas. Low interest rates have also helped households (by keeping mortgage costs down) and businesses (by making capital financing cheap). Finally, a strong dollar has hurt US exporters, but has improved the purchasing power of consumers (for a more-detailed analysis, please see the March 2015 US and Global Executive Summaries). Arguably, US consumers are among the biggest beneficiaries of the Great Divergence, thanks to sounder finances, lower interest rates, reduced oil prices, and a stronger dollar.
- **Europe and Japan: Mostly being helped, except for a big drag from high debt levels.** Lower oil prices, interest rates that are at (or below) zero, and weak currencies are helping both Europe and Japan—although, unlike US consumers, the purchasing power of European and Japanese households has been hurt by weaker currencies. The biggest drag on growth in these economies is high (and in many cases rising) levels of debt. The ratio of total debt to GDP in Japan and many European economies is well above 250% of GDP. Germany, the United Kingdom, and a few other Northern European countries are the only exceptions. The need to deal with the debt surge (especially government obligations) will continue to constrain both European and Japanese growth rates over the next decade.
- **China: The recent debt explosion has undermined the positive effects of lower oil prices and monetary stimulus.** Since 2007, China's debt has exploded—in absolute terms, it is approximately 15 times bigger, and as a share of GDP it has more than doubled, from around 120% to more than 250%. This debt has been used to finance a real-estate bubble and massive (and largely unproductive) additions to industrial capacity. Reducing this debt and resolving the capacity overhang will mean lower (possibly much lower) growth in coming years. One additional headwind for Chinese exporters is the steady appreciation of the currency, since it is tied to the US dollar. On the positive side, lower oil prices are helping Chinese consumers and producers. Similarly, more monetary stimulus—initially cautious, but now more aggressive—is helping to alleviate the debt drag.
- **Other emerging markets: Truly divergent.** While emerging market debt is, on average, lower than that of the advanced economies and China, debt levels in some economies of Asia (Malaysia, South Korea, Thailand, and Vietnam) and Central Europe (Hungary and Slovakia) have risen at a rapid pace in recent years. This could hurt their growth prospects. For the moment, debt is less of a problem for economies such as India, Brazil, and Russia. A far more important factor in the divergent performance of these three economies is the big drop in commodity prices. As an importer of oil and other raw materials, India is a big beneficiary. At the other extreme, as commodity exporters, Brazil and Russia (as well as other countries in Latin America, Central Asia, the Middle East, and Africa) are seeing much weaker growth or recessions. The currencies of many of these countries have also come under intense downward pressure, which has forced their central banks to tighten policy, further hurting growth.

Risks to the forecast

Ozlem Yaylaci, Senior Economist
Stephanie Karol, Economist

The especially weak first-quarter growth highlighted some of the positive and negative risks to the forecast. The pessimistic forecast focuses on household formation, its impact on the housing market, the model-based assumption of more rapid wage gains, and the forecast's dependence on improved foreign economic growth.

The optimistic scenario differs from the baseline scenario in four main ways: oil prices are mostly lower, total factor productivity and foreign growth rates are higher, and the dollar is mostly stronger. From a forecasting perspective, all four assumption changes are necessary to spur a meaningful difference in growth above the baseline. Besides taking the edge off any further appreciation of the dollar, the incremental foreign growth helps drive energy prices upward, reducing the damaging cutbacks that have affected US energy production.

Recovery stalls (15% probability)

In the pessimistic scenario, wage growth, job creation, and productivity growth stumble. In spite of their improved real spending power, consumers burnt by the Great Recession exhibit especially restrained attitudes toward consumption, continuing to pare down debt and increase their savings, rather than spending more. Lending standards remain similarly high, resulting in reduced credit availability.

As the population ages amid this poor labor market environment, many families prefer to consolidate households, continuing a recent trend of weak growth in household formation. Tight credit, a scarcity of developed lots, and rising construction costs further deter builders from adding to the housing stock. Housing starts weaken relative to the baseline forecast, averaging 984,000 in 2015 and 929,000 in 2016 (versus 1.15 million and 1.38 million, respectively, in the baseline)—around current levels. Although inventories are tight, demand wavers, causing home prices to sink and eroding the attractiveness of purchasing a home.

In this scenario, US export growth declines as foreign growth opportunities fade. Exports expand just 0.4% in 2015 (versus 1.6% in the baseline) and export growth remains beneath the baseline rate over the forecast period. The trade gap widens more slowly than in the baseline, as low incomes inhibit the consumption of imported goods even more drastically than export growth is dampened.

The double squeeze from weak domestic sales and slowing exports weakens businesses, further inhibiting payroll

growth. Depressed wages and low profits ensue, with the unemployment rate rising back above 6.0% in early 2016.

The 15% probability assigned to this scenario is largely driven by the recent data on household formation. The baseline forecast assumes that household formation improves only slightly in 2015, with more robust gains in 2016 and beyond. While we think upside risk exists in the 2015 household formation forecast, a lingering uncertainty remains on the downside as well.

Recovery reignites (15% probability)

In this scenario, strong global growth initially pushes oil prices above their baseline levels, where they stay until the second half of 2016. Thereafter, oil prices drop permanently below the baseline as global production increases, giving the US economy a permanent shot in the arm.

Meanwhile, Eurozone growth strengthens more than in the baseline as fiscal conditions improve, credit conditions ease, and pent-up consumer and business demand is released. We assume that the European Central Bank's (ECB) quantitative easing successfully steers the Eurozone away from its current low-inflation trajectory.

In addition to a stronger Eurozone, emerging-market GDP growth accelerates. Initially, the dollar strengthens less than it does in the baseline, because the pickup in foreign growth is so strong. But as the US economy picks up steam, the dollar appreciates, and by the middle of 2016, both the real and nominal trade-weighted exchange rates are about 10% above their baseline values.

Domestically, a permanent jump in total factor productivity (TFP) growth shifts the economy into a higher gear, leading to a virtuous cycle in which production and technological gains lead to employment gains, which lead to income gains, and then further production and technological gains. Over the forecast period, TFP adds 0.9 percentage point a year on average to potential GDP growth, compared with 0.7 percentage point in the baseline. Even with this increment, TFP growth remains well below its long-term historical average. The S&P 500 grows 13.3% (versus 9.3% in the baseline) in 2015, staying above the baseline level throughout the forecast period.

