Economic Developments and the Outlook

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*The views expressed in this presentation are those of the author and do not necessarily reflect those of the Federal Reserve Bank of Philadelphia, the Federal Reserve System, or the Federal Open Market Committee.
According to Dante, those who seek to forecast the future are condemned to the fourth ditch of the eighth circle of hell!
Economic activity continues to expand in most states

Philadelphia Fed Current Economic Activity Indexes, annualized growth over the three months ending in September 2012
Growth continues at a moderate pace.

Hurricane Sandy has not changed the national outlook, but will result in a small reduction in growth in 2012Q4, which will be made up in 2013.

Quarterly data: Last point plotted is 2012Q3
FOMC forecasters expect growth to accelerate, unemployment to gradually decline, and inflation to move toward its long-run goal of 2 percent. They are more optimistic on growth than our SPF forecasters.

<table>
<thead>
<tr>
<th></th>
<th>Central tendency of Fed Governors and Presidents September 2012 Forecasts</th>
<th>Survey of Professional Forecasters 2012 Q4 Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2012</td>
<td>2013</td>
</tr>
<tr>
<td>Real GDP Growth*</td>
<td>1.7 to 2.0 %</td>
<td>2.5 to 3.0 %</td>
</tr>
<tr>
<td>Unemployment Rate in Q4</td>
<td>8.0 to 8.2 %</td>
<td>7.6 to 7.9 %</td>
</tr>
<tr>
<td>PCE Inflation (Q4/Q4 growth)</td>
<td>1.7 to 1.8 %</td>
<td>1.6 to 2.0 %</td>
</tr>
</tbody>
</table>

*Q4/Q4 SPF forecast calculated from the underlying survey data
Hurricane Sandy left over 8 million customers in the dark in 21 states. Our region was hard hit: over 50% of customers in NJ lost power and 25% were without power for a week.

Customers with power outages

Millions


DOE Emergency Situation Reports
Hurricane Sandy impacted the Northeast U.S., a region accounting for about 13% of U.S. GDP and over 10% of employment. Economic losses, including property damage and lost output, will be high. The impact will cut $\frac{1}{4} - \frac{1}{2} \%$ pt. from growth in 2012Q4 and add a similar amount in 2013.

<table>
<thead>
<tr>
<th>Hurricane</th>
<th>Year</th>
<th>Region</th>
<th>Cost (bil 2011 $)</th>
<th>Cost (% GDP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Katrina</td>
<td>Aug 2005</td>
<td>Gulf of Mexico</td>
<td>$146.3</td>
<td>1.10 %</td>
</tr>
<tr>
<td>Sandy</td>
<td>Oct 2012</td>
<td>Northeast, US</td>
<td>50 - 60</td>
<td>0.33 – 0.40 %</td>
</tr>
<tr>
<td>Andrew</td>
<td>Aug 1992</td>
<td>Miami, FL</td>
<td>44.3</td>
<td>0.43</td>
</tr>
<tr>
<td>Ike</td>
<td>Sep 2008</td>
<td>Gulf of Mexico</td>
<td>28.9</td>
<td>0.20</td>
</tr>
<tr>
<td>Wilma</td>
<td>Oct 2005</td>
<td>Florida</td>
<td>18.7</td>
<td>0.14</td>
</tr>
<tr>
<td>Charley</td>
<td>Aug 2004</td>
<td>Florida</td>
<td>18.2</td>
<td>0.14</td>
</tr>
<tr>
<td>Ivan</td>
<td>Sep 2004</td>
<td>Gulf of Mexico</td>
<td>16.9</td>
<td>0.13</td>
</tr>
<tr>
<td>Irene</td>
<td>Aug 2011</td>
<td>Northeast, US</td>
<td>10.0</td>
<td>0.06</td>
</tr>
</tbody>
</table>

Source: Nomura Securities and author’s calculations
The hurricane may show up in some of our monthly data

Time $t =$ month or week of hurricane landfall
Employment growth has picked up over the past four months. In October, payrolls rose by 171 thousand jobs. So far this year, job gains have averaged 157 thousand per month, compared with 153 thousand per month last year.
Recent months’ readings on payrolls have been revised up. Total revisions July to Sept have added 148K jobs.
Pennsylvania and New Jersey have been adding jobs this year

Annualized year-to-date payroll job growth, as of September 2012

Job growth
annualized year-to-date
as of Sep 2012

US: 1.3%
3-state: 0.7%
PA: 0.5%
NJ: 1.1%
DE: −0.4%

3-state employment as share of nation: 8%
PA employment as share of 3-state: 57%
NJ employment as share of 3-state: 39%
DE employment as share of 3-state: 4%

Unemployment rates remain elevated

Civilian unemployment rate

Monthly data: Last point plotted is October 2012
Total employment growth in the nation is weaker than in the 1991 recovery.

