December 9, 2015

WELLS FARGO SECURITIES

Economics Group

2016 Annual Economic Outlook

The Great Divide

A great divide has opened in many areas of the economy. The U.S. is outperforming, while many emerging markets continue to struggle. Within the domestic economy, the services sector has fared relatively well as the production sector has faltered. Finally, the labor market rapidly approaches the traditional definition of full employment, while many other labor market indicators suggest there are still significant under-utilized resources available in the economy and inflation remains below the Fed's target.

Together we'll go far

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Executive Summary

"You can't connect the dots looking forward; you can only connect them looking backwards. So you have to trust that the dots will somehow connect in your future."

-Steve Jobs

Looking backwards over the past four years of this economic expansion, one of our analytic principles has been that the dots of this expansion are significantly different than those of the past. Beginning with the pace of economic growth, we have witnessed a clear break from previous years with the pace of growth settling into a 2.0-2.5 percent range, reflecting a downshift in both labor force and productivity growth. Growth, as is true of many economic series in the current cycle, is not mean-reverting to the pace associated with past periods that form the basis of many models utilized by other analysts. As a result, we have beaten the consensus in our GDP estimates for the past three years. Therefore, the lesson for decision-makers is that we need to be more critical of models that are useful only in a trend economy and cannot be applied when the overall structure of the economy changes. There is a clear anchoring bias in economics, as in many professions, and that will be misleading as the global economy evolves. As we examine individual economic sectors, another lesson of the current cycle is that dynamic adjustments are not symmetric across the economy. Capital moves faster than labor, cash moves faster than economic capital and interest rate effects differ by sector and from the past. There is a clear divide in economic performance.

Consumer spending remains the largest contributor to economic growth.

Consumer spending remains the largest contributor to economic growth and has picked up over the past two years. The fundamentals of consumer spending—job growth, wage & salary income, household wealth, consumer confidence and credit availability—have all improved. Yet, the household experience during this recovery has been divided from the past, first in labor force growth and second in the pace of labor compensation gains. Labor force growth and participation rates in this cycle have fallen below rates seen in prior cycles. This has led to a quicker decline in the unemployment rate than many estimated, including the Federal Reserve, but, curiously, this decline in the unemployment rate has not led to a rapid rise in the pace of labor compensation gains—a significant break with the past. As evidenced by Figure 1, the pace of wage compensation growth is consistent with the microeconomic model that associates weaker compensation growth with a slower pace of productivity and inflation. In contrast, the macroeconomic model that associates lower unemployment rates with higher inflation has failed. The great divide continues. As economists, we should be more critical about models that exclude almost all consequential diversity and uncertainty of households and firms—characteristics that in many ways are fundamental to the outcomes of the actual economy.

Curiously, the decline in the unemployment rate has not led to a rapid rise in the pace of labor compensation—a significant break with the past.

Equipment spending has settled into a slower pace of growth, consistent with the more modest pace of final sales growth seen during this cycle, not the rapid growth rates that would be implied by a traditional model emphasizing interest rates as a driver of capital spending. There has been a sharp downshift in the elasticity of investment spending with respect to lower interest rates. For decision-makers, this result suggests that we must be more critical of arguments that fail to recognize the assumption—or violation—of ceteris paribus. The willingness to invest in response to lower interest rates has clearly changed. Moreover, there have been significant sectoral differences in behavior during this cycle. The energy and transportation sectors, following the emergence of fracking and subsequent plunge in oil prices, have generated an internal cycle for equipment spending and non-residential investment independent of the overall pace of economic growth. Meanwhile, commercial mortgage-backed securities (CMBS) and hotel investment spending continue to move into a late cycle phase of risk/return tradeoffs.

Residential investment has clearly divided from the past. Housing credit has become more restrictive on the supply side. On the demand side, the urbanization of the Millennial generation has raised the demand for housing close to major job centers in the service economies of the Northeast and West Coast urban centers. As a result, the cost of land has risen sharply, thereby leading to a greater share of multifamily housing than in prior economic expansions. This result reinforces the lesson that decision-makers must be more critical of arguments that fail to recognize the assumption or violation of ceteris paribus. Low interest rates alone did not generate a boom in single-family housing or overall housing starts. This shift in the magnitude and composition of overall housing is illustrated in Figure 2.

Executive Summary

Figure 1

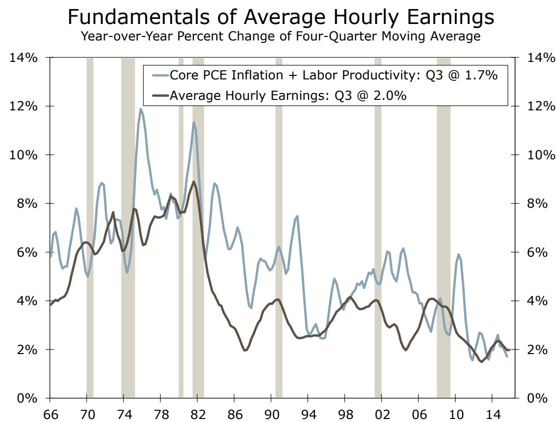
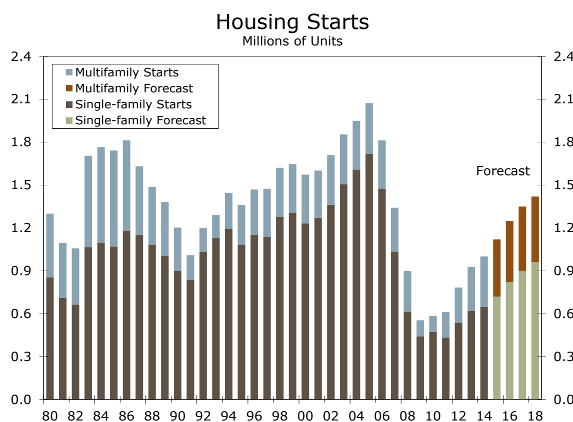


Figure 2



Source: U.S. Department of Labor, U.S. Department of Commerce and Wells Fargo Securities, LLC

Continued low inflation, below the pace expected by the Fed and implied by the declining unemployment rate, has remained a distinct divide from the past. Once again, our lesson as decision-makers is that we must be more critical of overly simplistic models, such as the Phillips Curve, that assume away the complexities of the modern economy. For the year ahead, our expectation is that both the consumer price index (CPI) and personal consumption expenditures (PCE) deflator measures of inflation will drift up, but there remains a significant divide in the behavior of goods prices, which have experienced deflation in recent years, and services, which have risen at a more than 2 percent pace (Figure 3).

Net exports remain a drag on economic growth. The U.S. economy has taken over the role of the locomotive in the global economy. A divide has opened between the U.S. and much of the world. Profit growth should see continued gains, although the pace of growth will be limited by rising labor costs. Output price gains will help improve the pace of top-line revenues.

Continued low short-term interest rates in the United States are certainly a significant divide from the past.

Continued low short-term interest rates in the United States are certainly a significant divide from the past. This break is likely to continue in the year ahead, even as the Federal Reserve looks set to raise the fed funds rate. However, this will mark a divide from the European Central Bank (ECB) and Bank of Japan (BoJ), which are more likely to ease policy. As such, dollar strength should continue amid solid capital inflows from investors continuing to show an interest in U.S. financial assets (Figure 4). The foreign private interest in buying U.S. Treasury, Agency and Corporate debt reflects the perceptions of relative growth and expected short-term interest rate increases.

One final note is the challenge of 2017, with a new president and thereby a new set of policies. As decision-makers, we need to be more critical of forecasts that rely on trend economic behavior when significant policy changes are in the offing.

Figure 3

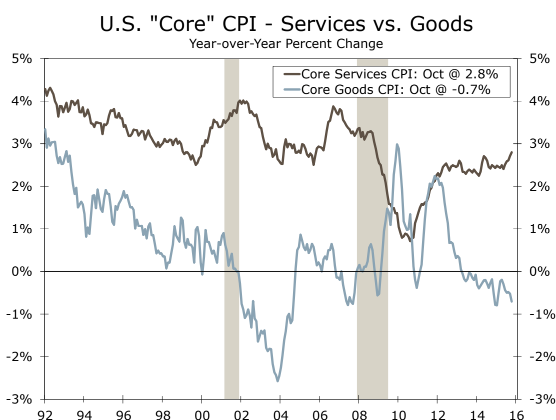
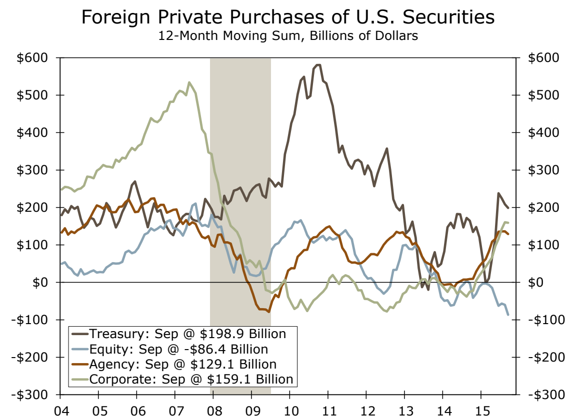


Figure 4



Source: U.S. Department of Labor, U.S. Department of the Treasury and Wells Fargo Securities, LLC

Slow Growth Abroad, But No Collapse

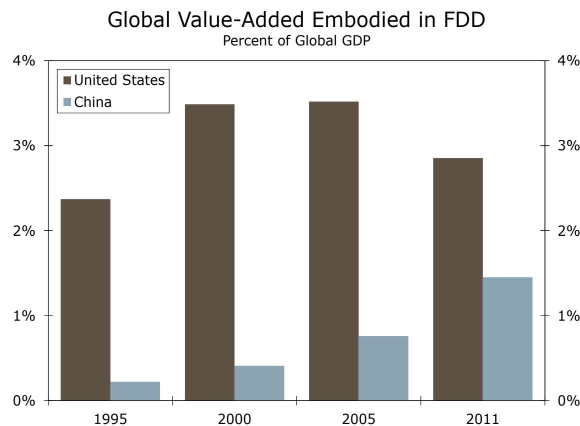
Chinese economic growth averaged roughly 10 percent per annum between 1980 and 2011. However, real GDP grew less than 8 percent per annum between 2012 and 2014, and growth looks to have slowed further to about 7 percent in 2015 (Figure 5). While we readily acknowledge that real GDP growth could clearly fall short of the 6.3 percent rate that we forecast for 2016, we think that dire prognostications of the imminent collapse of the Chinese economy are off the mark. Although recently released data show that growth in the industrial and construction sectors in China has slowed over the past few quarters, growth in the Chinese service sector, which accounts for more than 40 percent of the value added in the economy, remains robust. Moreover, with interest rates well above zero percent at present and with the debt-to-GDP ratio of the central government only at 15 percent, Chinese authorities have the flexibility to ease macroeconomic policy further, should it prove necessary, in order to shore up overall economic growth.