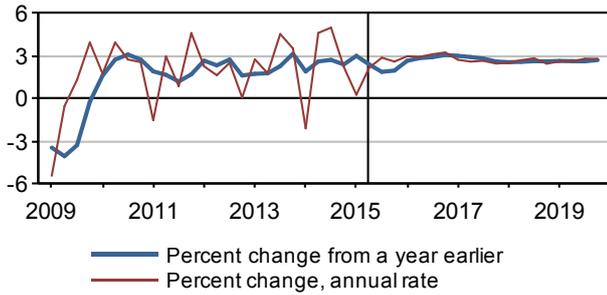
Increased production brings significant wage and payroll gains. As employment and wage growth both pick up, so does consumer spending. Real consumption climbs 3.7% in 2015 (versus 3.0% in the baseline) and 4.4% in 2016 (versus 3.0%).

We peg the probability of this scenario at 15%.

Forecast at a glance

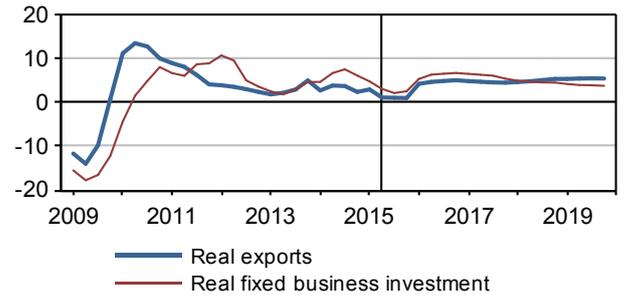
Above-average growth after first quarter

(Real GDP, percent change)



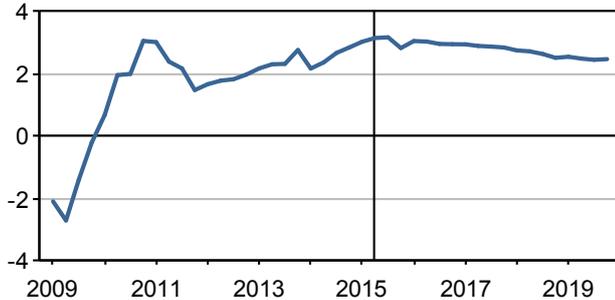
Export and investment gains will outpace GDP growth

(Percent change from a year earlier)



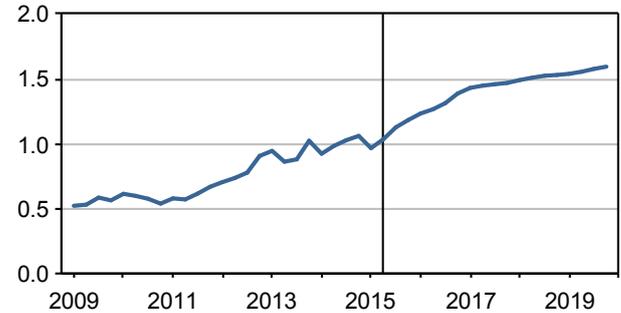
Consumer spending accelerates due to lower gas pump prices

(Real spending, percent change from a year earlier)



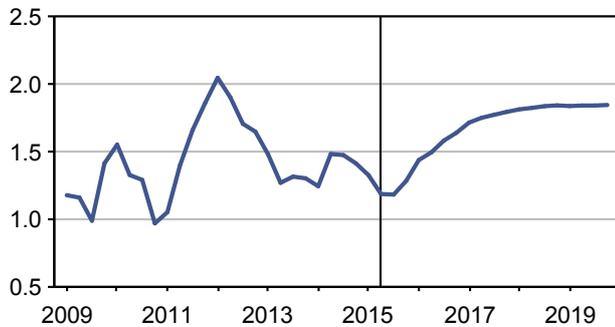
Housing starts continue their slow acceleration

(Million units)



Core inflation remains tame, for now

(Core PCE index, percent change from a year earlier)



Federal Reserve holds short-term rates near 0% until late in 2015

(Percent)

