INTERNATIONAL MONETARY FUND

IMF Country Report No. 16/226

UNITED STATES

2016 ARTICLE IV CONSULTATION—PRESS RELEASE; AND STAFF REPORT

July 2016

Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. In the context of the 2016 Article IV consultation with the United States, the following documents have been released and are included in this package:

- A **Press Release** summarizing the views of the Executive Board as expressed during its July, 8, 2016 consideration of the staff report that concluded the Article IV consultation with the United States.
- The **Staff Report** prepared by a staff team of the IMF for the Executive Board's consideration on July 8, 2016, following discussions that ended on June 20, 2016, with the officials of the United States on economic developments and policies. Based on information available at the time of these discussions, the staff report was completed on June 24, 2016.
- An **Informational Annex** prepared by the IMF staff.
- A **Staff Statement** updating information on recent developments.

The IMF's transparency policy allows for the deletion of market-sensitive information and premature disclosure of the authorities' policy intentions in published staff reports and other documents.

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INTERNATIONAL MONETARY FUND

Press Release No. 16/332
FOR IMMEDIATE RELEASE
July 12, 2016

International Monetary Fund
700 19th Street, NW
Washington, D. C. 20431 USA

IMF Executive Board Concludes Article IV Consultation with United States

On July 8, 2016, the Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation with the United States.[1]

The U.S. is in its seventh consecutive year of expansion. The unemployment rate has fallen to 4.9 percent and household net worth is close to pre-crisis peaks. Nonetheless, the economy has gone through a temporary growth dip in the last two quarters. Lower oil prices led to a further contraction in energy sector investment and a strong dollar and weak global demand have weighed on net exports. On the upside, real household disposable income is growing at 3 percent, the housing market is growing at a healthy clip, and the current fiscal and monetary policy mix is supporting the economy.

With activity indicators for the second quarter of this year rebounding, the economy is expected to grow at 2.2 percent and 2.5 percent in 2016 and 2017, which is above potential. Over this period, the remaining labor market gap should close before growth begins to steadily decline to 2 percent over the medium term. Inflation has remained subdued and wage indicators on the whole have shown only modest acceleration. As the output gap closes, personal consumer expenditure (PCE) inflation is expected to slowly and moderately rise above 2 percent in 2017–19, before returning to the Federal Reserve's medium-term target of 2 percent.

Risks to the growth outlook are tilted to the downside. Given uncertainty surrounding the implications of the U.K. referendum, continued financial market volatility or a further appreciation of the U.S. dollar are possible. There are, however, upside risks from oil—both in terms of a delayed effect on consumption and a lessening drag from oil-related investment. A more complex and harmful downside risk is the possibility that potential growth rate is lower than estimated and a smaller output gap than previously estimated. If true, this would mean the U.S. economy could soon bump up against capacity constraints that would slow growth and generate domestic inflationary pressures with negative global spillovers.

Over the longer term and despite the ongoing expansion, the U.S. faces a confluence of forces

[1] Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. A staff team visits the country, collects economic and financial information, and discusses with officials the country's economic developments and policies. On return to headquarters, the staff prepares a report, which forms the basis for discussion by the Executive Board.

that may weigh on the prospects for continued gains in economic well being. A rising share of the US labor force is shifting into retirement, basic infrastructure is aging, productivity gains are scanty, and labor markets and businesses appear less adept at reallocating human and physical capital. These growing headwinds are overlaid by pernicious secular trends in income: labor's share of income is around 5 percent lower today than it was 15 years ago, the middle class has shrunk to its smallest size in the last 30 years, the income and wealth distribution are increasingly polarized, and poverty has risen. If left unchecked, these forces will continue to drag down both potential and actual growth, diminish gains in living standards, and worsen poverty.

The consultation focused on the medium-term challenges of an increasingly polarized income distribution, high levels of poverty, falling labor force participation, and weak productivity growth, and policies to combat these trends.

Executive Board Assessment[2]

Executive Directors welcomed the continued recovery of the U.S. economy, on the back of strong fundamentals and supportive macroeconomic policies. Directors noted that, while the outlook remains broadly favorable, there are important downside risks and uncertainties, in particular slower potential growth, a strengthening of the U.S. dollar further away from levels justified by medium-term fundamentals, and sustained investor risk aversion following the outcome of the referendum in the United Kingdom. Meanwhile, longstanding issues on the supply side continue to weigh on economic prospects, including low productivity growth, falling labor force participation, and rising poverty and wealth inequality.

Directors agreed that the pace of interest rate normalization should remain data-dependent, proceeding cautiously along a gradual upward path. While there may be some merits in accepting a temporary overshooting of the medium-term inflation target until the economic expansion is solidly established, many Directors were concerned over the risks of de-anchoring inflation expectations and eroding monetary policy credibility. Directors welcomed the authorities' commitment to monitor closely economic and financial developments, both domestic and global, and their implications for the Federal Reserve's objectives of maximum employment and price stability. They also underscored the importance of maintaining clear, effective communication of the approach to interest rate adjustment.

Directors noted that near-term fiscal policy remains appropriately geared toward supporting growth and job creation. However, lasting institutional solutions are still needed to enhance the budget process and minimize fiscal uncertainties. Directors also highlighted the urgency of addressing the challenges posed by demographic trends, entitlement spending, and deteriorating infrastructure. In this context, they saw value in calibrating a credible medium-term consolidation plan to help guide the path of fiscal policy toward debt sustainability.

[2] At the conclusion of the discussion, the Managing Director, as Chairman of the Board, summarizes the views of Executive Directors, and this summary is transmitted to the country's authorities. An explanation of any qualifiers used in summings up can be found here: http://www.imf.org/external/np/sec/misc/qualifiers.htm.

Directors stressed the need to take a broad range of measures to tackle longer-term challenges. Priorities include boosting federal infrastructure spending; further reforming the health care and pension systems; and reaching agreement on skill-based immigration reform. Directors called for concerted efforts to advance pro-poor policies, particularly expanding tax credits to low-income households, raising the federal minimum wage, and expanding paid-family leave and childcare assistance. Complementary measures to boost long-term growth include a comprehensive reform of the U.S. corporate income taxation, and further progress on trade integration.

Directors noted that recent regulatory reforms and improved capital positions have strengthened the U.S. banking system. Nevertheless, there remain pockets of vulnerabilities that warrant continued vigilance, particularly in the asset management and insurance industries, although at the current juncture risks are unlikely to be systemic. To preserve hard-won gains on financial stability, Directors called on the authorities to continue implementing the recommendations of the 2015 Financial Sector Assessment Program. It will be particularly important to complete the regulatory reforms under the Dodd-Frank Act. Directors also recommended close monitoring and placing the insurance sector under consolidated national regulation and supervision. They supported efforts to improve data collection and reporting in the nonbank sector, strengthen requirements on beneficial ownership, and maintain dialogue and support capacity building in countries affected by the withdrawal of correspondent banking relationships.

United States: Selected Economic Indicators 1/

(percentage change from previous period, unless otherwise indicated)

		Projections					
	2015	2016	2017	2018	2019	2020	2021
National production and income							
Real GDP	2.4	2.2	2.5	2.3	2.0	1.9	2.0
Net exports 2/	-0.6	-0.3	-0.5	-0.3	-0.2	-0.2	-0.1
Total domestic demand	3.0	2.4	2.9	2.5	2.2	1.9	2.0
Final domestic demand	2.8	2.5	2.8	2.5	2.2	2.0	2.0
Private final consumption	3.1	2.7	2.7	2.3	2.0	2.0	2.0
Public consumption expenditure	0.4	1.2	1.4	1.4	1.5	1.0	1.3
Gross fixed domestic investment	3.7	2.4	4.3	3.8	3.1	2.5	2.3
Private fixed investment	4.0	2.5	5.0	4.2	3.1	2.3	2.2
Equipment and software	3.1	0.5	4.4	3.8	3.1	2.4	2.4
Intellectual property products	5.7	2.0	4.1	3.8	3.1	2.4	2.0
Nonresidential structures	-1.5	-1.9	4.2	3.4	2.2	1.8	2.2
Residential structures	8.9	10.0	7.3	5.9	3.7	2.4	2.0
Public fixed investment	2.3	2.2	1.3	1.7	3.1	3.8	3.1
Change in private inventories 2/	0.2	0.0	0.1	0.1	0.0	0.0	0.0
Nominal GDP	3.5	3.2	4.4	4.6	4.2	4.0	4.2
Personal saving rate (% of disposable income)	5.1	5.4	5.1	4.7	4.4	4.5	4.6
Private investment rate (% of GDP)	16.8	16.7	17.1	17.3	17.3	17.3	17.4
Unemployment and potential output							
Unemployment rate	5.3	4.9	4.8	4.6	4.7	4.9	5.1
Labor force participation rate	62.6	62.8	62.9	62.7	62.5	62.3	62.1
Potential GDP	1.8	1.9	1.9	1.9	2.0	2.0	2.0
Output gap (% of potential GDP)	-1.1	-0.8	-0.3	0.2	0.2	0.1	0.0
Inflation							
CPI inflation (q4/q4)	0.4	1.1	2.5	2.6	2.4	2.4	2.3
Core CPI Inflation (q4/q4)	2.0	2.2	2.4	2.5	2.4	2.4	2.3
PCE Inflation (q4/q4)	0.5	1.0	2.2	2.3	2.1	2.1	2.0
Core PCE Inflation (q4/q4)	1.4	1.8	2.1	2.2	2.1	2.1	2.0
GDP deflator	1.0	1.0	1.8	2.2	2.2	2.1	2.2
Government finances							
Federal government			(budget, fiscal years)				
Federal balance (% of GDP)	-2.6	-3.0	-2.8	-2.5	-3.0	-3.2	-3.4
Debt held by the public (% of GDP)	73.6	76.0	76.0	75.6	75.9	76.4	77.0
General government			(GFSM 2001, calendar years)				
Net lending (% of GDP)	-3.4	-3.8	-3.6	-3.4	-3.7	-3.7	-3.9
Primary structural balance (% of potential GDP)	-1.0	-1.6	-1.5	-1.4	-1.6	-1.5	-1.5
Gross debt (% of GDP)	105.7	107.9	107.8	107.4	107.5	107.7	107.8
Interest rates (percent)							
Fed funds rate	0.1	0.5	1.0	1.8	2.6	2.9	2.9
Three-month Treasury bill rate	0.1	0.3	0.8	1.6	2.4	2.7	2.7
Ten-year government bond rate	2.1	1.9	2.2	2.8	3.1	3.3	3.3
Balance of payments							
Current account balance (% of GDP)	-2.6	-2.9	-3.5	-3.8	-4.0	-4.0	-4.1
Merchandise trade balance (% of GDP)	-4.2	-4.3	-4.6	-4.7	-4.8	-4.8	-5.0
Export volume (NIPA basis, goods)	-0.2	1.2	5.8	6.1	5.3	5.1	3.9
Import volume (NIPA basis, goods)	4.8	3.2	8.2	6.4	5.6	5.6	5.1
Net international investment position (% of GDP)	-41.0	-44.2	-47.9	-51.7	-55.8	-59.4	-63.0
Saving and investment (% of GDP)							
Gross national saving	18.8	17.6	16.9	16.8	16.7	16.7	16.7
General government	-1.1	-1.3	-1.1	-0.9	-1.1	-1.1	-1.2
Private	19.9	18.9	18.0	17.8	17.8	17.9	17.9
Personal	3.8	4.1	3.8	3.5	3.3	3.4	3.4
Business	16.1	14.8	14.2	14.2	14.5	14.5	14.5
Gross domestic investment	20.2	20.1	20.4	20.6	20.7	20.7	20.8
Private	16.8	16.7	17.1	17.3	17.3	17.3	17.4
Public	3.4	3.4	3.3	3.3	3.3	3.4	3.4

Sources: BEA; BLS; FRB; Haver Analytics; and IMF staff estimates

1/ Components may not sum to totals due to rounding

2/ Contribution to real GDP growth, percentage points

INTERNATIONAL MONETARY FUND

UNITED STATES

STAFF REPORT FOR THE 2016 ARTICLE IV CONSULTATION

June 24, 2016

Backdrop and theme for the consultation. The United States economy is, overall, in good shape. A total of 2.4 million new jobs were created over the past year and unemployment has fallen to 4.7 percent, its lowest level since the eve of the "Great Recession." Inflation remains contained, and the U.S. economy has repeatedly demonstrated its resilience in the face of financial market volatility, a strengthening dollar, and subdued global demand. Despite these important achievements, the U.S. faces potentially significant longer-term challenges to strong and sustained growth. Concerted policy actions are warranted, sooner rather than later. The 2016 Article IV Consultation explores these policy challenges, focusing on the causes and consequences of falling labor force participation, an increasingly polarized income distribution, high levels of poverty, and weak productivity. Finding solutions to mitigate these secular trends will be key to the health of the global economy given the importance of the U.S. and the multiple channels for interlinkages and spillovers. The main policy messages underscore the range of actions needed to alleviate these long-running supply-side issues.

Policies to bolster growth and tackle poverty. In recent years, a divided political system has obstructed progress in tackling the longstanding supply-side issues facing the U.S. economy. It will be important, therefore, to build a broad consensus around reforms that will increase state and federal infrastructure investments; institute a comprehensive, skills-based immigration reform; further expand the Earned Income Tax Credit and raise the federal minimum wage; upgrade social programs for the nonworking poor; deepen and improve family-friendly benefits; and comprehensively reform the corporate income tax.

Monetary policy. The Federal Reserve should remain data dependent. There is a clear case to proceed along a very gradual upward path for the fed funds rate, conscious of global disinflationary trends and confirming along the way that wage and price inflation are indeed maintaining their steady upward momentum. Given the likelihood and severity of downside risks to inflation, the potential for a drift down in inflation expectations, the Federal Reserve's dual mandate of maximum employment and price stability, and the asymmetries posed by the effective lower bound, the path for policy rates should accept some modest, temporary overshooting of the Federal Reserve's inflation goal to allow inflation to approach the Federal Reserve's 2 percent medium-term target from above. Doing so will provide valuable insurance against the risks of disinflation, policy reversal, and ending back at a zero fed funds rate.

Fiscal policy. Near-term fiscal policy has been well-calibrated to the prevailing economic circumstances but demographic trends and rising interest rates will lead to larger deficits over the medium-term. The U.S. continues to need a detailed medium-term fiscal consolidation plan to prevent a renewed rise in the public debt. Such a plan would need to target a medium-term federal government primary surplus of about 1 percent of GDP (a general government primary surplus of about ¾ percent of GDP) and address rising health and social security costs, raise revenues, and improve the structure of the tax system. Insofar as the measures needed to boost growth and tackle poverty require additional fiscal resources, they should be funded from new revenues or a reallocation of spending priorities and fit within a path for the fiscal deficit that ensures a steady decline in the public debt-to-GDP ratio. It will be important also to find institutional mechanisms to avoid self-inflicted wounds such as those created by political brinkmanship over the debt ceiling and the threat of government shutdown.

Financial reforms. Action is needed to institute the range of improvements in the financial regulatory framework that were outlined in the 2015 Financial System Stability Assessment. Perhaps most pressing, though, is the need to oppose any wholesale or broad-based efforts to dilute some or all of the provisions of the Dodd-Frank Act.

Approved by:
Alejandro Werner (WHD) and Vivek Arora (SPR)

Discussions took place in Houston and Dallas (April 4–6), New York (May 1–4) and Washington D.C. (May 23–June 9). Concluding meetings with Chair Yellen and Secretary Lew took place on June 20. The team comprised N. Chalk (head), Y. Abdih, A. Alichi, R. Balakrishnan, S. Danninger, E. Kopp, A. Pescatori, D. Puy (all WHD), T. Matheson (FAD), E. Mathias (LEG), and S. Laseen (SPR).

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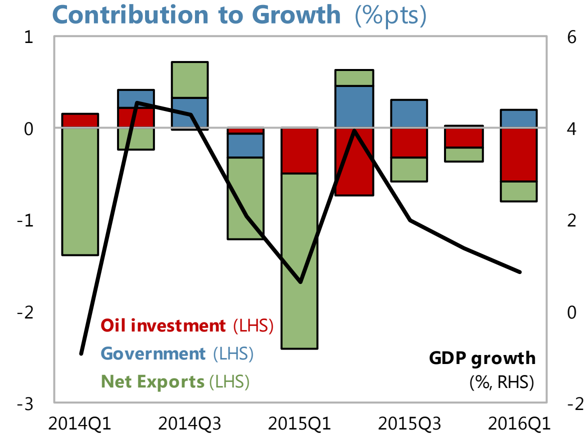
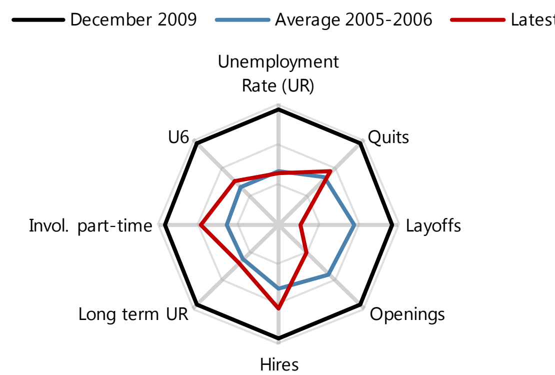
ANNEXES

OUTLOOK AND RISKS

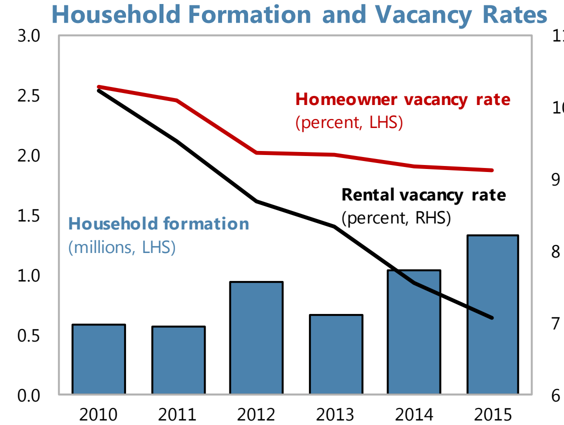
1. **The past few quarters have seen a temporary growth setback.** The U.S. is entering its seventh consecutive year of expansion. The unemployment rate has fallen to 4.7 percent, household net worth is close to pre-crisis peaks, and inflation remains contained. Nonetheless, the past few quarters have been characterized by a deceleration that is attributable to a continued contraction in energy sector investment; weak non-energy, non-residential investment; and a persistent drag from net exports (linked to weaker global growth and the strength of the U.S. dollar). Although it is more difficult to find proximate causal factors, consumer demand has also slowed. The recent disappointing growth numbers are expected to be short-lived but the latest jobs report does raise concerns that U.S. growth may be losing momentum. However, more data are needed to establish if the previously-positive trajectory for the labor market has shifted. More encouragingly, high frequency indicators point to activity already reaccelerating in the second quarter. Over the near term, we expect growth to be supported by:



Sources: BEA; Haver Analytics; and IMF staff calculations



Sources: Haver Analytics; and IMF staff calculations
1/ Closer to the center signifies less labor market slack



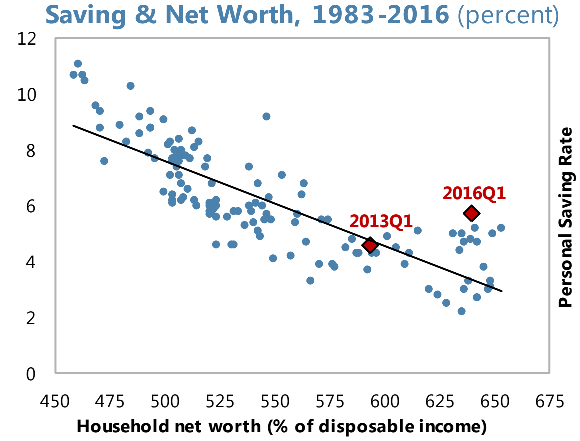
Sources: Census Bureau; and Haver Analytics; and IMF staff calculations

- *Labor market*. Since the beginning of this year, nonfarm payroll increases have averaged 150 thousand per month and real household disposable income is growing at around 3 percent. The unemployment rate has declined to 4.7 percent, although the cyclical rebound in labor force participation earlier this year appears to have been reversed. Despite the impressive record of job creation, various indicators still point to remaining (albeit diminishing) labor market slack from those that have become detached from the labor force or are involuntarily working part-time.

- *Housing*. Most of the stock of foreclosed homes has been reabsorbed and household formation has picked up (although millennials remain constrained by affordability and high debt). Residential investment is expected to continue to rise as a share of GDP and recovering house prices should support household wealth gains.

- *Household balance sheets*. So far, lower energy prices have not provided the expected boost to private consumption that was expected (see Box 1). Nevertheless, the oil dividend and strong growth in disposable incomes have allowed households to increase saving and strengthen their balance sheets. Conditioning on the recovery in household net worth, the personal saving rate is now well above levels that would have been predicted by historical patterns.

Saving & Net Worth, 1983-2016 (percent)



Sources: BEA; FRB; and Haver Analytics

Weighing these various forces, growth is forecast to be 2.2 percent in 2016 and 2.5 percent in 2017. The output gap, which was estimated at 1 percent of potential GDP in 2015, is expected to close by end-2017 and PCE inflation is expected to slowly rise above 2 percent in 2017–19 before returning to the Federal Reserve's medium-term target.

Economic Forecasts (percent) 1/

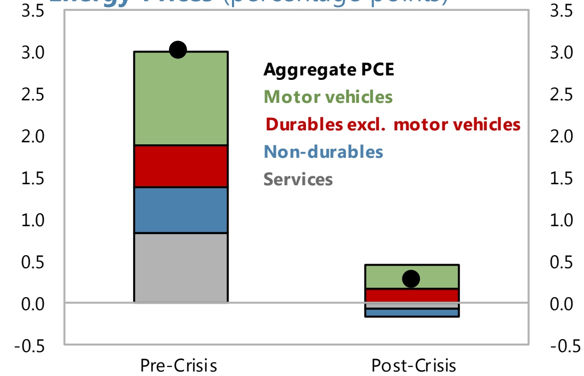
	2015	2016	2017	2018	2019	Longer Run 2/
		Projections				
Real GDP Growth (annual average)						
CBO	2.4	2.5	2.6	2.2	1.8	2.1
Consensus 3/		1.9	2.3	n.a.	n.a.	n.a.
IMF		2.2	2.5	2.3	2.0	2.0
Real GDP Growth (Q4/Q4)						
CBO	2.0	2.7	2.5	2.1	1.8	2.1
Consensus 3/		2.0	2.2	n.a.	n.a.	n.a.
FOMC		2.0	2.1	2.0	n.a.	1.9
IMF		2.5	2.3	2.2	2.0	2.0
Unemployment Rate (eop)						
CBO	5.0	4.5	4.5	4.7	4.9	5.0
Consensus 3/		4.7	4.5	n.a.	n.a.	n.a.
FOMC		4.7	4.6	4.6	n.a.	4.9
IMF		4.9	4.8	4.6	4.7	5.1
PCE Inflation (Q4/Q4)						
CBO	0.5	1.5	2.0	2.0	2.0	2.0
Consensus 3/		1.6	2.1	n.a.	n.a.	n.a.
FOMC		1.5	1.9	2.0	n.a.	2.0
IMF		1.0	2.2	2.3	2.1	2.0
Core PCE Inflation (Q4/Q4)						
CBO	1.4	1.6	1.9	2.0	2.0	2.0
FOMC		1.7	1.9	2.0	n.a.	n.a.
IMF		1.8	2.1	2.2	2.1	2.0
Output Gap (percent of potential, eop)						
CBO	-2.0	-0.9	-0.2	-0.1	-0.3	-0.5
IMF	-1.0	-0.5	-0.1	0.2	0.1	0.0

1/ CBO projections are from the Budget and Economic Outlook Jan. 2016; FOMC projections are from the June 2016 Summary of Economic Projections; IMF projections are from June 17, 2016.
2/ Year 2021 other than for FOMC
3/ Blue Chip Consensus, June 2016

Box 1. Consumption and the Oil Dividend

This time is different? Since November 2014, the drop in oil prices has provided a 1 percent of GDP windfall to U.S. households. Prior to the financial crisis, there was an empirically robust "excessive" reaction of consumption to energy price changes (i.e., spending increased by more than the oil price gains[1]). However, in the most recent episode the consumption response appears small. Post-financial crisis, the elasticity of consumption to energy price changes has fallen from around 3 to 0.4.[2] This decline has been observed across all subcomponents of consumption but it has been particularly pronounced for goods consumption (which historically has driven the overall response but now appears insensitive to energy price changes).

Decomposition of PCE Elasticity to Lower Energy Prices (percentage points)



Source: IMF staff estimates

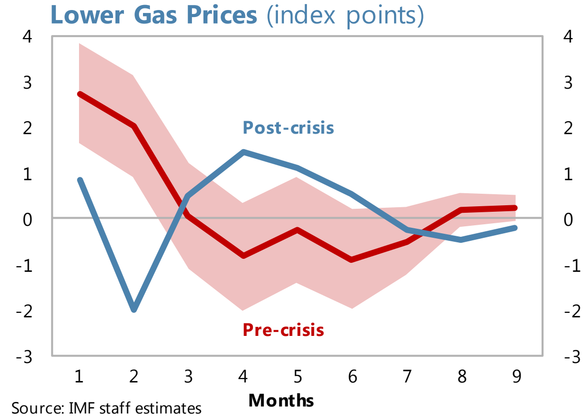
Why? Multiple factors are clearly at play, including the shift of the U.S. to being more energy self-sufficient in recent years. It is premature to have a conclusive view on the drivers but some stylized facts may be indicative:

- There no longer appears to be the same positive impact of lower oil prices on *consumer confidence*—a leading indicator of durable goods purchases—as in the pre-crisis era. Indeed, the near-term effects on confidence now appear, if anything, to be negative.

- The correlation between *equity prices* and oil prices has shifted from -0.3 percent pre-crisis to +0.6 percent in 2010–15. As a result, the associated wealth and confidence effects on consumption from rising equity valuations is now working in the opposite direction.

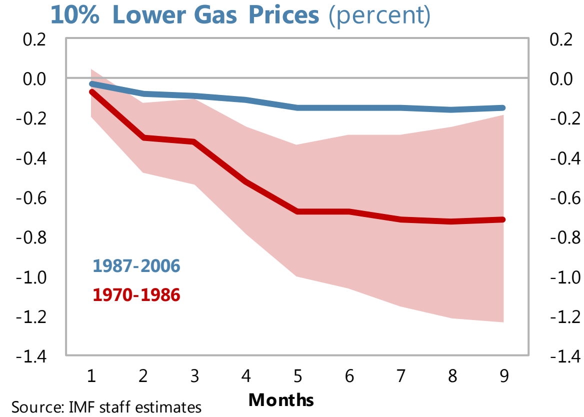
- The impact of oil prices on the *interest rates on consumer credit* are more muted than they have been in earlier historical episodes (i.e. in the 1970–80s). Indeed, it has been hard to detect any reduction in credit costs from lower oil prices since the early-1990s.

Response of Consumer Confidence to 10% Lower Gas Prices (index points)



Source: IMF staff estimates

Response of Rates on Auto Lending to 10% Lower Gas Prices (percent)



Source: IMF staff estimates

[1] See, for example, Eldstein and Kilian (2009) and Hamilton (1996).

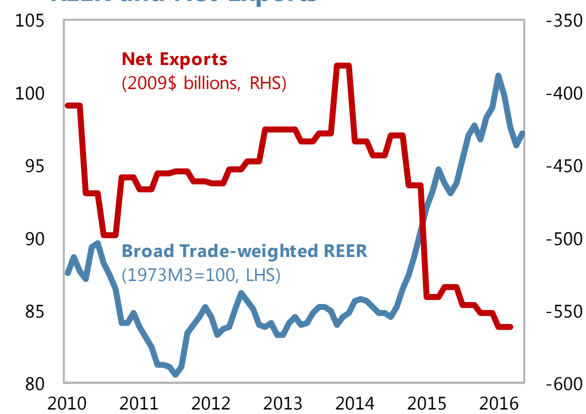
[2] Estimates are based on a VAR framework using monthly data on real consumption from the PCE and unanticipated changes in real income from changes in gasoline prices. Consumption elasticity is defined as the percent change in consumption associated with a 1 percent increase in energy spending.

