The U.S. Economic Outlook

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Where are we now…

<table>
<thead>
<tr>
<th>Concept</th>
<th>Growth since pre-recession peak</th>
<th>Date of peak</th>
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</thead>
<tbody>
<tr>
<td>Real GDP</td>
<td>4.6%</td>
<td>2007q4</td>
</tr>
<tr>
<td>Consumer Spending</td>
<td>6.1%</td>
<td>2007q4</td>
</tr>
<tr>
<td>Housing</td>
<td>-44.8%</td>
<td>2005q3</td>
</tr>
<tr>
<td>Exports</td>
<td>32.3%</td>
<td>2009q2</td>
</tr>
<tr>
<td>Imports</td>
<td>29.7%</td>
<td>2009q2</td>
</tr>
<tr>
<td>Business Equipment Spending</td>
<td>4.2%</td>
<td>2007q4</td>
</tr>
<tr>
<td>Employment</td>
<td>-1.4%</td>
<td>Jan 2008</td>
</tr>
<tr>
<td>Personal Income (real)</td>
<td>4.0%</td>
<td>2008q2</td>
</tr>
<tr>
<td>Corporate Profits (nominal)</td>
<td>30.7%</td>
<td>2007q2</td>
</tr>
</tbody>
</table>
...and where are we heading?

- **2013 q1-q3 highlights**
  - Resilient consumers, still spending after tax increases. “Fiscal cliff” scares.
  - Survival of the federal government spending sequester
  - Weak 2012 ending point

- **2013 q4 concerns**
  - Shutdowns in DC
  - Debt ceiling-driven spending limitations
  - QE tapering starts

- **2014**
  - Improved employment, income and asset values will drive the recovery through 2014
  - Renewed export growth as world economic growth mildly rebounds
  - QE tapering winds up
  - Affordable Care Act implementation

- **2015-16**
  - Interest rates rise as the Federal Reserve’s unemployment target get breeched
  - The federal budget deficit will approach 3% of GDP, a sustainable share.
Recovery still slow but set to pick up

(Real GDP, annualized real rate of growth, Q/Q, percent)
<table>
<thead>
<tr>
<th>Category</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
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<tbody>
<tr>
<td>Real GDP</td>
<td>2.8</td>
<td>1.5</td>
<td>2.5</td>
<td>3.2</td>
</tr>
<tr>
<td>Housing Starts (Millions)</td>
<td>0.78</td>
<td>0.91</td>
<td>1.15</td>
<td>1.48</td>
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<tr>
<td>Labor Productivity</td>
<td>1.5</td>
<td>0.2</td>
<td>0.8</td>
<td>1.2</td>
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<tr>
<td>Federal Government</td>
<td>-1.4</td>
<td>-4.9</td>
<td>0.3</td>
<td>-0.6</td>
</tr>
<tr>
<td>State and Local Government</td>
<td>-0.7</td>
<td>-0.4</td>
<td>0.1</td>
<td>0.6</td>
</tr>
<tr>
<td>Federal Deficit (% of GDP)</td>
<td>-6.8</td>
<td>-4.2</td>
<td>-4.2</td>
<td>-3.6</td>
</tr>
<tr>
<td>Federal Debt (% of GDP)</td>
<td>70.7</td>
<td>73.3</td>
<td>74.4</td>
<td>74.5</td>
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<tr>
<td>Unemployment Rate</td>
<td>8.1</td>
<td>7.5</td>
<td>7.1</td>
<td>6.5</td>
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<tr>
<td>CPI Inflation</td>
<td>2.1</td>
<td>1.5</td>
<td>1.6</td>
<td>1.7</td>
</tr>
<tr>
<td>Oil Price (Brent, $/bbl)</td>
<td>112</td>
<td>108</td>
<td>104</td>
<td>99</td>
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<tr>
<td>10-year Government Bond Yield</td>
<td>1.80</td>
<td>2.33</td>
<td>2.91</td>
<td>3.23</td>
</tr>
</tbody>
</table>
The macroeconomic focus will be housing and government spending through 2014.

(Contribution to GDP growth)

- Real GDP
- Business Fixed Investment
- Inventories
- Imports

- Consumer Spending
- Housing
- Exports
- Government

Sum of bars to the right of the blue bar = blue bar

Fiscal drag

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Employment growth still weak and uneven. But unemployment rate continues to fall.
Labor force participation – cyclical and secular decline

(Percent of population in the labor force)

Initial unemployment claims at rock-bottom levels

(Thousands)

475
450
425
400
375
350
325
300

Jan-11 Jul-11 Jan-12 Jul-12 Jan-13 Jul-13

- 4-Week Moving Average - Actual
What are the new normal profit margins?