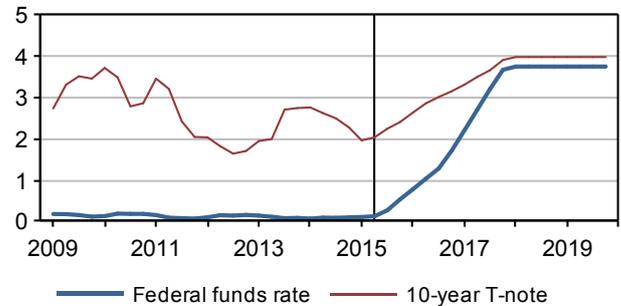


Table 1

	Mar. 2014	Apr. 2014	Sep. 2014	Oct. 2014	Nov. 2014	Dec. 2014	Jan. 2015	Feb. 2015	Mar. 2015	Apr. 2015	2012	2013	2014
Industrial Markets													
Industrial Prod. Total (2007=100.0)	103.1	103.2	105.2	105.1	106.3	106.2	105.8	105.9	105.2		97.1	99.9	104.1
Percent Change	0.8	0.1	0.7	0.0	1.1	-0.1	-0.4	0.1	-0.6		3.8	2.9	4.2
Percent Change Year Earlier	3.6	3.9	4.4	4.3	4.9	4.6	4.4	3.6	2.0				
Capacity Utilization, Manufacturing (%)	76.8	77.0	77.4	77.4	78.1	78.0	77.4	77.1	77.1		75.5	76.1	77.2
Unemployment Rate (%)	6.6	6.2	5.9	5.7	5.8	5.6	5.7	5.5	5.5	5.4	8.1	7.4	6.2
Payroll Employment (Mil.)	138.055	138.385	139.619	139.840	140.263	140.592	140.793	141.059	141.144	141.367	134.098	136.394	139.023
Change (Mil.)	0.225	0.330	0.250	0.221	0.423	0.329	0.201	0.266	0.085	0.223	2.255	2.296	2.629
Leading Indicator (2004=1.000)	1.154	1.158	1.192	1.199	1.203	1.209	1.211	1.212	1.214		1.076	1.111	1.175
Percent Change	1.0	0.3	0.6	0.6	0.3	0.5	0.2	0.1	0.2		2.1	3.3	5.7
New Orders, Mfg. (Bil. \$)	496.4	500.3	499.9	496.3	487.9	470.9	467.5	466.9	476.5		472.7	485.4	498.8
Percent Change	1.5	0.8	-0.5	-0.7	-1.7	-3.5	-0.7	-0.1	2.1		2.9	2.7	2.8
Inv. Chg., Mfg. & Trade (Bil. \$)	6.4	10.6	4.9	4.8	1.5	1.5	-0.6	4.8			80.8	74.3	66.6
Merchandise Trade Bal. (Bil. \$)	-60.9	-64.3	-61.0	-60.0	-57.9	-63.5	-61.5	-54.6	-69.8		-730.6	-688.7	-721.6
Consumer Markets													
Disposable Income (Bil. 2009\$)	11865	11880	11990	12018	12074	12139	12242	12277	12258		11676	11651	11939
Percent Change	0.5	0.1	0.1	0.2	0.5	0.5	0.8	0.3	-0.2		3.0	-0.2	2.5
Personal Income (Bil. \$)	14573	14608	14850	14902	14962	15011	15060	15127	15133		13888	14167	14729
Percent Change	0.6	0.2	0.2	0.4	0.4	0.3	0.3	0.4	0.0		5.2	2.0	4.0
Personal Saving Rate (%)	4.8	5.0	4.6	4.5	4.4	4.9	5.4	5.7	5.3		7.2	4.9	4.8
Consumer Expenditures (Bil. \$)	11807	11825	12045	12096	12142	12122	12086	12107	12161		11083	11484	11930
Percent Change	0.8	0.2	0.2	0.4	0.4	-0.2	-0.3	0.2	0.4		3.7	3.6	3.9
Retail Sales (Bil. \$)	430.2	432.3	437.3	439.2	441.4	437.6	434.2	432.0	435.9		4825.0	5011.9	5205.2
Percent Change	1.5	0.5	-0.3	0.4	0.5	-0.9	-0.8	-0.5	0.9		4.9	3.9	3.9
Non-Auto. Retail Sales (Bil. \$)	345.1	346.7	349.9	350.9	351.7	348.7	344.8	344.5	345.9		3937.7	4049.9	4171.4
Percent Change	0.9	0.4	-0.1	0.3	0.2	-0.9	-1.1	-0.1	0.4		4.0	2.8	3.0
New Light-Vehicle Sales (Mil.)	16.4	16.0	16.3	16.3	17.1	16.8	16.6	16.2	17.1	16.5	14.4	15.5	16.4
Housing Starts (Mil.)	0.950	1.063	1.028	1.092	1.015	1.081	1.072	0.908	0.926		0.784	0.930	1.001
New Home Sales (Mil.)	0.403	0.413	0.456	0.469	0.448	0.496	0.514	0.543	0.481		0.368	0.430	0.441
Existing Home Sales (Mil.)	4.700	4.750	5.100	5.160	4.950	5.070	4.820	4.890	5.190		4.657	5.074	4.920
Chg. Consumer Install. Credit (Bil. \$)	17.8	26.7	18.1	16.6	16.9	17.1	9.9	14.8	20.5		167.4	175.9	219.3