The slowdown that is underway in China should have a meaningful effect on the global economy.

With nominal GDP likely to exceed $11 trillion in 2015, China boasts the second largest economy in the world. Furthermore, China takes in about 9 percent of the world's exports. Therefore, the slowdown that is underway in China should have a meaningful effect on the global economy.

Figure 5

Figure 6



Source: Bloomberg LP, Organisation for Economic Cooperation and Development and Wells Fargo Securities, LLC

As we have written previously, however, statistics that allude to the amount of Chinese GDP or imports can overstate the true effect that the Chinese economy exerts on the rest of the world.[1] It is well known that many Chinese factories assemble raw materials and intermediate inputs into finished products for export. Therefore, the effect that the Chinese economy has on the rest of the world depends not so much on the amount of imports it uses in the production process, but rather on the amount of value added (i.e., wages, salaries and profits) in other countries that is attributable to final domestic demand (i.e., final spending by consumers, businesses and government) in China.

In that regard, China may not be quite as important to the global economy as many casual observers assume. As shown in Figure 6, final spending in China accounts for 1.5 percent of global value added. By that metric, China has one-half the "pull" on the global economy as the United States. Deceleration in the Chinese economy will certainly exert some slowing effect on the rest of the world. However, as long as the Chinese economy does not implode, which we do not expect, and as long as growth in the U.S. economy remains solid, which as detailed in this report we believe will transpire, then the global economy should continue to grow roughly in line with its long run average of 3.5 percent per annum.

[1] **See "How Important is China to Other Asian Economies?" (August 25, 2015), which is available upon request.**

China is not the only developing economy to have experienced slower economic growth recently. Economic deceleration has been generally felt across the developing world over the past few years (Figure 7). Developing economies such as Brazil, Colombia, Indonesia, South Africa and Turkey, which all were flying high just a few years ago, have experienced significant slowing over the past year or so. What all these seemingly disparate economies have in common is that they each incur a sizeable current account deficit (Figure 8). As investors have soured over the past few years on growth prospects in the developing world, these economies have generally not been able to attract enough capital inflows to finance their current account deficits.

Economic deceleration has been generally felt across the developing world over the past few years.

Figure 7

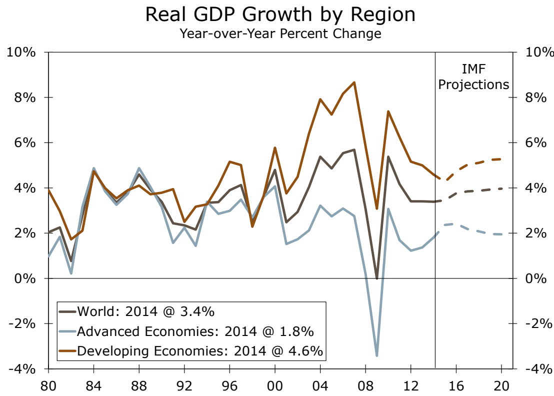
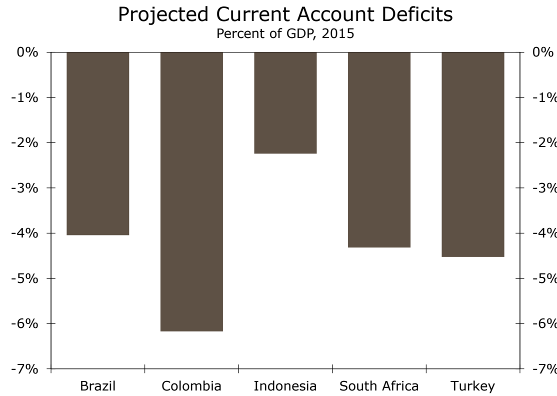


Figure 8



Source: International Monetary Fund and Wells Fargo Securities, LLC

Consequently, their exchange rates have come under downward pressure, depreciating between 20 percent and 40 percent on a trade-weighted basis since the beginning of 2013. In order to keep inflation expectations in check, central banks in these developing economies have found it necessary to tighten monetary policy, which leads to further growth moderation in the near term.

Moreover, some countries in the developing world have relied on extensive trade ties with China and/or exports of commodities to drive their own real GDP growth rates. If, as we expect, commodity prices generally remain depressed and growth in China remains slow relative to the breakneck pace that was registered over the past three decades, then these economies will need to restructure to return to their former luster. Real GDP in the developing world grew at an annual average rate in excess of 6 percent between 2000 and 2012 (Figure 7). Looking forward, the International Monetary Fund (IMF) forecasts that developing economies will grow about 5 percent per annum between 2016 and the end of the decade.

Turning to some of America's most important trading partners, the expansion that has been underway in the euro area, to which nearly 15 percent of U.S. exports are destined, should continue at a modest pace over the next few years. The recent terrorist attacks in Paris should not have a lasting effect on the Eurozone economy, unless attacks were to become frequent and widespread. Even in a best-case scenario in which terrorism has no meaningful economic effects, growth in the euro area likely will not be so strong as to bring about a meaningful rise in inflation. Therefore, the ECB likely will continue to maintain an accommodative policy stance, and conceivably add further accommodation, for the foreseeable future.

The ECB likely will continue to maintain an accommodative policy stance.

The Canadian economy slid into a mild recession earlier this year due, at least in part, to cutbacks in the country's important energy sector. However, Canadian real GDP growth returned to positive territory in Q3 2015 with an annualized growth rate of 2.3 percent, and we look for continued modest growth in Canada over the next two years. South of the border, the Mexican economy grew 2.6 percent on a year-ago basis in the third quarter. Although real GDP growth in Mexico likely will not return anytime soon to the 4 percent rates that characterized the middle years of the past decade, our forecast calls for some modest acceleration in Mexican GDP over the next two years.

Fortunately for the United States, the direct effect on its domestic economy from final spending in the rest of the world is not very significant. As shown in Table 1, only 10 percent of value added in the U.S. economy is directly attributable to final spending in the rest of the world. Said another way, the vast majority (about 90 percent) of U.S. value added emanates from final spending within the U.S. economy. On the margin, economic deceleration in foreign economies can exert some slowing effect on the U.S. economy. However, the slowdown abroad would need to be quite marked to have a meaningful effect on overall GDP growth in the United States. Unless foreign economic growth collapses, which we do not expect, the slowing effect that the rest of the world could exert on the U.S. economy should be limited.[2]

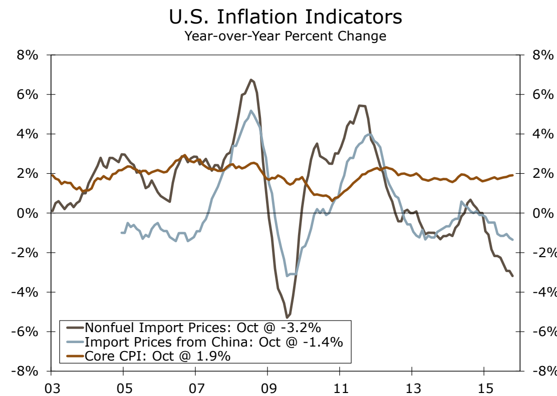
The slowdown abroad would need to be quite marked to have a meaningful effect on overall GDP growth in the United States.

Similarly, the effect that foreign economies have on U.S. inflation is also rather limited. There is a high degree of correlation between prices of imported Chinese goods and total non-oil import prices (Figure 9). This high degree of correlation makes intuitive sense because the United States gets nearly 25 percent of its non-oil imports from China. However, the correlation between non-oil import prices and the core CPI inflation rate is low. Even though dollar appreciation can put downward pressure on the price of imported goods, services account for 75 percent of the core CPI, and the United States imports few services. Unless the global economy weakens sharply, which as noted above we do not expect, or unless the dollar soars in value against other currencies, which we also do not expect, foreign economic developments likely will not put significant downward pressure on the underlying consumer price inflation rate.

Table 1

Sources of Value Added in the United States			
		Foreign Spending	
	Domestic Spending	Advanced Economies	Developing Economies
1995	91.1%	6.4%	2.6%
2005	92.1%	5.7%	2.2%
2011	89.6%	6.5%	3.8%

Figure 9



Source: International Monetary Fund, U.S. Department of Labor and Wells Fargo Securities, LLC

Speaking of the dollar, we look for the greenback to appreciate modestly, but not to "soar," versus most currencies in the quarters ahead. Indeed, we look for the Fed's Major Currency Index, which measures the trade-weighted value of the U.S. dollar vis-à-vis seven other widely used currencies, to rise about 4 percent or so between now and the end of 2016. Although we look for the Federal Reserve to tighten policy in the months ahead, most other major central banks either will be on hold or they likely will ease policy further. Rising interest rates in the United States relative to other major economies should support the value of the greenback against those major currencies. We also look for the greenback to strengthen modestly further versus the currencies of many developing economies in coming months.

We look for the greenback to appreciate modestly, but not to "soar," versus most currencies in the quarters ahead.

[2] **For further reading see "Could Developing Countries Take Down Developed Economies?" (August 21, 2015), which is available upon request.**

Monetary Policy Can Tame Inflation, but Can Policy Generate Inflation?