Economic Profits as a Share of GDP

- 13%
- 12%
- 11%
- 10%
- 9%
- 8%
- 7%
- 6%

Demand shortfall: household formation has revived

(Millions of households)

Mar 02- Mar 03- Mar 04- Mar 05- Mar 06- Mar 07- Mar 08- Mar 09- Mar 10- Mar 11- Mar 12-
Mar 03 Mar 04 Mar 05 Mar 06 Mar 07 Mar 08 Mar 09 Mar 10 Mar 11* Mar 12 Mar 13

*The latest revised 2011 figures show 2.4 million extra households, but are distorted by the introduction of new population controls. The table shows the original 2011 estimate.

Source: Census Bureau
Housing prices up 12.3% year-on-year

(Case-Shiller 20-City Index, April 2006 = 100)
Lean housing inventories behind sector rebound

(Months’ supply of new homes)

Housing shortages, a result of under-building, are driving housing forward. The shortages have led to rising home prices, incentivizing builders to ramp up on starts. Higher mortgage rates will reduce demand, of course. But not by enough to keep housing starts from reaching 1.5 million in 2015.
Refinancing plummets as mortgage rates rise

- 30-year fixed mortgage rate (Right scale, percent)
- MBA refinance index (Left scale, level, thousands)
Mortgage applications to purchase hit by higher mortgage rates

(Mortgage applications for purchase, index, Mar. 16, 1990 = 100)

<table>
<thead>
<tr>
<th>Jan-10</th>
<th>Jul-10</th>
<th>Jan-11</th>
<th>Jul-11</th>
<th>Jan-12</th>
<th>Jul-12</th>
<th>Jan-13</th>
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</table>
Housing starts in a long climb; prices have turned higher

- Housing Starts (LS, millions of units)
- FHFA House Price Index (RS, purchase-only index, 1991Q1 = 100)
Income growth set to accelerate; support spending

(Percent change)

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Stock market lifts household net worth

(Index, 2007Q1 = 100)

- Equities
- Real Estate
- Net Worth
Household deleveraging continues on the mortgage side

(Household liabilities, percent of disposable income)

140
120
100
80
60
40
20
0

- Total  - Mortgage  - Consumer Credit
Consumer spending will not be a strong driver of recovery

(Percent change)
Federal deficit projected path

(Billions of dollars, fiscal years)  (Percent of GDP)

500  5

0  0

-500  -5

-1,000  -10

-1,500  -15


Unified Budget Deficit (Left scale)  Deficit as % of GDP (Right scale)
The federal budget gap: action on both sides of the ledger

(Percent of GDP)

- Revenues
- Expenditures
Federal debt ratio to stabilize just under 80% - but the biggest problems come later

(Publically-held Federal debt, percent of GDP)
Entitlements and interest make it hard to cut federal spending more than we have assumed.

(Percent of GDP)

- Defense
- Medicare/Medicaid
- Social Security
- Interest
- Nondefense Goods & Services
- Other

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Government Shutdown – Causes and Consequences

• No budget in place for FY 2014.

• Without appropriated funds, certain government activities ceased on October 1 (start of FY 2014)

• Republicans demand ACA defunding as quid pro quo for spending bill. Democrats refuse to negotiate on this point.

• Misnomer: 60% of the federal government continues to function, but...

• Wide ranging impacts include furloughing of all non-emergency federal civilian personnel (whom would not be paid and would be forbidden to work) and shutting down of agency activities and services

• Government has “shutdown” 17 times since 1976 for a median 5 days. Last shut down was in late-2015 to early-2016 and lasted 21 days.
Government Shutdown – Causes and Consequences

- Impact on economic activity expected to be small and confined to Q4 – provided:
  - shutdown lasts only 1-3 weeks
  - government workers receive back pay as in 1995-96.

- 770,000 federal government workers furloughed.
  - GDP impact primarily through lost government services output.

- Lost GDP amounts to $1.6 billion per week of shutdown.

- Impact on Q4 GDP growth:
  - 1 week shutdown > subtracts 0.16 percentage points
  - 3 week shutdown > subtracts 0.48 percentage points

- Minor “multiplier effects” as long as shutdown is short and workers expect back pay.
IHS GDP Forecasts – With and Without a 3 Week Shutdown

(Quarter/Quarter Annualized % Change)

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The Debt Ceiling – A Larger Calamity

- Debt limit was temporarily suspended this year until mid-May, then capped at $16.7 trillion.