Prices and Wages													
CPI, All Urban Consumers	2.358	2.362	2.376	2.378	2.371	2.363	2.347	2.352	2.357		2.296	2.330	2.367
Percent Change Year Earlier	1.5	2.0	1.6	1.6	1.3	0.7	-0.2	-0.1	0.0		2.1	1.5	1.6
Core Cons. Price Defl. (2009=100.0)	107.1	107.3	107.9	108.1	108.1	108.1	108.2	108.3	108.5		104.7	106.1	107.6
Percent Change Year Earlier	1.3	1.4	1.5	1.5	1.4	1.3	1.3	1.3	1.3		1.8	1.3	1.4
PPI, Finished Goods	2.000	2.008	2.013	2.008	1.992	1.969	1.927	1.925	1.935		1.942	1.966	2.003
Percent Change Year Earlier	2.0	3.1	2.2	1.7	1.1	-0.7	-3.3	-3.5	-3.3		1.9	1.2	1.9
PPI, Industrial Commodities (NSA)	2.062	2.067	2.052	2.019	1.989	1.957	1.898	1.895	1.901		2.021	2.030	2.042
Percent Change Year Earlier	1.4	1.7	0.6	-0.3	-1.1	-3.1	-6.9	-7.9	-7.8		0.0	0.4	0.6
Avg. Private Hourly Earnings (\$)	20.50	20.52	20.68	20.72	20.77	20.72	20.81	20.82	20.88	20.90	19.73	20.14	20.60
Percent Change Year Earlier	2.4	2.4	2.3	2.3	2.3	1.9	2.0	1.7	1.9	1.9	1.5	2.0	2.3
Brent Crude, Spot Price (\$/bbl.)	107.87	107.98	98.91	88.72	80.91	64.12	50.08	58.21	57.25	60.56	111.78	108.75	99.83
Percent Change Year Earlier	-1.6	4.0	-11.3	-18.9	-24.9	-42.1	-53.5	-46.4	-46.9	-43.9	0.7	-2.7	-8.2
Henry Hub Spot Natural Gas (\$/mmbtu)	4.86	4.61	3.92	3.77	4.09	3.40	2.97	2.85	2.80	2.58	2.75	3.73	4.37
Percent Change Year Earlier	27.4	10.4	8.1	2.9	13.0	-19.7	-36.6	-52.6	-42.4	-44.0	-31.2	35.5	17.3
Financial Markets, Period Average													
Federal Funds Rate (%)	0.08	0.09	0.09	0.09	0.09	0.12	0.11	0.11	0.11	0.12	0.14	0.11	0.09
3-Month T-Bill Rate (%)	0.05	0.03	0.02	0.02	0.02	0.03	0.03	0.02	0.03	0.02	0.09	0.06	0.03
Commercial Bank Prime Rate (%)	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25
10-Year Treasury Note Yield (%)	2.72	2.71	2.53	2.30	2.33	2.21	1.88	1.98	2.04	1.94	1.80	2.35	2.54
Conv. Mortgage Rate, FHLMC (%)	4.34	4.34	4.16	4.04	4.00	3.86	3.71	3.71	3.77	3.67	3.66	3.98	4.17
M1 Money Supply (Bil. \$)	2745	2771	2857	2862	2877	2910	2928	2992	2988		2312	2545	2806
Percent Change	1.0	1.0	1.5	0.2	0.5	1.2	0.6	2.2	-0.2		12.6	7.7	9.3
M2 Money Supply (Bil. \$)	11161	11217	11481	11522	11565	11630	11707	11826	11846		10019	10692	11350
Percent Change	0.4	0.5	0.3	0.4	0.4	0.6	0.7	1.0	0.2		7.9	5.3	5.7
Trade-Weighted US\$, 18 Countries													
Morgan Guaranty Index (1990=100.0)	85.0	84.7	86.8	88.0	90.0	92.1	94.3	95.7	97.6	96.6	81.6	83.6	86.3
Percent Change	-0.1	-0.4	1.9	1.3	2.3	2.3	2.4	1.5	1.9	-0.9	2.6	2.5	3.1
Percent Change Year Earlier	1.7	1.3	3.4	5.8	7.2	9.3	10.8	12.4	14.8	14.2			
Real Morgan Guaranty Index	91.7	90.9	94.5	96.0	98.6	101.7	104.8	106.3	108.3	107.4	85.6	89.4	93.7
Percent Change	-0.3	-0.8	2.0	1.6	2.7	3.1	3.1	1.4	1.8	-0.8	5.0	4.5	4.7
Percent Change Year Earlier	3.6	2.5	5.0	7.7	9.0	11.6	13.7	15.6	18.1	18.1	5.12	5.43	5.59