During Paul Volcker's chairmanship of the Federal Reserve in the 1980s, the Fed established credibility that monetary policy could be used to "break" inflation. Whether monetary policy, however, can work the other way and generate inflation remains to be seen. A record expansion of the Fed's balance sheet and seven years of near-zero interest rates has yet to lead inflation back to the Fed's target following the Great Recession. Inflation, as measured by the PCE deflator, has run below the Fed's now explicit 2 percent target since mid-2012 (Figure 10).

The roughly 60 percent drop in oil prices and the rapid appreciation of the dollar have weighed on headline and core inflation.

FOMC members generally, and Chair Janet Yellen in particular, have leaned heavily on the Phillips Curve when determining how monetary policy can support a return to 2 percent inflation. Under this (augmented) framework, short-term inflation is driven by the amount of resource slack in the economy, expectations for inflation and price shocks. Inflation over the past year has certainly been dealt its share of shocks. The roughly 60 percent drop in oil prices and the rapid appreciation of the dollar have weighed on headline and core inflation. In a speech in September, Yellen attributed around 80 percent of the gap between actual and targeted inflation in 2015 to energy prices and the value of the dollar.

Even after accounting for the drag from oil and the dollar, inflation continues to fall below the Fed's target. This comes despite the rapid reduction in the unemployment rate and fairly stable inflation expectations, which has raised doubts over the efficacy of the Phillips Curve in explaining today's inflation dynamics. Yet, the relationship between labor market slack and price pressure, commonly measured by wage growth, is not linear. Therefore, there may appear to be no relationship until slack is absorbed, i.e., the labor market reaches full employment—a threshold effect. The unemployment rate is only now near the Fed's estimates of full employment. Therefore, wages and inflation would not begin rising until the threshold has been met. Indeed, wage growth has recently begun to edge up, which would indicate the labor market is in the ballpark of full employment (Figure 11). But will this help generate higher inflation?

Figure 10

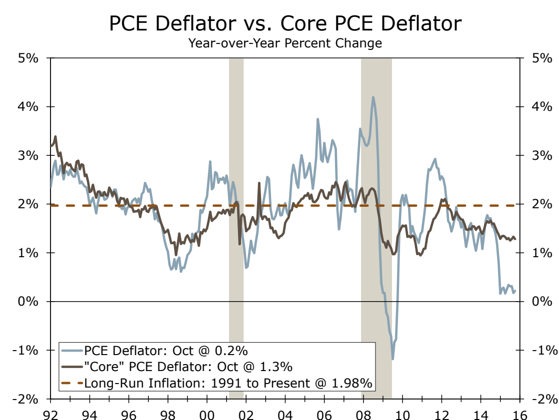
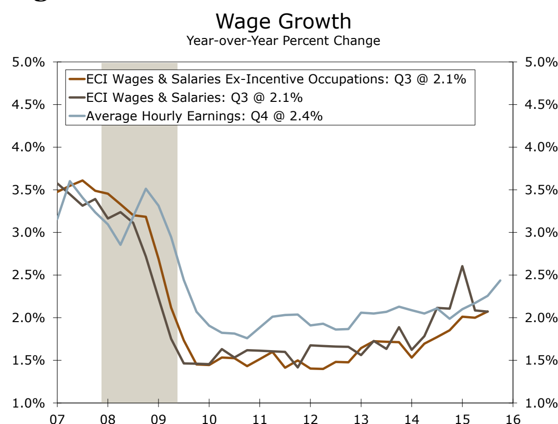


Figure 11



Source: U.S. Department of Commerce, U.S. Department of Labor and Wells Fargo Securities, LLC

The Phillips Curve in a Global World

Research suggests a weakening link between labor costs and inflation, and that inflation may actually lead wage growth.

Given that the unemployment rate is only now near estimates of full employment and there are merely nascent signs of wage growth, it is still somewhat early to determine whether the Phillips Curve is dead or merely dormant. Yet, there are reasons to believe that tightening in the domestic labor market—the crux of the Phillips Curve—may do little to boost inflation. To begin, research suggests a weakening link between labor costs and inflation, and that inflation may actually lead wage growth.[3] The more feeble relationship likely stems from labor income, measured by wages & salaries, accounting for an increasingly small share of personal income since the early 1970s and that a smaller share of the working-age population even earns income from the labor market since the Great Recession, as evidenced by the decline in the employment-population ratio.

[3] Peneva, Ekaterina, and Jeremy Rudd. "The Passthrough of Labor Costs to Price Inflation." Federal Reserve Board, Finance and Economics Discussion Series Paper 2015-042.

Knotek, Edward, and Saeed Zaman. 2014. "On the Relationship between Wages, Prices and Economic Activity." Federal Reserve Bank of Cleveland Economic Commentary 2014-14.

Instead, global price dynamics look to be increasingly relevant for domestic inflation. Wages may not play the role they once did in driving inflation, as globalization has led to a deeper pool of labor that U.S. workers must compete against. Similarly, many companies are competing globally for customers, and sluggish growth overseas has kept businesses' pricing power constrained. Of course the most visible sources of downward pressure on U.S. inflation this past year—collapsing commodity prices and the stronger dollar—also have their roots in the globally integrated nature of today's economy.

Figure 12

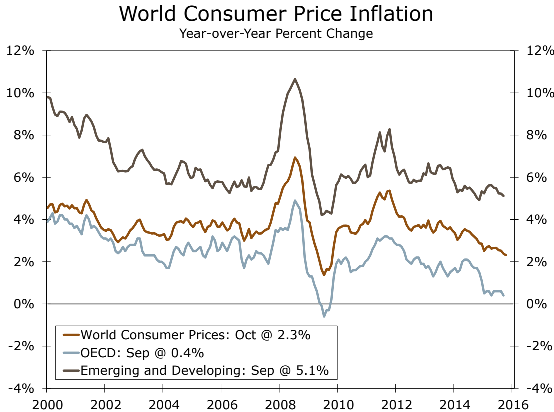
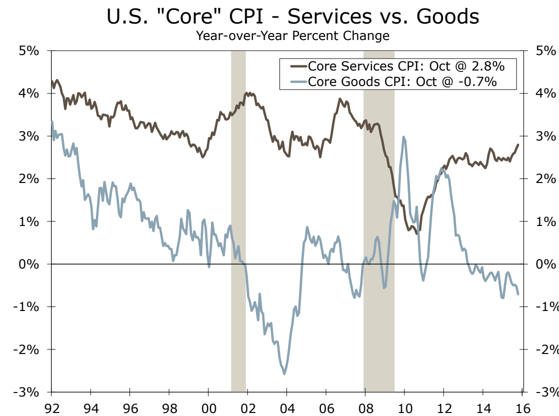


Figure 13



Source: IMF, U.S. Department of Labor and Wells Fargo Securities, LLC

Inflation in 2016: Moderate Rise in Core Inflation Ahead

The disinflationary global environment will likely lend little support to U.S. inflation in the year ahead (Figure 12). Slower growth in China and abundant excess capacity in the country's industrial sector will continue to weigh on commodity and manufactured goods prices. Subdued growth in advanced economies will also tame inflationary pressures from abroad. The Eurozone is struggling with even weaker core inflation than the United States despite the depreciation of the euro this past year. There too, monetary policy officials have pointed to soft demand and labor market slack as factors holding down inflation.[4]

Oil and the dollar should not be as large of a drag on inflation next year even if they remain at extreme levels.

Together, the weak pricing environments around the world and additional strengthening in the dollar will continue to weigh on core consumer goods prices. That said, the rate of dollar appreciation is expected to be more gradual in 2016, and any further drop in oil prices is not likely to be on the magnitude of this past year's decline. In other words, oil and the dollar should not be as large of a drag on inflation next year even if they remain at extreme levels. In addition, prices for core services, which are more reflective of domestic demand and domestic pricing power, should continue to underpin core inflation as the U.S. economy grows ahead of its potential rate again in 2016 (Figure 13).

With the unemployment rate expected to fall below estimates for full employment, 2016 should be a telling year for whether the Phillips Curve is still a useful guide for inflation dynamics. Currently, it looks as if the relationship between labor market slack and inflation has not fully broken down. Wage growth, while perhaps not as telling as it once was, is showing signs of picking up and inflation expectations have remained fairly stable. That said, we expect core inflation will strengthen only moderately as inflation is not solely a function of domestic wages. Another year of subpar global growth and soft inflation overseas should keep inflation pressures from abroad fairly muted, but the drag from energy and the dollar should fade.

[4] **Constâncio, Vítor. "Understanding Inflation Dynamics and Monetary Policy." Panel remarks at Jackson Hole Economic Symposium, Aug. 29, 2015.**

The Great Divide

The U.S. economy is poised to enter 2016 with solid momentum. Real GDP growth this past year slightly topped the average for the previous five and a half years of this recovery, but with a great divide. Overall growth in 2015 looks to have matched the prior year at 2.4 percent, despite the plunge in oil prices early in the year and the resulting pullback in energy exploration and related investment (Figure 14). However, the sectors of the economy that are closely tied to the global economy faced disappointment in 2015, as weakening foreign demand and a stronger dollar battered exports and earnings of large multinational firms. Mining and agriculture also were adversely impacted, as lower prices cut into output and earnings. On net, sectors less closely tied to the global economy fared considerably better. Private final sales to domestic purchasers grew at an annual rate of 3.1 percent in the third quarter and 3.2 percent over the past year (Figure 15).

The U.S. economy is poised to enter 2016 with solid momentum.