2. Lower oil prices and increasing energy independence have combined to contain the U.S. current account deficit over the past year. This has been despite the cyclical growth divergence with respect to trading partners and the rapid rise in the U.S. dollar. However, over the medium term, at current levels of the real exchange rate, the current account deficit is expected to rise above 4 percent of GDP. Net financial inflows were about 2 percent of GDP in 2015 with rising portfolio inflows being offset by weakness in direct investment and other inflows. The net international investment position (NIIP) fell to -39 percent of GDP in 2015 and, under staff's baseline outlook, the NIIP would deteriorate by a further 10 percent of GDP over the next five years (largely due to the projected current account deficits).

3. Risks to the growth outlook are balanced:

- *The path of the U.S. dollar*. The 13 percent real appreciation of the U.S. dollar since the summer of 2014 has taken its toll on manufacturing investment and net exports. Looking forward, the future path of the dollar represents a symmetric risk to the U.S. outlook:
  - On the downside, further appreciation, particularly if driven by a divergence in the inflation outlook between the U.S. and other systemic economies (rather than by diverging growth prospects) would eat into growth (Box 2). The current level of the U.S. dollar is assessed to be overvalued by 10–20 percent and the current account deficit is around 1.5–2 percent of GDP larger than the level implied by medium-term fundamentals and desirable policies (see Annex IV). As such, a strengthening in the dollar would serve to push the external position further away from levels justified by medium term fundamentals.
  - Conversely, a continuation of the depreciation that occurred since the beginning of the year would represent an important upside to both growth and inflation.

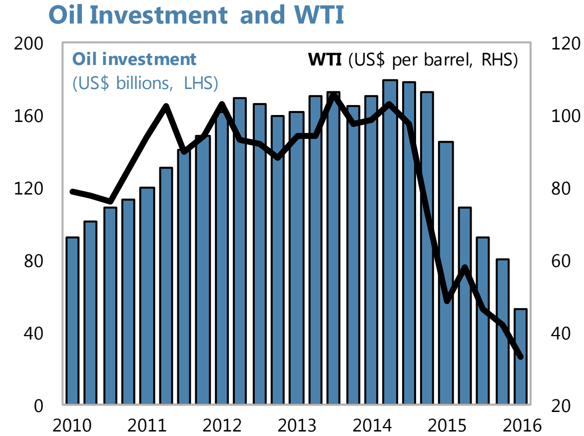
REER and Net Exports



Sources: BEA; FRB; and Haver Analytics

- *Energy sector investment and output*. The decline in crude prices has caused oil companies to curtail investment by about 40 percent in 2015 (subtracting 0.4 percent from GDP growth). In 2016, energy investment is expected to fall by another 30 percent, subtracting 0.2 percent from growth. The risks to growth associated with the future path of oil prices are asymmetric.

Oil Investment and WTI



Sources: BEA; Haver Analytics; and IMF staff calculations

- On the downside, the compression of capital spending that has already occurred implies that even at lower oil prices, larger-than-expected falls in investment will be small as a share of GDP and have only a minor impact on growth.

- However, if oil prices sustain their current levels and tight financing conditions for the sector begin to normalize, oil-related investment could resume, with a modest upside risk to activity (Box 3).

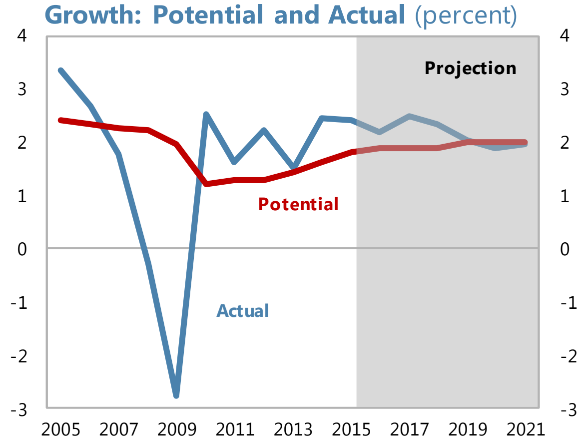
- *Non-oil investment.* A shrinking output gap and decent prospects for future domestic demand growth should support investment in non-oil, non-residential sectors. However, recent data has shown such investment moving in the opposite direction. This could be reflective of the strength of the U.S. dollar or perhaps broader industrial spillovers from the downturn in the energy sector. It could also reflect a more structural trend at work as U.S. output becomes less intensive in physical capital and more reliant on human and informational capital. If true, this would pose a downside risk to aggregate demand as the economy adjusts to the new equilibrium.

- *Finally, a consumption effect?* To date, there has been little apparent consumption stimulus from lower oil prices (the personal savings ratio stands at 5.4 percent, up ½ percent since mid-2014). Nonetheless, lower oil prices are helping to strengthen household balance sheets, particularly for lower income households. This should, at a minimum, increase the resilience of the economy to negative shocks and could mean a belated reaction of consumption. As such, this offers an unambiguous upside to the growth forecast.

- *U.K. exit from European Union*. Staff estimates suggest the impact on U.S. growth of a disruptive U.K. exit from the European Union are likely to be modest. The principal channels would come through a sustained rise in global risk aversion that would lead to a compression of U.S. sovereign yields, a rise in the U.S. dollar and a sell-off in risk assets. However, given the unprecedented nature of the event, the broader effects-including on the U.S. economy and its large financial system-are highly uncertain and could evolve in unpredictable and more negative ways than indicated by macro models.

- *A misjudgment about potential growth.* There is a risk that staff's outlook has over-estimated both the historical path of potential growth and the degree of slack that currently exists. If true, this could mean that the economy is now starting to bump up against capacity constraints (including in the labor market). As such, growth for the coming years could settle at well below 2 percent. Perhaps more problematic, a lower path of potential could give rise to an unexpected acceleration in inflationary pressures in the near-term, leading the Federal

Growth: Potential and Actual (percent)



Sources: BEA; and IMF staff estimates

Reserve to more assertively raise the policy rate. This would cause the dollar to appreciate and increase asset price volatility (as market participants find themselves wrong-footed).

- *Spillover implications*. Such a scenario would have important negative spillovers, particularly given that the global economy currently appears ill-prepared for a rapid rise in U.S. policy rates, for capital to flow back to the U.S., for risk premia to rise, and for the dollar to accelerate upwards. Such near-term negative spillovers would be further exacerbated by the real transmission effects of a path for medium-term U.S. growth that is well below current expectations.

4. Risks are skewed toward lower inflation. Further dollar strength would present a drag to imported inflation. However, even in the event of a stable currency, the significant global excess capacity seen across a range of tradable goods may lead to a protracted decline in tradable goods prices. This would be further exacerbated if the recent pattern of downgrades to global growth prospects continues. Finally, changing dynamics in the U.S. labor market, that are at this point not fully understood, may mean that the expected pick up in nominal wages could prove elusive, further weighing on inflation.

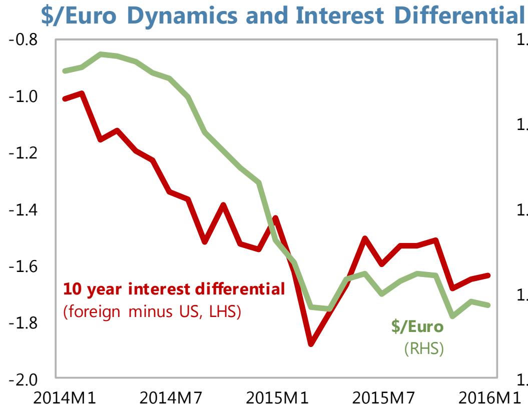
5. Authorities' views. Tepid growth over the last few quarters was viewed as likely to be transitory, especially when contrasted with the strong labor market data through April. Given the maturation of the cycle, the pace of job gains is expected to slow but, in May, job growth slowed substantially more than expected and that abruptness seems inconsistent with other more positive activity indicators. In the coming quarters, it was expected that sequential growth rates would pick up and moderately exceed potential growth. Near-term risks to the growth outlook were considered to be broadly balanced but there was some modest downside potential to inflation outcomes, particularly given weak global trends and the impact of residual seasonality on data in the first half of the year. Concern was expressed about the continued widening of the U.S. current account deficit, particularly as a symptom of weak global demand. Counterparts emphasized the importance that countries, including the U.S., use all available policy tools to boost demand. Officials also highlighted a number of advanced and emerging market economies with large external surpluses (including China, Germany, Japan, Korea, and Taiwan Province of China) which could usefully bolster domestic demand and, in so doing, contribute to stronger global growth and a more balanced world economy.

Box 2. Drivers of the U.S. Dollar

Drivers. Uncovered interest parity seems to be rejected by the data (see Engle 2013 for a review) but a more expansive theory would argue that exchange rate movements could be related to:

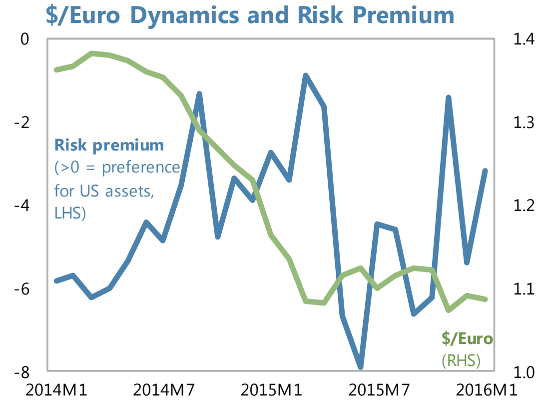
- Expected cumulative short-term rate differentials (as measured by movements in long-term rate differentials that capture divergences in medium-term neutral rates as well as inflation and monetary policy prospects);
- Foreign exchange risk premia (extracted from survey expectations of exchange rates from Consensus Forecasts); and
- Movements in the equilibrium real exchange rate (e.g. due to changes in the terms of trade).

$/Euro Dynamics and Interest Differential



Sources: Consensus Forecasts; FRB; Haver Analytics; and IMF staff calculations

$/Euro Dynamics and Risk Premium

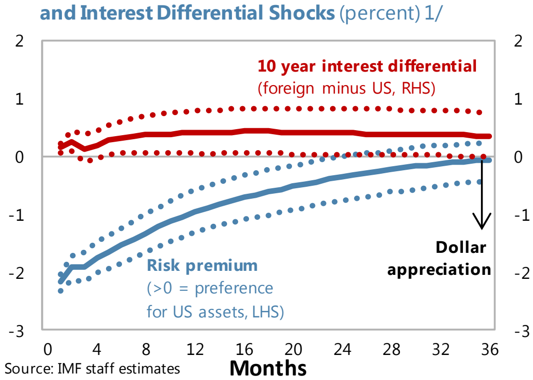


Sources: Consensus Forecasts; FRB; Haver Analytics; and IMF staff calculations

Empirical findings. A VAR framework[1] that adds variables to proxy global and country-specific shocks (VIX, WTI, expected inflation differentials, expected growth differentials, and short-term interest rates), reveals:

- FX risk premia and the 10-year interest rate differentials have a significant and persistent effect on exchange rates.
- A global uncertainty shock (proxied by a higher VIX) induces an appreciation of safe haven currencies and the U.S. dollar rises against all other major bilaterals except the Yen.
- Commodity currencies, such as the Canadian dollar, are sensitive to oil price movements including through a knock-on effect on the foreign currency risk premium.

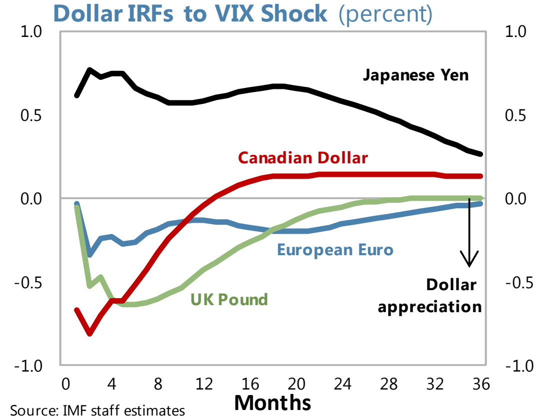
Trade-Weighted Dollar Response to Risk Premium and Interest Differential Shocks (percent) 1/



Source: IMF staff estimates

1/ Trade-weighted by Euro, Canadian dollar, UK pound, and yen; 68% bands

Dollar IRFs to VIX Shock (percent)



Source: IMF staff estimates

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[1] See Balakrishnan, Laseen, and Pescatori, "U.S. Dollar Dynamics: How Important are Policy Divergence and FX Risk Premiums?" IMF Working Paper (2016).

Box 3. U.S. Shale Oil and Global Spillovers

The shale oil "revolution". The U.S. oil industry experienced one of its most dramatic shifts in 2010–15 when the combination of high prices and technological change (notably horizontal drilling) allowed a doubling of U.S. crude production. Both the number and productivity of rigs increased with important implications for the oil market and global economy more broadly.

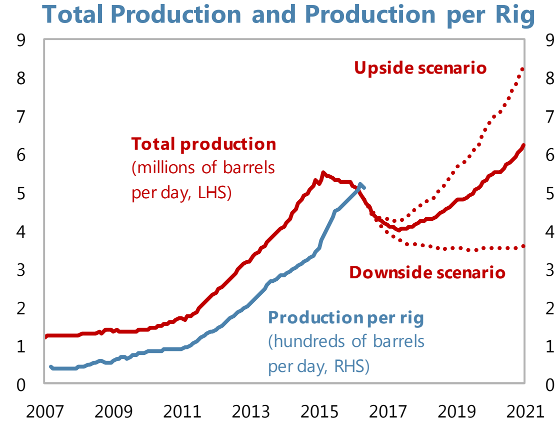
Scenarios. Forecasts of future production face tremendous uncertainty but scenarios can help identify the range of possible future outcomes. Specifically, we examine three scenarios:

- ***Baseline.*** Draws on the prediction of the future rig count that would be consistent with the current medium-term WTI forecast in the WEO; assumes a linear improvement in productivity;

- ***Upside.*** Assumes a similar rig count to the baseline but with a quadratic upward trend for productivity per rig;

- ***Downside.*** Assumes decreasing gains in productivity (i.e. uses a concave trend) and lowers the estimated impact of WTI price on the rig count by one standard deviation.

Total Production and Production per Rig



Source: IMF staff estimates

The differential impact on production from these modest changes in assumptions is large. By 2020, U.S. production could range from 3.5 to 8.4 million barrels per day depending on the scenario (the baseline scenario is very similar to the EIA's latest forecast).

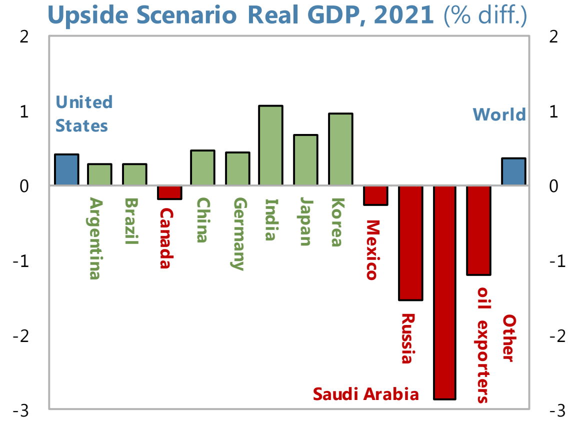
Global Spillovers. Using the G20 model, these shale oil scenarios are found to have:

- Relatively symmetric effects in the upside and downside scenarios, with the decline in global oil prices in the upside scenario leading to an increase of global GDP of about 0.4 percent.

- The biggest winners in an upside production scenario are India and Korea which have large oil imports. The most negative effects are for Saudi Arabia and Russia, as they are highly dependent on oil and have limited trade links with the US.

- Despite the significant oil price decline in the upside scenario, Canada and Mexico (which are oil exporters) receive a marginally positive short-term impact on GDP because of their strong trade links with the U.S. However, these effects turn moderately negative by 2021.

Upside Scenario Real GDP, 2021 (% diff.)



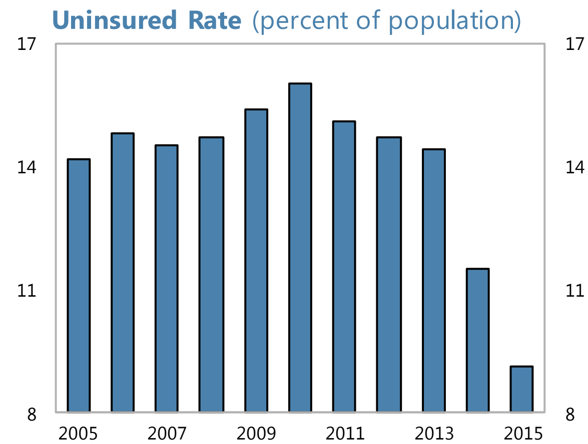
Source: G20

6. Near-term fiscal policy has been well-calibrated to the prevailing economic circumstances. At the general government level, the change in the structural primary balance is expected to be -½ and 0.1 percent of GDP in 2016 and 2017, respectively. This should be mildly supportive of growth, particularly if gauged against the fiscal contractions (of around ½ percent of GDP) experienced in 2014–15. From a macroeconomic perspective, both near-term fiscal and monetary policies appear consistent with the need to provide modest support to the economy as it transitions toward full employment in the face of global and domestic headwinds (near-term fiscal and monetary policy settings are in line with recommendations in the 2015 Article IV, see Annex I).

7. Fiscal uncertainties have been diminished by the passage of:

- *The Bipartisan Budget Act of 2015* which suspended the debt ceiling until March 2017 and avoided the risk of government shutdown by locking in appropriations for 2016 and 2017.
- *Protecting Americans from Tax Hikes Act* that lowered tax revenues by 3½ percent of GDP over the next 10 years. Among the many provisions, the bill made permanent the enhanced child tax credit, the American Opportunity tax credit for college tuition, and the improvements to the earned income tax credit (i.e. the expansion to larger families and removal of the marriage penalty). The bill also made permanent the research and experimentation credit for corporations (which had been temporarily extended 15 times since 1985, sometimes retroactively).
- *Fixing America's Surface Transportation Act* that commits US$305 billion to surface transportation for the next 4 years and provides some degree of stability to states in planning projects that are co-financed with federal resources.

8. The Affordable Care Act (ACA) was the most comprehensive health reform since the introduction of Medicare and Medicaid in 1965. Data is now beginning to emerge as to its effects. Health insurance coverage has risen significantly, with the uninsured falling to 9.1 percent of the population in 2015. However, this still means 28.8 million people remain without insurance. The remaining uninsured are mainly low-income young adults and non-permanent immigrants, including those with incomes that are too high to qualify for Medicaid (in those 19 states that chose not to expand Medicaid to households that earn less than 133 percent of the federal poverty threshold) but too low to receive ACA insurance premium subsidies. Following passage of the ACA, health costs have been rising at a slower pace (PCE health care inflation has risen, on average, by 1.4 percent per year over the past 5 years). The impact of the ACA on labor supply remains unclear and subject to large uncertainties. The Congressional Budget Office estimates the ACA would reduce hours worked by around 1.7 percent by 2025 (although other empirical studies have smaller effects). Also, the ACA requirement to maintain children on a parent's insurance until they are 26 years old appears to have raised the wages of young adults. Finally, the early evidence suggests that the ACA has provided



Source: National Health Interview Survey some support to those below, or close to, the poverty line (simulation analysis points to a 6 percent increase in the income equivalent for the lowest quintile).

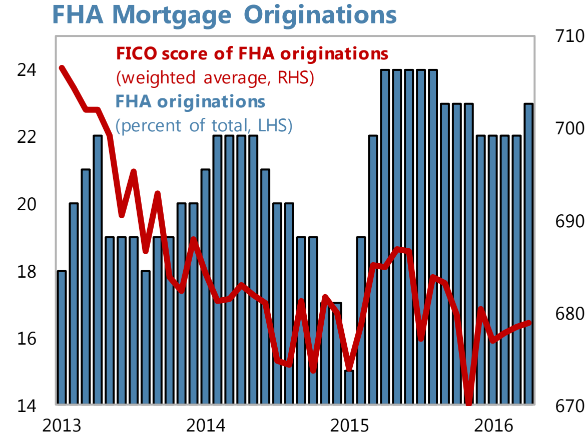
9. The volatility in financial markets in the early part of 2016 does not detract from the fact that financial conditions have been very supportive of the real economy (Figure 1). This is particularly true after parsing out the effects—on equity and bond prices—of the evident stress in energy and mining companies. Most notably, the availability and cost of financing for households—mortgage rates, auto loans, and the senior loan officer survey—remain very favorable. Also, as risk-free rates have trended downwards, investment grade yields of non-energy companies have generally been moving sideways.

10. Risks to the U.S. financial system are broadly unchanged from that of a year ago.

- The ***U.S. banking system*** continues to strengthen its capital position. Tier 1 capital is at 13 percent of risk weighted assets (RWA), with increasing RWA density (now at 71 percent). The system appears resilient to a range of extreme market and economic shocks. The results of the 2016 Comprehensive Capital Analysis and Review exercise will, however, be released in June, precluding an updated assessment relative to the 2015 Article IV. Measures to bolster bank liquidity, as well as strengthen recovery and resolution, are being steadily implemented.

- There are some ***pockets of vulnerability***. These include credit quality in auto lending, student loans, and commercial real estate lending. Energy and mining loan exposures are also likely to bear losses. However, these are relatively small parts of the U.S. financial system. Compressed interest margins continue to weigh on bank profitability and are causing intermediation to increasingly move to the nonbank sector, including mortgage origination and servicing being relocated to specialist non-banks. However, such mortgages are predominantly being securitized by the government sponsored enterprises and meet the debt-to-income and underwriting requirements of the Qualified Mortgage standard. Housing market policies, including expanded lending by the Federal Housing Administration, are, however, leading to looser underwriting standards which could, over time, worsen the credit quality of mortgages.

FHA Mortgage Originations



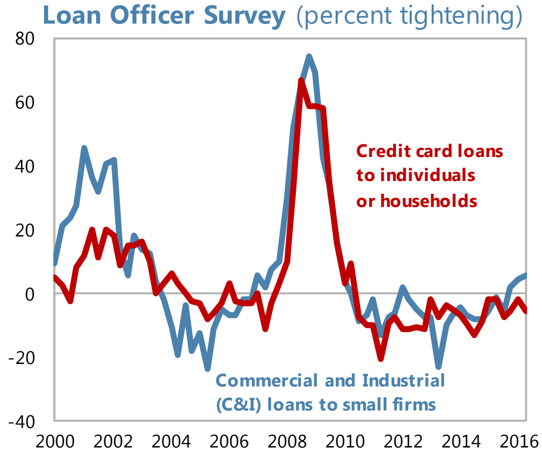
Sources: Ellie Mae; Haver Analytics; and IMF staff calculations

- The various ***financial stability issues*** highlighted in the 2015 FSAP, for the most part, have not been addressed (Annex II). These include data blind spots, the lack of risk management requirements and stress testing for the asset management industry, residual vulnerabilities in repo markets and money market funds, the complex institutional structure for financial regulation, a housing finance system that remains in limbo, and an incomplete understanding by the regulators of financial interlinkages.

Figure 1. Financial Conditions

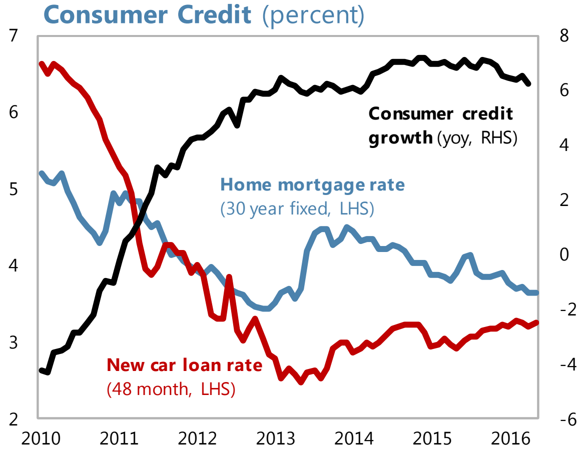
Lending standards are still supportive of growth, especially for households.

Loan Officer Survey (percent tightening)



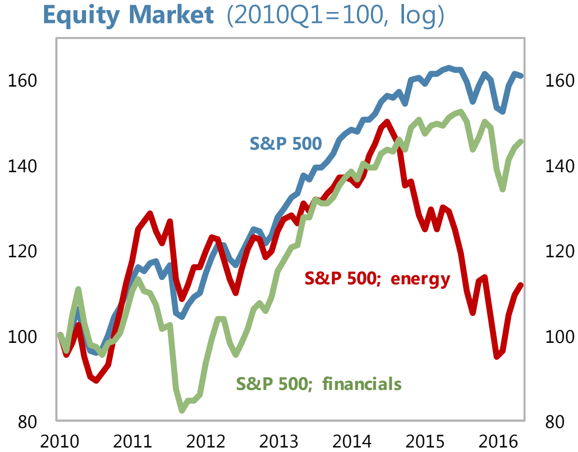
Low interest rates have led to sustained credit growth.

Consumer Credit (percent)



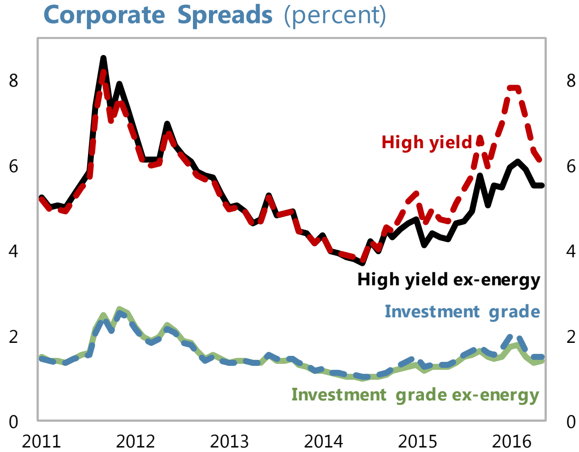
The energy sector has led a price correction in equity indices.

Equity Market (2010Q1=100, log)



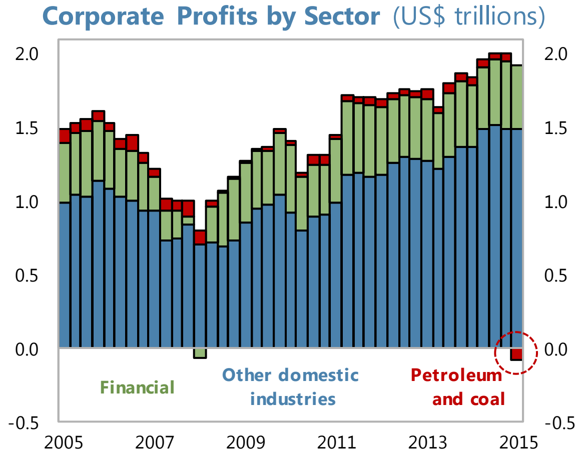
Rising high yield spreads reflect default concerns that are broader than just energy.

Corporate Spreads (percent)



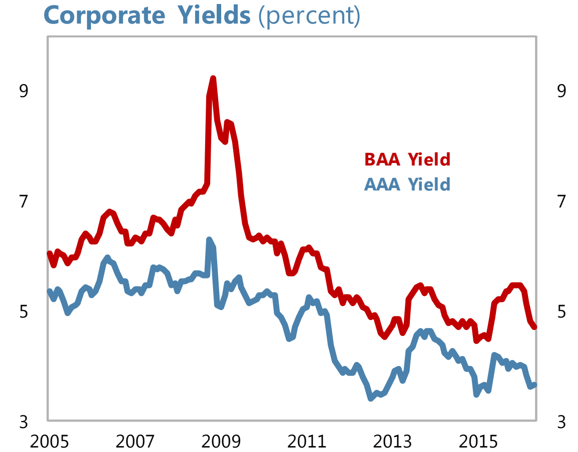
However, energy and mining corporate profits are a small fraction of the total.

Corporate Profits by Sector (US$ trillions)



Despite higher spreads, yields have mostly moved sideways as risk-free rates have trended down.

Corporate Yields (percent)



Sources: Haver Analytics and IMF staff calculations

- A large U.S. insurance company appealed its ***designation*** by the Financial Stability Oversight Council as a Systemically Important Financial Institution. Subsequently, a federal court has ruled on the case and decided to rescind the designation. The Financial Stability Oversight Council is currently appealing that court decision.

- The potential lack of ***market liquidity*** in a range of fixed income instruments, particularly at times when markets are under stress, remains a concern that could increase the risk of destabilizing forced asset sales or create volatility in market pricing. In the new regulatory environment, banks' balance sheet space for market-making activities has become tighter and alternative market systems are still unable to provide a full offset. Such market illiquidity not only induces more price volatility but also has the potential for creating macro-financial effects. However, adaptation is already occurring on multiple fronts as buy-side institutions arrange their activities with an understanding that liquidity-under-stress will be lower.