Source: IHS

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Table 2

	2015:1	2015:2	2015:3	2015:4	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4	2018:1
Summary of the US Economy													
Composition of Real GDP, Percent Change, Annual Rate													
Gross Domestic Product	0.2	2.1	2.9	2.6	3.0	2.9	3.1	3.2	2.7	2.6	2.6	2.4	2.5
Final Sales of Domestic Product	-0.5	3.3	3.1	2.6	3.0	2.9	3.1	3.1	2.9	2.8	2.8	2.5	2.5
Total Consumption	1.9	3.0	3.3	3.1	2.8	3.0	3.0	3.0	2.8	2.8	2.9	2.9	2.4
Durables	1.1	9.5	8.3	6.1	4.5	6.0	6.4	6.5	6.4	6.4	7.3	6.2	4.5
Nondurables	-0.3	3.3	2.7	2.9	2.9	2.6	2.7	2.7	2.3	2.7	2.6	2.6	2.2
Services	2.8	1.9	2.7	2.6	2.5	2.6	2.5	2.6	2.4	2.2	2.3	2.5	2.2
Nonresidential Fixed Investment	-3.4	2.7	4.9	6.5	7.6	6.5	5.6	7.2	6.9	5.6	4.8	4.5	4.9
Equipment	0.1	9.0	9.2	8.9	8.9	8.5	6.5	6.7	7.3	4.8	4.2	3.3	3.2
Information Processing Equipment	-8.0	14.9	12.3	15.1	13.0	12.7	8.1	8.3	9.4	7.9	5.9	5.9	5.9
Computers & Peripherals	-29.0	19.4	6.8	16.3	15.2	17.5	6.7	6.9	7.0	7.2	4.8	4.9	5.5
Communications Equipment	-2.6	4.6	18.4	19.4	16.7	15.2	11.9	12.1	14.9	9.9	5.2	5.2	5.1
Industrial Equipment	-7.9	19.3	7.9	10.5	10.7	9.1	9.1	10.4	7.4	6.0	5.9	5.8	3.2
Transportation equipment	23.7	-8.3	2.0	-3.2	2.1	2.4	-1.6	-1.4	5.3	-0.6	0.3	-3.7	-2.2
Aircraft	7.7	-36.6	-5.6	-5.7	-6.9	5.7	3.1	4.6	2.4	2.3	18.9	1.6	2.0
Other Equipment	-5.4	13.9	15.6	13.9	9.4	9.1	10.4	9.4	6.7	5.2	4.3	4.4	5.2
Intellectual Property Products	7.8	5.7	7.2	6.8	5.9	5.1	4.7	4.5	4.8	4.2	3.7	3.6	3.6
Structures	-23.1	-13.9	-7.7	0.7	7.4	4.3	5.0	13.0	9.1	9.8	8.0	8.7	10.8
Commercial & Health Care	-7.8	4.7	10.6	10.9	17.5	16.9	17.3	21.8	11.2	12.4	15.5	12.6	15.9
Manufacturing	31.3	18.9	1.9	2.0	5.1	-37.7	-27.7	-2.9	-8.6	-3.9	-6.0	-4.1	0.4
Power & Communication	-19.3	-3.2	-3.3	-1.9	-2.2	1.4	2.0	-0.9	6.6	13.0	5.5	7.4	8.5
Mining & Petroleum	-48.7	-52.8	-39.0	-12.5	7.6	13.0	1.2	11.9	16.6	10.6	5.3	12.0	12.3
Other	-24.7	7.9	3.9	4.1	4.2	24.3	23.2	28.9	12.9	10.1	9.8	7.7	9.1
Residential Fixed Investment	1.3	11.8	16.3	11.0	15.0	11.8	11.4	12.9	11.9	5.5	4.2	1.5	1.7
Exports	-7.2	3.3	4.2	4.3	5.4	5.0	5.0	5.0	4.6	4.3	4.5	4.8	5.3
Imports	1.8	2.5	8.2	8.6	7.2	6.8	5.6	6.1	6.2	4.4	4.8	4.8	3.9
Federal Government	0.3	1.9	2.7	-1.0	-1.8	-1.0	1.6	-2.7	-1.4	-0.7	0.5	-1.9	-0.6
State & Local Government	-1.5	2.8	1.9	1.3	1.0	0.6	0.4	0.7	0.9	0.9	1.0	1.1	1.0
Billions of Dollars													
Real GDP	16304.8	16391.3	16507.0	16612.6	16734.0	16855.0	16984.0	17119.1	17234.0	17344.2	17457.6	17563.3	17671.5
Nominal GDP	17710.0	17913.7	18115.8	18298.4	18525.5	18764.5	19004.6	19252.9	19472.6	19691.8	19917.2	20131.6	20359.3
Prices & Wages, Percent Change, Annual Rate													
GDP Deflator	-0.1	2.3	1.7	1.5	2.0	2.3	2.1	2.0	1.9	1.9	2.0	1.9	2.1
Consumer Prices	-3.1	1.0	1.5	1.2	1.6	2.9	2.8	2.8	1.6	2.6	2.7	2.6	2.7