Figure 14

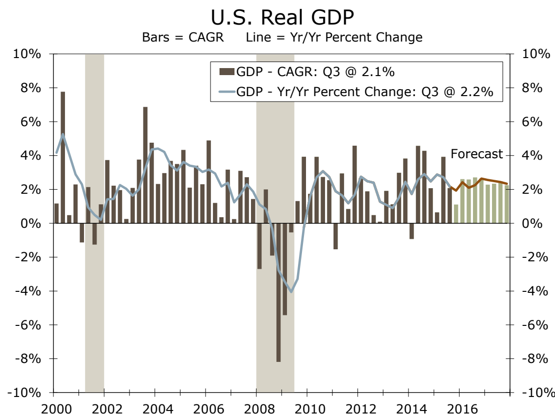
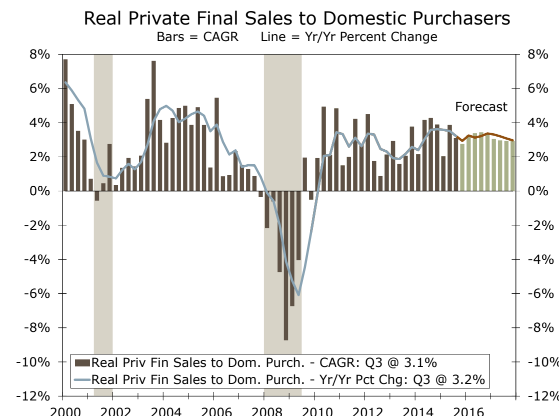


Figure 15



Source: U.S. Department of Commerce and Wells Fargo Securities, LLC

We expect the economic tale of two economies to remain in place during 2016. For those sectors of the outlook tied primarily to the domestic economy, 2016 is likely to see better times, at least relative to the current economic expansion. For those areas closely tied to the global economy, the economic environment will be more challenging. Fortunately, most of the U.S. economy is more closely tied to domestic economic conditions. International trade, the sum of exports and imports, represents just 29 percent of GDP as of the third quarter. Moreover, some of the headwinds facing the economy over the past few years will lessen appreciably in 2016. While energy prices might move lower from time to time, they are unlikely to plummet from current levels, so the positive effects on household purchasing power from lower energy prices are likely to more substantially offset the negative effects of reduced energy production. Fiscal policy will also be more supportive of growth, now that a federal budget deal has been enacted that allows for modest gains in defense and non-defense discretionary outlays.

The improvement in employment and earnings will continue to support consumer confidence and household formation.

Domestic demand is poised to grow solidly in 2016. Nonfarm employment is expected to average 188,000 jobs per month during the year ahead, which is a slightly slower pace than this past year. While the net number of jobs being created is likely to be slightly less than in 2015, the quality of jobs should be better, with more of the jobs created being full-time positions. Compensation is also likely to accelerate further. We expect nominal personal income to grow 5.1 percent in 2016, up slightly from 4.6 percent in 2015. The improvement in employment and earnings will continue to support consumer confidence and household formation, both of which have risen back to levels that have, in the past, supported healthy gains in home sales and spending on big-ticket items.

Although we expect consumer spending to remain strong in 2016, we are looking for a fairly conservative 2.8 percent rise in personal consumption expenditures, which is slightly less than the 3.1 percent gain posted this past year (Figure 16). One of the reasons for our caution is that motor vehicle sales, which ended the year at around an 18-million unit pace, appear to be a bit extended. Sales have been helped along by easier credit. Motor vehicles and student loans are the only areas of the economy where credit has flowed as freely in this cycle as it did in previous cycles, and it will likely be hard to push the envelope much further. This means auto sales may be close to topping out for the cycle. Consumers will also once again have to grapple with higher health care costs, which hit paychecks at the start of the year. Rising health care costs are one reason real consumer spending has pulled back so sharply at the start of the past few years.

Consumers should be in better shape to deal with rising expenses.

Consumers should be in better shape to deal with rising expenses. Real after-tax income is expected to rise 2.8 percent in 2016, compared to 3.5 percent this past year. Household net worth has also increased noticeably and households are more likely to spend the money they are saving at the gasoline pump now that it looks like the dip in gasoline prices seems to be long lasting. Consumers are multifaceted, however. Spending over the past few years has tended to be supported to a higher degree by rising wealth, which meant that gains were fairly strong at the upper end of the income distribution. Higher-end spending has also benefitted from foreign purchases, as international visitors opened up their wallets on visits to key gateway markets including New York City, Miami, Los Angeles and San Francisco.

Figure 16

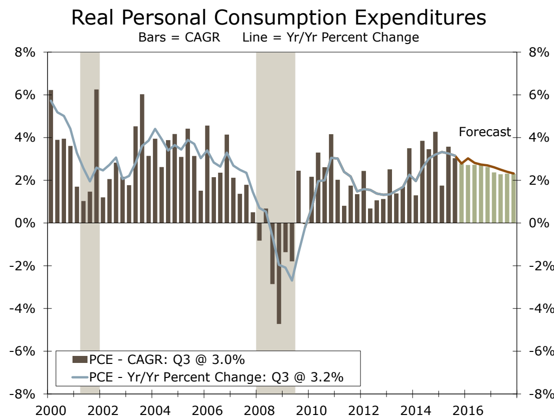
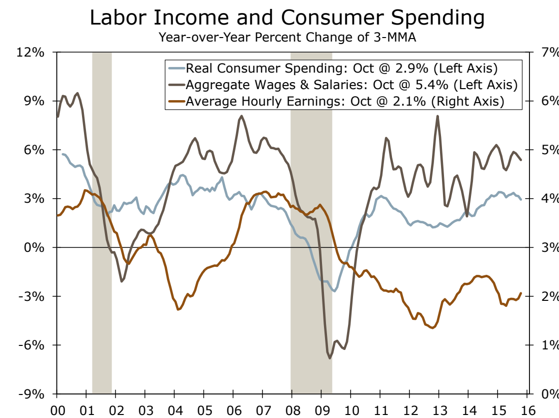


Figure 17



Source: U.S. Department of Commerce, U.S. Department of Labor and Wells Fargo Securities, LLC

Home prices have seen the greatest rebound predominantly in markets that have seen particularly large job gains.

The improvement in household finances and rising optimism about employment prospects should also support home sales and new residential construction, but the housing market has also seen a great divide. Housing prices have recovered much of their recession losses across the country, at least in nominal terms (Figure 18). Home prices have seen the greatest rebound predominantly in markets that have seen particularly large job gains, such as tech-heavy areas like the San Francisco Bay Area, Denver, Seattle and Dallas, and markets that have seen a great deal of foreign purchases and investor buying, such as New York City, Seattle and Washington, D.C. By contrast, home price appreciation has been much more restrained in parts of the country where job growth has been more modest. There has also been a notable split between home prices in the suburbs, which have recovered more slowly, and home prices in and near the urban core, which rebounded fairly rapidly.

The split in fortunes between urban and suburban locations is also evident in new home construction. Apartments have accounted for a much larger proportion of new home construction than in previous cycles. Demographics, changes in technology and new mortgage rules are all clearly playing a role in the shift toward apartments and urban living in general. In comparison to previous decades, population growth in primary city areas has been much more in line with suburban areas over the past several years (Figure 19). We believe the shift back to the cities is long-lasting, but feel the apartment boom may be getting a bit overextended in certain markets. We expect to see a shift back toward for-sale housing, which will include urban-style development both in the cities and the suburbs. Demand for condominiums and townhomes is rising, and traditional residential development is also making a bit of a comeback, helped out by lower gasoline prices and looser lending requirements for land development.

Figure 18

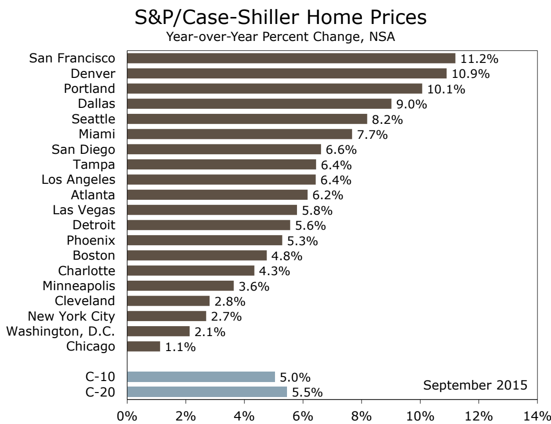
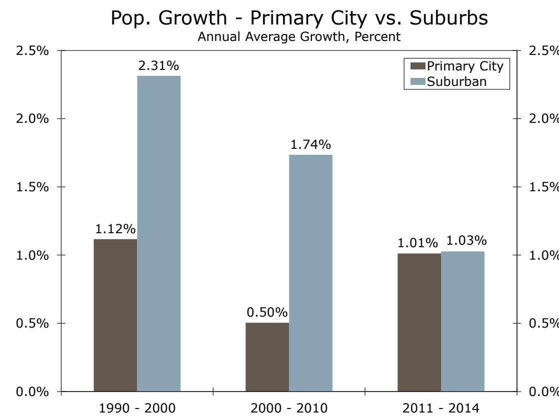


Figure 19



Source: S&P/Case-Shiller, U.S. Department of Commerce and Wells Fargo Securities, LLC

After rising 11.6 percent in 2015, we are looking for housing starts to again climb 11.6 percent in 2016 to 1.25 million units with single-family starts to rise 13.9 percent and a 7.5 percent rise in multifamily starts. Home price appreciation and residential rents should moderate somewhat, as new supply comes to the market. We are looking for home prices to rise roughly 4 percent in the coming year, but the risks remains weighted toward the upside.

The improvement in residential construction, particularly the single-family market, is good news for commercial construction. Development of office and retail space has been conspicuously absent from this recovery, except in areas where energy and technology have been booming. One source of strength in commercial real estate has been demand for industrial space, which has benefitted from the explosive growth in online retailing, gains in international trade and the rebound in U.S. manufacturing activity. These trends should remain in place in 2016, but we should also see increased activity in the office and retail markets as well. The hotel market has also performed unusually well throughout much of the recovery and is still seeing strong development activity. The improvement in commercial development should help boost structures outlays in 2016, when we expect outlays to rise 1.5 percent, following a 1.2 percent decline this past year.