Cumulative % change in nonfarm payrolls since recession trough

- **U.S. payroll employment**
- Avg of 8 recoveries, 1949-1982
- 1991
- 2009
- 2001

**Months Since Recovery Began**

- Last point plotted for 2009 recovery is October 2012
- Trough Mar 1991
- Nov 2001
- Jun 2009
We have reached the halfway point on recovering lost jobs. Pennsylvania is outperforming the nation and the rest of the region.

<table>
<thead>
<tr>
<th>Percent</th>
<th>% of jobs lost from employment peak to employment trough and % of lost jobs regained since employment trough</th>
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</thead>
<tbody>
<tr>
<td>US</td>
<td>6.4% = 8.8 million jobs</td>
</tr>
<tr>
<td>PA</td>
<td>6.3% = 260 thousand jobs</td>
</tr>
<tr>
<td>NJ</td>
<td>7.8% = 34 thousand jobs</td>
</tr>
<tr>
<td>DE</td>
<td>51.4% % of lost jobs regained</td>
</tr>
<tr>
<td></td>
<td>71.4% % of jobs lost</td>
</tr>
<tr>
<td></td>
<td>21.0% 24.7%</td>
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</table>

Incorporates October 2012 data for US and states
Progress is being made: 
Compare this year’s chart with last year’s.

% of jobs lost from employment peak to employment trough and % of lost jobs regained since employment trough

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<th>US</th>
<th>PA</th>
<th>NJ</th>
<th>DE</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of jobs lost peak to trough</td>
<td>6.4%</td>
<td>4.4%</td>
<td>6.3%</td>
<td>7.9%</td>
</tr>
<tr>
<td>% of lost jobs regained since trough</td>
<td>51.4%</td>
<td>71.4%</td>
<td>21.0%</td>
<td>24.7%</td>
</tr>
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The gradual growth in employment has lead to a gradual pickup in personal income growth this year.

Year-over-year growth in personal income and real disposable income
(3-month moving average)

Percent

Jan 07  Jul 07  Jan 08  Jul 08  Jan 09  Jul 09  Jan 10  Jul 10  Jan 11  Jul 11  Jan 12  Jul 12

Monthly data: Last point plotted is September 2012
Since the steep decline in 2008, household net worth has been rising.

Source: FRB Flow of Funds, annual data for 1995-2011; quarterly data for 2012
Household debt-to-disposable income is falling

Debt-to-Disposable Income

Quarterly data: Last point plotted is 2012 Q1
Nationally, consumer sentiment has been on an upswing since the summer, and is now at a five-year high. Regionally, the hurricane dashed confidence.

Monthly data: Last point plotted is November 2012
The recession was very deep

Real personal consumption
4Q/4Q growth, SAAR*

Last point plotted is 2011; Red bars indicate two or more quarters during the year occurred during a recession
The recession was very deep, but consumer spending is recovering

Real personal consumption
4Q/4Q growth, SAAR

Annual data through 2011 (4Q/4Q growth), quarterly data for 2012 (Q/Q growth, annualized)
Retail sales have held up.
Hurricane Sandy may have affected the numbers in October.

Monthly data: Last point plotted is October 2012 for real and nominal retail sales, and September 2012 for retail sales excl. autos, gasoline, and building materials.
Auto sales have been strong this year. Dealers attribute October’s decline to Hurricane Sandy. Both sales and production are expected to increase as cars destroyed in the hurricane are replaced.

Monthly data: Last point plotted is October 2012
The general activity index in the Philadelphia Fed Business Outlook Survey of regional manufacturing fell back into negative territory in November. This may reflect the hurricane.

Index represents percentage of respondents reporting an increase minus percentage reporting a decrease.
Monthly data: Last point plotted is November 2012
The hurricane may show up in some of our monthly data. Last year, our BOS fell sharply below trend in August when hurricane Irene hit.

Time $t$ = month of hurricane landfall
Business investment in equipment and software has been weak. Uncertainty surrounding U.S. fiscal policy is a factor weighing on business spending.

Nondefense capital goods excluding aircraft
Year-over-year percentage change, SA

Monthly data: Last point plotted is October 2012
Residential investment has added to growth in 2012, but it is a smaller share of the economy than it was during the boom.

Residential investment is now 2.4% of output, down from 6.3% during the boom.

Real residential investment
4Q/4Q growth, SAAR*

Percent

Annual data through 2011 (4Q/4Q growth), quarterly data for 2012 (Q/Q growth, annualized)
Housing as a share of the economy is at its post-WWII low

Dotted lines represent average shares from 1955Q1 – 2012Q3
Housing is beginning to recover, with sales and starts moving up, albeit from very low levels.

Monthly data: Last point plotted is October 2012 for housing starts and existing home sales and September 2012 for new home sales.
House prices are now rising at the national level

Monthly data: Last point plotted is September 2012
Delinquencies continue to move down.
Still, one in 13 mortgages is seriously delinquent.

Percent of all mortgages outstanding,
1-4 residential units

Quarterly data: Last point plotted is 2012Q2
Source: Mortgage Bankers Association, seasonally adjusted
Inflation remains near the FOMC’s longer-run goal of 2 percent.
Longer-term inflation expectations appear to be well-anchored, however, the measures based on TIPS have increased since the summer.