Producer Prices, Finished Goods	-11.6	-5.1	1.3	0.8	1.2	4.5	3.9	3.3	1.2	3.0	3.6	2.3	2.8
Employment Cost Index - Total Comp.	3.0	2.6	2.7	2.7	2.5	2.7	2.9	2.9	3.1	3.1	3.2	3.2	3.3
Other Key Measures													
Brent Crude, Spot Price (\$/bbl)	55.18	55.19	58.67	60.67	58.00	64.00	68.00	72.00	69.47	72.10	74.82	77.61	80.92
Productivity (%ch., saar)	-1.9	0.5	2.1	2.2	2.3	2.0	2.2	2.2	1.8	1.8	1.9	1.9	2.0
Total Industrial Production (%ch., saar)	-1.0	-2.2	2.6	2.8	3.9	4.0	4.4	4.6	3.3	2.8	2.7	2.8	2.9
Factory Operating Rate	77.2	76.9	77.0	77.1	77.4	77.8	78.0	78.1	77.9	77.6	77.5	77.2	77.1
Nonfarm Inven. Chg. (Bil. 2009 \$)	105.5	62.2	55.3	56.5	56.4	59.1	58.5	64.7	57.4	49.9	44.7	42.7	41.5
Consumer Sentiment Index	95.5	97.5	97.5	97.8	97.5	96.9	97.0	97.6	95.9	95.8	96.3	96.8	96.5
Light Vehicle Sales (Mil. units, saar)	16.60	16.84	17.02	17.08	17.11	17.22	17.29	17.37	17.58	17.66	17.76	17.75	17.63
Housing Starts (Mil. units, saar)	0.969	1.037	1.128	1.184	1.234	1.267	1.314	1.388	1.431	1.448	1.459	1.469	1.491
Exist. House Sales (Total, Mil. saar)	4.967	5.260	5.367	5.526	5.580	5.634	5.602	5.575	5.525	5.401	5.372	5.382	5.377
Unemployment Rate (%)	5.6	5.4	5.3	5.3	5.2	5.1	5.0	5.0	5.0	4.9	4.9	5.0	5.0
Payroll Employment (%ch., saar)	2.2	1.7	1.7	1.3	1.3	1.5	1.4	1.4	1.5	1.4	1.4	1.2	0.9
Federal Surplus (Unified, nsa, bil. \$)	-262.8	48.4	-127.1	-165.1	-239.1	75.7	-107.9	-167.9	-237.1	73.1	-112.6	-180.4	-248.3
Current Account Balance (Bil. \$)	-465.3	-399.0	-400.2	-417.2	-399.6	-399.9	-415.1	-436.8	-458.1	-477.6	-492.9	-511.8	-526.0
Financial Markets, NSA, Quarter Average													
Federal Funds Rate (%)	0.11	0.13	0.27	0.54	0.78	1.04	1.29	1.71	2.21	2.71	3.21	3.67	3.75
3-Month Treasury Bill Rate (%)	0.03	0.04	0.25	0.50	0.75	1.01	1.28	1.69	2.16	2.61	3.13	3.47	3.51
10-Year Treasury Note Yield (%)	1.97	2.04	2.25	2.41	2.64	2.86	3.01	3.15	3.31	3.50	3.66	3.91	3.98
30-Year Fixed Mortgage Rate (%)	3.73	3.75	3.90	4.10	4.36	4.61	4.83	5.00	5.17	5.38	5.56	5.83	5.89
S&P 500 Stock Index	2063	2103	2126	2149	2173	2196	2213	2231	2248	2263	2279	2295	2311
(Four-Quarter % change)	12.5	10.7	7.6	6.8	5.3	4.4	4.1	3.8	3.4	3.1	3.0	2.9	2.8
Exchange Rate, Major Trading Partners	1.151	1.164	1.172	1.181	1.171	1.163	1.157	1.148	1.139	1.126	1.110	1.095	1.079
(% change, annual rate)	37.2	4.6	3.0	2.9	-3.1	-2.9	-1.9	-3.2	-3.1	-4.6	-5.4	-5.3	-5.7
Incomes													
Personal Income (% ch., saar)	4.0	3.7	3.4	3.7	5.2	4.5	4.7	5.4	6.4	5.6	5.3	5.3	5.6
Real Disposable Income (%ch., saar)	6.2	2.4	1.7	1.9	3.2	1.8	2.8	3.3	4.2	3.6	3.6	3.6	2.8
Saving Rate (%)	5.5	5.3	5.0	4.7	4.8	4.5	4.5	4.5	4.9	5.1	5.2	5.4	5.4
After-Tax Profits (Billions of \$)	1923	2050	2131	2156	2144	2230	2248	2276	2201	2203	2206	2198	2157
(Four-quarter % change)	10.8	11.3	12.5	17.3	11.5	8.8	5.5	5.6	2.6	-1.2	-1.9	-3.4	-2.0