Business fixed investment in general remains under pressure. Activities related to oil and gas exploration should continue to contract in 2016, although at a much slower pace than this past year. The consensus view on energy prices has changed a great deal over the past year. Hopes that U.S. production would quickly decline and allow prices to rebound have faded away, and the new mantra is that oil prices are likely to stay low for longer. The International Energy Agency (IEA) recently noted that it does not expect oil prices to rebound back above $80 a barrel before 2020. We agree with this projection. Oil prices are unlikely to increase until we have seen a meaningful consolidation among U.S. energy producers, particularly among the "new" energy producers, and a significant improvement in global economic growth.

Investment tied to the energy boom continues to unwind. Orders for steel pipes, which are used for drilling; railcars utilized to haul fracking materials, sand and oil; and heavy industrial equipment, used to prepare and operate drilling sites; have all declined considerably over the past year. Demand for trucks, oil field equipment and mining machinery have also fallen. Slower global economic growth and the stronger dollar are also taking a toll on investment spending. Businesses are understandably reluctant to expand production capacity during a time when demand remains weak relative to prior expectations and profit margins are being squeezed. The farm sector is also getting squeezed by lower commodity prices and, thereby, purchases of farm equipment have tumbled. We are looking for business fixed investment in equipment to rise 4.8 percent in 2016, following a 3.4 percent rise this past year.

Investment tied to the energy boom continues to unwind.

Slower global economic growth means that international trade will likely continue to be a drag on U.S. GDP growth in 2016. We expect imports to rise 4.6 percent in 2016 following a 5.1 percent rise in 2015. The increase reflects solid consumer demand and the stronger dollar, which make imported goods less expensive for U.S. purchasers. We are looking for the major currencies trade-weighted dollar to rise roughly 5 percent in 2016 (Figure 20). A stronger dollar will make it even more difficult for U.S. exporters to compete against producers overseas. Moreover, several nations, including Russia, Brazil, Turkey and Mexico, have seen their currencies weaken much more relative to the dollar, adding more competition for U.S. exporters in markets abroad (Figure 21). We expect U.S. exports to rise 1.6 percent in 2016, following a 1.2 percent rise in 2015. The widening in the trade deficit is expected to cut 0.5 percentage points off of U.S. GDP growth in 2016.

Slower global economic growth means that international trade will likely continue to be a drag on U.S. GDP growth in 2016.

Figure 20

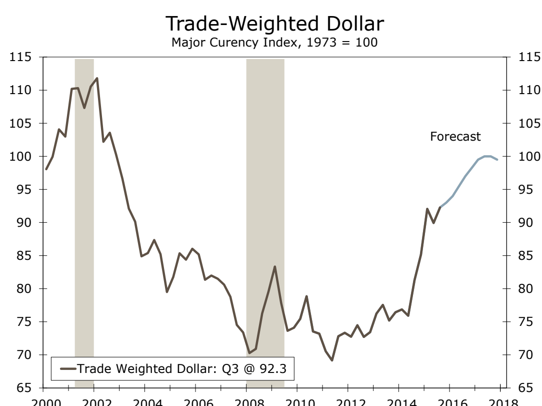
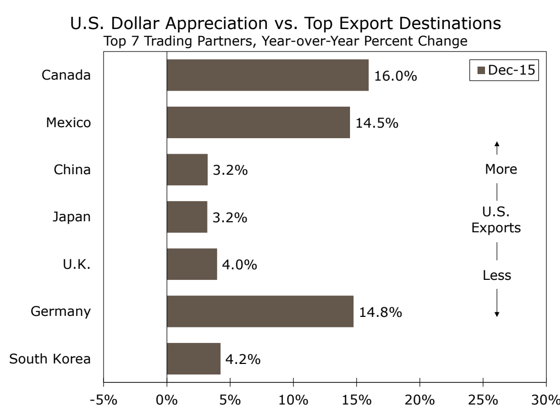


Figure 21



Source: Federal Reserve Board, Moody's Analytics and Wells Fargo Securities, LLC

In contrast, one area where the economy can expect a little more strength is the public sector. The budget deal passed by Congress and signed by the president this fall will allow federal defense spending and nondefense discretionary outlays to rise modestly in 2016. The growth will provide some real relief to areas heavily dependent on government spending, such as the Capital region and many military communities around the country. State and local spending should also rise a little more rapidly, reflecting rising tax receipts and easing budget pressures in most states. Even with this improvement, we expect total government spending to rise just 1.9 percent in 2016, which is less than the overall economy. But even that modest gain would mark the strongest increase for government outlays since 2009 and would contribute 0.3 percentage points to overall growth.

One area where the economy can expect a little more strength is the public sector.

As always, there are numerous wildcards in the economic outlook. The most obvious is geopolitical risks emanating from terrorism or the ongoing conflict in the Middle East. Heightened terrorist activity would likely further slow global economic growth and undermine exports even further. Another more mundane issue is the buildup in inventories seen over the past several quarters. A slower rate of inventory building reduced third quarter real GDP by 0.6 percentage points. Despite this drag, the overall inventory-to-sales ratio remains exceptionally high and manufacturers, wholesalers and retailers all continue to report concerns about inventories remaining too high. The overhang of inventories is expected to restrain production through at least the first half of 2016 and ultimately slice 0.2 percentage points off 2016 real GDP growth. This pull back will also weigh on air, truck and rail freight traffic. A sharper reversal in inventories remains possible.

Data and Model Dependent Monetary Policy

Projections of monetary policy actions, and thereby interest rate behavior, represent a significant divide from the past. First, the continued downshift in inflation expectations by the FOMC (Figure 22) has given the impression of continued delay in policy actions. Yet, the decline in the unemployment rate in excess of what the FOMC has projected suggests an increase in inflation and Fed action.

The lack of inflation, despite significant improvement in the labor market, raises doubt about the effectiveness of the Phillips Curve as a model of inflation behavior and a guide for policy actions. This compounds the communication issue for the Fed and the markets. Moreover, the lesson is that we should be more critical of overly simplistic models, such as the Phillips Curve, that assume away the complexities of the modern labor market.

Interest Rate Outlook

Our expectation is that the Fed will raise the fed funds rate in December and will continue to raise rates in the year ahead.

Our expectation is that the Fed will raise the fed funds rate in December and will continue to raise rates in the year ahead to reach a range of 1.00-1.25 percent by the end of 2016. This projection reflects our view that inflation measures, both the CPI and PCE deflator, will approach the Fed's 2 percent target in the year ahead. In recent months, a majority of Federal Reserve Banks have voted for an increase in the discount rate. According to the minutes of the Federal Reserve Board's discount rate meeting on Oct. 26, nine of the 12 regional bank presidents thought an increase in the discount rate to 1.0 percent was warranted.

Yet, Chair Yellen's assertion that the FOMC will avoid an "overly aggressive" policy indicates to us that the Fed will likely lower its projected pace of interest rate increases, indicated by the dot-plot diagram (Figure 23). The net result is that the pace of policy rate hikes should be mild compared to prior cycles and the fed funds rate will not reach as high a level as suggested by the dot-plot diagram.

Given our modest projections for the funds rate relative to previous tightening cycles (we do not expect anything like the pace of tightening seen in the 1994-1995 and 2004-2006 cycles), our expectation is that the yield curve will flatten over the forecast period. Our two-year Treasury expectation is for 1.80 percent by the end of 2016, while we estimate the ten-year U.S. Treasury yield will only approach 2.60 percent over the same period—hence the ten-year/two-year spread declines.

For financial markets, there are two lessons here. First, there remains a significant divide in economic policy projections for various central banks resulting in a significant range of possibilities for exchange rates that will significantly alter the potential range of investment returns for global portfolios. Second, the persistent willingness of investors to emphasize the purchase of existing assets rather than invest in new assets reflects an interesting view of the balance associated with Tobin's Q assessment.

Finally, financial capital is not perfectly mobile—think Japan in the 1980s or China today. Limited mobility in turn inhibits the ability of interest rates, exchange rates and the real return on physical capital to adjust and results in pent up supply/demand imbalances in capital flows over time. This constant tension in financial markets creates the volatility that opens up opportunities for the thoughtful decision-makers.

Figure 22

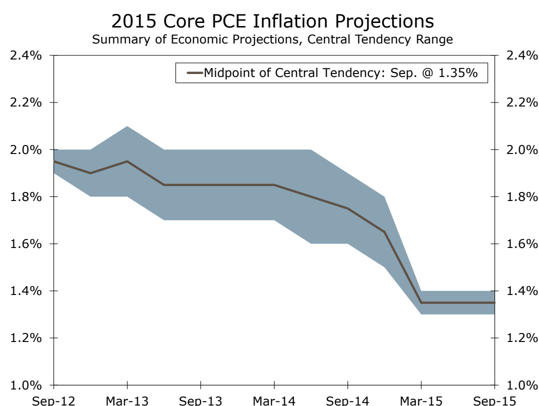
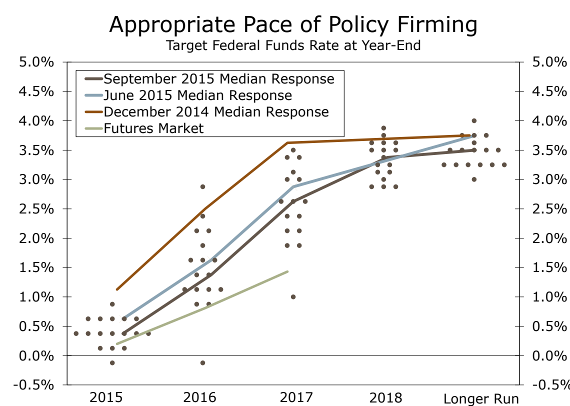


Figure 23



Source: Federal Reserve Board, Bloomberg LP and Wells Fargo Securities, LLC

Zero Interest Rate Policy and Lessons from Japan

Since 1995, Japan's benchmark lending rate has been below 0.50 percent. In fact in 2013, the BoJ conceded that a zero interest rate policy would persist indefinitely and that financial markets should instead focus on the BoJ's expansion of the monetary base. In the United States, seven years have passed with policy rates effectively at zero (Figure 24). In this segment of the annual, we examine the experience of Japan to better understand the implications of perpetually low short-term interest rates for the U.S. economy.