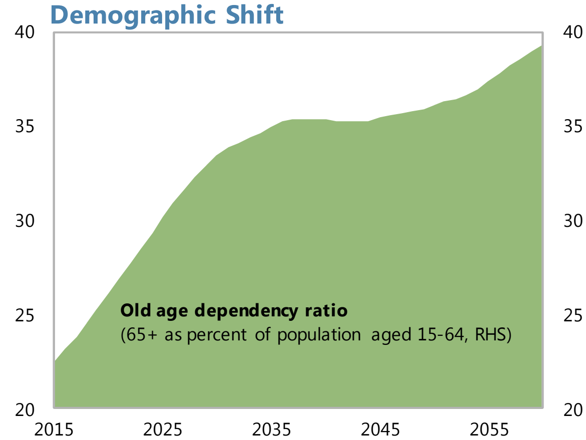
THE SUPPLY SIDE CHALLENGES AHEAD

11. Despite the sustained economic expansion, the U.S. faces a confluence of forces that will weigh on the prospects for continued gains in economic well being. A rising share of the U.S. labor force is shifting into retirement, basic infrastructure is aging, productivity gains are scanty, and labor markets and businesses appear less adept at reallocating human and physical capital. These growing headwinds are overlaid by pernicious secular trends in income: labor's share of income is around 5 percentage points lower today than it was 15 years ago, the middle class has shrunk to its smallest size in the last 30 years, the income and wealth distribution are increasingly polarized, and poverty has risen.

12. These secular trends both interact and reinforce each other. Demographic changes are slowing potential growth, delaying the renewal of business equipment, and depressing labor force dynamism. Reduced dynamism in the corporate sector has the potential to diminish innovation, deepen the loss of middle income jobs, and further polarize the income distribution. Income polarization itself can prevent productivity-improving investments in education by poorer households, lessen social mobility, add to economic insecurity, and limit consumption prospects. The causes of and interactions between these various forces are complex and not well understood. Skill-biased technological change, the more globalized and integrated market for goods and labor, changing structures of industrial and labor markets, and insufficient offsetting domestic policy actions are all feeding into these dynamics. However, what is clear is that these trends are coinciding with a well-documented decline in potential growth (from above 3 percent in the early 2000s to below 2 percent today) that is being mirrored across a range of advanced and emerging economies. If left unchecked, these forces will continue to drag down both potential and actual growth, diminishing gains in living standards and worsening poverty.

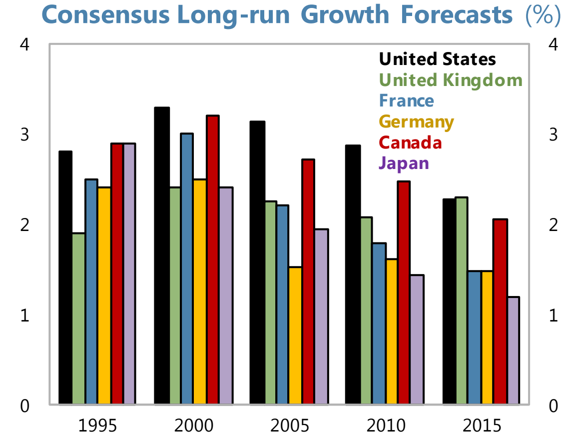
13. Demographics are an immutable headwind. The aging of the baby boom generation is set to cause a fall in the growth of the working age population in the coming years as well as a steady decline in labor force participation. As a consequence, the labor force is projected to grow at just 0.5 percent per year over the next decade (significantly slower than the 0.9 percent growth of the past 25 years). Falling growth in the labor force and a higher dependency ratio will eat into potential growth and add to medium-term fiscal challenges. Indeed, aging-related spending is forecast to cause an inflexion point in the public debt GDP ratio starting in 2019, raising concerns over the sustainability of the current medium-term fiscal trajectory (see below).

Demographic Shift



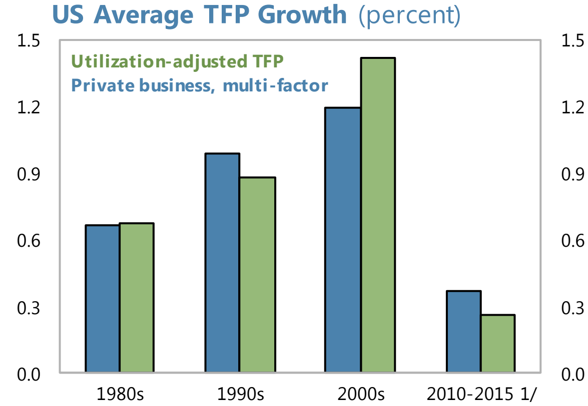
Sources: Census Bureau; Haver Analytics; and IMF staff calculations

Consensus Long-run Growth Forecasts (%)



Source: Consensus Forecasts

US Average TFP Growth (percent)

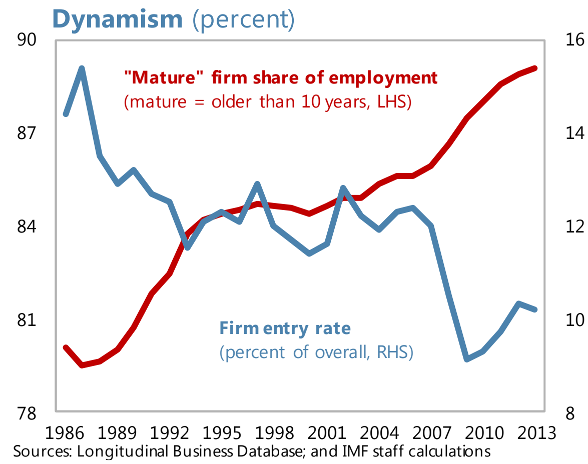


Sources: BLS; FRB; Haver Analytics; and IMF staff calculations
1/ For multi-factor, 2011-2015. 2010 is included in 2000s

14. Since the late 90s and early 00s, total factor productivity (TFP) in the U.S. has slowed significantly. TFP growth has been close to zero in the past 5 years and estimates of labor productivity have seen a similar decline. This slower productivity growth has been a global phenomenon and there is evidence it is related, at least in part, to a slower pace of innovation, a generalized decline in economic dynamism and the pace of new firm formation, rising firm concentration, falling labor market turnover, and the continued shift from manufacturing to services.

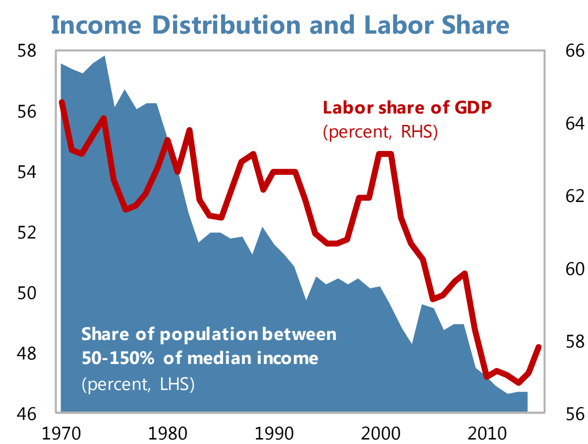
15. There has been a marked decline in labor market dynamism. In contrast to the "job-less recovery" of the early 2000s, the current expansion has seen relatively healthy employment growth but wage gains have been anemic. Over one-half of the post-recession employment gains have been accounted for by the 55-and-over population who find themselves with insufficient income for retirement (and, as a result, are working later in life). In addition, churning—a measure of labor market dynamism that has been correlated with real wage growth—has followed a downward trend for both men and women, is at historically low levels, and seems connected to slower productivity growth (Box 4).

16. Firm creation and destruction are also below historic levels. Business dynamism (i.e., business birth, growth, and exit) plays a critical role in the reallocation of resources from less-productive activities to more-productive ones. An important component of the observed fall in business dynamism has been a marked decline in firm startups and a decreasing role of young businesses in the economy. Since newer businesses have much higher innovation intensity than their more mature counterparts, their declining presence is eating into productivity. Contributing factors for this measured drag to dynamism include shifting patterns in the IT sector (which contributed substantially to business formation until the mid-2000s but has now matured as an industry) and increasing firm concentration (which is adding to the market power of incumbents and potentially acting as an implicit barrier to entry).



Sources: Longitudinal Business Database; and IMF staff calculations

17. The labor share of income has seen secular decline which began to accelerate in 2000. This is a phenomenon that has also been seen in other advanced economies. The evidence suggests a combination of factors are at work including wage competition from abroad, a compositional shift in GDP toward services (where the labor share is lower), and a decline in the labor share within manufacturing and industry (particularly for import-exposed sectors). Explanations for the latter range from a generalized decline in unionization rates, a shift of manufacturing activity to southern and western states that prohibit union security agreements, and an off-shoring of more labor-intensive tasks within manufacturing and industry.

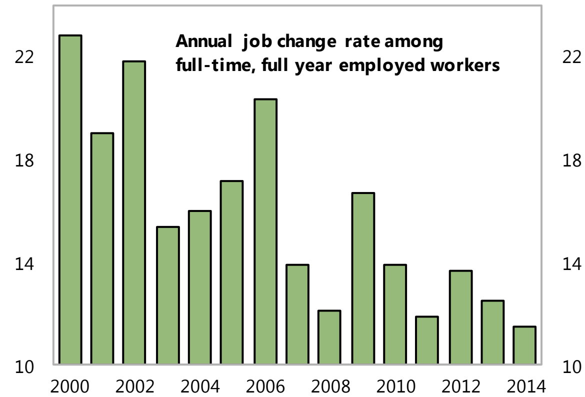


Sources: BLS; Current Population Survey; and IMF staff calculations

Box 4. The Decline of U.S. Dynamism

Labor market fluidity. Since the late 1980s, American workers have been changing jobs less frequently[1]. Quit and layoff rates have declined and job-to-job moves—a common practice for workers as they move up the wage ladder—have fallen by 40 percent. As a result workers are holding fewer jobs during their careers, reallocating less across sectors, and accumulating less transferable skills. The decline in job-to-job moves may also be a partial explanation behind lower wage growth and a falling labor share of income.

Job-to-Job Transition Rate (percent)

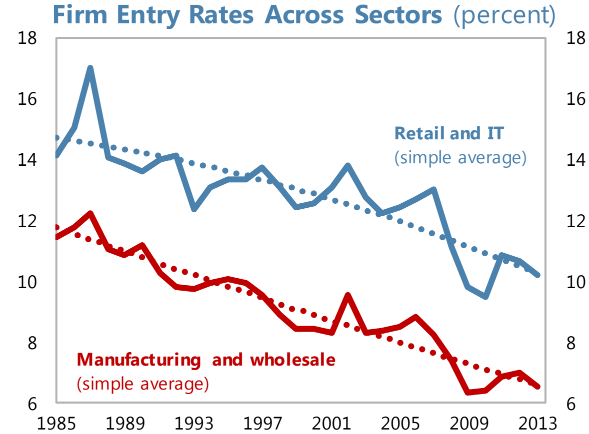


Sources: Census Bureau; and IMF staff calculations

Firm formation. The structure of the corporate sector is mirroring these labor market changes. The rate of business entry and exit has been on a secular decline. This was initially concentrated in a few sectors (e.g. retail) but, over the past 15 years, this declining pattern has broadened to include more innovative sectors such as technology.

The link to productivity. It has been no coincidence that, during this same period, the most productive firms have been growing at a slower pace. Within individual industries business concentration has risen and the dispersion of productivity across firms within a sector has grown.[2] The decline in labor market fluidity could well have slowed the allocation of employee talent to productive firms and, in so doing, suppressed overall productivity growth.

Firm Entry Rates Across Sectors (percent)



Sources: Census Bureau; and IMF staff calculations

Why? Reasons for falling dynamism are difficult to untangle given the two-way causality between productivity and business or labor churning. Demographics and a changing industry mix explain only a small part of the decline. More favorable interpretations (such as more efficient job-matching) do not appear to be supported by the data. Recent research[3] has focused on slow-moving structural causes although, empirically, the relative merits of these explanations are unclear:

- Greater hurdles for firms to enter and workers to reallocate due to rising legal and regulatory constraints (e.g. limits on at-will employment, noncompete agreements in labor contracts, or increasing barriers in business and occupational licensing);
- Changes in corporate business models that better exploit economies of scale, including greater vertical integration within a company, bounded by the constraints imposed by anti-trust rules;
- Evolving social preferences, including a diminishing willingness to take employment risks.

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[1] S. Davis and J. Haltiwanger (2014) "Labor Market Fluidity and Economic Performance," NBER Working Papers 20479 and S. Danninger, "Is the US Labor Market Changing" IMF Working Paper (2016).

[2] R. A. Decker, J. Haltiwanger, R. S. Jarmin and J. Miranda (2015). "Where Has All The Skewness Gone? The Decline In High-Growth (Young) Firms In The U.S," NBER Working Papers 21776.

[3] R. Molloy, C. L. Smith, R. Trezzi and A. Wozniak (2016) "Understanding declining fluidity in the U.S. labor market", Brookings Papers on Economic Activity.

Box 5. Polarization and Consumption[1]

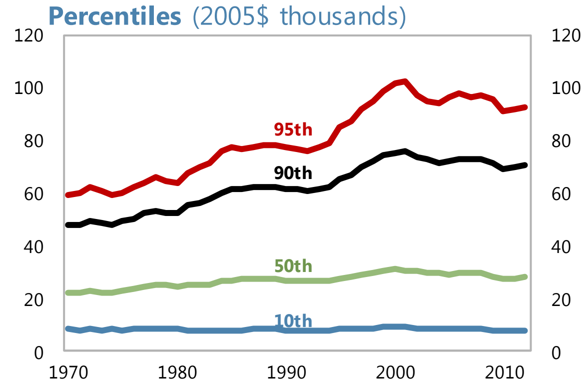
Divergent paths. Since the 1970s, the real income of families in the low to middle income brackets have stagnated while real income growth of higher brackets has accelerated since the late 1990s.

Polarization. Over the last four decades, many households have moved out of middle-income groups (defined as those earning 50–150 percent of the median income) and into the tails of the distribution. Since 2000, this "hollowing out" of the middle class, has been tilted more toward movements into the lower than the higher income ranks.

Wealth. The net worth of households has also polarized. The real net worth of those groups who earn less than two-thirds of the median income is now 20 percent *below* where it was when the data started in 1983. Meanwhile the average real net worth of those earning more than twice the median income has doubled since 1983.

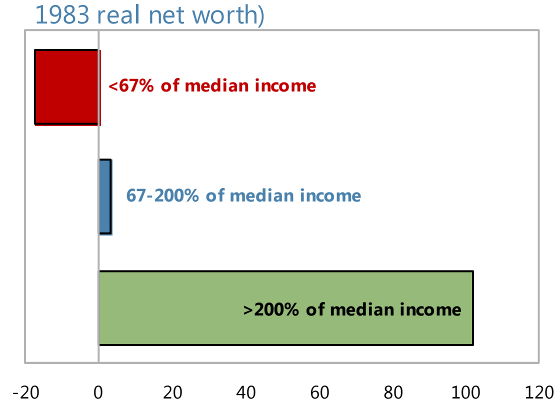
Consequences. Staff estimates suggest that rising polarization has led to a lower aggregate consumption over the past 15 years, as more households have moved to the low-income tail of the distribution with more limited resources for consumption. In addition, empirical work shows that the overall marginal propensity to consume of these lower income groups has not increased. Staff estimates that these effects have lowered the level of aggregate consumption by about 3½ percent (equivalent to more than one year of consumption) since 1998.

Real Median Family Income by Income Percentiles (2005$ thousands)



Source: Current Population Survey
Note: Adjusted for family size using OECD's equivalence scale.

Household Real Net Worth (percent of 1983 real net worth)

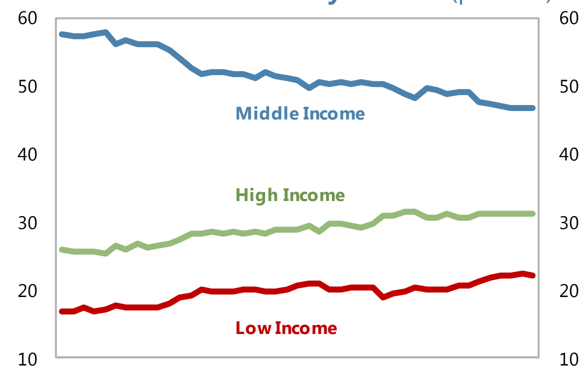


Sources: Census Bureau; and IMF staff calculations

[1] See A. Alichi, K. Kantenga, and J. Sole, "Income Polarization in the United States", IMF Working Paper (2016) and "The American Middle Class is Losing Ground", Pew Research Center (2016).

18. The re-profiling of the economic structure, coupled with skill-biased technological progress in both services and manufacturing, has contributed to a shrinking of the share of the population in middle income jobs and a broader polarization of the income distribution (Box 5). Since the mid-1980s, the number of semi-skilled jobs paying incomes around the national median has fallen and jobs are instead being created either at the upper or lower ends of the occupational skill distribution. This phenomenon has been dubbed "job polarization". At the same time, the earnings of workers remaining in the middle and lower segments of the skill distribution have stagnated or fallen. A direct consequence has been the "hollowing out" of the income distribution. The share of households earning between 50 and 150 percent of the median income has fallen from 58 to 46 percent over the past 45 years. An even more pronounced but connected trend has taken place in the polarization of the wealth distribution. This has had broad, macro-relevant, consequences for consumer behavior, human capital accumulation, and the housing market.

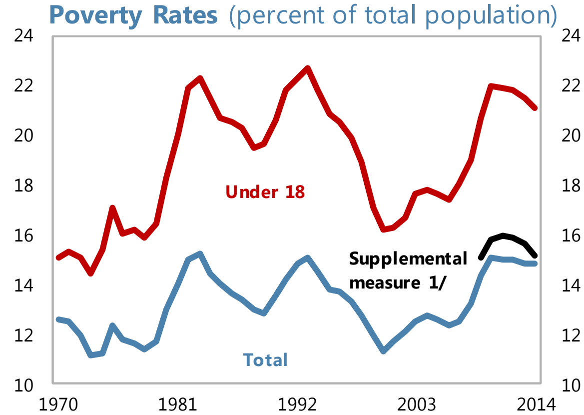
Share of Households by Income (percent)



Source: Current Population Survey
Note: Adjusted for family size using OECD's equivalence scale

19. In parallel with the polarization of the income and skills distribution, there has been a steady increase in poverty in the U.S. In the latest data, 1 in 7 Americans are living in poverty, including 1 in 5 children and 1 in 3 female-headed households. Further, around 40 percent of those in poverty are working. The incidence of poverty has been unusually persistent even as the economic expansion has matured. Poverty levels today are higher across age cohorts and for both men and for women. All of the progress that was made in lowering poverty during the 1990s has now been unwound. There are overlapping factors at work that include a greater premium for skills, a declining progressivity of the tax system, compositional changes in sectoral employment and educational attainment, as well as the broader economic dislocation triggered by the financial crisis.

Poverty Rates (percent of total population)

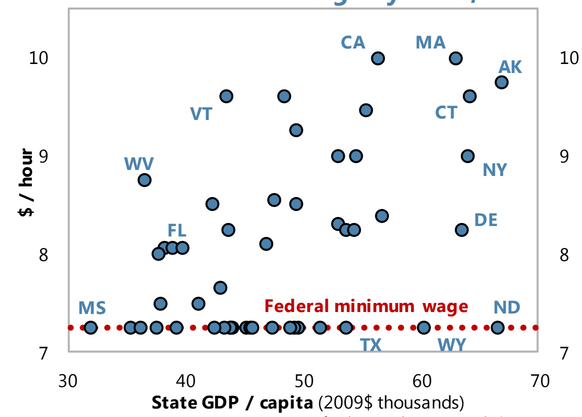


Sources: Census Bureau; Haver Analytics; and IMF staff calculations
1/ Takes account of government programs designed to assist low income familie

POLICY STRATEGIES

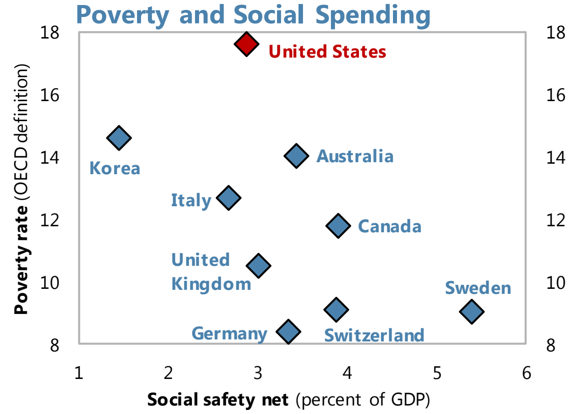
20. Reducing poverty requires national efforts that are complemented by targeted responses in states and localities where the incidence of poverty is most concentrated. In the near-term, a more generous earned income tax credit (including eligibility for workers without dependents, those under 25, and older workers that are not yet eligible for social security) combined with a higher federal minimum wage would help alleviate poverty. These two measures would have strong complementarities. The improvements in the EITC can work in tandem with the minimum wage to ensure a meaningful increase in after-tax earnings for the nation's poorest households (see 2014 Article IV). Upgrading social programs to support the nonworking poor would also be a step forward. This could include simplifying and unifying the various programs underlying the safety net, increasing the generosity of those programs, learning from the diversity of experiences at the state-level to identify the most effective approaches, and targeting federal payments toward achieving specified outcomes. Efforts to improve K-12 education, invest in early childhood education, subsidize healthcare and childcare for lower income families, and expand needs-based support for tertiary and vocational education can have important effects, over a longer horizon, in reducing the inter-generational persistence of poverty.

Effective Minimum Wage by State, 2015



Sources: BEA; Census Bureau; Department of Labor; and Haver Analytics

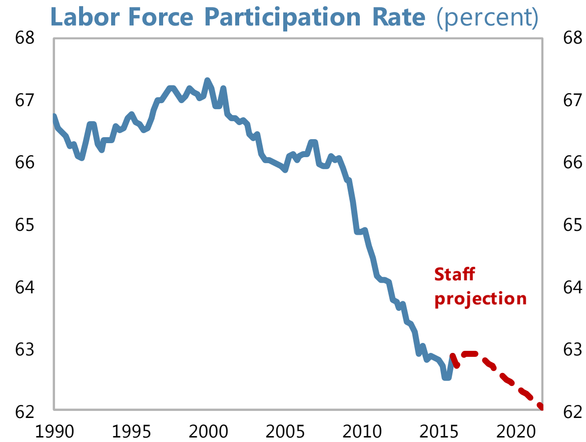
Poverty and Social Spending



Source: OECD latest available data; and IMF staff calculations
1/ OECD categories: Incapacity, Unemployment, and Other social policy areas

21. Authorities' views. The administration has repeatedly argued for raising the minimum wage and expanding the EITC for workers without dependent children as well as workers that are 21-24 and 65-66 years old. The President's budget also makes the case for providing high-quality preschool to lower income families, instituting full day kindergarten in every school district, and expanding funding for programs that support learning and development of the neediest children. More recently, the overtime regulations had been updated, doubling the salary threshold to US$ 913 per week and extending coverage to 4.2 million lower income workers. Moreover, the threshold will now be automatically updated every 3 years based on wage growth. Officials also saw merit in reexamining the structure of safety net spending, particularly given that the generosity of cash poverty alleviation programs had declined in recent years with additional spending funded without an increase in the deficit.

22. Falling labor force participation is an inevitable consequence of an aging society but those demographic effects can be mitigated. Improvements in the EITC, discussed above, will help encourage work. It will also be important to:



Sources: BLS; and IMF staff estimates

- Adopt ***family-friendly benefits***, particularly as a policy lever to slow the downward trend in female labor force participation. These would include providing means-tested support for childcare and introducing paid family leave in line with standards in ILO conventions.

- Rework the ***disability insurance*** program to provide incentives for beneficiaries to work part-time (rather than drop out of the labor force).

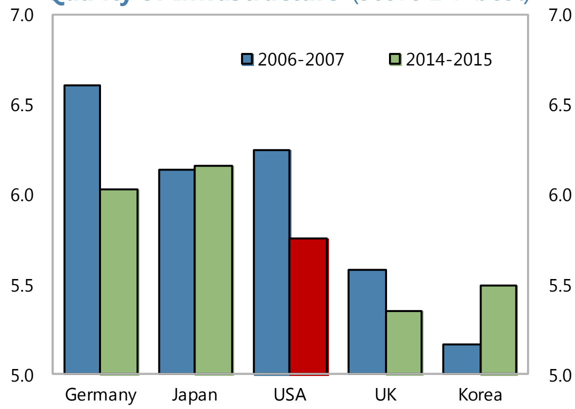
- Finally, perhaps the largest effect on the labor supply would come from an agreement on an ***immigration reform*** that is skill-based, changes the underlying demographic trends, reduces the dependency ratio, and raises the average level of human capital in the labor force.

23. Authorities' views. Adverse demographic trends made supporting working families a high priority so as to use the U.S. labor force most effectively. The 2017 Budget proposes federal funding for start-up grants to assist states in introducing paid leave programs and providing federal employees with six weeks of paid administrative leave for the birth, adoption, or foster placement of a child (currently new parents who are federal employees are allowed to draw down six weeks of their sick leave and take twelve weeks of unpaid leave). The budget also supports increasing childcare subsidies for lower income families with young children and raising the child and dependent care tax credit (to a maximum amount of US$3,000 per child for families with children under age five). The administration is committed to common sense and comprehensive reform to fix the broken immigration system and has taken executive actions to offer relief from deportation for the parents of citizens or legal residents who have lived in the U.S. for more than five years.

24. Raising productivity and bridging the skill divide will be essential. Since the boom of the late 1990s, total factor productivity has slowed significantly. This appears to be a global trend that is not confined to the U.S. Notwithstanding this, public policy tools could help facilitate innovation and technological progress, and support efficiencies in private activity:

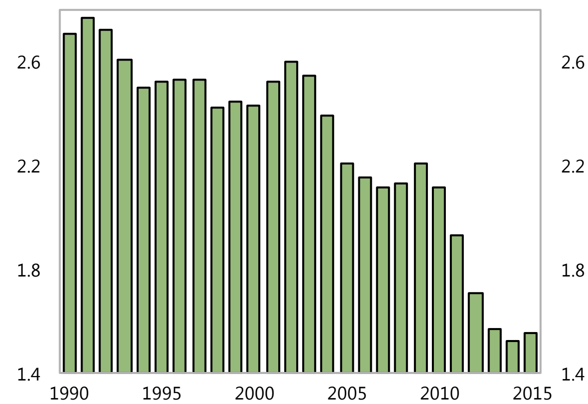
- ***Expanding infrastructure investment***. The public capital stock is aging and has been declining as a share of GDP for some time. New investment is urgently required to improve the quality and reliability of infrastructure, particularly for surface transportation. This will help remove bottlenecks and congestion and add to the productivity of private activity. Public projects to upgrade infrastructure technologies (e.g. in high speed rail, ports, or telecommunications) would be particularly valuable. In parallel, innovative solutions should be sought to facilitate the financing (both public and private) of U.S. infrastructure. It is estimated that such investments could cost about 5–8 percent of GDP over the next 10 years which should be financed without an increase in the near-term fiscal deficit (i.e., by reallocating spending from other areas and raising revenues). Estimates suggest that such an expansion in infrastructure investment could boost potential growth by around ¼ percent.

Quality of Infrastructure (score 1-7 best)



Source: Global Competiveness Index, World Economic Forum

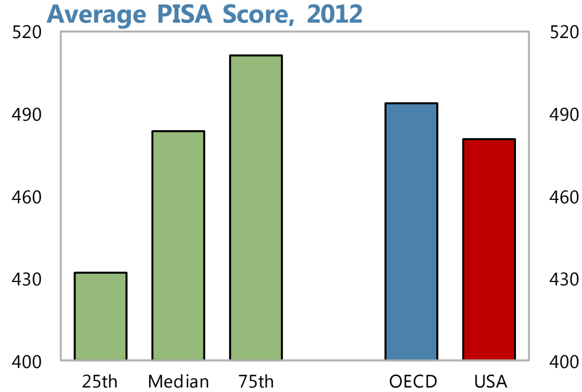
Public Investment, Structures (% of GDP)



Sources: BEA; Haver Analytics; and IMF staff calculations

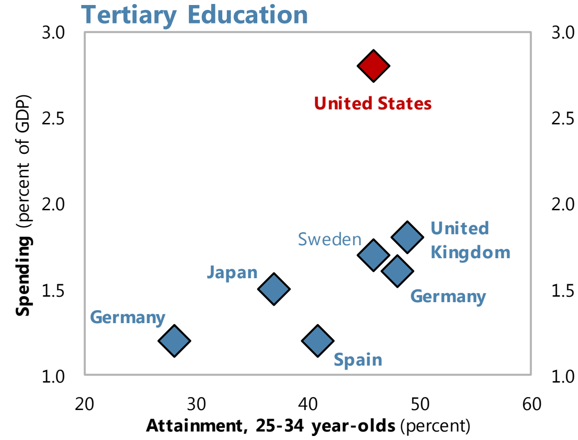
- ***K-12 education***. There is a clear need for better spending on education so as to raise educational outcomes. This could include prioritizing funding for early childhood education (including financing of universal pre-K) and supporting science, technology, engineering, and mathematics programs.
- ***Vocational education***. Closing the skills gaps would be facilitated by greater federal support for state-level training as well as the expansion of partnerships between industry and higher education institutions to facilitate apprenticeships and vocational training.