Source: IHS

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Table 3

Summary of the US Economy

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Composition of Real GDP, Percent Change													
Gross Domestic Product	-0.3	-2.8	2.5	1.6	2.3	2.2	2.4	2.3	2.9	2.8	2.6	2.6	2.7
Final Sales of Domestic Product	0.2	-2.0	1.1	1.7	2.2	2.2	2.3	2.3	3.0	2.9	2.6	2.7	2.7
Total Consumption	-0.3	-1.6	1.9	2.3	1.8	2.4	2.5	3.0	3.0	2.9	2.7	2.5	2.5
Durables	-5.1	-5.5	6.1	6.1	7.3	6.7	6.9	6.6	6.2	6.5	5.4	4.1	4.1
Nondurables	-1.1	-1.8	2.2	1.8	0.7	1.9	1.8	2.3	2.8	2.6	2.4	2.4	2.2
Services	0.8	-0.9	1.2	1.8	1.3	1.9	2.1	2.7	2.5	2.4	2.3	2.3	2.3
Nonresidential Fixed Investment	-0.7	-15.6	2.5	7.7	7.2	3.0	6.3	3.2	6.3	6.1	4.7	4.0	3.9
Equipment	-6.9	-22.9	15.9	13.6	6.8	4.6	6.4	5.5	8.4	6.0	3.7	3.5	4.2
Information Processing Equipment	0.4	-8.9	9.9	1.6	3.2	3.0	2.8	7.1	12.4	8.3	6.0	5.3	5.4
Computers & Peripherals	5.9	-0.4	10.3	-2.0	4.7	-0.2	-2.5	-1.0	13.3	7.2	5.7	6.0	6.5
Communications Equipment	-4.9	-13.3	13.6	1.7	11.4	8.0	-0.3	8.6	15.4	11.2	5.4	5.1	5.5
Industrial Equipment	-4.8	-22.2	-0.5	21.1	3.8	3.9	12.9	4.3	10.3	7.7	3.9	1.1	1.1
Transportation equipment	-23.0	-55.0	94.0	33.7	18.9	6.2	11.7	6.9	-0.2	0.7	-1.1	1.0	3.0
Aircraft	-0.7	-41.0	24.7	26.5	11.0	-1.1	17.0	5.1	-4.8	5.0	5.0	3.7	3.3
Other Equipment	-4.8	-19.8	8.5	10.9	4.0	5.6	-0.3	3.2	11.3	7.1	5.3	6.0	6.7
Intellectual Property Products	3.0	-1.4	1.9	3.5	3.9	3.4	4.8	7.7	5.8	4.4	3.6	3.7	3.7
Structures	6.1	-18.9	-16.4	2.3	13.1	-0.5	8.2	-7.6	2.1	9.0	8.6	5.5	3.6
Commercial & Health Care	-3.7	-30.7	-24.9	-0.5	8.5	3.4	7.7	5.3	14.8	15.0	13.5	5.8	4.2
Manufacturing	24.8	4.6	-27.5	-4.2	14.8	-1.3	12.7	21.0	-9.4	-11.3	1.6	10.2	4.1
Power & Communication	9.9	1.4	-16.1	-7.8	21.0	-7.6	11.4	-12.6	-1.1	5.3	6.2	1.5	2.6
Mining & Petroleum	7.3	-28.6	17.1	26.4	12.3	0.5	8.2	-28.1	-8.9	10.6	8.7	7.4	3.8
Other	12.7	-18.3	-26.7	-9.4	9.5	3.1	1.0	-0.5	11.8	16.2	6.6	4.6	3.1
Residential Fixed Investment	-24.0	-21.2	-2.5	0.5	13.5	11.9	1.6	6.9	13.0	9.1	2.5	2.4	2.5
Exports	5.7	-8.8	11.9	6.9	3.3	3.0	3.2	1.6	4.8	4.7	5.0	5.5	5.7
Imports	-2.6	-13.7	12.7	5.5	2.3	1.1	4.0	4.9	6.9	5.5	4.2	3.2	3.0
Federal Government	6.8	5.7	4.3	-2.7	-1.8	-5.7	-1.9	0.4	-0.3	-0.9	-0.6	-0.4	0.3
State & Local Government	0.3	1.6	-2.7	-3.3	-1.2	0.5	1.0	1.1	1.1	0.8	1.1	1.1	1.0
Billions of Dollars													
Real GDP	14830.4	14418.8	14783.8	15020.6	15369.2	15710.3	16085.6	16453.9	16923.0	17399.8	17848.4	18318.3	18818.6
Nominal GDP	14718.6	14418.7	14964.4	15517.9	16163.2	16768.1	17418.9	18009.5	18886.9	19803.3	20707.1	21668.8	22690.9
Prices & Wages, Percent Change													
GDP Deflator	1.9	0.8	1.2	2.1	1.8	1.5	1.5	1.1	2.0	2.0	1.9	2.0	1.9
Consumer Prices	3.8	-0.3	1.6	3.1	2.1	1.5	1.6	-0.2	2.0	2.5	2.6	2.5	1.9
Producer Prices, Finished Goods	6.4	-2.6	4.2	6.0	1.9	1.2	1.9	-4.4	1.8	2.8	2.7	2.6	1.3
Employment Cost Index - Total Comp.	2.9	1.4	1.9	2.2	1.9	1.9	2.1	2.7	2.7	3.0	3.2	3.2	3.2
Other Key Measures													
Brent Crude, Spot Price (\$/bbl)	97.94	61.57	79.84	110.95	111.78	108.75	99.83	57.43	65.50	73.50	85.00	95.00	89.00
Productivity (%ch.)	0.8	3.2	3.3	0.2	1.0	0.9	0.7	0.3	2.1	1.9	2.1	2.1	2.0
Total Industrial Production (%ch.)	-3.4	-11.3	5.7	3.3	3.8	2.9	4.2	1.5	3.3	3.5	2.9	2.8	2.8
Factory Operating Rate	74.6	65.6	71.1	73.9	75.5	76.1	77.2	77.1	77.8	77.6	76.9	76.4	76.1
Nonfarm Inven. Chg. (Bil. 2009 \$)	-35.0	-146.0	65.9	36.6	65.9	55.2	65.2	69.9	59.7	48.7	43.8	41.3	43.2
Consumer Sentiment Index	63.8	66.3	71.8	67.4	76.5	79.2	84.1	97.1	97.2	96.2	96.5	96.3	97.1
Light Vehicle Sales (Mil. units)	13.19	10.40	11.55	12.74	14.43	15.52	16.40	16.88	17.25	17.69	17.55	17.25	17.10
Housing Starts (Mil. units)	0.900	0.554	0.586	0.612	0.784	0.930	1.001	1.080	1.301	1.452	1.513	1.566	1.601
Exist. House Sales (Total, Mil. units)	4.106	4.329	4.183	4.277	4.657	5.074	4.920	5.280	5.598	5.420	5.402	5.527	5.557
Unemployment Rate (%)	5.8	9.3	9.6	8.9	8.1	7.4	6.2	5.4	5.1	5.0	5.1	5.2	5.1
Payroll Employment (%ch.)	-0.6	-4.3	-0.7	1.2	1.7	1.7	1.9	2.0	1.4	1.4	1.1	0.9	1.2
Federal Surplus (Unified, FY, bil. \$)	-454.8	-1415.7	-1294.2	-1296.8	-1089.2	-680.2	-483.4	-518.3	-436.6	-444.4	-499.0	-525.8	-517.1
Current Account Balance (Bil. \$)	-686.6	-380.8	-443.9	-459.3	-460.8	-400.3	-410.6	-420.4	-412.9	-485.1	-536.8	-536.1	-486.7
Financial Markets, NSA, Quarter Average													
Federal Funds Rate (%)	1.93	0.16	0.18	0.10	0.14	0.11	0.09	0.26	1.21	2.95	3.75	3.75	3.75
3-Month Treasury Bill Rate (%)	1.37	0.15	0.14	0.05	0.09	0.06	0.03	0.20	1.18	2.84	3.51	3.51	3.51
10-Year Treasury Note Yield (%)	3.67	3.26	3.21	2.79	1.80	2.35	2.54	2.17	2.92	3.60	3.98	3.98	3.98
30-Year Fixed Mortgage Rate (%)	6.04	5.04	4.69	4.46	3.66	3.98	4.17	3.87	4.70	5.48	5.89	5.89	5.89
S&P 500 Stock Index	1221	947	1139	1269	1380	1643	1931	2110	2203	2271	2340	2419	2500
(Percent change)	-17.3	-22.5	20.3	11.4	8.7	19.1	17.5	9.3	4.4	3.1	3.0	3.4	3.4
Exchange Rate, Major Trading Partners	0.959	1.000	0.970	0.912	0.946	0.977	1.010	1.167	1.160	1.117	1.061	1.036	1.030
(Percent change)	-4.5	4.3	-3.0	-5.9	3.7	3.3	3.3	15.6	-0.6	-3.7	-5.0	-2.4	-0.6
Incomes													
Personal Income (% ch.)	3.6	-2.8	2.8	6.2	5.2	2.0	4.0	3.9	4.4	5.5	5.2	5.0	5.0
Real Disposable Income (%ch.)	1.5	-0.4	1.0	2.5	3.0	-0.2	2.5	3.5	2.4	3.5	3.2	3.1	3.1
Saving Rate (%)	5.0	6.2	5.6	6.0	7.2	4.9	4.9	5.1	4.6	5.1	5.6	6.0	6.5
After-Tax Profits (Billions of \$)	1073	1203	1470	1428	1681	1761	1827	2065	2225	2202	2194	2235	2270
(Percent change)	-17.6	12.1	22.2	-2.9	17.8	4.7	3.8	13.0	7.7	-1.0	-0.4	1.9	1.6