Figure 24

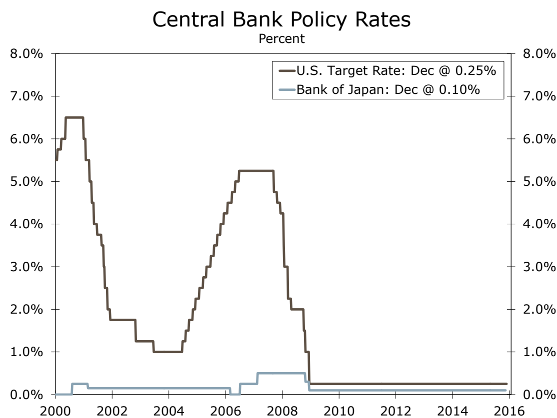
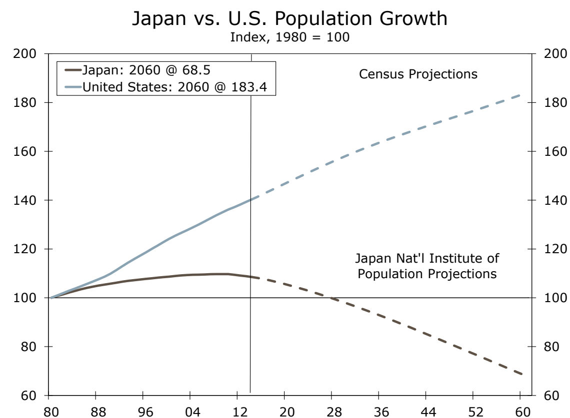


Figure 25



Source: IHS Global Insight, U.S. Department of Commerce, Japan National Institute of Population and Wells Fargo Securities, LLC

The Japanese government estimated that Japan's population will fall 25 percent between 2005 and 2050.

Japan and the United States are very different. Two major reasons why outcomes in the United States could be different from outcomes in Japan are population trends and a recapitalized banking sector.

The first is population trends. From the mid-1990s until just a few years ago, Japan's population was growing at a slow rate and more recently growth has begun to decline. The Japanese government estimated that Japan's population will fall 25 percent between 2005 and 2050. In contrast, over the same time period and as shown in Figure 25, the U.S. Census Bureau estimates the U.S. population will increase roughly 35 percent from 295 million in 2005, to 398 million by 2050.

The other big difference is that unlike Japan, the United States completely recapitalized its banking system through the Troubled Asset Relief Program in 2008. During the 1990s in Japan, one of the key problems was that many banks had loans that were not marked-to-market. By not forcing Japanese banks to charge off bad loans as U.S. institutions did during the U.S. financial crisis, the Japanese policy response resulted in problems being drawn out over a longer period and bank lending slowed to a crawl. Worse, the total amount of government cash committed was too small to recapitalize the banks—a key vulnerability in Japan's disappointing recovery.[5] The result was an agonizingly slow chain reaction that resulted in a "lost decade" for the Japanese economy.

In a 2013 speech to the Japan Society, New York Fed President William Dudley considered the monetary policy lessons of the Japanese experience for the U.S. economy.[6] After recognizing Japan's role in developing tools and strategies that would inform the thinking of decisions at the Federal Reserve, Dudley identified the challenge of conducting policy when "short-term interest rates are already pinned close to zero, but the economy is still operating well below its potential." That challenge seems even more relevant today than it was in 2013.

In describing how Fed policy has been informed by the experience in Japan, President Dudley identified six key points, which we outline below that should guide the Fed. Two and a half years after his initial remarks, we reconsider these concepts in the context of the current economic landscape to better understand the nuances of monetary policy as we look into 2016.

[5] **"Will the U.S. Bank Recapitalization Succeed? Lessons from Japan, Kashyap, Anil (University of Chicago) and Takeo Hoshi (University of California, San Diego), April, 2009, IMF Policy Paper.**

[6] **"Lessons at the Zero Bound: The Japanese and U.S. Experience" May, 2013, Federal Reserve Bank of New York.**

"First, and most importantly, managing expectations is critical in the execution of monetary policy at the zero bound…Second, in managing expectations, good communication is essential." We are bravely publishing this annual outlook a week before the December Fed meeting confident that our call for a rate hike at the final meeting of 2015 is the right one. Given the great lengths to which the Fed has gone to guide expectations toward a rate hike by year-end, FOMC policymakers would be breaking rule number one and rule number two should they not raise rates.

"First, and most importantly, managing expectations is critical in the execution of monetary policy at the zero bound."

"Third, actions speak louder than words alone." This certainly has been true in Japan where financial markets responded dramatically to the announcement of both the rollout of Quantitative and Qualitative Easing (QQE) in the spring of 2013 as well as the October 2014 acceleration of the pace of BoJ purchases. The Fed's own Quantitative Easing program and the eventual tapering also offered evidence of action trumping talk.

"Fourth, the policy instruments interact so that policy as a whole exceeds the sum of its parts." In a way, this was more relevant earlier in the cycle for the Fed, though it could become important again. Current policy comments focus on when the Fed will begin tightening. In our view, that occurred last year when the Fed wound down its asset purchases. When all of the policy tools are considered as a whole, the current tightening cycle is well underway.

"Fifth, at the zero lower bound, risk management becomes extremely important." This deals with the so-called liquidity trap—the problem that arises when central banks inject cash into the banking system, but fail to spur price growth and stimulate the economy. With chronic deflation, consumers will hold cash in savings rather than spend or invest. Even with the drastic measures currently being pursued by the BoJ, it is not clear that Japan has broken free of the liquidity trap.

"Sixth, the constraints imposed by the zero bound will limit what monetary policy can accomplish by itself. This increases the importance of complementary fiscal, financial, and structural policy actions." In our view, neither Japan nor the United States offers a sterling example of how to get this right. In Japan, the first two arrows of Abenomics (fiscal spending and monetary base expansion) were rolled out with fanfare. If fiscal policy expansion is recommended as a solution to the liquidity trap, then why have Japan's policies not worked? The answer is that in addition to the shrinking population problem, other needed measures (structural reform) have yet to be implemented in a credible and substantive way.[7] In the United States, the $831 billion America Recovery and Reinvestment Act of 2009 offered some help to the economy but the act was criticized for its slow implementation and bureaucratic delays. The six years that have passed since have been characterized by fiscal policy uncertainty and government spending cuts. Congressional infighting and government shutdowns are hardly the sort of complementary fiscal policy environment that makes the most of accommodative monetary policy.

[7] **See "Limited Options for Japan as GDP Slips in Q2" (August, 2015), which is available on our website.**

Late-Cycle Activity Sparking Risk Concerns

The U.S. economic recovery that began in mid-2009 will enter its seventh year of expansion in 2016. According to the National Bureau of Economic Research (NBER), which is the official arbiter of the U.S. business cycle, the average length of an economic expansion in the post-war era has been about five years. With some late-cycle economic and financial market activity perking up, including soaring valuations in some asset classes, elevated credit spreads, weak manufacturing activity and dollar price appreciation, market participants are beginning to question whether the business cycle is in its final innings. Some are even dusting off Hyman Minsky's now oft-quoted, "financial instability hypothesis," which posits that economic stability leads to risk taking and leverage, which ultimately pushes the economy into a recession. Although worries about the more advanced age of the economic expansion are largely misplaced, the surge in asset prices and widening credit spreads in the financial market are worth exploring.

The U.S. economic recovery that began in mid-2009 will enter its seventh year of expansion in 2016.

Before we look at late-cycle indicators, it is a good idea to revisit how the NBER classifies an "official" recession. The NBER defines a recession as a significant decline in economic activity spread across the economy, lasting more than a few months, which is normally visible in real GDP, real income, employment, industrial production and real wholesale-retail sales. Economic indicators closely followed by the NBER are all continuing to firm at a healthy clip, which suggests the recovery has more room to run. We also use a statistical approach to ascertain the probability of a recession by employing a probit model, which gauges the probability of a recession six months out (Figure 27). Given the historical accuracy and real-time performance of the model during the past few years or so, the model's current-low estimate does not suggest a recession is in the offing. That said, the question remains how much more room does this economic expansion have to grow.

Figure 26

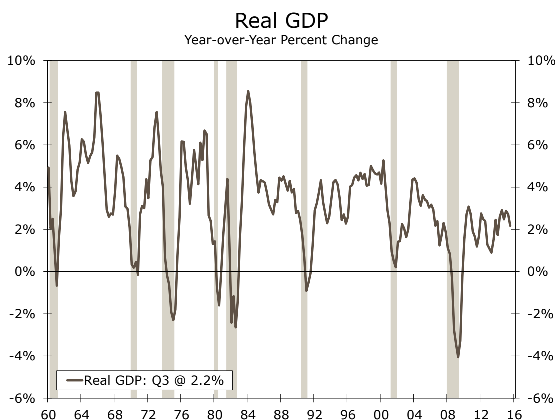
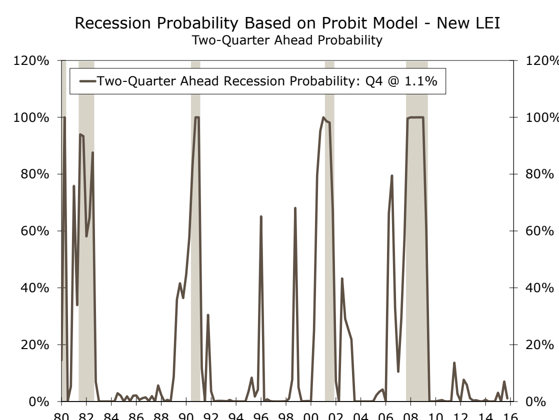


Figure 27



Source: U.S. Department of Commerce and Wells Fargo Securities, LLC

Are Credit Risks Still Looming?