Average PISA Score, 2012



Sources: OECD; and IMF staff calculations
Note: PISA (Programme for International Student Assessment) 2012 tested students in mathematics. Sample range is 65 emerging and OECD countries

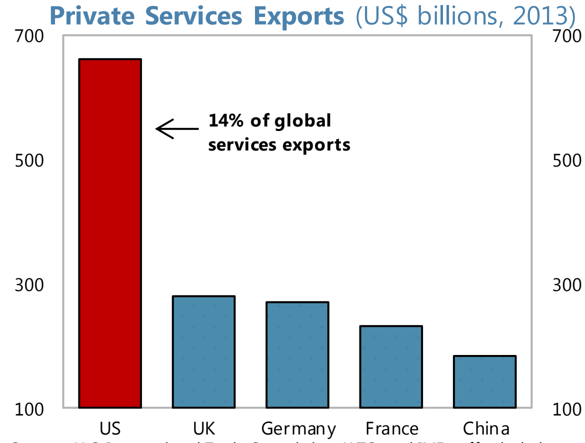
Tertiary Education



Source: OECD latest available data

- ***Trade integration***. The free exchange of goods and services has been a hallmark of American economic success. New trade agreements, such as the Trans Pacific Partnership (TPP), cement and extend this principle by going beyond the removal of tariff barriers—which are already low—and include rules on investment, competition policy, intellectual property rights, and regulations. By preserving a level playing field in future growth areas, such as services, the TPP has the potential to set a new standard and pathway for international economic cooperation. It would also aid the U.S. economy by capitalizing on its strength in the fast growing area of tradable services. Resisting all forms of protectionism will also be essential. There will likely be transition costs to both jobs and incomes from greater trade integration as well as potential effects on income polarization. The consequences for trade-affected U.S. workers should be taken into account and policy efforts should be taken to mitigate the downsides through training, temporary income support, and job search assistance, including deployment of the existing trade adjustment assistance program.

Private Services Exports (US$ billions, 2013)



Sources: U.S. International Trade Commission; WTO; and IMF staff calculations

25. Authorities' views. The administration has proposed a "surge" in new infrastructure and clean energy investment funded through an excise on crude oil and a one-time 14 percent tax on unrepatriated corporate profits (as a transition to broader business tax reform). There has been broad recognition of the importance of education and job training to support future growth and productivity. The administration has already expanded grants and tax credits to increase access to college and had proposed making community college free for two years. There is a hope that the recent step to make the research and experimentation tax credit permanent could help with productivity. Federal funding for job training has been increased in recent years, and, in the past two years, 75,000 additional individuals have been enrolled into federally-supported apprenticeship programs. Continued efforts along these lines could help lessen the skills mismatch that is currently visible in the U.S. labor market. There is a strong commitment to working with Congress to pass the TPP and move ahead with other plurilateral trade agreements. The U.S. is committed to resisting financial and trade protectionism. Given that trend declines in productivity are widespread globally, officials noted the value of further examining the productivity slowdown from an international perspective.

26. Steps should also be taken to avoid self-inflicted wounds from future disagreements on the path for fiscal policy. Whatever gains could be achieved in supporting growth through the supply-side measures described above could be easily dissipated by a repetition of past political brinkmanship over appropriations and the debt ceiling. Near-term uncertainties have certainly been diminished by the passage of the Bipartisan Budget Act of 2015, the Protecting Americans from Tax

Hikes Act, and the Fixing America's Surface Transportation Act. However, it will be important to identify more lasting institutional solutions.

- One possibility would be to replace the debt ceiling with a bipartisan agreement on a clear, simple medium-term fiscal objective (with an integrated view of all budget functions and numerical goals for both debt and deficit).

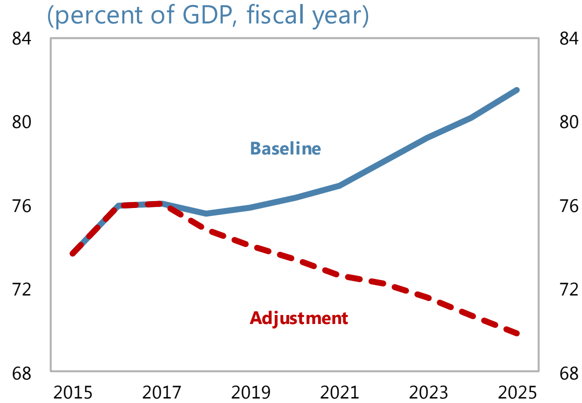
- Alternatively, a legislative process could be introduced that adjusts the debt ceiling automatically, consistent with whatever agreement is struck on the broader budget parameters.

- Carefully-designed mechanisms could be built in to support fiscal discipline by triggering automatic revenue or spending adjustments if congressionally approved targets are breached.

- Consideration could also be given to more permanently shifting to a budget cycle where annual spending levels are agreed for a two-year period (helping to divorce budget decisions from the electoral calendar).

27. Demographic trends and rising interest rates will lead to larger fiscal imbalances over the medium-term. Specifically, over the next decade healthcare and social security outlays are expected to increase by 1¾ percent of GDP and interest spending will rise by 2 percent of GDP. As a consequence, the federal debt is forecast to begin rising in 2019 and exceed 80 percent of GDP by 2025. Regrettably, the U.S. continues to lack a detailed medium-term fiscal consolidation plan to prevent this renewed rise in the public debt. Such a plan would need to target a medium-term federal government primary surplus of about 1 percent of GDP (a general government primary surplus of about ¾ percent of GDP) which would put the public debt ratio firmly on a downward path. Since many of the policies needed to boost growth and tackle poverty will have fiscal implications—the largest of which is linked to public infrastructure spending—their costs should fit within this overall deficit envelope.

Federal Debt Held by the Public
(percent of GDP, fiscal year)



Source: IMF staff estimates

28. Achieving this medium-term path will require actions on multiple fronts:

- ***Tax reform***. The Joint Committee on Taxation estimates that a comprehensive reform of the U.S. tax system that removes exemptions, simplifies the system, and reduces statutory rates (both for individual and corporate income taxes)—would raise the level of real GDP by up to 1.6 percent over the next ten years. Reform of the corporate income tax is badly needed and could help revitalize business dynamism and investment (Box 6). For the personal income tax, the structure could be made more progressive so as to help mitigate income polarization and assist the working poor. This could involve capping itemized deductions, including for mortgage interest, to lessen the tax benefit for the most well off. Finally, as has been advocated in past consultations, additional revenues should be generated through the introduction of a federal level VAT and a broad-based carbon tax (see 2015 Article IV), including an increase in the federal gas tax (which has been 18 cents per gallon since 1993).

- ***Pension reform***. The expected depletion of the social security trust fund calls for early steps toward fundamental reform of the pension system. These would include raising the income ceiling for social security contributions, indexing benefits and contribution provisions to chained CPI, raising the retirement age, and instituting a greater progressivity in the benefit structure.

- ***Healthcare cost containment***. Healthcare inflation has come down but it appears largely linked to slow wage growth in the health sector (which has already started to bounce back). More is needed to sustainably lower the path of future healthcare costs. This could be achieved through better coordination of services to patients with chronic conditions, greater cost sharing with beneficiaries, innovations in efficiency technologies (e.g. electronic health care records, remote consultations with doctors, international outsourcing of some diagnostic functions), and changing incentives away from remuneration per procedure and toward payments for achieving specified health outcomes. Higher Medicare premiums would also help address financial imbalances in the publicly-funded health system.

29. Authorities' views. On the tax side, the administration has argued for closing personal income tax loopholes for "carried interest" and to limit the value of itemized deductions and other tax expenditures for higher income households. They also would favor increasing the top tax rate on capital gains and dividends to 28 percent. The President has proposed a comprehensive, revenue-neutral business tax reform that would reduce the corporate tax rate to 28 percent, eliminate dozens of inefficient tax expenditures, impose a 19 percent minimum tax on foreign earnings that would be paid currently without possibility of deferral (with no additional tax upon repatriation), and limits on the use of excessive interest deductions by foreign companies to strip earnings. The administration recognizes there are imbalances in the entitlement system and has, over time, put forward various measures that could be part of a "grand bargain"—to strengthen the solvency of the system. In this regard, it was important not to understate the important progress, in part linked to the Affordable Care Act, that has been made in lowering the pace of cost increase in health care (which will lessen the medium-term fiscal imbalances due to aging). Tackling the financing gap in the social security system while ensuring beneficiaries receive robust benefits was seen as an increasing priority.

Estimated Fiscal Impact of Various Policy Options
(cumulative primary deficit change, 2017–2025[1])

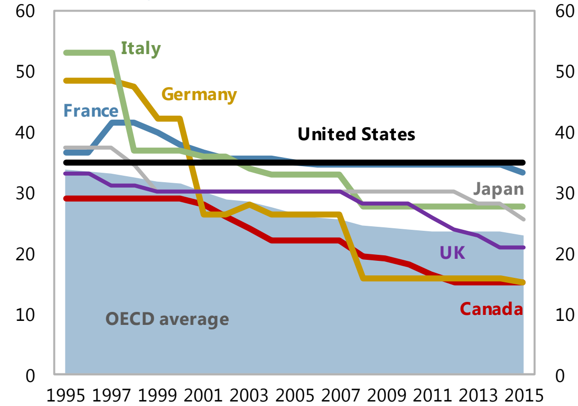
Infrastructure (drawing on American Society of Civil Engineers)	+5 to 8
Extend EITC to childless and younger workers (JCT)	+0.4
Increased funding for education and job training (CBO)	+0.5
Healthcare	
1% increase in payroll tax for Medicare Hospital Insurance (CBO)	-3.4
Increase premiums for Parts B and D of Medicare (CBO)	-1.4
Change cost sharing rules for Medicare / restrict Medigap insurance (CBO)	-0.5
Manufacturers rebate for Medicare Part D drugs for low-income patients (CBO)	-0.5
Social Security	
Increase maximum taxable earnings for payroll tax to $180,000 in 2017; index maximum to chained CPI thereafter (CBO)	-3.0
Indexing benefits to chained CPI (CBO)	-0.8
Phased increase of full retirement age to 70 (CBO)	-0.2
Extend the computation period for benefits by three years (CBO)	-0.2
Tax reform	
1% increase in personal income tax rates for upper-income groups (JCT)	-0.4
Eliminate fossil fuel preferences (JCT)	-0.2
Replace CPI with chained CPI for personal income tax brackets (CBO)	-0.6
Carbon tax (2015 Article IV report)	-4 to -5
For each 1% broad based VAT (CBO)	-2.4
For each 10 cents increase in federal gas tax and index for inflation (CBO)	-0.5
Immigration reform (CBO)	-1.5

Sources: CBO; JCT; ASCE; and IMF staff estimates
1/ Expressed as a percent of average 2017–2025 GDP.

Box 6. Reform of the U.S. Corporate Income Tax[1]

The shortcomings. There is bipartisan acceptance that the U.S. system for taxing corporate income is broken. The current tax structure is too complex, has a marginal rate that is too high and with a narrow base, is rife with legislated exemptions, favors debt financing, and incentivizes a range of cross-border avoidance and tax planning mechanisms to lower U.S. tax liabilities. Despite the well-documented distortions and shortcomings, and their negative implications for both productivity and the global competitiveness of U.S. businesses, reforming the system has proven politically impossible.

Statutory Corporate Tax Rates (percent)



Source: OECD

The priorities for incremental reform:

- Reduce the corporate income tax rate to 25 percent.
- Broaden the CIT base by eliminating the bulk of corporate tax expenditures including the Section 199 deduction (for domestic production activities) and repeal the corporate alternative minimum tax.
- Align depreciation allowances with rates of economic depreciation. Eliminate tax incentives for petroleum exploitation, including publicly traded partnerships.
- Adopt the recommendations of Base Erosion and Profit Shifting Action 4 by limiting interest deductions to 10–20 percent of EBITDA for both domestic and foreign-owned firms to reduce income-stripping as well as debt bias.
- Adopt a territorial system by excluding dividends of foreign subsidiaries from U.S. taxation. On a going-forward basis, impose a 15 percent country-by-country minimum rent tax on the foreign earnings of U.S. corporations. Maintain the current system of crediting for foreign taxes paid.
- Tax the existing stock of un-repatriated foreign-sourced earnings at a rate of 25 percent, with payments spread over the next 8 years.

More fundamental reform. Over a longer horizon, the U.S. should transform its corporate tax system into a rent tax. This would involve allowing U.S. corporations a general capital allowance against earnings for both debt and equity-financed investment and then taxing the remaining rents at a lower marginal rate. Normal returns to capital should be taxed at the investor level including by removing the current tax exempt status for pension funds and endowments. Partial crediting should remain for foreign taxes paid.

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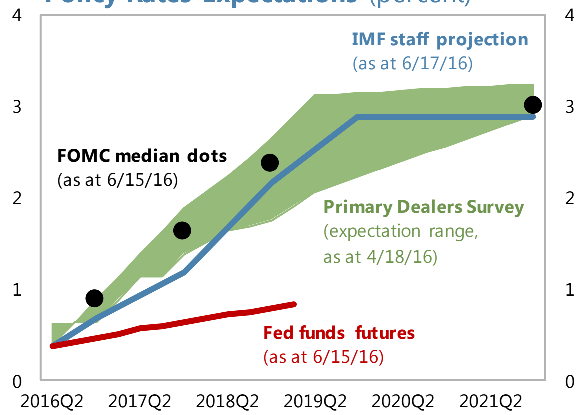
[1] See K. Clausing, E. Kleinbard and T. Matheson, "U.S. Corporate Income Tax Reform and Its Spillovers", IMF Working Paper (2016)

A SLOW TRAIN TO "NORMAL"

30. Since the first rate increase in December, the predicted pace of subsequent rate increases has slowed (in both the FOMC and market's expectations). Despite a string of strong labor market data, there has been concern around weak activity and, more recently, jobs data, recurrent bouts of financial market volatility, and diminishing global prospects. The FOMC has emphasized the shallow, gradual upward slope in its expected policy rate profile and has underlined that the federal funds rate is likely to remain, for some time, below levels that were expected to prevail in the longer run.

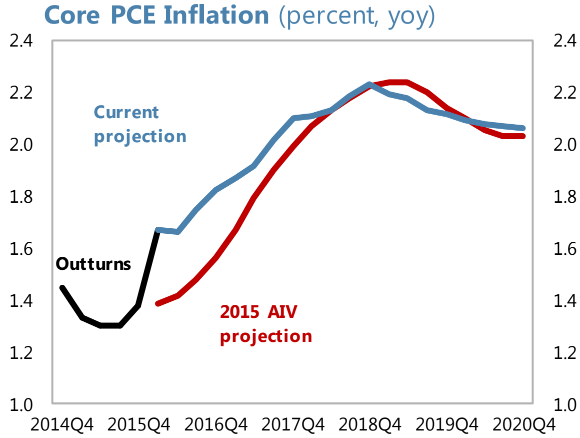
Policy Rates Expectations (percent)



Sources: Federal Reserve; Bloomberg; and IMF staff estimates

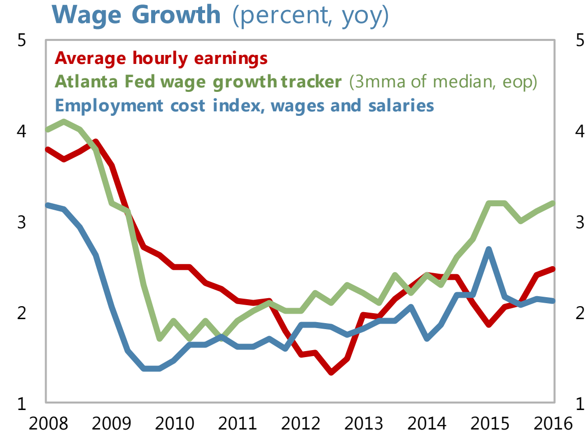
31. Wage and price inflation appears contained. Price developments have been marginally above staff's expectations at the time of the last Article IV. However, wage indicators appear moderately softer than had been previously envisaged, despite the labor market repairing on a faster-than-expected timetable. Over the past 12 months, compensation growth as measured by the employment cost index has fallen to under 2 percent and average hourly earnings are only modestly higher (at 2.5 percent). Despite this, inflation outcomes are currently expected to follow a slow trajectory back to the central bank's medium term target as labor market slack is steadily exhausted.

Core PCE Inflation (percent, yoy)



Sources: BEA; and IMF staff estimates

Wage Growth (percent, yoy)

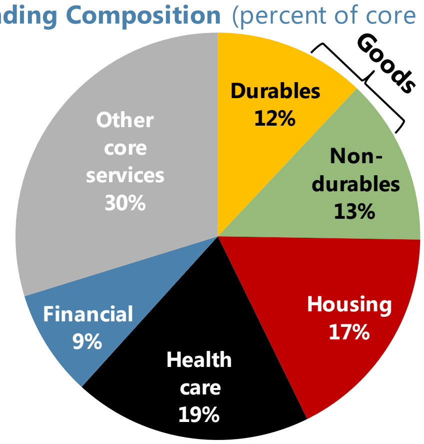


Sources: BLS; FRB; and Haver Analytics

Figure 2. Inflation Dynamics

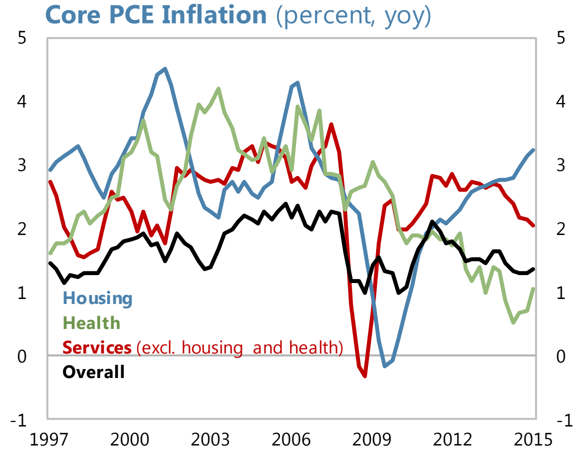
Core PCE goods prices, housing, and health care services are the key drivers in PCE inflation.

Spending Composition (percent of core PCE)



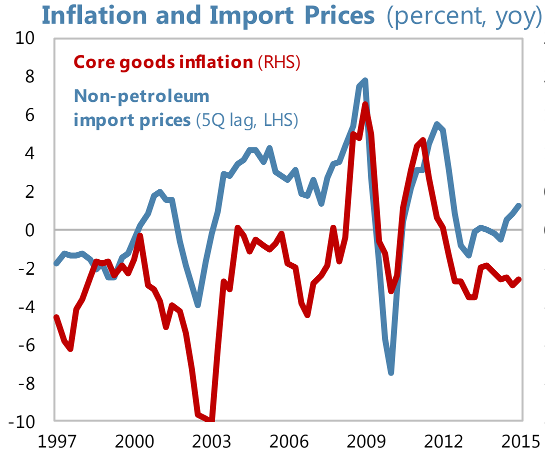
Leading to a slow upward path for core PCE in the past several months.

Core PCE Inflation (percent, yoy)



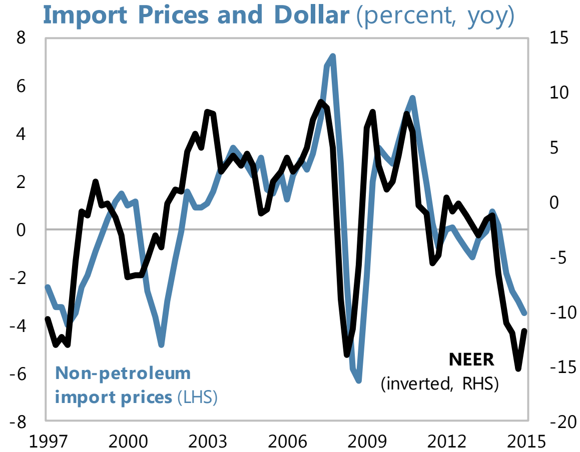
Core inflation has been held down by low import prices.

Inflation and Import Prices (percent, yoy)



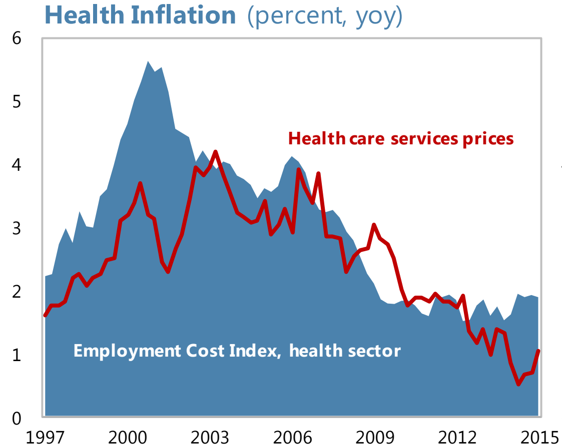
Pointing to an important role for the dollar in inflation dynamics.

Import Prices and Dollar (percent, yoy)



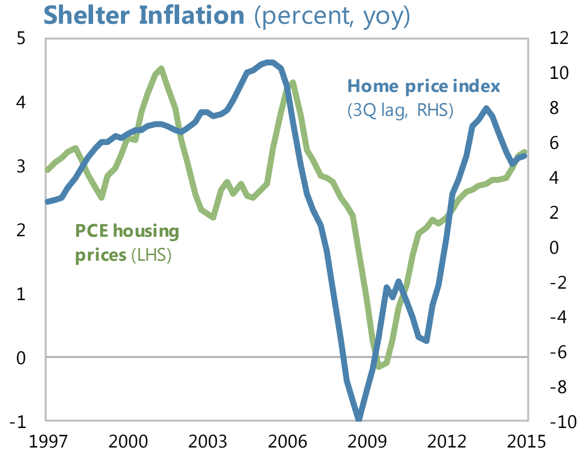
Health care wage growth has stabilized which likely presages increasing health care inflation.

Health Inflation (percent, yoy)



Shelter costs are expected to continue rising with the ongoing recovery in the housing market.

Shelter Inflation (percent, yoy)



Sources: BEA; and IMF staff calculations

32. Evidently, monetary policy should remain data dependent. It is also important to note that it will be the whole expected future path of rate movements that will be relevant for the macroeconomy. At this point in the cycle, there is a clear case to proceed along a very gradual upward path for the fed funds rate, conscious of global disinflationary trends and confirming along the way that wage and price inflation are indeed maintaining their steady upward momentum. Evidence suggests that the trade-off between slack and price pressures appears to have remained reasonably stable (Box 7). Staff's own macroeconomic outlook is built on an assumption of two further rate increases in the second half of 2016 and the forecasted outturns for growth, inflation, and unemployment are broadly in line with the FOMC's own summary of economic projections. Given the likelihood and severity of downside risks to inflation, the potential for a drift down in inflation expectations, the Federal Reserve's dual mandate of maximum employment and price stability, and the asymmetries posed by the effective lower bound, the path for policy rates should accept some modest, temporary overshooting of the Federal Reserve's inflation goal to allow inflation to approach the Fed's 2 percent medium-term target from above. Doing so will provide valuable insurance against the risks of disinflation, policy reversal, and ending back at a zero fed funds rate (see Working Paper). The Federal Reserve should be clear in communicating its intentions and emphasize that its medium-term inflation goal is symmetric and that inflation could well approach their target from above. If either wage or price inflation becomes visible at a faster pace than is embedded in staff's current forecasts, interest rates should be raised on a more front-loaded timetable.

33. Authorities' views. A healthy labor market—notwisthstanding the slowdown in job growth in May—and real income growth were expected to support a pickup in consumer spending, leading to a faster pace of GDP growth in the coming quarters. The low unemployment rate appears, at present, to be exerting little upward pressure on wage or price inflation. However, with consumer demand growth continuing, the dollar no longer appreciating and energy prices apparently having bottomed out, there was confidence that inflation would move steadily upward to the 2 percent objective in the medium run. If incoming data shows economic growth continuing to pick up, labor market conditions continuing to strengthen, and inflation making progress toward 2 percent, then it likely would be appropriate to gradually increase the federal funds rate in the coming months. However, incoming data would determine the timing and pace of future rate adjustments. There is no preset course for the policy rate. Officials indicated that the Federal Reserve's medium term inflation goal should not be viewed as a ceiling and there were likely to be symmetric errors around the 2 percent target. However, there was no intention to engineer an overshoot the inflation objective and the welfare case for doing so was not compelling. There was a concern also that aiming to overshoot the medium-term target would create the risk of being behind the curve and potentially being faced with a need to raise rates more quickly especially if the labor market tightening led to a faster increase in inflation than seen until now. This could be disruptive and undermine the achievement of the Federal Reserve's mandates of maximum employment and stable prices.

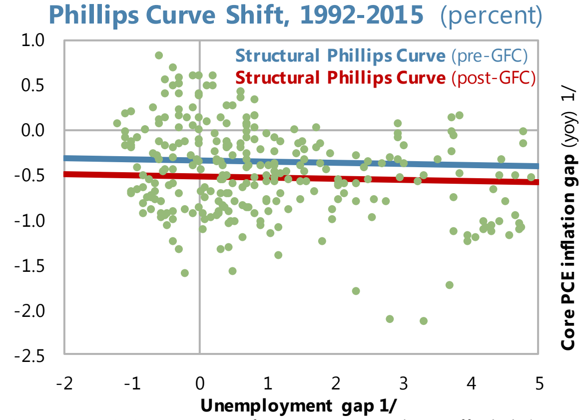
Box 7. Did the Global Financial Crisis Break the U.S. Phillips Curve?[1]

A structural break? Since the global crisis, the combination of high unemployment and a lack of wage deflation, followed by a period where unemployment was declining steadily without an acceleration in wage growth, has raised questions as to whether the nature of the unemployment-inflation trade-off has changed. Particularly, has the Phillips curve flattened or shifted to become less responsive to "slack"?

A multivariate approach. Using a large-cross-section Bayesian Vector Auto Regression and dynamic factor model that exploits a wide range of data in a flexible framework, we find that there is some evidence, post-recession, that the nature of underlying *shocks* to the economy has changed. However, there is little evidence of a change in the *coefficients* of the Phillips curve. In addition, corporate bond spreads are found to be an important predictor of unemployment[2] and financial and external variables are predictive of inflation.

Markov-switching. A separate approach was deployed using a flexible, New Keynesian model that allows for 3-state regime switching both in the structure of shocks and in the model coefficients. The model that best fits the data is one that shows no change in the Phillips curve itself but a change in the coefficients in the monetary policy reaction function. This change in the reaction function induces a shift in the time series variance-covariance structure between inflation and unemployment. The Phillips curve has, according to these results, not broken. Rather, describing recent dynamics needs a structural model that allows for a shift in the monetary policy reaction function in order to best explain the post-financial crisis changes in the structure of correlations seen in the data. Estimating a single equation Phillips curve, without allowing for such changes in the policy reaction function, would make it erroneously appear as if the Phillips curve itself has tilted downwards.

Phillips Curve Shift, 1992-2015 (percent)



Sources: BEA; CBO; Department of Commerce; FRB; and IMF staff calculations
1/ Unemployment gap uses CBO's NAIRU; PCE gap uses SPF 10yr expectations

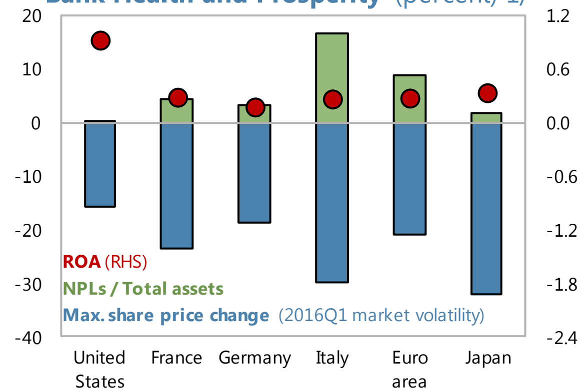
[1] See Laseen, S. and Taheri Sanjani, M., "Did the Global Financial Crisis Break the U.S. Phillips Curve?", IMF Working Paper (2016)

[2] See Gilchrist and Zakrajsek (2010) "Credit Spreads and Business Cycle Fluctuations", NBER Working Paper 17021.