- Since then, Treasury has taken “extraordinary measures” to finance deficits approved by Congress.
  - Treasury estimates they will expire on October 17.

- At that point, Treasury will not be able to add net new debt (currently $16.7 trillion).
  - Will have to rely on tax revenues and cash balances.

- If debt ceiling is not raised, there are no “good” options available to Treasury.

- Given the political and economic ramifications of not doing so, we believe the debt ceiling will be raised.
No debt-ceiling hike means no federal deficits

- Ultimately, federal deficits would have to be eliminated so that the Treasury doesn’t to borrow to cover outlays.

- $740 billion deficit projected for FY 2014.

- Eliminating would mean massive fiscal contraction
  - Would cut projected government outlays by 21% (4.2% of GDP).

- US economy would fall into recession
  - GDP would contract by 1.8% in 2014 just from fewer government outlays.
  - Multiplier effects would add to the decline.
  - Fed would try to offset, but would probably be unsuccessful.

- Even on an interim basis, massive spending cuts would be required.
What if Treasury “defaults?”

Since federal government has never defaulted, can only speculate about the outcome.

- A missed or delayed debt payment would be a technical default.

Financial market impact would be disastrous.
- Collateral value of Treasury securities would plummet as markets add default risk to asset prices.
- Credit markets would freeze
- Bond yields would spike
- Would spread to other credit sectors (corporate, muni, mortgage)
- US sovereign debt would be downgraded

- Banks would have to mark down balance sheets, curtailing lending.
  - Fed might not take Treasuries as collateral at discount window.

- Treasury would probably put debt payments at front of the line.
But can Treasury prioritize debt payments over other obligations?

Probably not.

- Put debt payments ahead of other obligations such as salaries, vendor/contractor payments, Social Security benefits, Medicare reimbursements.

- According to Treasury, might not be technically feasible given their computer systems.
  - Treasury makes 100 million monthly payments.

- Could be politically treacherous.
  - Who gets paid first, a foreign bond holder or a Social Security recipient?

- Would not avoid credit downgrade –
  - According to Fitch Ratings, arrears on any government obligations would be grounds for a downgrade.
## The Debt Ceiling – Upcoming Cash Requirements

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Amount</th>
</tr>
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<tbody>
<tr>
<td>October 23</td>
<td>Social Security Benefits Payment</td>
<td>$12 billion</td>
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<tr>
<td>October 31</td>
<td>Interest payment on Treasury Securities</td>
<td>$6 billion</td>
</tr>
<tr>
<td>November 1</td>
<td>Social Security, Medicare Advantage and Medicare D, active-duty military pay, retiree pension benefits, SSI</td>
<td>$67 billion</td>
</tr>
<tr>
<td>November 13</td>
<td>Social Security Benefits Payment</td>
<td>$12 billion</td>
</tr>
<tr>
<td>November 15</td>
<td>Interest payment on Treasury Securities</td>
<td>$30 billion</td>
</tr>
</tbody>
</table>

* In addition to these payments, ongoing activities will likely cost $10 billion per day on average. Tax remittances typically average $7 billion per day.

Source: Congressional Budget Office
Components of monetary policy

• Current US monetary policy has three components:
  • policy rates
  • forward guidance
  • asset purchases.

• Policy rate has been at zero since December 2008.

• Two unconventional components:
  • Forward guidance – a promise to keep the policy rate at zero at least until unemployment falls below 6.5% so long as inflation is less than 2.5%.
  • Asset purchases – purchases of long-term US Treasuries and MBS, at $85 billion per month pace until labor market shows substantial improvement.
"Taper Talk" drives interest rates higher

(10-year Treasury Note Yields)

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<td>1.5</td>
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</table>

June 19 FOMC meeting

Sept. 18 FOMC meeting
Forward Guidance: No rate hikes until unemployment hits 6.5%.

The unemployment rate will hit the Fed’s 6.5% threshold in mid-2015.
U.S. interest rate outlook – slow climb

- Federal Funds Rate
- 10-year Treasury Bond
- Corporate AAA Bonds
- 30-year fixed mortgage

Fed tapering proceeds
Near zero rates end

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Fed on hold until fog of fiscal uncertainty lifts

- Markets expected the Fed to taper at its September 18 meeting, but the Fed deferred.
  - Labor market data looking less robust
  - Impact of rising mortgage rates on housing.
  - Fiscal policy.

- Fed holds two more meetings this year (10/30 and 12/18).
  - No October taper
    - Even if CR is passed and debt ceiling raised this month.
  - December taper most likely
    - Fiscal issues resolved satisfactorily, labor market shows improvement.
  - Could wait until early next year.
Thank you!

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