We begin by looking at credit, which is the lifeblood of the U.S. economy. Seminal work done by Bernanke and Gertler (1989) and Kiyotaki and Moore (1997), find that financial market conditions can play a key role in business cycle fluctuations. Financial leverage, as measured by bank credit as a percent of nominal GDP, reached a record peak in mid-2009, fell sharply following the recession, but is now inching closer to its previous peak. Much of this activity is due to a pickup in loans and leases as banks seek to offset some of the decline in net interest margins (NIMs) by reaching for yield in a low interest-rate environment. With the Federal Reserve holding its short-term target rate steady, the NIM is now at its lowest level on record.

Across the spectrum of loans, much of the increased activity has occurred in multifamily, income-producing and commercial and industrial lending. At this stage in the business cycle, however, real estate loans are garnering more of the lending activity. Demand across all categories of commercial real estate, which is typically forward-looking, is also rising at a healthy pace, with the Senior Loan Officer Opinion Survey (SLOOS) showing the net percentage of banks reporting "stronger" demand for construction, nonresidential and multifamily loans gradually strengthening (Figure 28). In fact, anecdotal reports of fierce competition for real estate loans and relaxed underwriting standards, especially for mid-size banks eager to gain market share, are also gaining traction. If there is any

competition among banks, it would likely appear in the multifamily sector. That said, with property fundamentals set to moderate in the multifamily space, and the SLOOS showing some tightening in bank credit, we do not expect any near-term risks in the sector. Income-producing properties, which comprise the largest share of risk-weighted assets for commercial real estate loans, are also strengthening; however, the proportion for mid-size banks likely peaked in late-2010, while the share at large banks is gradually growing. That said, loan performance remains strong, with noncurrent loans and net charge-offs at historically low levels.

Outside of bank credit, widening credit spreads in investment grade and high yield, which are thought to be forward-looking, are igniting concern. Looking more closely at the past three business cycles we find that the trough in the corporate credit spreads is a better indicator of weakening economic activity, with the spread reaching a bottom roughly three quarters before the onset of the downturn in economic conditions (Figure 29). We suspect that even though spreads have widened sharply, the underlying credit quality of bond issuers and the level of leverage are important predicators of the level of defaults. Given our economic outlook, we do not expect any near-term risks in this space.

Outside of bank credit, widening credit spreads in investment grade and high yield, which are thought to be forward-looking, are igniting concern.

Figure 28

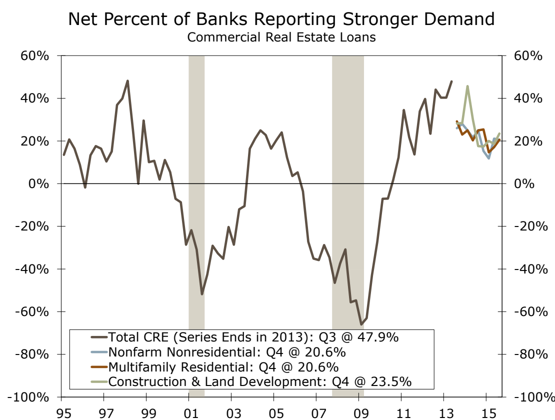
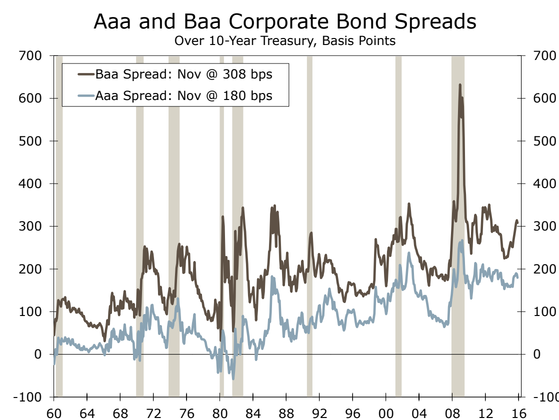


Figure 29



Source: Federal Reserve Board, Moody's Analytics and Wells Fargo Securities, LLC

Term Risks

Another concern due to the low interest-rate environment is term risk. One asset class that is prompting concern is commercial mortgage-backed securities (CMBS). Over the next three years, more than $200 billion in 10-year loans will mature—more than 40 percent of the current conduit market. The largest amount of loans set to mature will occur in 2016 and 2017. While the "wall" of maturities has gradually become smaller over the past year as loans have refinanced ahead of maturity, roughly a third of the remaining 2016 and 2017 maturing loans may struggle to refinance without additional new equity. One positive factor is that the market has already cleared the first hurdle of refinancings with 88 percent of loans maturing in 2015 repaying at or before maturity. Moreover, delinquencies and defaults remain at a low level largely due to increasing property values and low-interest rates.

One asset class that is prompting concern is commercial mortgage-backed securities.

Moody's has been ringing the alarm about deteriorating credit quality in CMBS, with leverage surpassing its pre-crisis peak. Although the issue of leverage is on our radar, we suspect that in the current rate environment Moody's could be somewhat overstating credit risk. Moody's uses the long-run cap rate to generate its loan-to-value ratio, which suggests cap rates will revert to its mean. Accommodative monetary policy in the United States and abroad suggests that even if the Federal Reserve increases its target short-term interest rate, any increase in rates will likely be gradual. Moreover, the terminal short-term target rate is projected to settle at much lower level than in previous cycles, which means that cap rates will also likely settle at a lower level. With CMBS investors committing capital for 10 years, it is hard to judge the current risk level; however, if cap rates are mean reverting over this term, current low cap rates could be a serious concern.

Moody's also highlights concern about the share of hotel property loans included in recent conduit deals. Hotel performance is very cyclical and tends to be highly leveraged. Year-to-date, hotel loans account for about 16 percent of conduit deals, while more seasoned vintages only comprise about 10 percent. According to Smith Travel Research, hotel performance metrics continue to strengthen, but it is well understood that the hotel sector is in the late stages of its real estate cycle.