KEEPING THE FINANCIAL SYSTEM SAFE

34. Regulatory reforms, improved risk management practices, and changing business practices have strengthened the U.S. banking system. Compared to European and Asian peers, U.S. banks have stronger portfolios and are considerably more profitable. However, net interest margins remain compressed and corporate credit risk is rising (although the latter deterioration has been largely concentrated in energy and mining where the banking system as a whole has only a modest exposure). A small number of non-systemic banks with a high portfolio concentration in distressed sectors (notably energy and mining) are likely to see increases in loan losses. Furthermore, a potential worsening of credit quality for auto and commercial real estate loans could create a broader increase in provisioning needs. All in all, though, these downsides represent pockets of vulnerability but are unlikely to prove systemic. Banks will continue to face a lower profit environment going forward but regulatory levers and market discipline appear to be in place to prevent efforts to restore profitability translating into weaker lending standards.

Bank Health and Prosperity (percent) 1/



Sources: Bloomberg; EBA; and IMF staff calculations
1/ Data is as of 2015 or latest available

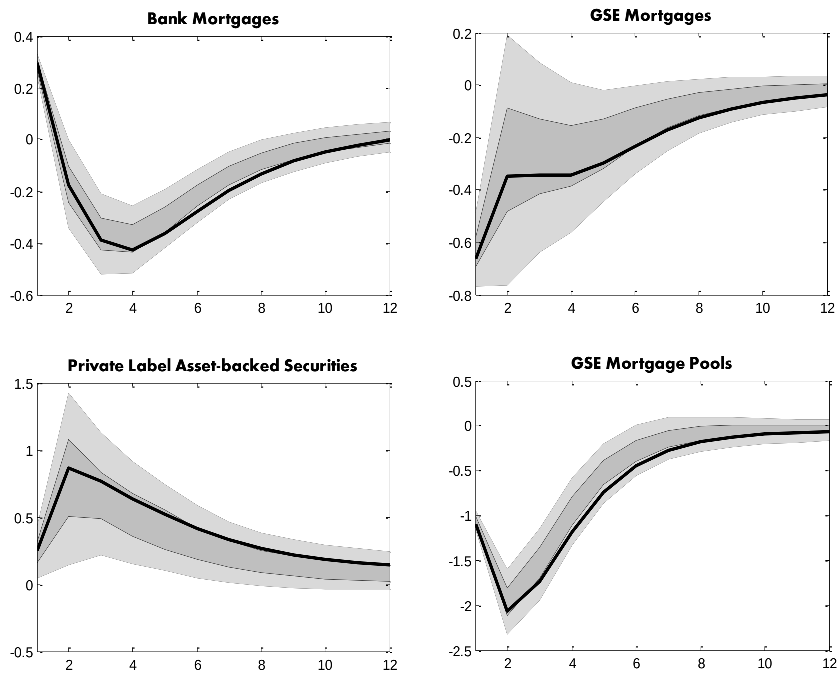
35. Intermediation activity is further migrating from banks to nonbanks and is likely to continue to do so as policy rates increase. This argues for caution, including in assessing the effects of higher policy rates on overall risk (Box 8). For instance, mortgage origination and servicing have, to a large extent, moved off of bank balance sheets into specialized entities that sell the loans for eventual securitization by government sponsored agencies. As the structure of the housing finance industry evolves, the associated risks bear close examination. Retail deposits have, so far, remained in the banks but, as rates rise, money market funds offering higher returns could increasingly pull funding from the banks (which are constrained by regulatory liquidity measures and the costs of deposit insurance).

Box 8. Securitization and Monetary Policy: Watch Out for Unintended Consequences

The approach. An empirical exercise was undertaken using a proxy-VAR drawing on flow of funds data to trace through the effects of higher policy rates on credit flows in different parts of the financial system[1].

The role of securitization. Estimates suggest that a monetary policy tightening does act as a liquidity shock for banks that (temporarily) raises their costs of funds and puts pressure on bank profits, cash flow, and liquidity. As a result, banks cut back on credit creation. However, since securitization provides a source of funding and liquidity, it also appears that a higher federal funds rate causes U.S. banks to liquefy part of their assets (mostly mortgages) and expand lending through securitization. Specifically, a monetary policy tightening causes the total supply of mortgages and the securitization of conforming (i.e., GSE) mortgage loans to fall. However, higher policy rates result in an increase in private-label asset backed mortgage securities. In addition, the GSEs themselves expand lending to the Federal Home Loan Bank system.

Impact of Higher Policy Rate on Mortgage Credit



Implication. The evidence suggests that higher policy rates do "get in the cracks" with broad effects on the financial system but that they do so in very uneven ways. Specifically, our analysis suggests that different forms of financial intermediation do not react in a uniform way to policy rate shocks. As policy is tightened, financial activity migrates from bank balance sheets to the less-well monitored non-bank sector (including via securitization). In the current context, this channel for disintermediation poses a lower risk than in the past, given the subdued private-label securitization activity. However, in the aftermath of the global financial crisis, new channels of credit creation have opened up in the nonbank sector (including ETFs and asset management vehicles) so that the overall impact of monetary policy decisions on financial risks and activities is far from clear.

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[1] See Pescatori, A., and J. Sole "Credit, Securitization and Monetary Policy: Watch Out for Unintended Consequences", IMF Working Paper 16/76 (2016).

36. Many of the policy recommendations for the nonbanks made during the 2015 IMF Financial Sector Assessment Program remain pertinent today, but have not been implemented (Annex II). Two areas are particularly worth reiterating:

- ***Asset managers***. On-demand vehicles (such as mutual funds) that are ultimately invested in less-liquid fixed income assets have the potential to create market instability due to liquidity mismatches and redemption or first-mover risks. As one indicator, the share of less liquid corporate and foreign bonds held by mutual funds has doubled since 2009, to 21 percent. Regulation is currently being explored to tackle these risks. However, to adequately analyze the evolution of interconnections, exposures, and potential buildup of risks among asset managers, there is a strong case to accelerate the work on building a more complete and transparent data landscape of the asset management industry. This should go hand in hand with a structured effort to implement comprehensive stress testing programs for the asset management industry that focus on liquidity and counterparty risks.
- ***The life insurance industry***. The life insurance sector intermediates 30 percent of GDP in assets that are leveraged. The low-interest rate environment and market pressures to maintain returns at a sufficient level have forced firms to change asset composition (toward nontraditional asset classes, private equity, and lower-rated fixed income) and compete on the liability side (through an increase in unit-linked and guaranteed-return products). However, there is a lack of clarity, at an overall portfolio level, of the underlying risk profile of the life insurance industry and how it has evolved (Box 8), and the absence of harmonized national standards or consolidated supervision makes any assessment of risks in the industry necessarily tentative and incomplete. A coordinated, nationally consistent approach to regulation (particularly valuation and solvency requirements), supervision, and stress testing is needed with regulatory oversight assigned to an independent agency with a nation-wide mandate, operational independence, and appropriate powers and accountability. For designated institutions, enhanced prudential standards should be implemented without further delay.

37. Authorities' views. Leverage in the system on average does not appear high and risks appear manageable. However, supervisors were closely watching risks associated with the concentration of leverage and deteriorating credit quality in certain parts of the system. Over the past few years there has been a clear recognition of the financial stability concerns that may arise from liquidity and redemption risks in pooled investment vehicles (particularly mutual funds that invest in less liquid assets). Work is now underway to improve liquidity management practices, reporting and disclosure for mutual funds and to impose limits on a fund's ability to hold assets with very limited liquidity. While the structure of financial markets is evolving, markets have weathered well the dislocations in the beginning of the year, indicating that market participants have been adapting to the new environment. Efforts were ongoing to better understand the structure of different markets and how they interact. Steps were being taken to build a better database on cash treasury markets, enhance data collection and reporting on securities lending and repos, and form an interagency working group to examine the potential risks to financial stability from hedge fund activity. There was shared concern that regulators do not have a complete picture of the risks being taken in the nonbank system. The Securities and Exchange Commission is developing proposed rules to enhance the regulatory framework over the U.S. asset management industry, which includes enhanced reporting and risk management requirements, limits to leverage, and—for registered investment companies sand advisers—transition planning to address a potential major disruption in their business. Separately, the alignment of repo and triparty settlement has eliminated intraday credit risk, thereby completing the triparty repo reform. There was increased concern on the operational risks to the financial system from a serious failure in either a market's or an individual entity's cyber security protections, an interagency collaboration was underway to better understand and address these risks.

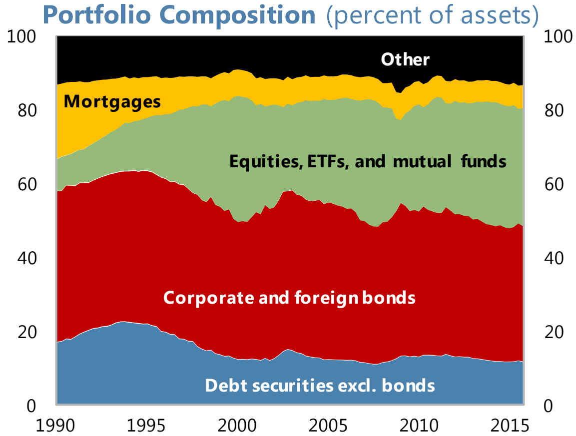
38. Important gains have been made in strengthening the financial oversight structure. Over the past several years a series of decisive measures were put in place to lessen the potential for financial stability risks, including enhanced capital and liquidity requirements, better underwriting standards in the housing sector, greater transparency to mitigate counterparty risks, and limits on proprietary trading. The Dodd Frank Act requirements have stimulated supervisory intensity, with increased emphasis on banks' capital planning, stress testing, and corporate governance. The Federal Reserve's Comprehensive Capital Analysis and Review process has proven to be particularly valuable. Further important regulatory measures have been, or are being, implemented including liquidity risk requirements for money market and mutual funds; standardization of derivatives products and markets; measures that reduce banks' medium term asset-liability mismatch (through the net stable funding ratio), and a framework for bank recovery and resolution (i.e., rules on living wills and bail-inable debt).

39. These improvements in financial oversight need to be preserved. Eight years after the inception of the financial crisis, political support behind the reform of the financial system has clearly ebbed and there is a danger that the indispensable progress that has been made may stall or be rolled back. Of course, it is natural to recalibrate some aspects of the oversight system as changes are seen in action. Nevertheless, it will be important to oppose any wholesale or broad-based efforts to dilute the provisions of the Dodd-Frank Act.

40. Authorities' views. There is a strong commitment to continue to strengthen efforts to monitor potential risks and emerging threats to financial stability. Changes to the structure and practice of financial system oversight since the financial crisis have served to make the system stronger, safer, and more resilient. Future changes to the regulatory structure will continue to be driven by data and evidence-based analysis and will involve broad collaboration among the various regulators under the umbrella of the Financial Stability Oversight Council. However, as the memory of the financial crisis fades, there was a risk that some may want to let the guard down on financial reform. Nevertheless, the administration was committed to ensuring that efforts to roll back the Dodd-Frank Act would be resisted.

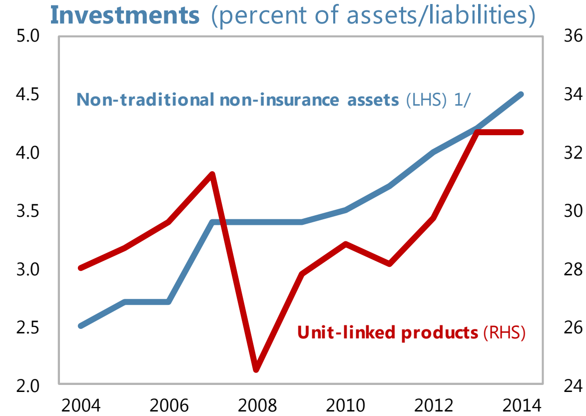
Box 9. Developments in the U.S. Life Insurance Sector

Portfolio Composition (percent of assets)



Sources: Federal Reserve Board; and IMF staff calculations

Investments (percent of assets/liabilities)



Source: IMF GFSR April 2016

1/ Incl. direct lending, investment banking, and mutual & hedge fund investment

Assets. U.S. life insurers' investment portfolios have changed considerably over time with a declining presence of mortgages and rising investments in direct lending, equity, mutual funds, and hedge fund investments. At the same time, average duration has risen and life insurers are now more sensitive to abrupt increases in interest rates (although a slow rise in rates would benefit the industry). However, given the inability of having a clear portfolio view of the asset side of the sector, and the correlations among asset classes, it is difficult to assess the extent to which credit, liquidity, and market risk of the sector has changed over time.

Liabilities. U.S. life insurers have increased the share of insurance products that have higher guarantees or early withdrawal features. As a result, exposure has risen to lapse-induced liquidity risk (with lapse rates between 4 and 7 percent across large firms). In the event that liquidity shortages give rise to asset liquidation in volatile markets, the market liquidity risk that is being borne by the life insurance industry on the liability side has likely risen.

Oversight and supervision. Insurance supervision has been strengthened by bringing it under the oversight of the FSOC and creating the Federal Insurance Office. However, the regulatory system remains fragmented at the state level (despite the ongoing internationalization and globalization of the industry) and Federal Reserve oversight of the systemic insurance groups is still being developed.

41. The withdrawal of correspondent banking relationships has created spillover risks for some countries, particularly those that are unable to substitute to other financial connections in a timely manner. As in other jurisdictions, a number of globally active U.S. banks have been reducing their correspondent banking relationships with counterparts in a range of countries. There is a confluence of factors potentially driving this phenomenon—including shortcomings in the AML/CFT framework in recipient countries, higher supervisory scrutiny, the changing global economic environment, profitability concerns, low margins in correspondent banking, changing liquidity and capital requirements, a broader reorientation of bank business models, insufficient regulatory clarity, reputation concerns of the banks, possible conflicts in regulations (e.g. with data privacy laws), and economies of scale in compliance. On the U.S. side, the legal framework for sanctions, AML/CFT, and tax information sharing appears to be applied in a manner that is proportional to the seriousness of the violation. Nevertheless, regulators should continue their investments in outreach and in the ongoing clarification of regulatory expectations. While the risk-based regulatory approach should strive to provide more clarity, there should be no expectation that U.S. regulators and enforcement agencies are able to offer either certainty or "safe harbor". The U.S. should continue its efforts to assist recipient countries to build capacity and work with other jurisdictions to foster global and bilateral solutions to data privacy impediments. Adherence to the international standards on AML/CFT and the sharing of tax information would help to alleviate concerns about the adequacy of controls at recipient institutions. It is worth exploring mechanisms for U.S. financial intermediaries to lessen the fixed costs of compliance and risk management by pooling resources and exploiting economies of scale (e.g. utilizing specialist transfer and clearing services, building common platforms, and sharing information on clients). There may also be scope for U.S. banks to vary more the risk-pricing of correspondent services so as to factor compliance costs into their fee structure and make the risk-return profile more efficient (see Box 10 and Staff Discussion Note).

42. Authorities' views. Due to the prevalence of U.S. banks in global finance, their withdrawal from certain correspondence banking relationships has affected certain jurisdictions. The U.S. remains fully committed to continuing outreach and supporting capacity building in recipient countries. Recent studies on the impact of withdrawal from corresponding banking relationships on remittances flows and U.S. dollar clearing have given mixed results so the causes and effects are still unclear. Regulators noted the increased use of consent orders by U.S. supervisors and the Department of Justice and the broad intentions to resolve violations with remedial measures taken by financial institutions. Regulators' principle focus was to ensure that internal controls were appropriate and proportional to the risks of the institutions' operations. Indeed, the supervisors' preference was for these activities to remain within the regulated financial system but with institutions having appropriate risk-based controls in place.

43. A more structured, uniform and complete solution is needed to the current lack of transparency in beneficial ownership in the U.S. A lack of information on the beneficial ownership and control of U.S. corporations and trusts has given rise to loopholes for criminal financial activities, including domestic and foreign based tax evasion. The U.S. authorities recently issued regulations to strengthen the requirements for U.S. financial institutions to identify and verify beneficial owners of the companies whose accounts they maintain. They also proposed regulations requiring foreign owned, single member companies to provide ownership information to the tax authorities. However, given that corporate registration and trusts are governed by the states under a variety of statutes, a complete solution will require federal legislation to make beneficial ownership information readily available to regulatory and law enforcement bodies.

44. Authorities' views. Treasury officials underlined the importance they attach to ensuring a more transparent and uniform approach to making available beneficial ownership information. They indicated that that the leaks from the Mossack Fonseca law firm had highlighted the globally widespread use of corporate entities and trusts to avoid and evade taxes and to conceal corrupt practices. Officials indicated that the issue of global tax avoidance and evasion was a huge problem that necessitated both international cooperation and a multilateral solution. Transactions structured solely around tax avoidance undermined public confidence in the tax system and violated the basic principle of making sure that everyone pays their fair share. New Treasury regulations will help and the administration was committed to working with congress to legislate steps to provide regulators with the information they needed to undertake their statutory obligations.

Box 10. Withdrawal of Correspondent Bank Relationships

Trends and implications. Many globally active banks, including those based in the U.S., have been scaling back correspondent banking relationships (CBRs). While the number of such relationships has been declining, there are indications that the volume of correspondent activity continues to rise. Nevertheless, prospective shifts in CBRs could impair cross-border financial intermediation (including remittance transfers or trade finance), limit the provision of financial services to certain jurisdictions, and cause customers and/or activities to migrate to areas with lower regulatory and supervisory visibility and control.

Multiple drivers. The forces leading to this rearrangement of CBRs have included:

- A broader realignment of bank business models as a result of changes to capital and liquidity rules, the requirement for foreign banks to establish bank holding companies in the U.S., a structural decline in profitability of various business lines, and significant fixed costs for the banks associated with maintaining a compliant, risk-based approach to correspondent activities;
- Increasing economic, financial and reputational risks facing banks from undertaking certain forms of cross-border activities, particularly those that bear the risk of both supervisory and criminal enforcement actions for the violation of rules on money laundering, financing of terrorism, tax evasion, sanctions programs, or intermediating the proceeds of narcotics trafficking;
- Tighter post-crisis regulation and broader reporting requirements (including those related to AML/CFT) that require investments in transaction monitoring systems, processes to flag, examine and report suspicious transactions, customer due diligence, and the maintenance of transaction records; and
- Conflict of regulations such as those that arise from data privacy constraints on cross-border information sharing on the transactions in respondent banks and prevent U.S. based banks from undertaking the needed due diligence with their foreign bank clients.

Regulatory clarity. On balance, the U.S. regulations while complex appear clear and generally well understood by most global banks, particularly those with a sizeable U.S. footprint. However, some global banks headquartered in Europe argued that regulations were inconsistently communicated and unevenly implemented, asking for more regulatory clarity. To their credit, the U.S. authorities have undertaken extensive outreach and education efforts, particularly to foreign jurisdictions and internationally active banks. This has included placing in the public domain supervisory manuals, case law, implementing regulations, and outreach presentations.

A risk-based approach. The U.S. regulators and enforcement agencies have been clear that they are looking for adequate systems (in terms of compliance function and internal audits) to manage the risks the financial institutions face. The regulators are not advising the discontinuance of activities but would prefer the risks are, instead, managed and the activity is maintained within the regulated financial system. There appears a proportional process of escalation from supervisory involvement, to enforcement action, and eventually prosecution or sanctions, with most cases being resolved with remedial measures. The oft-cited cases with large fines have involved egregious, widespread, repeated and systemic violations of either sanctions rules or the Bank Secrecy Act. Most banks appear to be assessing CBRs against their risk-return profile, and on a case-by-case rather than wholesale basis.

Box 10. The Evolution of U.S. Correspondent Bank Relationships (concluded)

Policy options:

- U.S. regulators should continue their investments in outreach, the clarification of regulatory expectations, and building understanding of the underlying standards relating to AML/CFT, sanctions, tax issues, and narcotics-linked transactions.
- The U.S. should continue its efforts to assist recipient countries to build capacity.
- The U.S. should continue to work with other jurisdictions to foster global and bilateral solutions to data privacy impediments such as helping to structure carve-outs to local privacy laws that allow for information by other jurisdictions and banks sharing on a narrow set of regulatory questions (as recently was undertaken with Mexico).
- Full compliance with international standards on AML/CFT frameworks or the sharing of tax information by other jurisdictions and banks will only help to mitigate the risks U.S. banks face and help alleviate concerns about the adequacy of controls at recipient institutions.
- There may be mechanisms for U.S. financial intermediaries to lessen the fixed costs of compliance and risk management by pooling resources, utilizing specialist transfer and clearing services, building common platforms, and sharing information on clients. This could be particularly valuable for small states that are on the recipient side but lack scale in their transactions.
- There may also be scope for U.S. banks to vary more the pricing of correspondent services to factor compliance costs in their fee structure and make the risk-return profile more attractive.

STAFF APPRAISAL

45. Growth and inflation. While the pace of the expansion has disappointed over the past few quarters this is a temporary setback and there are signs healthy growth rates are already resuming in the second quarter. As remaining slack is eroded, and employment continues to expand, wage and price inflation should begin to rise, helping to raise average living standards and reverse some of the loss in labor share of income.

46. External assessment. The U.S. external position is moderately weaker than implied by medium-term fundamentals and desirable policies. Over the medium term, fiscal consolidation and policies to raise productivity, increase the labor force, and raise saving will help maintain external stability while achieving full employment.

47. Supply-side trends. Although near-term prospects for growth are good, over a longer horizon the U.S. is likely to confront significant complications associated with a confluence of factors: aging demographics, polarization of the income and wealth distribution, low productivity, declining labor force participation, a falling labor share of income, compromised dynamism, and high levels of adult and child poverty. Some of these reflect global trends and are likely to have common causes.

48. Supply-side policies. The interlinked and complex nature of the supply-side trends facing the U.S. economy mean that reversing them will require efforts on multiple fronts. These include protections for low income households (through a combination of a higher federal minimum wage, more generous earned income tax credit, and a better safety net), a range of benefits to incentivize work and support families, and efforts linked to infrastructure, education, and trade to raise productivity. Policymakers must recognize there is significant uncertainty about how the various possible policy prescriptions will interact. Also, many of the solutions are legislative in nature and will necessitate building a wide social consensus and congressional action. Efforts to foster broad-based political support and to seek out common ground will be essential. If implemented, though, such measures will not only support U.S. economic well-being but, almost universally, have positive spillover implications for the global economy.

49. Fiscal policy. Congressional action over the past year has reached a compromise on fiscal policies that provides the right amount of fiscal support to the U.S. economy. However, those agreements last only until 2017 and efforts can no longer be deferred on tackling the medium-term problems facing the budget. Fortunately, the options to achieve the needed adjustment are many and can accommodate the needed reduction in the medium-term deficit and also fund the additional fiscal measures to support higher potential growth and diminish poverty.

50. Monetary policy. The Federal Reserve should remain data dependent. There is a clear case to proceed along a very gradual upward path for the fed funds rate. Given the likelihood and severity of downside risks to inflation, the potential for a drift down in inflation expectations, the Federal Reserve's dual mandate of maximum employment and price stability, and the asymmetries posed by the effective lower bound, the path for policy rates should accept some modest, temporary overshooting of the Federal Reserve's inflation goal to allow inflation to approach the Federal Reserve's 2 percent medium-term target from above.

51. Macrofinancial policies. While there are pockets of financial sector vulnerabilities they are unlikely to prove systemic. Nevertheless, there are serious data gaps across various parts of the nonbank system which make it impossible to assess the degree of leverage, vulnerabilities and interconnections in the broader financial system. Work should focus on building a more complete and transparent data landscape of the nonbanks. The administration should oppose any attempt to significantly dilute or backtrack on the important progress made in strengthening the resilience of the financial system.

52. It is recommended that the next Article IV consultation take place on the standard 12-month cycle.

Table 1. Selected Economic Indicators 1/

(percentage change from previous period, unless otherwise indicated)

	2015	2016	2017	2018	2019	2020	2021
		Projections					
National production and income							
Real GDP	2.4	2.2	2.5	2.3	2.0	1.9	2.0
Net exports 2/	-0.6	-0.3	-0.5	-0.3	-0.2	-0.2	-0.1
Total domestic demand	3.0	2.4	2.9	2.5	2.2	1.9	2.0
Private final consumption	3.1	2.7	2.7	2.3	2.0	2.0	2.0
Public consumption expenditure	0.4	1.2	1.4	1.4	1.5	1.0	1.3
Gross fixed domestic investment	3.7	2.4	4.3	3.8	3.1	2.5	2.3
Private fixed investment	4.0	2.5	5.0	4.2	3.1	2.3	2.2
Equipment and software	3.1	0.5	4.4	3.8	3.1	2.4	2.4
Intellectual property products	5.7	2.0	4.1	3.8	3.1	2.4	2.0
Nonresidential structures	-1.5	-1.9	4.2	3.4	2.2	1.8	2.2
Residential structures	8.9	10.0	7.3	5.9	3.7	2.4	2.0
Public fixed investment	2.3	2.2	1.3	1.7	3.1	3.8	3.1
Change in private inventories 2/	0.2	0.0	0.1	0.1	0.0	0.0	0.0
Nominal GDP	3.5	3.2	4.4	4.6	4.2	4.0	4.2
Personal saving rate (% of disposable income)	5.1	5.4	5.1	4.7	4.4	4.5	4.6
Private investment rate (% of GDP)	16.8	16.7	17.1	17.3	17.3	17.3	17.4
Unemployment and potential output							
Unemployment rate	5.3	4.9	4.8	4.6	4.7	4.9	5.1
Labor force participation rate	62.6	62.8	62.9	62.7	62.5	62.3	62.1
Potential GDP	1.8	1.9	1.9	1.9	2.0	2.0	2.0
Output gap (% of potential GDP)	-1.1	-0.8	-0.3	0.2	0.2	0.1	0.0
Inflation							
CPI inflation (q4/q4)	0.4	1.1	2.5	2.6	2.4	2.4	2.3
Core CPI Inflation (q4/q4)	2.0	2.2	2.4	2.5	2.4	2.4	2.3
PCE Inflation (q4/q4)	0.5	1.0	2.2	2.3	2.1	2.1	2.0
Core PCE Inflation (q4/q4)	1.4	1.8	2.1	2.2	2.1	2.1	2.0
GDP deflator	1.0	1.0	1.8	2.2	2.2	2.1	2.2
Interest rates (percent)							
Fed funds rate	0.1	0.5	1.0	1.8	2.6	2.9	2.9
Three-month Treasury bill rate	0.1	0.3	0.8	1.6	2.4	2.7	2.7
Ten-year government bond rate	2.1	1.9	2.2	2.8	3.1	3.3	3.3
Balance of payments							
Current account balance (% of GDP)	-2.6	-2.9	-3.5	-3.8	-4.0	-4.0	-4.1
Merchandise trade balance (% of GDP)	-4.2	-4.3	-4.6	-4.7	-4.8	-4.8	-5.0
Export volume (NIPA basis, goods)	-0.2	1.2	5.8	6.1	5.3	5.1	3.9
Import volume (NIPA basis, goods)	4.8	3.2	8.2	6.4	5.6	5.6	5.1
Net international investment position (% of GDP)	-41.0	-44.2	-47.9	-51.7	-55.8	-59.4	-63.0
Saving and investment (% of GDP)							
Gross national saving	18.8	17.6	16.9	16.8	16.7	16.7	16.7
General government	-1.1	-1.3	-1.1	-0.9	-1.1	-1.1	-1.2
Private	19.9	18.9	18.0	17.8	17.8	17.9	17.9
Personal	3.8	4.1	3.8	3.5	3.3	3.4	3.4
Business	16.1	14.8	14.2	14.2	14.5	14.5	14.5
Gross domestic investment	20.2	20.1	20.4	20.6	20.7	20.7	20.8
Private	16.8	16.7	17.1	17.3	17.3	17.3	17.4
Public	3.4	3.4	3.3	3.3	3.3	3.4	3.4

Sources: BEA; BLS; FRB; Haver Analytics; and IMF staff estimates
1/ Components may not sum to totals due to rounding
2/ Contribution to real GDP growth, percentage points

Table 2. Balance of Payments

(annual percent change unless otherwise indicated)