Source: IHS

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Table 4

	2015Q1	2015Q2	2015Q3	2015Q4	2016Q1	2016Q2	2014	2015	2016	2017	2018	2019	2020
Alternative Scenarios of the US Economy													
Recovery Stalls (Prob. = 15%)													
Composition of Real GDP, Percent Change, Annual Rate													
Gross Domestic Product	0.2	-0.5	0.7	0.0	1.2	1.1	2.4	1.4	1.0	1.9	1.9	2.1	2.2
Total Consumption	1.9	1.0	1.6	0.6	1.1	1.0	2.5	2.3	1.1	1.5	1.9	2.0	1.9
Nonresidential Fixed Investment	-3.4	-1.9	-0.8	2.3	3.3	2.5	6.3	1.3	2.2	4.9	4.9	4.0	3.4
Residential Fixed Investment	1.3	6.7	5.5	-0.6	3.9	3.4	1.6	3.9	4.3	6.9	-1.8	-2.3	1.1
Exports	-7.2	-0.5	1.9	1.5	2.8	3.4	3.2	0.4	2.6	3.7	4.4	4.8	4.8
Imports	1.8	-1.7	2.3	1.9	0.4	1.5	4.0	2.9	1.2	3.2	3.8	2.9	2.5
Federal Government	0.3	-2.0	1.1	-2.8	-2.5	-1.5	-1.9	-0.6	-1.4	-0.8	-0.6	-0.4	0.3
State & Local Government	-1.5	2.5	1.5	0.1	0.1	-0.6	1.0	0.9	0.2	-0.1	0.4	0.9	1.1
Prices & Wages, Percent Change, Annual Rate													
Consumer Prices	-3.1	0.5	1.2	0.8	1.6	3.0	1.6	-0.3	1.9	3.0	3.4	3.3	2.7
Producer Prices, Finished Goods	-11.6	-5.6	1.1	0.8	1.4	4.8	1.9	-4.6	1.9	3.7	3.6	3.5	2.2
Employment Cost Index - Total Comp.	3.0	-0.5	2.4	2.6	2.6	2.8	2.1	2.0	2.5	3.4	3.7	3.7	3.8
Other Key Measures													
Brent Crude, Spot Price (\$/bbl)	55.18	55.47	59.26	61.55	59.02	65.17	99.83	57.86	66.99	79.23	92.23	102.59	96.82
Productivity (%ch., saar)	-1.9	-1.5	1.1	1.1	2.1	1.8	0.7	-0.3	1.6	1.9	1.7	1.8	1.6
Total Industrial Production (%ch., saar)	-1.0	-3.8	0.4	-0.1	1.4	2.3	4.2	0.8	1.2	2.8	2.4	2.3	2.4
Nonfarm Inven. Chg. (Bil.2009 \$)	105.5	47.5	27.4	14.8	3.9	3.6	65.2	48.8	6.8	20.9	31.7	30.2	31.0
Consumer Sentiment Index	95.5	94.1	93.9	92.1	91.1	88.6	84.1	93.9	89.4	88.4	90.4	91.8	93.2
Light Vehicle Sales (Mil. units, saar)	16.60	16.59	16.27	15.91	15.64	15.40	16.40	16.34	15.48	15.98	16.18	16.05	15.88
Housing Starts (Mil. units, saar)	0.969	1.018	0.999	0.975	0.951	0.913	1.001	0.990	0.965	1.089	1.094	1.097	1.118
Unemployment Rate (%)	5.6	5.5	5.7	5.9	6.0	6.1	6.2	5.7	6.2	6.5	6.9	7.1	7.1
Payroll Employment (%ch., saar)	2.2	0.6	0.7	-0.2	0.0	0.1	1.9	1.6	0.1	0.4	0.6	0.7	1.0
Federal Surplus (Unified, FY, bil. \$)	-262.8	41.9	-137.5	-181.8	-257.2	52.2	-483.4	-535.0	-523.2	-583.0	-673.9	-780.6	-843.7
Financial Markets, NSA, Quarter Average													
Federal Funds Rate (%)	0.11	0.07	0.07	0.09	0.09	0.09	0.09	0.08	0.09	0.41	2.25	3.94	4.75
10-Year Treasury Note Yield (%)	1.97	1.83	1.92	1.95	2.01	2.22	2.54	1.92	2.26	2.97	4.14	4.78	4.85
Incomes													
Personal Income (% ch., saar)	4.0	0.7	0.7	1.3	2.9	2.6	4.0	2.9	2.2	4.5	5.5	5.9	6.0
After-Tax Profits (Four-qr.% change)	10.8	7.5	6.9	7.9	0.8	0.6	3.8	8.2	0.8	1.0	4.1	5.9	2.1
Recovery Reignites (Prob. = 15%)													
Composition of Real GDP, Percent Change, Annual Rate													
Gross Domestic Product	0.2	3.6	4.6	4.6	4.0	3.8	2.4	2.9	4.1	3.7	3.4	3.0	2.9
Total Consumption	1.9	4.8	4.9	4.6	4.1	4.2	2.5	3.7	4.4	4.5	4.0	3.2	2.9
Nonresidential Fixed Investment	-3.4	7.4	11.3	10.7	10.9	9.4	6.3	5.1	9.9	7.5	5.9	5.0	4.5
Residential Fixed Investment	1.3	14.6	15.3	6.3	13.8	14.4	1.6	6.9	13.2	15.0	7.8	3.2	2.1
Exports	-7.2	7.6	7.1	7.2	8.1	5.2	3.2	2.9	6.5	4.3	5.4	5.9	6.1
Imports	1.8	13.4	13.6	11.4	11.3	9.4	4.0	7.8	10.9	9.4	7.5	4.9	4.1
Federal Government	0.3	3.7	4.1	-0.6	-1.8	-1.0	-1.9	0.9	0.0	-0.9	-0.6	-0.4	0.3
State & Local Government	-1.5	4.7	3.4	2.8	2.3	1.2	1.0	1.7	2.2	1.0	1.4	1.4	1.1
Prices & Wages, Percent Change, Annual Rate													
Consumer Prices	-3.1	1.6	0.7	1.3	1.1	3.0	1.6	-0.2	1.5	1.6	2.2	2.2	1.6
Producer Prices, Finished Goods	-11.6	-3.7	0.4	0.9	0.7	4.7	1.9	-4.3	1.1	1.4	2.1	2.2	0.9
Employment Cost Index - Total Comp.	3.0	3.8	3.1	3.0	2.8	2.9	2.1	2.9	3.0	3.2	3.4	3.5	3.5
Other Key Measures													
Brent Crude, Spot Price (\$/bbl)	55.18	59.49	60.34	62.67	60.00	69.00	99.83	59.42	64.76	64.92	75.51	85.38	79.14
Productivity (%ch., saar)	-1.9	2.1	3.2	3.6	2.9	2.3	0.7	0.8	2.8	2.0	2.2	2.2	2.3
Total Industrial Production (%ch., saar)	-1.0	-0.4	2.4	4.8	4.1	4.5	4.2	2.0	3.9	3.8	3.1	2.8	2.7
Nonfarm Inven. Chg. (Bil. 2009 \$)	105.5	77.9	73.7	92.4	89.6	88.0	65.2	87.4	90.3	84.0	72.6	53.8	52.9
Consumer Sentiment Index	95.5	97.7	98.2	98.8	99.5	99.2	84.1	97.6	101.4	105.8	106.8	105.6	106.5
Light Vehicle Sales (Mil. units, saar)	16.60	17.04	17.40	17.55	17.57	17.70	16.40	17.14	17.75	18.62	18.78	18.39	18.04
Housing Starts (Mil. units, saar)	0.969	1.057	1.163	1.213	1.271	1.321	1.001	1.100	1.360	1.608	1.712	1.738	1.747
Unemployment Rate (%)	5.6	5.4	5.2	5.1	5.0	4.9	6.2	5.3	4.8	4.2	4.0	4.0	4.0
Payroll Employment (%ch., saar)	2.2	2.5	1.8	1.9	1.7	2.2	1.9	2.3	2.0	2.2	1.7	1.2	1.1
Federal Surplus (Unified, FY, bil. \$)	-262.8	50.6	-126.2	-160.9	-234.6	81.9	-483.4	-515.1	-414.6	-395.6	-378.5	-366.3	-342.6
Financial Markets, NSA, Quarter Average													
Federal Funds Rate (%)	0.11	0.57	0.96	1.42	2.41	3.26	0.09	0.76	3.29	3.75	3.75	3.75	3.75
10-Year Treasury Note Yield (%)	1.97	3.52	3.83	3.96	4.14	4.27	2.54	3.32	4.23	4.01	3.81	3.63	3.55
Incomes													
Personal Income (% ch., saar)	4.0	4.7	5.3	5.6	6.9	6.2	4.0	4.5	6.1	6.6	5.5	4.9	4.7
After-Tax Profits (Four-qr.% change)	10.8	16.7	18.4	26.9	22.6	15.8	3.8	18.3	14.3	-0.5	-1.4	0.0	0.7

Source: IHS

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