Wells Fargo U.S. Economic Forecast

	Actual							Forecast									Actual		Forecast		
	2014				2015				2016				2017				2013	2014	2015	2016	2017
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q					
Real Gross Domestic Product (a)	-0.9	4.6	4.3	2.1	0.6	3.9	2.1	1.1	2.6	2.6	2.7	2.6	2.3	2.3	2.5	2.3	1.5	2.4	2.4	2.4	2.5
Personal Consumption	1.3	3.8	3.5	4.3	1.8	3.6	3.0	2.8	2.7	2.7	2.7	2.6	2.4	2.3	2.3	2.3	1.7	2.7	3.1	2.8	2.5
Business Fixed Investment	8.3	4.4	9.0	0.7	1.6	4.1	2.4	3.0	4.8	4.9	5.2	5.1	4.9	4.8	4.7	4.6	3.0	6.2	3.1	4.2	4.9
Equipment	3.5	6.5	16.4	-4.9	2.3	0.3	9.5	3.2	4.1	4.8	5.5	5.7	5.4	5.2	4.8	4.7	3.2	5.8	3.4	4.8	5.3
Intellectual Property Products	7.8	4.9	6.5	6.9	7.4	8.3	-0.9	4.5	6.7	6.0	5.8	5.3	4.9	4.8	4.8	4.7	3.8	5.2	6.0	5.1	5.1
Structures	19.1	-0.2	-1.9	4.3	-7.4	6.2	-7.1	-0.5	3.4	3.4	3.5	3.5	4.0	4.0	4.2	4.5	1.6	8.1	-1.2	1.5	3.9
Residential Construction	-2.7	10.4	3.4	9.9	10.1	9.4	7.3	8.0	9.0	11.0	11.0	11.5	9.0	9.0	8.0	8.0	9.5	1.8	8.6	9.4	9.6
Government Purchases	0.0	1.2	1.8	-1.4	-0.1	2.6	1.7	1.8	1.7	2.1	1.8	1.7	1.2	1.0	1.0	0.9	-2.9	-0.6	0.8	1.9	1.4
Net Exports	-434.0	-443.3	-429.1	-463.6	-541.2	-534.6	-544.1	-565.6	-590.6	-623.2	-651.1	-673.6	-690.6	-703.3	-714.6	-727.3	-417.5	-442.5	-546.4	-634.6	-708.9
Pct. Point Contribution to GDP	-1.4	-0.2	0.4	-0.9	-1.9	0.2	-0.2	-0.5	-0.6	-0.8	-0.7	-0.5	-0.4	-0.3	-0.3	-0.3	0.2	-0.2	-0.7	-0.5	-0.4
Inventory Change	36.9	77.1	79.9	78.2	112.8	113.5	90.2	55.0	60.0	65.0	70.0	70.0	64.0	60.0	61.0	55.0	61.4	68.0	92.9	66.3	60.0
Pct. Point Contribution to GDP	-1.3	1.1	0.0	0.0	0.9	0.0	-0.6	-0.9	0.1	0.1	0.1	0.0	-0.1	-0.1	0.0	-0.1	0.0	0.0	0.2	-0.2	0.0
Nominal GDP (a)	0.6	6.9	6.0	2.2	0.8	6.1	3.4	1.7	4.3	4.6	5.0	4.8	4.2	4.3	4.4	4.2	3.1	4.1	3.4	4.0	4.5
Real Final Sales	0.4	3.5	4.3	2.1	-0.2	3.9	2.7	2.2	2.5	2.5	2.6	2.7	2.4	2.4	2.5	2.4	1.4	2.4	2.3	2.6	2.5
Retail Sales (b)	2.2	4.5	4.4	4.2	2.6	1.9	2.3	2.2	4.5	3.8	3.7	4.1	4.3	4.8	5.1	5.2	3.9	3.8	2.2	4.0	4.9
Inflation Indicators (b)																					
PCE Deflator	1.3	1.7	1.6	1.1	0.2	0.3	0.3	0.5	1.4	1.3	1.6	2.0	2.0	2.0	1.9	1.9	1.4	1.4	0.3	1.6	2.0
Consumer Price Index	1.4	2.1	1.8	1.2	-0.1	0.0	0.1	0.5	1.8	1.6	1.8	2.2	2.3	2.3	2.2	2.1	1.5	1.6	0.2	1.9	2.2
"Core" Consumer Price Index	1.6	1.9	1.8	1.7	1.7	1.8	1.8	2.0	2.0	1.9	2.0	2.0	2.0	2.1	2.1	2.1	1.8	1.7	1.8	2.0	2.1
Producer Price Index (Final Demand)	1.4	2.0	1.8	1.3	-0.5	-0.8	-0.9	-1.3	0.3	0.6	0.9	2.1	2.2	2.2	2.2	2.2	1.4	1.6	-0.9	1.0	2.2
Employment Cost Index	1.8	2.0	2.2	2.3	2.6	2.0	2.0	2.1	2.0	2.5	2.5	2.5	2.6	2.6	2.7	2.8	1.9	2.1	2.1	2.4	2.7
Real Disposable Income (a)	4.0	3.0	2.7	4.7	3.9	2.6	3.9	2.9	2.5	2.6	2.7	2.7	2.5	2.5	2.4	2.4	-1.4	2.7	3.5	2.8	2.5
Nominal Personal Income (b)	3.9	4.2	4.5	5.2	4.5	4.5	4.7	4.7	5.3	5.1	5.1	4.8	4.6	4.5	4.4	4.4	1.1	4.4	4.6	5.1	4.5
Industrial Production (a)	3.6	5.7	3.9	4.7	-0.3	-2.3	2.6	-0.1	2.4	2.1	1.1	2.2	2.6	2.2	1.1	2.5	1.9	3.7	1.5	1.4	2.1
Capacity Utilization	77.3	78.0	78.3	78.8	78.4	77.7	77.9	77.7	78.1	78.4	78.6	78.7	78.5	78.3	78.2	78.3	76.7	78.1	77.9	78.5	78.3
Corporate Profits Before Taxes (b)	-3.6	1.2	5.8	3.4	4.6	0.6	-4.7	5.0	4.3	4.8	4.6	4.6	4.4	4.4	4.5	4.4	2.0	1.7	1.3	4.6	4.4
Corporate Profits After Taxes	-7.5	-2.6	4.9	2.7	4.7	-0.6	-8.1	4.2	4.1	4.0	4.1	4.3	3.7	3.5	3.5	3.5	1.2	-0.6	-0.1	4.1	3.6
Federal Budget Balance (c)	-241	47	-117	-177	-263	123	-123	-197	-150	-48	-130	-160	-150	-80	-150	-150	-680	-484	-439	-525	-540
Current Account Balance (d)	-96.4	-92.0	-97.9	-103.1	-118.3	-109.7	-115.0	-115.0	-120.0	-130.0	-140.0	-145.0	-150.0	-155.0	-160.0	-160.0	-376.8	-389.5	-458.0	-535.0	-625.0
Trade Weighted Dollar Index (e)	76.9	75.9	81.3	85.1	92.1	89.9	92.3	93.0	94.0	95.5	97.0	98.3	99.5	100.0	100.0	99.5	75.9	78.5	91.8	96.2	99.8
Nonfarm Payroll Change (f)	193	284	237	324	195	231	174	236	195	190	185	180	175	170	165	160	199	260	209	188	168
Unemployment Rate	6.6	6.2	6.1	5.7	5.6	5.4	5.2	5.0	4.9	4.8	4.7	4.6	4.5	4.5	4.4	4.4	7.4	6.2	5.3	4.7	4.5
Housing Starts (g)	0.93	0.98	1.03	1.06	0.98	1.16	1.15	1.17	1.24	1.24	1.25	1.26	1.27	1.34	1.39	1.40	0.92	1.00	1.12	1.25	1.35
Light Vehicle Sales (h)	15.8	16.5	16.7	16.8	16.7	17.1	17.8	18.1	18.0	17.9	17.8	17.6	17.5	17.4	17.3	17.2	15.5	16.4	17.4	17.8	17.4
Crude Oil - Brent - Front Contract (i)	107.6	109.5	103.7	77.3	55.6	63.9	51.6	46.4	47.0	52.0	55.0	53.0	57.0	61.0	63.0	60.0	108.4	99.5	54.4	51.8	60.3
Quarter-End Interest Rates (j)																					
Federal Funds Target Rate	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.50	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	0.25	0.25	0.31	0.88	1.88
3 Month LIBOR	0.23	0.23	0.24	0.26	0.27	0.28	0.33	0.65	0.70	0.95	1.20	1.45	1.70	1.95	2.20	2.45	0.27	0.23	0.38	1.08	2.08
Prime Rate	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.50	3.50	3.75	4.00	4.25	4.50	4.75	5.00	5.25	3.25	3.25	3.31	3.88	4.88
Conventional Mortgage Rate	4.34	4.16	4.16	3.86	3.77	3.98	3.89	3.96	4.10	4.15	4.17	4.20	4.25	4.30	4.34	4.51	3.98	4.17	3.90	4.16	4.35
3 Month Bill	0.05	0.04	0.02	0.04	0.03	0.01	0.00	0.21	0.38	0.68	0.90	1.18	1.33	1.59	1.88	2.15	0.06	0.03	0.06	0.79	1.74
6 Month Bill	0.07	0.07	0.03	0.12	0.14	0.11	0.08	0.43	0.59	0.74	0.99	1.24	1.45	1.68	1.99	2.23	0.09	0.06	0.19	0.89	1.84
1 Year Bill	0.13	0.11	0.13	0.25	0.26	0.28	0.33	0.57	0.71	1.03	1.20	1.52	1.63	1.96	2.18	2.41	0.13	0.12	0.36	1.11	2.04
2 Year Note	0.44	0.47	0.58	0.67	0.56	0.64	0.64	0.93	1.25	1.48	1.64	1.80	1.99	2.22	2.34	2.59	0.31	0.46	0.69	1.54	2.29
5 Year Note	1.73	1.62	1.78	1.65	1.37	1.63	1.37	1.70	1.80	1.89	1.99	2.10	2.29	2.40	2.59	2.70	1.17	1.64	1.52	1.95	2.50
10 Year Note	2.73	2.53	2.52	2.17	1.94	2.35	2.06	2.28	2.45	2.50	2.55	2.60	2.67	2.74	2.80	2.99	2.35	2.54	2.16	2.53	2.80
30 Year Bond	3.56	3.34	3.21	2.75	2.54	3.11	2.87	2.94	2.98	3.00	3.06	3.10	3.13	3.18	3.23	3.49	3.45	3.34	2.86	3.03	3.26

Forecast as of: December 9, 2015

Notes: (a) Compound Annual Growth Rate Quarter-over-Quarter
(b) Year-over-Year Percentage Change
(c) Quarterly Sum - Billions USD; Annual Data Represents Fiscal Yr.
(d) Quarterly Sum - Billions USD
(e) Federal Reserve Major Currency Index, 1973=100 - Quarter End
(f) Average Monthly Change
(g) Millions of Units - Annual Data - Not Seasonally Adjusted
(h) Quarterly Data - Average Monthly SAAR; Annual Data - Actual Total Vehicles Sold
(i) Quarterly Average of Daily Close
(j) Annual Numbers Represent Averages

Wells Fargo International Economic Forecast

(Year-over-Year Percent Change)

	GDP			CPI		
	2015	2016	2017	2015	2016	2017
Global (PPP Weights)	3.0%	3.1%	3.4%	3.3%	3.3%	3.6%
Global (Market Exchange Rates)	2.8%	3.0%	3.3%	n/a	n/a	n/a
Advanced Economies[1]	2.0%	2.2%	2.3%	0.2%	1.5%	1.9%
United States	2.4%	2.4%	2.5%	0.2%	1.9%	2.2%
Eurozone	1.5%	1.9%	2.2%	0.0%	1.0%	1.5%
United Kingdom	2.3%	2.2%	2.1%	0.1%	1.3%	1.9%
Japan	0.7%	1.0%	0.8%	0.8%	0.9%	1.1%
Korea	2.5%	2.6%	3.3%	0.7%	1.6%	2.0%
Canada	1.3%	2.3%	2.4%	1.2%	1.9%	1.9%
Developing Economies[1]	3.8%	4.0%	4.5%	6.1%	5.1%	5.3%
China	7.0%	6.3%	6.1%	1.4%	1.3%	1.8%
India[2]	7.3%	7.3%	7.8%	6.0%	5.1%	5.4%
Mexico	2.5%	2.7%	3.1%	2.7%	3.1%	3.1%
Brazil	-3.3%	-1.4%	2.3%	8.9%	8.0%	7.2%
Russia	-3.7%	-0.1%	2.0%	15.6%	7.6%	6.3%

Forecast as of: December 9, 2015

[1]Aggregated Using PPP Weights [2]Forecasts Refer to Fiscal Year

Wells Fargo International Interest Rate Forecast

(End of Quarter Rates)

	3-Month LIBOR						10-Year Bond					
	2015	2016				2017	2015	2016				2017
	Q4	Q1	Q2	Q3	Q4	Q1	Q4	Q1	Q2	Q3	Q4	Q1
U.S.	0.65%	0.70%	0.95%	1.20%	1.45%	1.70%	2.28%	2.45%	2.50%	2.55%	2.60%	2.67%
Japan	0.07%	0.05%	0.05%	0.05%	0.05%	0.05%	0.35%	0.40%	0.42%	0.45%	0.50%	0.55%
Euroland[1]	-0.10%	-0.10%	-0.10%	-0.10%	-0.05%	0.00%	0.60%	0.65%	0.70%	0.80%	0.85%	0.95%
U.K.	0.57%	0.65%	0.90%	0.95%	1.20%	1.40%	1.80%	1.90%	2.00%	2.05%	2.10%	2.25%
Canada[2]	0.85%	0.85%	0.85%	0.90%	1.00%	1.25%	1.50%	1.55%	1.60%	1.70%	1.80%	1.90%

Forecast as of: December 9, 2015

[1] 10-year German Government Bond Yield [2] 3-Month Canada Bankers' Acceptances

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