	2015	2016	2017	2018	2019	2020	2021
		Projections					
Real exports growth							
Goods and services	1.1	1.8	5.4	5.4	4.8	5.0	4.4
Goods	-0.2	1.2	5.8	6.1	5.3	5.1	3.9
Services	4.0	3.0	4.6	4.2	4.0	4.7	5.2
Real imports growth							
Goods and services	4.9	3.4	7.5	5.9	5.2	5.1	4.2
Goods	4.8	3.2	8.2	6.4	5.6	5.6	5.1
Nonpetroleum goods	5.3	3.1	9.0	7.3	6.3	6.1	5.5
Petroleum goods	1.7	5.5	-0.1	-2.4	-2.1	-0.6	1.0
Services	5.6	4.1	4.4	3.6	3.6	2.6	0.1
Net exports (contribution to real GDP growth)	-0.6	-0.3	-0.5	-0.3	-0.2	-0.2	-0.1
				(% of GDP)			
Nominal exports							
Goods and services	12.6	12.1	12.2	12.2	12.3	12.5	12.6
Nominal imports							
Goods and services	15.5	15.1	15.4	15.5	15.6	15.8	15.8
Current account							
Current account balance	-2.6	-2.9	-3.5	-3.8	-4.0	-4.0	-4.1
Balance on trade in goods and services	-2.8	-2.9	-3.2	-3.2	-3.2	-3.2	-3.1
Balance on income	0.2	0.0	-0.3	-0.6	-0.8	-0.8	-1.0
Capital and Financial Account							
Capital account balance	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial account balance	-1.1	-2.4	-3.5	-3.8	-4.0	-4.0	-4.1
Direct investment, net	-0.2	0.4	0.4	0.2	0.4	0.4	0.3
Potrfolio investment, net	-0.5	-2.9	-3.8	-4.2	-4.4	-3.9	-3.7
Financial derivatives, net	-0.1	0.0	-0.1	-0.2	-0.1	-0.1	-0.1
Other investment, net	-0.2	0.0	0.1	0.3	0.1	-0.3	-0.6
Reserve assets, net	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Errors and Omissions	1.5	0.5	0.0	0.0	0.0	0.0	0.0
Net International Investment Position	-41.0	-44.2	-47.9	-51.7	-55.8	-59.4	-63.0
Direct investment, net	2.2	3.9	5.4	6.1	7.3	8.5	9.4
Potrfolio investment, net	-39.7	-44.9	-50.4	-56.5	-62.5	-66.0	-68.2
Financial derivatives, net	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Other investment, net	-5.9	-5.5	-5.0	-3.5	-2.8	-3.9	-6.2
Reserve assets, net	2.1	2.0	2.0	1.9	1.8	1.7	1.7
Memorandum items							
Current account balance (US$ billions)	-463	-531	-669	-760	-839	-870	-938
Non-oil trade balance (% of GDP)	-2.4	-2.6	-2.9	-3.0	-3.0	-3.0	-3.0
Foreign real GDP growth (%, ar)	2.2	2.2	2.5	2.7	2.8	2.8	2.8
U.S. real GDP growth (%, saar)	2.4	2.2	2.5	2.3	2.0	1.9	2.0
U.S. real total domestic demand growth (saar)	3.0	2.4	2.9	2.5	2.2	1.9	2.0

Sources: BEA; FRB; Haver Analytics; and IMF staff estimates

Table 3. Federal and General Government Finances
(percent of GDP)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
			Projections									
	(fiscal years; budget basis)											
Federal government												
Revenue	17.6	18.2	18.2	18.2	18.1	18.0	18.1	18.1	18.0	18.0	18.1	18.2
Expenditure	20.9	20.8	21.1	20.9	20.6	21.1	21.3	21.5	22.0	22.1	22.0	22.4
Non-interest	19.5	19.6	19.8	19.5	19.1	19.4	19.5	19.6	20.0	19.8	19.6	19.9
Interest	1.3	1.3	1.3	1.4	1.5	1.6	1.8	1.9	2.1	2.3	2.4	2.5
Budget balance 1/	-3.3	-2.6	-3.0	-2.8	-2.5	-3.0	-3.2	-3.4	-4.0	-4.0	-3.9	-4.3
Primary balance 2/	-1.9	-1.3	-1.6	-1.4	-1.0	-1.4	-1.4	-1.6	-1.9	-1.8	-1.5	-1.8
Primary structural balance 3/ 4/	-1.5	-1.1	-1.4	-1.3	-1.1	-1.4	-1.5	-1.5	-1.9	-1.7	-1.5	-1.8
Change	1.0	0.4	-0.3	0.1	0.2	-0.4	0.0	-0.1	-0.4	0.2	0.2	-0.3
Federal debt held by the public	74.4	73.6	76.0	76.0	75.6	75.9	76.4	77.0	78.1	79.2	80.2	81.5
	(calendar years; GFSM2001 basis)											
General government												
Revenue	31.4	31.7	31.8	31.7	31.7	31.7	31.8	31.8	31.9	32.0	32.1	
Expenditure	35.6	35.1	35.6	35.3	35.1	35.4	35.5	35.7	36.0	35.9	35.8	
Net interest	2.0	1.9	1.9	1.9	2.0	2.1	2.2	2.4	2.6	2.8	2.9	
Net lending 1/	-4.1	-3.4	-3.8	-3.6	-3.4	-3.7	-3.7	-3.9	-4.1	-4.0	-3.7	
Primary balance 2/	-2.1	-1.5	-1.9	-1.7	-1.4	-1.5	-1.5	-1.5	-1.5	-1.2	-0.8	
Primary structural balance 3/ 4/	-1.7	-1.0	-1.6	-1.5	-1.4	-1.6	-1.5	-1.5	-1.5	-1.2	-0.8	
Change	0.5	0.7	-0.5	0.1	0.1	-0.2	0.1	0.0	0.0	0.3	0.3	
Gross debt	104.9	105.7	107.9	107.8	107.4	107.5	107.7	107.8	108.2	108.4	108.5	
incl. unfunded pension liab.	123.2	125.4	127.8	127.8	127.6	127.9	128.2	128.6	129.1	129.5	129.7	
	(from authorities)											
Memorandum items												
Federal government deficit												
President's FY2017 Budget	-2.8	-2.5	-3.3	-2.6	-2.3	-2.6	-2.4	-2.4	-2.8	-2.7	-2.5	-2.7
CBO budget assessment	-2.8	-2.5	-2.9	-2.2	-1.9	-2.5	-2.7	-2.9	-3.4	-3.4	-3.2	-3.5
CBO baseline (current law)	-2.8	-2.5	-2.9	-2.8	-2.7	-3.4	-3.7	-3.9	-4.4	-4.4	-4.3	-4.6
Federal government debt												
President's FY2017 Budget	74.4	73.7	76.5	76.5	76.1	76.1	75.8	75.5	75.5	75.4	75.2	75.2
CBO budget assessment	74.1	73.6	75.4	74.9	74.1	74.1	74.3	74.4	75.0	75.7	76.1	76.7
CBO baseline (current law)	74.4	73.6	75.4	75.5	75.4	76.2	77.2	78.3	79.8	81.2	82.4	83.9

Sources: Congressional Budget Office; Office of Management and Budget; and IMF staff estimates
Note: Fiscal projections are based on the March 2016 Congressional Budget Office baseline adjusted for the IMF staff's policy and macroeconomic assumptions. The baseline incorporates the key provisions of the Bipartisan Budget Act of 2015, including a partial rollback of the Sequester spending cuts in fiscal year 2016. In fiscal years 2017 through 2021, the IMF staff assumes that the sequester cuts will continue to be partially replaced, in proportions similar to those already implemented in fiscal years 2014 and 2015, with back-loaded measures generating savings in mandatory programs and additional revenues. Projections also incorporate the Protecting American From Tax Hikes Act of 2015, which extended some existing tax cuts for the short term and some permanently. Finally, Fiscal projections are adjusted to reflect the IMF staff's forecasts for key macroeconomic and financial variables and different accounting treatment of financial sector support and of defined-benefit pension plans and are converted to a general government basis.

1/ Includes staff's adjustments for one-off items, including costs of financial sector support
2/ Excludes net interest
3/ Excludes net interest, effects of economic cycle, and costs of financial sector support
4/ Percent of potential GDP

Annex I. Response to Past Policy Advice

Fiscal policy. Public finances remain on an unsustainable path. Over the last few years staff has emphasized the importance of fixing long standing fiscal problems and normalize the budget process. The Bipartisan Budget Acts of 2013 and 2015 were welcome steps. The Bipartisan Budget Act of 2015 suspended the debt ceiling until March 2017 and approved appropriations for 2016 and 2017, lessening fiscal uncertainties. These agreements, however, did not address the sustainability of public finances over the medium term. Staff has advocated adopting a medium-term fiscal consolidation plan to restore long-run fiscal sustainability, stressing that early action is needed to slow entitlement spending. Anchored by such a plan, staff called for expanding the near-term budget envelope through specific measures—including front-loaded infrastructure spending, a better tax system, active labor market policies, and improving educational spending, with these measures funded by offsetting savings in future years. As part of the Bipartisan Budget Act and Protecting Americans from Tax Hikes Act, the authorities did expand the near-term deficit and made permanent various tax measures (including improvements to the EITC, the research and experimentation tax credit, and child tax credit advocated by staff).

Monetary policy. Staff supported the FOMC remaining data dependent and recommended deferring the first increase in policy rates until there were greater signs of wage or price inflation than were evident at the time of the 2015 Article IV Consultation. Based on staff's macroeconomic forecast, this implied a gradual path of policy rate increases starting in the first half of 2016. Staff has also repeatedly stressed the importance of communication and pointed to scope for enhancing the Fed's communications toolkit. The Fed did raise rates in December 2015, with little impact on domestic or international financial markets, and continues to judge further increases in the federal funds rate based on incoming data. Communications have repeatedly emphasized that the normalization path will be data dependent and gradual. The Fed continues to maintain a supportive monetary policy and has made significant efforts—in FOMC statements, press conferences, and speeches—to prepare markets for the path toward more normal levels of the policy rate.

Monetary policy and financial stability. Staff has recommended that policy rates should not be used in an effort to either reduce leverage or dampen financial stability risks. Instead, efforts should be targeted toward strengthening the macroprudential framework, developing regulatory tools, and addressing gaps in regulation and supervision. The authorities largely agreed saying that "the jury is still out" on whether such using interest rates for financial stability purposes would be advisable in the U.S. context. They also said there were other tools available to manage emerging risks (such as countercyclical capital buffers or margin requirements). Judging from Fed minutes, financial stability considerations appear not to have been a relevant consideration in recent Fed policy rate decisions.

Financial policies. Based on the 2010 and 2015 FSAPs, staff has recommended multiple steps to tackle financial sector risks, particularly those related to activities in nonbank intermediaries. Substantial progress has been made on the national and global financial reform agenda over the last few years, and many of the policy suggestions have been implemented. These include enhanced capital and liquidity buffers, strengthened underwriting standards in the housing sector, greater transparency to mitigate counterparty risks, as well as progress in collecting more comprehensive information to assess risks. Still, several reforms emphasized by staff remain to be completed, such as addressing remaining vulnerabilities of the money market funds and the tri-party repo market, reducing data blind-spots, better risk management and stress testing of asset managers, enhancing the effectiveness of the FSOC, simplifying the institutional structure for financial oversight, and increasing the resilience of the insurance sector. Annex II provides a fuller summary of progress on FSAP recommendations.

Structural policies. Staff has recommended structural measures to counter the slowdown in potential growth and high poverty rates, including further expanding the EITC, increasing the minimum wage, investing in infrastructure and education, improving the tax system, using active labor market policies, implementing a broad, skills-based approach to immigration reform and capitalizing on the gains from rising U.S. energy independence. The Administration has taken measures to increase wages for employees of federal contractors and some states and localities have increased minimum wages and mandated paid family leave. Building political consensus on a reform of the tax system in the direction envisaged by staff (a less complex system with a broader tax base and lower rates) has made little progress. Support for immigration reform is elusive and there is no plan to raise the gas tax or to introduce a VAT or a carbon tax. However, the recent tax bill whose provisions made permanent the enhanced child tax credit, the American Opportunity tax credit for college tuition, the improved earned income tax credit (expanded to larger families and removing the marriage penalty), and the research and experimentation credit for corporations.

Housing finance. Staff has stressed policy measures to encourage greater availability of mortgage credit, while clarifying the future role of government in housing finance. Administrative measures have been taken to lessen regulatory uncertainties and to transfer risks from the agencies to private investors through market transactions but more could be done in this direction without legislation (see 2015 Selected Issues Paper). Legislative proposals to more fundamentally reshape housing finance have made little headway in Congress.

Annex II. Follow-Up on 2015 FSAP Recommendations

FSAP Recommendation	Developments	Status
Macroprudential framework and policy		
Provide an explicit financial stability mandate to all FSOC member agencies	Several agencies continue to have no explicit legal mandate to support financial stability. This complicates their input to the FSOC, and potentially undermines the response to FSOC recommendations and macroprudential coordination. While not all FSOC agencies within their existing authorities have an explicit legal mandate to support financial stability, they all continue to make progress toward financial reforms. Some FSOC agencies, however (including the FDIC, as specifically incorporated in its official strategic plan), have as their mission, in relevant part, maintaining financial stability.	Not implemented.
Include in FSOC Annual Report specific follow-up actions for each material threat identified	While the FSOC's 2015 Annual Report discusses, in a detailed manner, each material threat identified, provides updates on regulations and other measures proposed or implemented in response to each threat, and outlines the research agenda, specific timelines and responsible agencies are not identified.	Partially implemented.
Publish the current U.S. macroprudential toolkit and prioritize further development	The FSAP recommended that the FSOC should identify when macroprudential tools are needed, and promote the implementation of effective system-wide and time-varying macroprudential tools. The macroprudential toolkit remains to be centrally published, and a prioritization to be made. The FSAP recommended a further development and implementation of time-varying macroprudential tools, like the countercyclical capital buffer (CCB): Necessary final steps on application triggers required to implement the CCB should be completed; the scope to alter risk-	Partially implemented.

	weights on particular types of lending needs to be assessed; macroprudential tools could be used in the real estate sector (e.g. by varying maximum LTVs and DTI ratios). In end-January 2016, the Federal Reserve (FRB) extended until March 21, 2016 the comment period for the proposed policy statement detailing the framework the FRB would follow in setting the CCB (comments on the proposed policy statement were originally due by February 19, 2016). The proposed policy statement gives details on the range of financial system vulnerabilities and other factors that could be taken into account as it calibrates the CCB. Further, the FRB also affirmed that the current level of the CCB should be 0 percent. The FRB consulted with staff of the Federal Deposit Insurance Corporation (FDIC) and Office of the Comptroller of the Currency (OCC) in making this determination.	
Expedite heightened prudential standards for designated non-bank systemically important financial institutions (SIFIs)	The FRB has finalized a comprehensive set of heightened prudential standards for General Electric Capital Corporation, Inc. (GECC), which was designated by the FSOC in July 2013 for Federal Reserve supervision. The standards include capital and liquidity requirements, capital planning and stress testing requirements, financial risk management requirements, and restrictions on intercompany transactions between GECC and its parent. The FRB has further issued proposed reporting requirements and final resolution planning requirements for the insurance companies designated as SIFIs. On June 3, 2016, the Board approved an advance notice of proposed rulemaking inviting comment on conceptual frameworks for capital standards that could apply to systemically important insurance companies and to insurance companies that own a bank or thrift.	Partially implemented.
Improve data collection, and address impediments to inter-agency data sharing	The Office of Financial Research (OFR) *Interagency Data Inventory* (IDI), which catalogues the data that FSOC member agencies purchase or collect from the industry or derive from other data, had its annual update in February 2016. FSOC member agencies use the inventory for identifying data gaps and for improving research and analysis but, due to specific restrictions to data sharing, the listing of	Partially implemented.

	data in the inventory does not necessarily signify that all FSOC member agencies have access to all data sets. The OFR's *Bilateral Repo Data Collection Pilot Project* was the first instance where the OFR went directly to the industry to collect information. Participation in the pilot project was voluntary and, specifically, the participating companies provided input to the OFR on what data should be gathered. While information and data on the triparty and General Collateral Finance (GCF) repo markets are published regularly, information about bilateral repos (about half of the repo market in terms of volume) was hardly available, and largely incomplete. The data collection is being made permanent. While steady progress in data collection and sharing is being made, there are two areas where more work needs to be done: (i) The collection of data on securities lending, asset management, and bilateral repos is still at an early stage; (ii) outstanding obstacles to interagency data sharing should be reduced, as recommended in the FSAP.	
Regulation and supervision		
Give primacy to safety and soundness in the supervisory objectives of Federal Banking Agencies	The multi-agency framework continues to create coordination challenges. Duplication of supervision can potentially result in uncertainty for institutions when rules or guidance appear contradictory. However, the Federal Financial Institutions Examination Council (FFIEC) is a forum the agencies use to promote consistent approaches to bank supervision, which they also try to achieve through regular informal communication. Consumer protection is not left exclusively to the Consumer Financial Protection Bureau (CFPB). However, the prudential regulators and the CFPB have a memorandum of understanding (MOU) in place that establishes a process to coordinate exam scheduling. The MOU also requires that exam reports be shared and comments considered for those institutions where jurisdiction is shared, prior to the report of examination being issued to the institution. The federal banking agencies' mandates have not been redefined, and although safety	Partially implemented.

	and soundness have not been given primacy in their supervisory objectives, federal banking agencies examine for safety and soundness under the Uniform Financial Institutions Rating System. While charter shopping has not been eliminated and the dual banking structure can be challenging for international cooperation, the FFIEC has affirmed that charter conversions or changes in primary federal regulator should only be conducted for legitimate business and strategic reasons. Further, enforcement actions still need to be coordinated better with home supervisors.	
Strengthen the banking supervisory framework and limit structures for related party lending and concentration risk; and update guidance for operational and interest rate risk	*Concentration risk:* The FRB issued a final rule in November 2014, Regulation XX, to implement Section 622 of the DFA and establish a financial sector concentration limit. It prohibits a financial company from merging or consolidating with, or acquiring control of, another company if the resulting company's liabilities would exceed 10 percent of the aggregate consolidated liabilities of all financial companies. Furthermore, in the FSAP's Basel Core Principles (BCP) assessment, the supervisory framework for credit concentration risk was deemed sound. While guidance on specific areas of credit concentration risk has been issued, some reassessment of the supervisory force of the thresholds for commercial real estate exposures would be warranted. In March 2016, the FRB proposed a rule to address *counterparty credit risk*. The proposal would apply single-counterparty credit limits to Bank Holding Companies (BHCs) with total consolidated assets of $50 billion or more, and depending on the BHC's systemic footprint: (i) GSIBs would be restricted to a credit exposure of no more than 15 percent of the bank's Tier 1 capital to another systemically important financial firm, and up to 25 percent of the bank's tier 1 capital to another counterparty; (ii) BHCs with $250 billion or more in total consolidated assets, or $10 billion or more in on-balance-sheet foreign exposure, would be restricted to a credit exposure of no more than 25 percent of the bank's tier 1 capital to a counterpart;. (iii) BHCs with $50 billion or more in total consolidated assets would be restricted to a credit exposure of no more than 25 percent of the bank's total regulatory capital to another counterparty; (iv) BHCs with less than $50 billion in total consolidated assets, including community banks, would not be subject to the proposal. Similarly tailored requirements would also be established for foreign banks operating in the United States. However, comparable supervisory guidance on *other risk concentrations* remains to be issued. The separate and additional limits for money market investments and security holdings available to	Partially implemented.

	banks (but not federal savings associations) continue to leave open the possibility of excessive risk concentrations. *Guidance on operational risk and interest rate risk*: Supervisory guidance and reporting requirements in operational risk remain disparate. The approach to interest rate risk in the banking book does not include specific capital charges or limits being set under Pillar 2, is in contrast to the treatment of other risks. Further guidance remains to be issued. *Limit structures for related party lending*: Publicly available information suggests no progress has been made towards implementation of the FSAP recommendation.	
Set up an independent insurance regulatory body with nationwide responsibilities and authority	The supervisory and regulatory architecture for insurance firms has not changed.	Not implemented.
Implement principle-based valuation standard for life insurers consistently across the states	State insurance regulators' Principle-based Reserving Valuation Manual will become operative as of January 1, 2017 for the 45 States and territories that have already adopted it (but as of yet some States have not agreed on adopting the standard). Also, this does not automatically mean that standards will be fully harmonized across the States as risk models would still be approved at State level, and legislation leaves some room for interpretation.	Partially implemented.

Develop and implement group supervision and group-level capital requirements for insurance companies	On June 3, 2016, the FRB approved an advance notice of proposed rulemaking inviting comment on conceptual frameworks for capital standards that could apply to systemically important insurance companies and to insurance companies that own a bank or thrift. State insurance regulators have adopted a proposal for a group capital calculation (not currently framed as a requirement) and instituted a Group Capital Calculation Working Group. Regarding group supervision, as of May 2016, all 50 states, the District of Columbia and Puerto Rico, have adopted the updated NAIC model holding company act enhancing state insurance regulators' group supervisory authorities.	Partially implemented.
Provide needed resources to the Securities and Exchange Commission (SEC) and Commodity Futures Trading Commission (CFTC) and enhance their funding stability	Publicly available information suggests no progress has been made towards implementation of the FSAP recommendation.	Not implemented.
Increase examination coverage of asset managers	The FSAP recommended that the SEC needs to be better equipped in order to be able to significantly increase the number of asset manager examinations from the current coverage of only around 10 percent of investment advisers per year.	Not implemented.
Introduce explicit requirements on risk management and internal controls for asset managers and commodity pool operators	The FSOC has actively reviewed potential risks to financial stability stemming from the asset management industry, and *in April 2016 published a review of asset management products and activities* that includes a recommendation to establish explicit risk management requirements for asset managers (see further below).	Not implemented.
Complete the assessment of equity	The SEC's *Equity Market Structure Advisory Committee* continues to meet on a quarterly basis. Over the last year, the meetings focused on (i) recommendations related to a potential access fee pilot	Not implemented.

market structure and address regulatory gaps	and trading venues regulation, (ii) the events of August 24, 2015 ("flash crash"), (iii) impact of access fees and rebates on equity market structure; (iv) different regulatory frameworks applicable to exchanges and other trading venues; (v) the order protection rule (Rule 611 of SEC Regulation NMS). The assessment of the equity market structure has not been completed. Hence, regulatory gaps remain to be addressed and data gaps be closed.	
Stress testing		
Conduct liquidity stress testing for banks and nonbanks on a regular basis; run regular network analyses; and link liquidity, solvency, and network analyses	Comprehensive Capital Analysis and Review (CCAR) and DFA stress tests continue to take the form of supervisory solvency stress tests, where systemic risk is not specifically assessed. Authorities finalized a rule implementing for the large U.S. banks the *Liquidity Coverage Ratio* (LCR), and more recently proposed a *Net Stable Funding Ratio* (NSFR). Per definition, the LCR is a short-term liquidity stress test, and banks are expected to pass the underlying stress scenario on a continuous basis. Both required and stable funding in the NSFR are subject to stress (runoff rates and haircuts on the value of liquid assets). Hence, the NSFR contains elements of liquidity stress test, as well. However, stress testing exercises, like the DFA stress tests or the CCAR, focus on credit and market risk, not on funding and market liquidity risk. Authorities do not yet conduct, on regular basis, liquidity stress tests on nonbanks. *Liquidity stress tests for banks*: The final rule on the *Liquidity Coverage Ratio* (LCR), which requires large banking organizations to hold a minimum amount of high-quality liquid assets that can be utilized to meet net cash outflows over a 30-day stress period, was finalized in September 2014. Firms are required to be fully compliant with the standard by January 1, 2017. The authorities in May 2016 proposed a rule to strengthen the medium-term funding patterns of U.S. banks by requiring a minimum amount of available stable funding (*Net Stable Funding Ratio*, NSFR) relative the required stable funding. The NSFR would become effective on January 1, 2018. The NSFR proposal would complement the LCR rule. The proposed rule foresees specifications conditional on the risk of a particular bank, i.e., the most stringent requirements would apply to the largest firms (those with $250 billion or more in total consolidated assets or $10 billion or more in on-balance sheet foreign exposure, as well as those banking organizations' subsidiary depository institutions that have assets of $10 billion or more). The proposed rule for the largest BHCs would be consistent with the liquidity standard agreed to by the Basel Committee on Banking Supervision. BHCs with less than $250 billion, but more than $50 billion in total consolidated assets, and less than	Partially implemented.

	$10 billion in on-balance sheet foreign exposure would be subject to a less stringent, modified NSFR requirement. The rule would not apply to holding companies with less than $50 billion in total consolidated assets and would not apply to community banks. Holding companies subject to the proposal would be required to publicly disclose information about their NSFR levels each quarter. *Network analysis, and integration with liquidity and solvency stress tests.* The DFA stress tests or the CCAR do not integrate different risk classes beyond credit and market risk. Tests look at banks individually, while contagion and spillover risks are not assessed in the tests. Publicly available information suggests there is no supervisory requirement to integrate in a single framework different risk factors.	
Develop and perform regular insurance stress tests on a consolidated group-level basis	State insurance regulators assess the stress tests performed by insurance companies on a consolidated group-level basis through the Own Risk and Solvency Assessment (ORSA). However, as of yet, no macroprudential insurance sector stress testing is performed by regulators.	Partially implemented.
Develop and perform regular liquidity stress tests for the asset management industry	The FSOC has actively reviewed potential risks to financial stability stemming from the asset management industry, and *in April 2016 published a review of asset management products and activities*. The update summarized the outcome of an almost two-year long consultation process with the public, and provided the FSOC's view on areas that require specific attention, and outlines how to respond to these risks. The report largely discussed and commented on the SEC's May 2015 proposals on how to regulate the US asset management industry. These included enhanced data reporting for registered investment companies and advisers of separately managed accounts; a strengthening of asset management firms' liquidity risk management and disclosure; and limits to leverage obtained through derivatives transactions by registered investment companies. The FSOC's review focused on five areas: liquidity and redemption; leverage; operational functions; securities lending; and firm resolvability. As regards liquidity and redemption risks, the FSOC recommends implementing requirements for robust liquidity risk management practices for mutual funds, including stress testing; the issuance of guidelines on funds' holdings of less liquid assets; enhanced reporting as well as public disclosure; and the reallocation of redemption costs.	Partially implemented.

Market-based finance and systemic liquidity		
Change redemption structures for mutual funds (MF) to lessen incentives to run; move all money market mutual funds (MMMFs) to variable net asset value (NAV) approaches	*FSOC recommended changes in redemption structures:* In April 2016, the FSOC recommended taking steps to allow and facilitate MFs' allocation of redemption costs more directly to investors who redeem shares. Such tools would help reduce first-mover advantage and mitigate the risk that less-liquid asset classes would be subject to fire sales under stressed conditions. It was further recommended that regulators assess which tools could be effective in reducing first-mover advantage and determine the scope of application of such tools. The report welcomed the SEC's September 2015 proposed rule for MFs and ETFs designed to enhance liquidity risk management by funds, provide new disclosures regarding fund liquidity, and allow funds to adopt swing pricing to pass on transaction costs to entering and exiting investors. Regulators should issue guidance on adequate risk management planning, and establish expectations regarding MFs' abilities to meet redemptions under a variety of extreme but plausible stressed market scenarios (stress testing). *MMMFs and variable NAV:* IMF staff and the FSOC have long recommended the adoption of floating NAVs for MMMFs, which mandate the daily share prices of these funds to fluctuate according to changes in the market-based value of fund assets. The new rules issued by SEC require floating NAVs for institutional prime MMMFs but allow retail and government MMMFs to continue using an amortized cost method of pricing where constant NAVs are applied. For the latter group of MMMFs, the rules provide new tools—liquidity fees and redemption gates—to address potential runs, but structural vulnerabilities remain. For government MMMFs, the framework remains unchanged. The rules provide a two-year transition period for their implementation, and are not likely to be revised again anytime soon.	Partially implemented.
Complete triparty repo (TPR) reforms and measures to reduce run-risk, including the possible use of a central clearing platforms (CCPs)	Fully implemented. The underlying infrastructure of the TPR market, a key stress point in the global financial crisis, has been improved. The amount of intra-day credit extended to the collateral providers has been largely eliminated by modifying the settlement cycle and improving the collateral allocation processes. Also, clearing banks are now limited to funding a maximum of 10 percent of a dealer's notional tri-party book through pre-committed lines (incurring a capital charge). The resilience of the TPR market needs to be enhanced to reduce fire-sale risk and the reliance on the two clearing banks. Furthermore,, full alignment of general collateral finance (GCF; service offered by one U.S. CCP, which allows securities dealers exchanging anonymously sovereign securities for cash)	Implemented.

	repo settlement with the new triparty settlement process has been achieved by moving the unwinding of inter-dealer GCF repos to 3:30 pm, largely reducing the need for discretionary extensions of intraday credit to settle. It remains important to closely monitor the CCP that settles interbank GCF repo transactions, in particular as the Fixed Income Clearing Corporation suspends GFC repo transactions on an interbank basis starting July 2016, and to take further measures to reduce the usage of intraday credit if the interbank GCF repo program is restored. Risk of fire-sales of collateral by a dealer loosing access to repo or by a dealer's creditors: The latter has been reduced through the use of CCP-like clearing for repo financing, an industry effort establishing a process for orderly asset liquidation of a defaulted member. And although the risk of collateral fire-sales has reduced through the introduction of capital and liquidity regulations for broker-dealers, it remains a significant risk that warrants attention. Intraday counterparty risk exposure in the tri-party repurchase (repo) market contracted significantly in recent years, but more work is needed to bring the settlement of General Collateral Finance (GCF) repo transactions in line with post-crisis reforms. The potential for fire sales of collateral by creditors of a defaulted broker-dealer also remains a significant risk. Additionally, data gaps continue to limit regulators' ability to monitor the aggregate repo market and identify interdependencies among firms and market participants. Regulators will need to monitor market responses to new SEC money market mutual fund (MMF) rules, which become effective this year, and assess where there may be unforeseen risks, as well as potential regulatory and data gaps associated with other types of cash management vehicles.	