Survey of Professional Forecasters
Median 10-Year CPI Inflation Expectations

10-Year Inflation Compensation from Treasury Inflation-Indexed Securities

Daily data: Last point plotted is November 6, 2012 for inflation compensation and Fourth Quarter 2012 SPF for 10-year CPI inflation expectations.
European sovereign debt and banking problems continue to cloud the global outlook and Europe is in recession, but European countries have taken some positive steps.
Slow growth abroad will be a drag on U.S. exports next year

Real GDP Growth, SAAR

Source: IMF World Economic Outlook, October 2012.
Hatched bars are forecasts.
Stock prices were volatile over the election period, and have moved down recently on concerns about the fiscal cliff and geopolitical risk in the Middle East. The S&P 500 is up about 10 percent, on net, year-to-date.
Interest rates remain very low across the maturity spectrum. The Fed has kept the fed funds rate at essentially zero for 4 years. 30-year mortgage rates are under 3.5% and 10-year Treasury yields are under 1.7%.

Weekly data: Last point plotted is November 16, 2012
Banks continue to loosen credit conditions as borrower creditworthiness improves

Senior Loan Officer Opinion Survey
Net Percentage of Banks Tightening Standards

C&I Loans to Large Borrowers
C&I Loans to Small & Medium-Sized Borrowers
Consumer Credit Cards
Business lending is growing

Moving 3-month average of annualized monthly loan growth at all domestically-charted commercial banks

Source: Federal Reserve H.8 Statistical Release
Monthly Data: Last point plotted is October 2012
The Fed is buying agency mortgage-backed securities again and operation twist continues to lengthen the portfolio’s maturity. By the end of the year, the Fed will hold no short-term Treasury securities.
The FOMC took further action in September to ease financial conditions, and reiterated its policy in October

**Balance Sheet Policy**

- QE3: Purchase agency MBS at a pace of $40 billion per month.
- Operation Twist: continue through the end of the year the program to extend the average maturity of Fed balance sheet assets.
- Continue to reinvest principal payments from agency debt and agency MBS into agency MBS.

\[\Rightarrow \text{These three actions combined increase longer term assets on the balance sheet by $85 billion per month through year-end.}\]

**Forward Rate Guidance**

- Likely to keep fed funds rate at 0 to 1/4 percent at least through mid-2015.
- Highly accommodative stance of monetary policy will remain appropriate for a considerable time after the economic recovery strengthens.
- If the outlook for the labor market does not improve substantially, do more.
Majority of FOMC participants believe it will not be appropriate to raise the funds rate until 2015.

Source: FOMC Minutes and Press Conference, September 2012
The fiscal cliff is a risk to the forecast: forecasts assume we will avoid diving off the cliff but we might put our foot over the edge

<table>
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<tr>
<th>Changes in Revenue Policies</th>
<th>$ billions</th>
<th>% of FY13 GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expiration of tax provisions and adjustments to AMT</td>
<td>221</td>
<td>1.4%</td>
</tr>
<tr>
<td>Expiration of employee’s payroll tax reduction</td>
<td>95</td>
<td>0.6%</td>
</tr>
<tr>
<td>Other expiring provisions</td>
<td>65</td>
<td>0.4%</td>
</tr>
<tr>
<td>Taxes included in Affordable Care Act</td>
<td>18</td>
<td>0.1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>399</strong></td>
<td><strong>2.5%</strong></td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Changes in Spending Policies</th>
<th>$ billions</th>
<th>% of FY13 GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic sequestration</td>
<td>65</td>
<td>0.4%</td>
</tr>
<tr>
<td>Expiration of emergency unemployment benefits</td>
<td>26</td>
<td>0.2%</td>
</tr>
<tr>
<td>Reduction in Medicare payment rates for doctors</td>
<td>11</td>
<td>0.1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>103</strong></td>
<td><strong>0.6%</strong></td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Other Changes in Revenues and Spending</th>
<th>$ billions</th>
<th>% of FY13 GDP</th>
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</thead>
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<tr>
<td><strong>Total Change in Deficit</strong></td>
<td><strong>607</strong></td>
<td><strong>3.8%</strong></td>
</tr>
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</table>

*Source: Congressional Budget Office, May 2012*
The government budget deficit as a percent of GDP is expected to decline over the next two years, but current fiscal policy is not sustainable over the longer-run.

Source: Office of Management and Budget Mid-Session Review, July 2012

Hatched bars are median forecasts from the 2012Q4 *Survey of Professional Forecasters*.

[Image of bar chart showing economic forecasts from 2008 to 2013 for Q1 to Q4, with hatched bars indicating median forecasts from 2012Q4.]
The latest Philadelphia Fed Survey of Professional Forecasters indicates the unemployment rate will continue to decline over the year but will remain high.
The Philadelphia Fed SPF forecasts total PCE inflation will be 2% over the next two years, consistent with the Fed’s long-run goal.

Hatched bars represent median forecasts from the 2012 Q4 Survey of Professional Forecasters.