Enhance disclosures and regulatory reporting of securities lending	In early 2016, the Office of Financial Research (OFR), FRB, and SEC completed a *joint securities lending data collection pilot*. In April 2016, the FSOC highlighted that without comprehensive information on securities lending activities across the financial system, regulators cannot fully assess financial stability risk, and encouraged enhanced and regular data collection and reporting, as well as interagency data sharing. The FSOC encouraged efforts to propose and adopt a rule for a permanent collection of data on securities lending.	Partially implemented.
Strengthen broker-dealer regulation, in particular liquidity and leverage regulations	The U.S. authorities are tackling financial leverage through regulating financial products rather than types of market participants (of which some are not subject to direct regulation): Broker-dealer requirements, like margin rules for securities transactions, central clearing of derivatives (fostering product standardization and increasing liquidity), as well as newly introduced margin requirements for uncleared swaps constitute important examples of regulatory and supervisory efforts. However, those apply only to broker-dealers under a bank holding company, and leverage can still be increased through other instruments (like commercial paper). In order to reduce the financial stability risk potential of derivatives, US bank swap dealers are now required to collect and post margin on (almost) all swaps that cannot be centrally cleared. The use of uncleared derivatives is thereby made less attractive, and will motivate substitution with standard derivatives that go through central clearinghouses. This measure also helps ensure that a default of a major OTC derivatives market participant would not bring down the system. As CCPs take on such a central role in today's financial markets, it is critical that be both resilient and resolvable. In December 2015, the SEC *proposed rules on the use of derivatives by registered investment companies*, limiting leverage generated through derivatives, and requiring formalized risk management programs for funds with particularly complex derivatives structures. In October 2015, FRB, Federal Deposit Insurance Corporation (FDIC), OCC, Farm Credit Administration (FCA), and Federal Housing Finance Association (FHFA) together issued a *final rule on capital and margin requirements for common swap entities* (swap dealers, key swap participants, security-based swap dealers and participants). In parallel, the agencies issued another final rule that specified which non-cleared swaps and security-based swaps are exempted from the general rule.	Partially implemented.

	The key change here is the use of a variation margin requirement, which will be phased in over six months starting September 2016. The European Commission (EC) and the CFTC reached agreement on the Common Approach for Transatlantic CCPs OTC Derivatives Reform agenda, which will allow the European Securities and Markets Authority (ESMA) to recognize U.S. CCPs as 'equivalent' to EU CCPs for the purpose of providing their services in the European Union (EU) while complying with CFTC requirements. Reciprocally, EU CCPs will also be permitted to provide services to U.S. clearing members and clients while complying with certain corresponding EU requirements. As a result, derivatives clearing become harmonized across the Atlantic. However, international regulatory and supervisory bodies should continue to develop rules and standards as market infra- and microstructure evolves. Broader international harmonization of standards, beyond the U.S.-EU, would help reduce the potential for regulatory arbitrage, and further enhance the stability of critical market infrastructure.	
Improve data availability across bilateral repo/triparty repo and securities lending markets	The OFR's *Bilateral Repo Data Collection Pilot Project* aims at collecting data about bilateral repos (see above). Data on the triparty and GCF repo markets are published regularly. Despite these efforts, considerably more work needs to be done with respect to data collection on securities lending and asset management, where data is scarce. Also, information collection on bilateral repos is still at an early stage.	Partially implemented.
Liquidity backstops, crisis preparedness, and resolution		
Revamp the Primary Credit Facility as a monetary instrument	The facility that expired in 2010 has not been revamped. Publicly available information suggests no progress has been made towards implementation of the FSAP recommendation.	Not implemented.
Enable the Fed to lend to solvent non-banks that are designated as systemically important	In November 2015, the Federal Reserve approved a *final rule specifying its procedures for emergency lending* under Section 13(3) of the Federal Reserve Act. Since the passage of the DFA in 2010, the FRB's emergency lending activity has been limited to programs and facilities with "broad-based eligibility" that have been established with the approval of the Secretary of the Treasury. The rule	Partially implemented.

	provides greater clarity regarding the FRB's implementation of limitations to emergency lending, and other statutory requirements. The final rule defines "broad-based" to mean "a program or facility that is not designed for the purpose of aiding any number of failing firms and in which at least five entities would be eligible to participate." These additional limitations are consistent with and provide further support to the revisions made by the DFA that a program should not be for the purpose of aiding specific companies to avoid bankruptcy or resolution. While the final rule has achieved more clarity, its restrictions limit the Federal Reserve in taking action to avoid or minimize contagion, in particular from solvent non-banks that have been designated as systemic by the FSOC.	
Assign formal crisis preparedness and management coordinating role to FSOC	Crisis preparedness and management has not been formally assigned to the FSOC. Publicly available information suggests no progress has been made towards implementation of the FSAP recommendation.	Not implemented.
Extend the Orderly Liquidation Authority powers to cover systemically-important insurance companies and U.S. branches of foreign-owned banks	Systemically important U.S. insurance holding companies can be resolved using Orderly Liquidation Authority (OLA) powers. The State-based resolution regimes related to the resolution of insurance company subsidiaries have tools available to address insurance company liquidations, but their capacity to deal effectively with insurance company subsidiaries of a systemically important holding company remains untested. U.S. agencies are currently discussing how FMIs would be resolved. To the extent a foreign bank has branches in the United States, a Single Point of Entry resolution strategy generally would not affect such branches.	Partially implemented.
Adopt powers to support foreign resolution measures; extend preference to overseas depositors	To the extent insured depository institutions enter resolution under the FDI Act, the depositor preference rules applicable to insured depository institutions, as well as ring-fencing of foreign-owned uninsured bank branches can complicate effective coordination by potentially increasing the likelihood of ring-fencing of foreign branches by host authorities. However, efforts continue to enhance resolution preparedness, including by coordinating institution-specific resolution strategies on a cross-border basis (cf. living wills, see below). Also, information-sharing agreements before and during a crisis, as well as the progress on effective group-wide resolution plans and enhancing resolvability, are not fully implemented.	Partially implemented.

Finalize recovery and resolution plans for SIFIs, agree cooperation agreements with overseas authorities	Important steps have been made towards implementing effective recovery and resolution frameworks. The U.S. supervisory authorities place responsibility for the recovery planning process on the firm's senior management. The board of directors of the firm is responsible for oversight of the firm's recovery planning process. Recovery plans are updated at least annually. To prepare for the implementation of its resolution authority under Title II of the Dodd-Frank Act, the FDIC has developed resolution plans for G-SIFIs and has included in each plan a resolution strategy and an operational plan that meet the requirements of the applicable *Key Attributes* and relevant annexes thereto. Furthermore, the establishment of *living wills* is an essential requirement from the DFA, where SIFIs and certain other firms are asked to design, and submit for review to the FRB and the FDIC, concise plans explaining their orderly resolution under bankruptcy. Authorities have recently communicated that the majority of the firms' submitted plans so far are not credible or would not facilitate an orderly resolution under the U.S. Bankruptcy Code, and that more work needs to be done by these firms. However, according to the U.S. authorities, the living wills have shown progress and will continue to evolve. Progress made includes firms' adherence to the ISDA 2015 Universal Resolution Stay Protocol; maintenance of long-term debt issued from the top-tier parent holding company to potentially absorb losses; steps to ensure operational continuity on both an intra-company and third-party basis; continued legal entity rationalization; and enhanced capability to monitor liquidity needs.	Partially implemented.
Financial market infrastructures (FMIs)		
Identify and manage system-wide risks related to interdependencies among FMIs, banks, and markets	Progress has been made towards implementation of the FSAP recommendation. The U.S. authorities have participated in Financial Stability Board (FSB) work streams on the continuity of access to FMIs for members in resolution and resolution strategies for FMIs. U.S. authorities have discussed FMI	Partially implemented.

	recovery actions and have commenced information sharing related to resolution matters, and are actively engaging in resolution planning for systemic CCPs. U.S. authorities will continue efforts to increase the robustness of CCPs. Several issues identified at the domestic and international levels warrant further attention, such as cyber resilience, standardized stress testing, harmonized margin requirements, implementation of recovery and resolution regimes, the adequacy of CCPs' loss absorbing capacity in resolution, and continued coordination between the supervisors of CCPs and their main clearing members.	
Offer Fed accounts to designated Financial Market Infrastructures (FMUs) to reduce dependencies on commercial bank services	In April 2016, the Federal Reserve Bank of Chicago authorized three U.S. clearing houses, run by CME Group and Intercontinental Exchange, and the Options Clearing Corporation, to *open accounts at the central bank*. The measure has been possible as clearing houses have been designated as systemically important utilities.	Implemented.
Housing finance		
Reinvigorate the momentum for comprehensive housing market reform	Housing finance and the U.S. housing market have not been reformed comprehensively. *The government decided to make only limited changes to the footprint of Government Sponsored Entities (GSEs).* This means that the availability of mortgages will continue to be wider than without Fanny and Freddy dominating the market. Lender surveys organized by Fannie or housingrisk.org further show that credit standards have been loosening continuously since end-2014, indicating that loan loss impairments for the GSE (despite a recent decline) may increase somewhat going forward. As a result, the GSEs' capital buffer could erode going forward, and Treasury funds are needed. Also, since 2015, the GSEs have to transfer their funds to the Housing Trust Fund (in line with the 2008 Housing and Economic Recovery Act), which puts additional pressure on the GSEs financial situation. The *"Qualified Mortgage" (QM) rule* (September 21, 2015) will stimulate the housing market further, as it provides smaller banks with protection against lawsuits under the Ability-to-repay regulation. This could in fact mean a competitive advantage for the smaller banks, as well as broader extension	Not implemented.

	of housing credit in general. Perhaps this advantage can compensate for their low economies of scale in the high fixed-cost mortgage business. Large banks, on the other hand, continue to tighten standards and reduce mortgage exposure, resulting in an increase in nonbanks' market share (see list of risks further below). Also, the *Congressional Budget Office (CBO) continues to push for a modification of the GSEs' multifamily and single-family operations* ("shrink or eventually close"). The discussion centers around four different options, including a hybrid approach, where investors take the first hit, while the rest is covered under a federal guarantee (in line with the 2015 Article IV recommendations). However, there is little momentum for decisive housing market reform. The *House Financial Services Committee* in March 2016 passed three bills that aim at reducing small banks' regulatory reporting requirements, which would allow regulators to tailor regulations to a bank or credit union's business model and risk profile (H.R. 2896), modify the Volcker Rule so that smaller banks and businesses have easier access to finance (H.R.4096), and exempt from the Dodd-Frank Act's risk retention requirements certain qualified commercial real estate loans (H.R. 4620). The two bills that featured prominently in the 2015 U.S. Article IV Special Issues Paper both did not pass Congress: House bill "*Protecting American Taxpayers and Homeowners Act of 2013 - GSE Bailout Elimination and Taxpayer Protection Act 2013*," H.R.2733, introduced on July 22, 2013; and the "*Housing Finance Reform and Taxpayer Protection Act of 2014*," S.1217.	

Annex III. Risk Assessment Matrix[1]

Nature/Source of Risk	Overall Level of Concern	
	Likelihood of Realization	**Expected Impact if Risk Materializes**
Sharp asset price decline and decompression of credit spreads	**Medium** As investors reassess underlying risk and respond to changes in growth and financial prospects in large economies with poor market liquidity amplifying asset price volatility.	**Medium** A persistent 1 percent decompression of credit spreads could subtract about ½ percent of GDP after two years. Sustained spikes in term premia could imply greater output losses.
Surge in the US dollar	**High** Improving U.S. economic prospects relative to the rest of the world could lead to a dollar surge, suppressing exports and investment in tradables and eroding growth.	**Medium** A persistent 10% dollar appreciation reduces GDP by 0.5 percentage points in the first year and 0.5-0.8 percentage points in the second year, *ceteris paribus*.
Persistently lower oil prices	**Medium** Low oil prices triggered by supply factors reverse only gradually, amidst weak demand. A smaller than expected boost to consumption and non-oil investment are outweighed by the negative impact on investment in the energy sector.	**Low** With the level of oil investment already cut in half in the past 2 years, further declines are likely to have small effects on aggregate growth, with potential upsides if consumption effects kick in.
Faster increases in interest rates	**Medium** The Fed may raise policy rates at a faster-than-expected pace because inflation picks up. This could lead to market volatility and higher risk premia as portfolios are repositioned.	**Medium** A permanent 50 bps surprise increase in 10-year interest rates could subtract about ½ percent of GDP after two years. Sustained spikes in term and risk premia could imply greater output losses.
Slower U.S. potential growth	**Low** Potential growth may be slower than the 2 percent currently assessed. If so, the current output gap would be significantly smaller and prospects for future growth would be weaker.	**High** Greater inflationary pressures would lead to a steeper path for policy rates and create market volatility. Lower medium-term growth would worsen poverty, increase debt-GDP, and create negative global spillovers.
Structurally weak growth in key advanced and emerging economies	**High** Weak demand and persistently low inflation leading to "new mediocre" rate of growth. Maturing of the cycle, misallocation of investment, and incomplete structural reforms leads to prolonged slower growth in EMs.	**Medium** A 1 percentage point decline in growth in advanced and emerging economies could subtract about 0.1 percentage point of U.S. GDP after two years.
British voters elect to leave the European Union.	**High** Protracted post-exit negotiations of trade, financial and migration relationships, elevated financial volatility and heightened uncertainty.	**Medium/Low** The likely increase in risk premia could result in a stronger U.S. dollar and lower Treasury yields with an uncertain impact on the U.S. economy.

[1] The Risk Assessment Matrix (RAM) shows events that could materially alter the baseline path (the scenario most likely to materialize in the view of IMF staff). The relative likelihood of risks listed is the staff's subjective assessment of the risks surrounding the baseline ("low" is meant to indicate a probability below 10 percent, "medium" a probability between 10 and 30 percent, and "high" a probability between 30 and 50 percent). The RAM reflects staff views on the source of risks and overall level of concern as of the time of discussions with the authorities. Non-mutually exclusive risks may interact and materialize jointly.

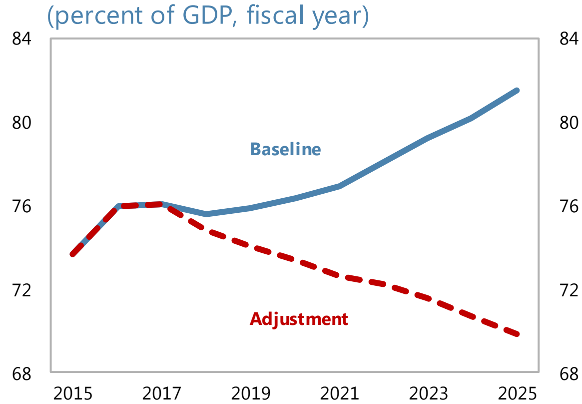
Annex IV. Public Debt Sustainability Analysis

The budget deficit in the United States has been reduced significantly over the past few years. Yet, the public debt ratio remains on an unsustainable trajectory over the medium term. Under the baseline scenario, public debt is projected to first stabilize, but then to start rising as aging-related spending pressures on entitlement programs assert themselves and interest rates normalize. Gross financing needs are large but manageable given the global reserve currency status of the United States. A medium-term, credible consolidation plan remains a key policy priority.

Background. Significant fiscal consolidation measures were legislated in 2011–13 to tackle the high public debt ratio, which has doubled at the federal government level since 2007 as a result of the financial crisis and the ensuing recession. The Bipartisan Budget Acts of 2013 and 2015 partially reversed the cuts scheduled to take place in FY2014-2017, replacing them with savings generated through cuts to mandatory spending in later years and, thus, improving the pace and distribution of near-term deficit reduction. On the other hand, the Tax Act of 2015, extended many tax cuts through the medium term and made some permanent, leading to higher deficits in the medium and long term.

Baseline. Staff's baseline assumes the current laws, except that the automatic spending cuts beyond FY2017 would be partially reversed and replaced similar to the deals reached in the Bipartisan Budget Acts of 2013 and 2015). With these assumptions, the public debt ratio temporarily stabilizes in 2016–18. However, the debt ratio starts rising again owing to the rising interest rates, as well as health care and social security related spending pressures from an aging population. Federal debt held by the public is projected to increase from 75 percent of GDP now to close to 82 percent of GDP in FY2025, with general government gross debt exceeding 108 percent of GDP by FY2025. Overall, despite the substantial deficit reduction achieved so far and the legislated savings in the pipeline, the U.S. public finances remain on an unsustainable trajectory.

Federal Debt Held by the Public
(percent of GDP, fiscal year)



Source: IMF staff estimates

Adjustment scenario. The 2015 general government primary balance was -1½ percent of GDP. In staff's view, aiming for a medium-term general government primary surplus of about ¾ percent of GDP (a federal government surplus of about 1 percent of GDP) would be appropriate to put the public debt ratio firmly on a downward path. The target primary surplus would have to be higher in the long run to bring the debt ratio closer to the pre-crisis levels by 2030.

Debt servicing costs. The fiscal projections benefit from the current favorable interest rate-growth differential. Reflecting accommodative monetary policy and the safe haven status of the United States, real interest rates have fallen well below GDP growth. Under the staff's baseline, the effective interest rate is projected to rise gradually from the current historical lows and reach about 4¾ percent by 2025 (compared to an average of about

3½ percent over 2005–2015). As a result, real interest rates will become a major debt-creating flow over the medium-term.

Realism. Baseline economic assumptions and fiscal projections are generally within the error band observed for all countries. While ambitious, the projected fiscal adjustment is realistic based on the consolidation episodes observed in 1990–2011.

Stress tests. The public debt dynamics are highly sensitive to growth and interest rate assumptions, primarily reflecting the fact that the U.S. public debt ratio already exceeds 100 percent of GDP. An increase of 200 basis points in the sovereign risk premium would mean a debt ratio that is about 15 percentage points above the baseline. If real GDP growth turns out to be one standard deviation below the baseline, the public debt would increase by about 8 percentage points above the baseline. A scenario involving a 1 percentage point slippage in the planned consolidation over the next two years would lead to a debt-to-GDP ratio of 110 percent in 2025. A combined macro-fiscal shock could raise the public debt ratio as high as 132 percent of GDP by the end of the 10-year horizon. An exchange rate shock is unlikely to have important implications for debt sustainability in the United States given that all debt is denominated in local currency and the reserve currency status of the dollar.

Mitigating factors. The depth and liquidity of the U.S. Treasury market as well as its safe haven status at times of distress represent a mitigating factor for relatively high external financing requirements.

United States: Public DSA–Baseline Scenario

(percent of GDP, unless otherwise indicated)

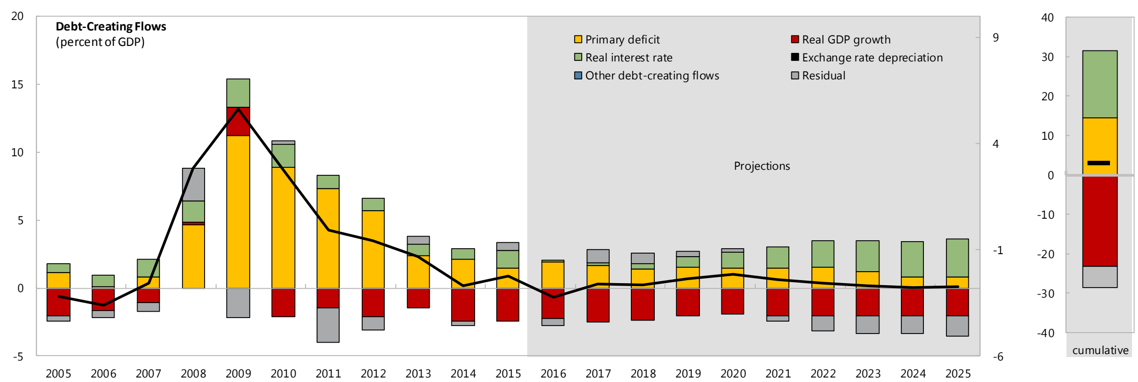
Debt, Economic and Market Indicators 1/

	Actual			Projections									
	2005–2013 2/	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Nominal gross public debt	83.6	105.0	105.8	105.1	105.5	105.7	106.3	107.3	107.9	108.3	108.5	108.5	108.6
Public gross financing needs	17.3	14.9	16.9	24.0	20.2	18.8	19.0	20.2	20.5	21.1	21.3	21.7	21.9
Real GDP growth (percent)	1.4	2.4	2.4	2.2	2.5	2.3	2.0	1.9	2.0	2.0	2.0	2.0	2.0
Inflation (GDP deflator, percent)	2.0	1.6	1.0	1.1	1.9	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1
Nominal GDP growth (percent)	3.5	4.1	3.5	3.3	4.4	4.4	4.1	4.0	4.1	4.1	4.1	4.1	4.1
Effective interest rate (percent) 4/	3.7	2.5	2.3	1.3	2.1	2.5	2.8	3.2	3.7	4.1	4.4	4.7	4.9

As of June 15, 2016		
Sovereign Spreads		
Spread (bp) 3/		158
CDS (bp)		94
Ratings	Foreign	Local
Moody's	Aaa	Aaa
S&Ps	AA+	AA+
Fitch	AAA	AAA

Contribution to Changes in Public Debt

	Actual			Projections											
	2005–2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Cumulative	Debt-stabilizing primary balance 9/
Change in gross public sector debt	4.4	0.2	0.9	-0.7	0.3	0.2	0.7	1.0	0.6	0.4	0.2	0.1	0.1	2.8	0.8
Identified debt-creating flows	4.8	0.5	0.3	-0.1	-0.6	-0.6	0.2	0.7	1.0	1.5	1.5	1.4	1.6	6.5	
Primary deficit	4.7	2.1	1.5	1.9	1.7	1.4	1.5	1.5	1.5	1.5	1.2	0.8	0.8	13.8	
Primary (noninterest) revenue and grants	29.6	31.0	31.2	31.2	31.1	31.0	30.9	31.0	31.0	31.0	31.0	31.0	31.0	310.2	
Primary (noninterest) expenditure	34.3	33.1	32.7	33.1	32.8	32.4	32.5	32.5	32.5	32.5	32.1	31.8	31.8	324.0	
Automatic debt dynamics 5/	0.1	-1.6	-1.1	-2.1	-2.3	-2.0	-1.3	-0.8	-0.5	-0.1	0.3	0.6	0.8	-7.3	
Interest rate/growth differential 6/	0.1	-1.6	-1.1	-2.1	-2.3	-2.0	-1.3	-0.8	-0.5	-0.1	0.3	0.6	0.8	-7.3	
Of which: real interest rate	1.2	0.8	1.3	0.2	0.2	0.4	0.7	1.1	1.6	2.0	2.3	2.6	2.8	13.9	
Of which: real GDP growth	-1.1	-2.4	-2.5	-2.2	-2.5	-2.4	-2.1	-1.9	-2.0	-2.0	-2.0	-2.0	-2.0	-21.2	
Exchange rate depreciation 7/	0.0	0.0	0.0	…	…	…	…	…	…	…	…	…	…	…	
Other identified debt-creating flows	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Net privatization proceeds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Other liabilities (bank recap. and PSI sweetner)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Residual, including asset changes 8/	-0.4	-0.3	0.5	-0.5	0.9	0.8	0.4	0.3	-0.4	-1.1	-1.3	-1.3	-1.5	-3.7	

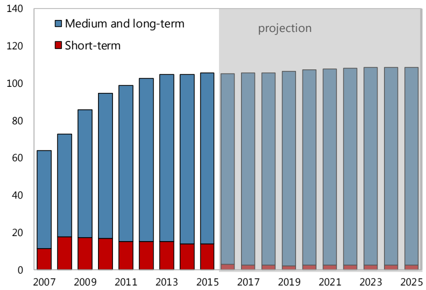


Source: IMF staff
1/ Public sector is defined as general government
2/ Based on available data
3/ Bond Spread over German Bonds
4/ Defined as interest payments divided by debt stock at the end of previous year
5/ Derived as [(r - p(1+g) - g + ae(1+r)]/(1+g+p+gp)) times previous period debt ratio, with r = interest rate; p = growth rate of GDP deflator; g = real GDP growth rate; a = share of foreign-currency denominated debt; and e = nominal exchange rate depreciation
6/ The real interest rate contribution is derived from the denominator in footnote 4 as r - π (1+g) and the real growth contribution as -g
7/ The exchange rate contribution is derived from the numerator in footnote 2/ as ae(1+r).
8/ For projections, this line includes exchange rate changes during the projection period. Also includes ESM capital contribution, arrears clearance, SMP and ANFA income, and the effect of deferred interest
9/ Assumes that key variables (real GDP growth, real interest rate, and other identified debt-creating flows) remain at the level of the last projection year

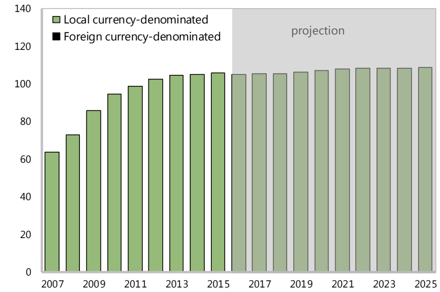
United States: Public DSA–Composition of Public Debt and Alternative Scenarios

Composition of Public Debt

By Maturity
(Percent of GDP)



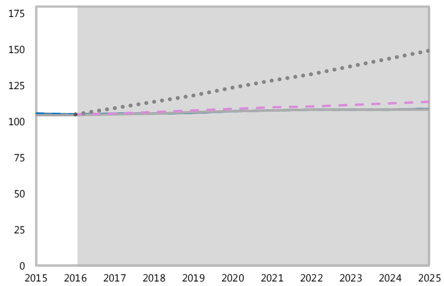
By Currency
(Percent of GDP)



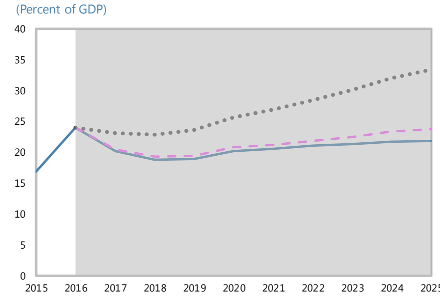
Alternative Scenarios

Baseline — Historical — Constant Primary Balance

Gross Nominal Public Debt
(Percent of GDP)



Public Gross Financing Needs
(Percent of GDP)



Underlying Assumptions
(Percent)

Baseline scenario	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Real GDP growth	2.2	2.5	2.3	2.0	1.9	2.0	2.0	2.0	2.0	2.0
Inflation	1.1	1.9	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1
Primary balance	-1.9	-1.7	-1.4	-1.5	-1.5	-1.5	-1.5	-1.2	-0.8	-0.8
Effective interest rate	1.3	2.1	2.5	2.8	3.2	3.7	4.1	4.4	4.7	4.9
Constant primary balance scenario										
Real GDP growth	2.2	2.5	2.3	2.0	1.9	2.0	2.0	2.0	2.0	2.0
Inflation	1.1	1.9	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1
Primary balance	-1.9	-1.9	-1.9	-1.9	-1.9	-1.9	-1.9	-1.9	-1.9	-1.9
Effective interest rate	1.3	2.1	2.5	2.8	3.2	3.7	4.1	4.4	4.6	4.8

Historical scenario	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Real GDP growth	2.2	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Inflation	1.1	1.9	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1
Primary balance	-1.9	-4.5	-4.5	-4.5	-4.5	-4.5	-4.5	-4.5	-4.5	-4.5
Effective interest rate	1.3	2.1	2.7	3.2	3.7	4.3	4.7	5.1	5.4	5.6

Source: IMF staff

United States: Public DSA–Realism of Baseline Assumptions

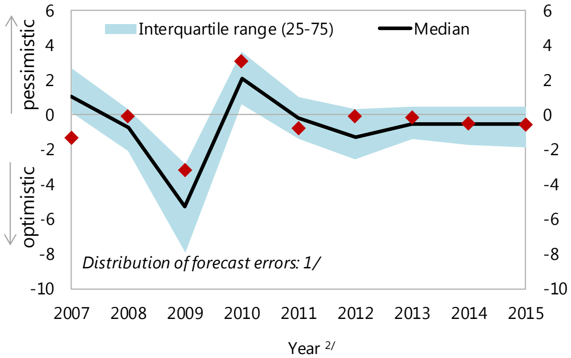
Forecast Track Record, versus all countries

Real GDP Growth

(Percent, actual-projection)

United States median forecast error, 2007-2015: **-0.52**

Has a percentile rank of: **49%**

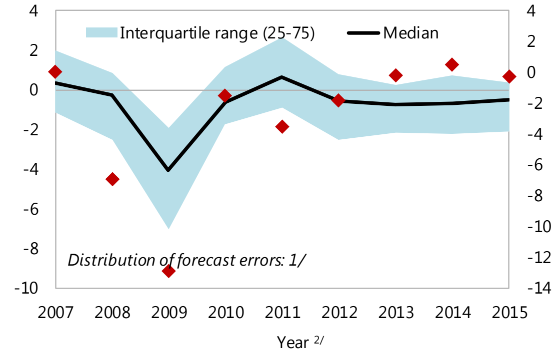


Primary Balance

(Percent of GDP, actual-projection)

United States median forecast error, 2007-2015: **-0.28**

Has a percentile rank of: **58%**

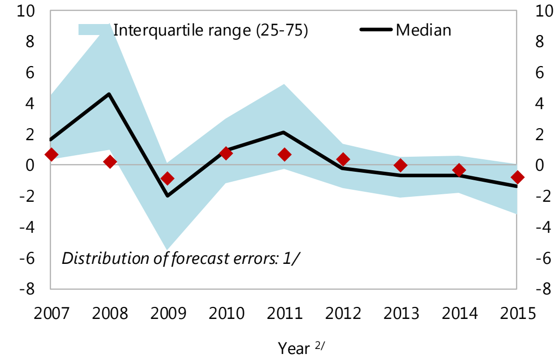


Inflation (Deflator)

(Percent, actual-projection)

United States median forecast error, 2007-2015: **0.24**

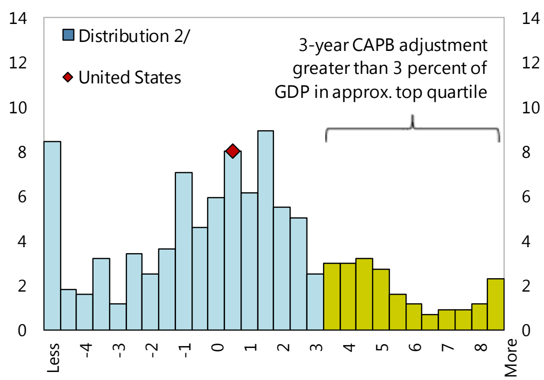
Has a percentile rank of: **53%**



Assessing the Realism of Projected Fiscal Adjustment

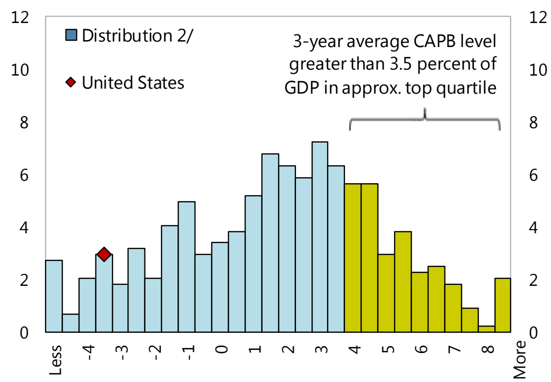
3-Year Adjustment in Cyclically-Adjusted Primary Balance (CAPB)

(Percent of GDP)



3-Year Average Level of Cyclically-Adjusted Primary Balance (CAPB)

(Percent of GDP)



Boom-Bust Analysis

Real GDP growth

(Percent)

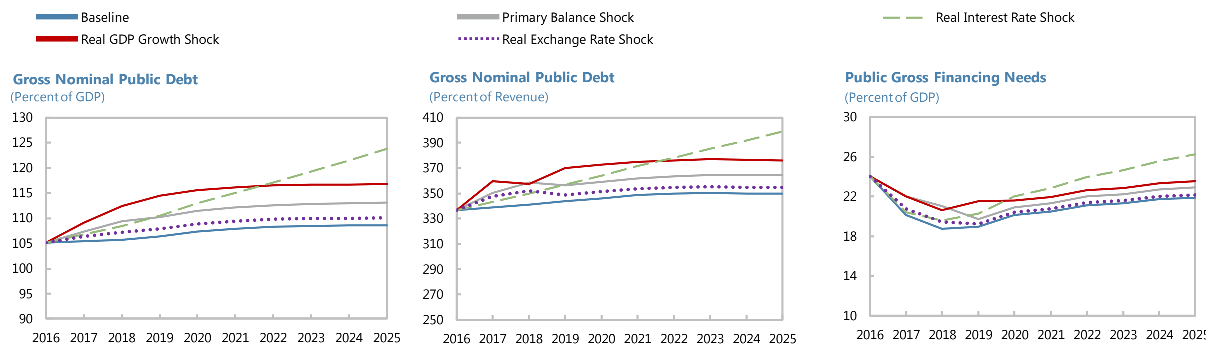
Source : IMF staff

1/ Plotted distribution includes all countries, percentile rank refers to all countries. Projections made in the spring WEO vintage of the preceding year

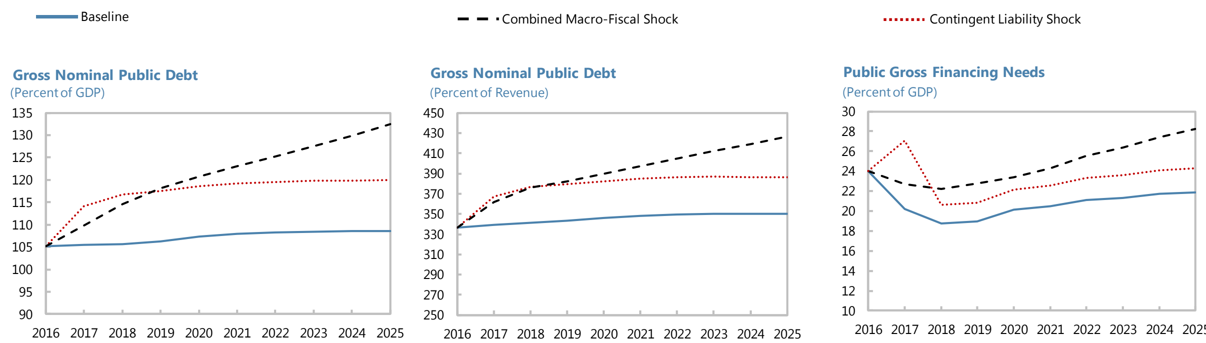
2/ Data cover annual obervations from 1990 to 2011 for advanced and emerging economies with debt greater than 60 percent of GDP. Percent of sample on vertical axis

United States: Public DSA–Stress Tests

Macro-Fiscal Stress Tests



Additional Stress Tests



Underlying Assumptions

(Percent)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Primary Balance Shock										
Real GDP growth	2.2	2.5	2.4	2.0	1.9	2.0	2.0	2.0	2.0	2.0
Inflation	1.1	1.9	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1
Primary balance	-1.9	-3.5	-3.3	-1.5	-1.5	-1.5	-1.5	-1.2	-0.8	-0.8
Effective interest rate	1.3	2.1	2.6	3.0	3.4	3.8	4.2	4.5	4.7	4.9
Real Interest Rate Shock										
Real GDP growth	2.2	1.2	1.3	1.4	1.5	1.8	1.8	1.8	1.8	1.8
Inflation	1.1	1.9	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1
Primary balance	-1.9	-1.7	-1.4	-1.5	-1.5	-1.5	-1.5	-1.2	-0.8	-0.8
Effective interest rate	1.3	2.1	2.9	3.5	4.2	4.9	5.5	5.9	6.3	6.6
Combined Shock										
Real GDP growth	2.2	0.8	0.6	1.4	1.5	1.8	1.8	1.8	1.8	1.8
Inflation	1.1	1.5	1.6	2.0	2.0	2.1	2.1	2.1	2.1	2.1
Primary balance	-1.9	-3.8	-3.3	-2.9	-1.5	-1.5	-1.5	-1.2	-0.8	-0.8
Effective interest rate	1.3	2.1	2.9	3.6	4.3	4.9	5.5	6.0	6.3	6.6

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Real GDP Growth Shock										
Real GDP growth	2.2	0.8	0.6	2.0	1.9	2.0	2.0	2.0	2.0	2.0
Inflation	1.1	1.5	1.6	2.0	2.0	2.1	2.1	2.1	2.1	2.1
Primary balance	-1.9	-3.1	-2.3	-2.9	-1.5	-1.5	-1.5	-1.2	-0.8	-0.8
Effective interest rate	1.3	2.1	2.5	2.9	3.3	3.7	4.1	4.4	4.6	4.8
Real Exchange Rate Shock										
Real GDP growth	2.2	2.0	2.1	2.0	1.9	2.0	2.0	2.0	2.0	2.0
Inflation	1.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1
Primary balance	-1.9	-2.2	-1.9	-1.5	-1.5	-1.5	-1.5	-1.2	-0.8	-0.8
Effective interest rate	1.3	2.1	2.5	2.8	3.2	3.6	4.0	4.4	4.6	4.8
Contingent Liability Shock										
Real GDP growth	2.2	0.8	0.6	2.0	1.9	2.0	2.0	2.0	2.0	2.0
Inflation	1.1	1.5	1.6	2.0	2.0	2.1	2.1	2.1	2.1	2.1
Primary balance	-1.9	-8.0	-1.4	-1.5	-1.5	-1.5	-1.5	-1.2	-0.8	-0.8
Effective interest rate	1.3	2.2	2.6	3.0	3.3	3.7	4.1	4.4	4.7	4.9

Source: IMF staff

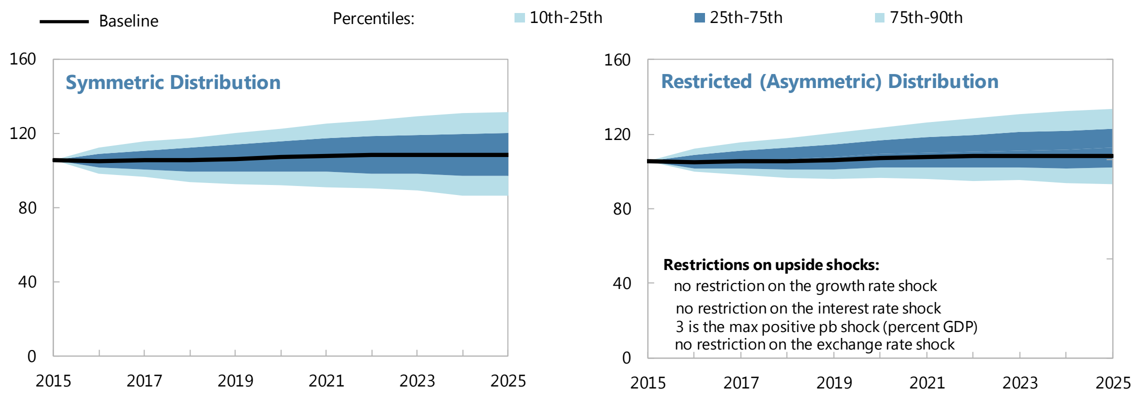
United States: Public DSA–Risk Assessment

Heat Map Baseline (2015-2025)

Debt level 1/	Real GDP Growth Shock	Primary Balance Shock	Real Interest Rate Shock	Exchange Rate Shock	Contingent Liability shock
Gross financing needs 2/	Real GDP Growth Shock	Primary Balance Shock	Real Interest Rate Shock	Exchange Rate Shock	Contingent Liability Shock
Debt profile 3/	Market Perception	External Financing Requirements	Change in the Share of Short-Term Debt	Public Debt Held by Non-Residents	Foreign Currency Debt

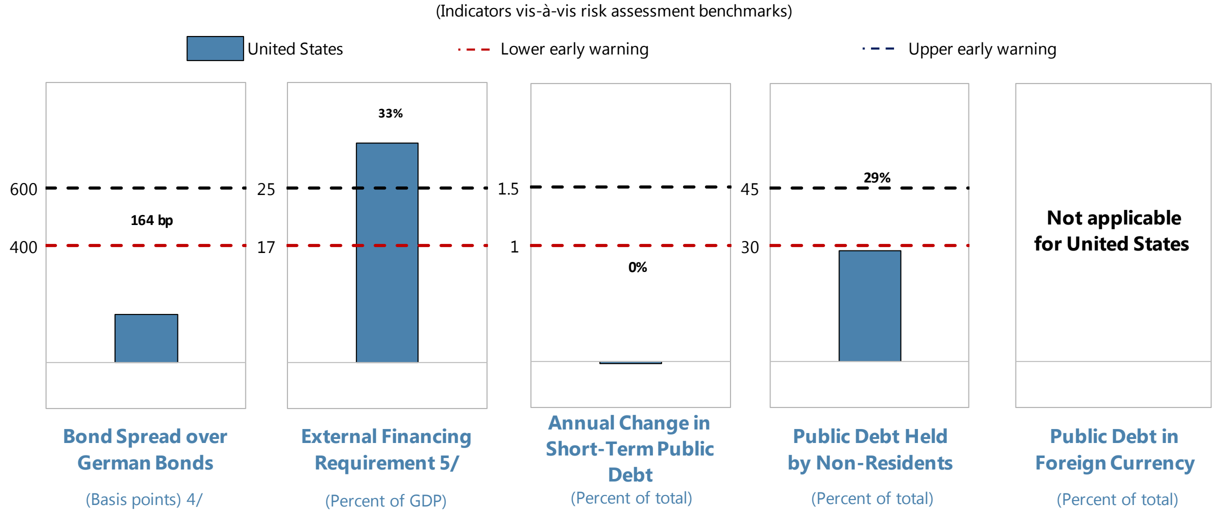
Evolution of Predictive Densities of Gross Nominal Public Debt

(Percent of GDP)



Debt Profile Vulnerabilities

(Indicators vis-à-vis risk assessment benchmarks)



Source: IMF staff

1/ The cell is highlighted in green if debt burden benchmark of 85% is not exceeded under the specific shock or baseline, yellow if exceeded under specific shock but not baseline, red if benchmark is exceeded under baseline, white if stress test is not relevant

2/ The cell is highlighted in green if gross financing needs benchmark of 20% is not exceeded under the specific shock or baseline, yellow if exceeded under specific shock but not baseline, red if benchmark is exceeded under baseline, white if stress test is not relevant

3/ The cell is highlighted in green if country value is less than the lower risk-assessment benchmark, red if country value exceeds the upper risk-assessment benchmark, yellow if country value is between the lower and upper risk-assessment benchmarks. If data are unavailable or indicator is not relevant, cell is white.

Lower and upper risk-assessment benchmarks are:

400 and 600 basis points for bond spreads; 17 and 25 percent of GDP for external financing requirement; 1 and 1.5 percent for change in the share of short-term debt; 30 and 45 percent for the public debt held by non-residents

4/ An average over the last 3 months, 17-Mar-16 through 15-Jun-16

5/ Includes liabilities to the Eurosystem related to TARGET

Annex V. External Sector Assessment

Foreign asset and liability position and trajectory	**Background**. The net international investment position (NIIP) declined from -18.7 percent of GDP in 2010 to -38.8 percent of GDP in 2015, reflecting sustained current account deficits, stronger performance of the U.S. stock market relative to trading partners, and valuation changes of foreign currency denominated assets. 1/ Under staff's baseline scenario, U.S. NIIP would deteriorate by about 10 percentage points of GDP over the next five years predominantly due to projected current account deficits. Potential valuation losses including from losses on FDI assets in overseas energy projects are a source of uncertainty. **Assessment**. A decline in foreign demand for U.S. debt securities (for example, by a protracted failure to restore long-run fiscal sustainability) would raise financial stability risks, but at the same time weaken the exchange rate and strengthen the trade balance. Given the dollar's reserve currency status, such financial stability concerns are limited. Most U.S. foreign assets are denominated in foreign currency and over 50 percent are in the form of FDI and portfolio equity claims, whose value tend to decline when global growth and stock markets are weak, as well as when the U.S. dollar appreciates.	**Overall Assessment**: *The U.S. external position was moderately weaker than implied by medium-term fundamentals and desirable policies. As of May 2016 the REER has strengthened marginally relative to the 2015 average, but this does not change the overall assessment.* The U.S. external position has improved considerably in recent years, as have assessed imbalances and fiscal policy gaps. Nevertheless, solid U.S. economic performance and divergence of U.S. growth and monetary policy prospects from key trading partners has led to a strengthening of the U.S. dollar and a rise in the current account deficit. **Recommended policies**: Over the medium term, fiscal consolidation should aim for a general government primary surplus of about ¾ percent of GDP (a federal government primary surplus of about 1 percent of GDP). Structural policies should be implemented to raise productivity, increase labor force growth, and, thus, raise saving. This would be consistent with maintaining external stability while achieving full employment.
Current account	**Background**. The U.S. current account (CA) balance has narrowed from its pre-crisis height of -6 percent of GDP to -2.6 percent of GDP in 2015 (cyclically adjusted -2.6 percent as well), reflecting a sharp reduction in the fiscal deficit, higher private saving, lower investment in the aftermath of the financial crisis, and a stronger energy trade balance (due to the rapid increase of unconventional energy production). 2/ The CA deficit is expected to rise moderately but steadily from its low point in 2014 through the medium-term as the effects of a stronger U.S. economy and the lagged effects of a more appreciated U.S. dollar are only partly offset by lower oil prices. **Assessment**. The EBA model estimates a cyclically-adjusted CA gap of 1.7 percent of GDP for 2015 which is primarily accounted for by a (policy-unrelated) residual. In staff's view, the gap is moderately overstated because the estimation of the EBA CA norm does not fully account for the discovery of shale oil, which resulted in a substantial wealth gain. Taking this factor into account, the CA norm should be smaller reducing the CA gap by about ¼ percent of GDP. 3/	
Real exchange rate	**Background**. The real effective exchange rate (REER) appreciated in 2015 by about 11 percent compared to 2014 due to solid U.S. economic performance and divergence of U.S. growth and monetary policy from key trading partners. As of May 2016, the REER was about 1 percent stronger than its average value over 2015. **Assessment.** Indirect estimates of the REER (relying on the EBA current account assessment) suggest the exchange was overvalued by almost 20 percent in 2015. Direct REER analyses suggest an overvaluation of between 14-23 percent. 4/ Considering all estimates and the uncertainties around them, staff assess the 2015 average REER to be overvalued by 10-20 percent relative to the level implied by medium-term fundamentals and desirable policies	
Capital and financial accounts: flows and policy measures	**Background**. Net financial inflows were about 2 percent of GDP in 2015. 5/ Portfolio inflows increased by about 0.4 percent, year over year, in 2015 but were offset by weaker direct investment and other inflows. On the outflow side, there were further increases in U.S. portfolio investment overseas, but much less so than in 2014. The stronger outlook for the U.S. economy compared to its key trading partners, the dollar's reserve currency status and safe haven motives continue to boost foreign demand for U.S. Treasury securities. **Assessment**. The U.S. has a fully open capital account. Vulnerabilities are limited by the dollar's status as a reserve currency and the U.S. role as a safe haven.	
FX intervention & reserves level	**Assessment**. The dollar has the status of a global reserve currency. Reserves held by the U.S. are typically low relative to standard metrics but the currency is free floating.	

Technical Background Notes	1/ The U.S. has a positive net equity position, with sizable portfolio equity and direct investment abroad, and a negative debt position vis-à-vis the rest of the world, owing to sizeable foreign holdings of U.S. Treasuries and corporate bonds. Gross assets and liabilities are about 140 and 180 per cent of GDP, respectively. 2/ The oil and gas portion of the CA had a deficit of 0.5 percent of GDP in 2015, 0.5 percentage points lower than in 2014, reflecting less net imports and lower oil prices. 3/ Because of the discovery of shale and related investments to build capacity for exports, the CA norm is estimated to be about 0.25 percent of GDP smaller than the one estimated by EBA, hence narrowing the gap. 4/ The two direct EBA models are the REER Index model and the REER Level model. 5/ This is substantially below pre-crisis levels of about 5.0 percent of GDP.

INTERNATIONAL MONETARY FUND

UNITED STATES

June 24, 2016

STAFF REPORT FOR THE 2016 ARTICLE IV CONSULTATION—INFORMATIONAL ANNEX

Prepared By | The Western Hemisphere Department

CONTENTS

FUND RELATIONS

(As of May 31 2016)

Membership Status: Joined 12/27/1945; Article VIII

General Resources Account:	**SDR Million**	**Percent Quota**
Quota	82,994.20	100.00
Fund holdings of currency	77,343.98	93.19
Reserve Tranche Position	5,651.38	6.81
Lending to the Fund		
New Arrangements to Borrow	6,224.58	

SDR Department:	**SDR Million**	**Percent Allocation**
Net cumulative allocation	35,315.68	100.00
Holdings	35,858.57	101.54

Outstanding Purchases and Loans: None

Financial Arrangements: None

Projected Payments to the Fund:

(SDR Million; based on existing use of resources and present holdings of SDRs):

			Forthcoming		
	2016	2017	2018	2019	2020
Principal					
Charges/Interest		1.24	1.24	1.24	1.24
Total		1.24	1.24	1.24	1.24

Exchange Rate Arrangements. The exchange rate of the U.S. dollar floats independently and is determined freely in the foreign exchange market. The United States has accepted the obligations under Article VIII, Sections 2(a), 3 and 4 of the IMF's Articles of Agreement and maintains an exchange system free of multiple currency practices and restrictions on the making of payments and transfers for current international transactions, except for those measures imposed for security reasons. The United States notifies the maintenance of measures imposed for security reasons under Executive Board Decision No. 144–(52/51). The last of these notifications was made June 3, 2016.

Article IV Consultation. The 2015 Article IV consultation was concluded on July 6, 2015 and the Staff Report was published as IMF Country Report No. 15/322. A fiscal Report of Observance of Standards and Codes was completed in the context of the 2003 consultation.
The 2016 Article IV discussions took place May 23–June 9, 2016. Concluding meetings with Chair Yellen of the Board of Governors of the Federal Reserve System, and Treasury Secretary Lew occurred on June 20 and June 21 respectively. The Managing Director, Ms. Lagarde, the Deputy Managing Director, Mr. Zhu, and WHD Director, Mr. Werner, participated in the concluding meetings. A press conference on the consultation was held on June 22, 2016. The team comprised Nigel Chalk (head), Yasser Abdih, Ali Alichi, Ravi Balakrishnan, Stephan Danninger, Emanuel Kopp, Andrea Pescatori, Damien Puy (all WHD), Christian Henn and Stefan Laseen (SPR), Thornton Matheson (FAD), and Emmanuel Mathias (LEG). Mr. Sabharwal (Executive Director), Mr. Haarsager (Senior Advisor) and Mr. Hall (Advisor) attended some of the meetings. Outreach included discussions with Congressional staff, U.S. Chamber of Commerce, AFL-CIO, private sector representatives, and think tanks. Unless an objection from the authorities of the United States is received prior to the conclusion of the Board's consideration, the document will be published.

STATISTICAL ISSUES

Statistical Issues. Comprehensive economic data are available for the United States on a timely basis. The quality, coverage, periodicity, and timeliness of U.S. economic data are adequate for surveillance. The United States has subscribed to the Special Data Dissemination Standard (SDDS) and its metadata are posted on the Dissemination Standard Bulletin Board (DSBB).

United States: Table of Common Indicators Required for Surveillance
(As of June 23, 2016)

	Date of latest observation	Date received	Frequency of data[1]	Frequency of reporting[1]	Frequency of publication[1]
Exchange rates	Same day	Same day	D	D	D
International reserve assets and reserve liabilities of the monetary authorities[2]	2016 M5	May 26	M	M	M
Reserve/base money	June 23	June 23	W	W	W
Broad money	June 23	June 23	W	W	W
Central bank balance sheet	May 26	May 26	W	W	W
Interest rates[3]	Same day	Same day	D	D	D
Consumer price index	2016 M5	June 16	M	M	M
Revenue, expenditure, balance and composition of financing[4]—general government[5]	2016 Q1	May 31	Q	Q	Q
Revenue, expenditure, balance and composition of financing[4]—central government	2016 M5	June 10	M	M	M
Stocks of central government and central government-guaranteed debt	2016 M5	June 6	M	M	M
External current account balance	2016 Q1	June 16	Q	Q	Q
Exports and imports of goods and services	2016 M4	June 3	M	M	M
GDP/GNP (2nd release)	2016 Q1	May 27	Q	M	M
Gross External Debt	2015 Q4	March 31	Q	Q	Q
International Investment Position[6]	2015 Q4	March 31	Q	Q	Q

[1] Daily (D), Weekly (W), Biweekly (B), Monthly (M), Quarterly (Q), Annually (A); NA: Not Available.
[2] Includes reserve assets pledged or otherwise encumbered as well as net derivative positions.
[3] Both market-based and officially-determined, including discount rates, money market rates, rates on treasury bills, notes and bonds.
[4] Foreign, domestic bank, and domestic nonbank financing.
[5] The general government consists of the central government (budgetary funds, extra budgetary funds, and social security funds) and state and local governments.
[6] Includes external gross financial asset and liability positions vis-à-vis nonresidents.

Statement by the IMF Staff Representative on the United States

July 8, 2016

1. This statement reports on information that has become available since the staff report was issued. It does not alter the thrust of the staff appraisal.

2. **Better activity data for the first two quarters of the year.** Growth in the first quarter was revised up from 0.8 to 1.1 percent due to stronger net exports and non-residential investment. The revised estimate is broadly in line with staff's expectation based on high frequency activity indicator models. Real private consumption expenditure (PCE) for April and May grew by 0.8 and 0.3 percent m/m, respectively. The strong spending momentum and upward revision to first quarter growth strengthen the basis for staff's growth forecast of 2.2 percent in 2016.

3. **Uncertainty surrounding the implications of the U.K. referendum.** U.S. markets reacted negatively to the result of the U.K. referendum. After a sell-off in risk assets in the first two days, U.S. stock markets have recovered and the U.S. dollar, in nominal effective terms, has appreciated by less than 1 percent. Long-term treasury yields have fallen substantially to 1.4 percent on 10-year bonds, driven by safe haven flows and expectations of a slower pace of future policy rate increases. Continued bouts of financial market volatility or a further appreciation of the U.S. dollar are possible. The team expects the impact on the baseline to be small but because of uncertainty about the economic fallout, risks to the outlook appear now as skewed to the downside. Should downside risks materialize, interest rate increases should be delayed in line with a data dependent approach. Near-term fiscal spending could be increased in the event that growth decelerates substantially.

4. **On June 30, the President signed a bill to provide a framework to restructure Puerto Rico's debt.** The Puerto Rico Oversight, Management, and Economic Stability Act ("PROMESA") puts in place an oversight board for the Commonwealth, imposes a stay on creditor action, and establishes a collective action mechanism for restructuring existing bonds. The collective action mechanism allows creditors holding over two-thirds of the outstanding principal of the bonds within a pool to bind the minority. In the event a voluntary restructuring agreements cannot be reached, the law provides for a U.S. court-supervised restructuring process (replicating a number of the provisions of the Federal Bankruptcy Code). After passage of the law, Puerto Rico defaulted on US$1.9 billion of debt obligations.

5. **The Federal Reserve published results of its 2016 Comprehensive Capital Assessment Program (CCAR)**. Owing mainly to strengthened capital buffers, all 33 participating bank holding companies passed the supervisory stress test, which was based on stringent scenarios including a long recession and negative yields on U.S. Treasuries. However, the Federal Reserve objected to the capital plans of U.S. subsidiaries of Deutsche Bank and Banco Santander on the basis of qualitative factors related to capital planning.