Old Dominion University
2014 National Economic Outlook

February 5, 2014

Professor Gary A. Wagner

www.odu.edu/forecasting
Presentation Outline

- 2013 Scorecard
- Current economic conditions

Outlook for 2014
  - What are the likely sources for improved or slower growth?

- Federal Reserve and Monetary Policy
- Upside risks
- Downside risks
### 2013 Old Dominion University National Scorecard

<table>
<thead>
<tr>
<th></th>
<th>Historical 2011</th>
<th>Historical 2012</th>
<th>2013 Forecast</th>
<th>2013 Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real Gross Domestic Product (GDP)</td>
<td>1.85%</td>
<td>2.78%</td>
<td>2.10%</td>
<td>1.92%</td>
</tr>
<tr>
<td>Employment growth</td>
<td>1.61%</td>
<td>1.65%</td>
<td>1.15%</td>
<td>1.70%</td>
</tr>
<tr>
<td>Unemployment rate (%)</td>
<td>8.9</td>
<td>8.1</td>
<td>7.6</td>
<td>7.4</td>
</tr>
<tr>
<td>Consumer price index (CPI)</td>
<td>3.34%</td>
<td>1.90%</td>
<td>1.73%</td>
<td>1.22%</td>
</tr>
<tr>
<td>CPI – Core (excludes food and energy)</td>
<td>2.24%</td>
<td>1.89%</td>
<td>1.51%</td>
<td>1.71%</td>
</tr>
<tr>
<td>3-month Treasury bill</td>
<td>0.05%</td>
<td>0.09%</td>
<td>0.20%</td>
<td>0.06%</td>
</tr>
<tr>
<td>10-year Treasury bond</td>
<td>2.79%</td>
<td>1.80%</td>
<td>1.95%</td>
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<td>30-year conventional mortgage rate</td>
<td>4.46%</td>
<td>3.66%</td>
<td>3.80%</td>
<td>3.98%</td>
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</tbody>
</table>
Growth in Real Gross Domestic Product (GDP), 2006:Q1 - 2013:Q4

Seasonally adjusted annualized rate

Average since June 2009: 2.40%

2013 Growth Rates:
- Q1 = 1.2%
- Q2 = 2.5%
- Q3 = 4.1%
- Q4 = 3.2%

Source: Bureau of Economic Analysis and Old Dominion University Economic Forecasting Project.
Month-to-Month Change in US Total Nonfarm Employment

Average monthly change 2004-2006: +182,600 jobs

Average last 12 months: +182,167
Average last 6 months: +169,500
Losing 800,000 jobs per month

Source: Bureau of Labor Statistics and Old Dominion University Economic Forecasting Project.
### US Unemployment Situation

**Seasonally adjusted**

**January 2000 - December 2013**

<table>
<thead>
<tr>
<th></th>
<th>Peak '07-10</th>
<th>One year ago</th>
<th>Currently</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployment rate</td>
<td>10.0</td>
<td>7.9</td>
<td>6.7</td>
</tr>
<tr>
<td>U6 rate</td>
<td>17.2</td>
<td>14.4</td>
<td>13.1</td>
</tr>
</tbody>
</table>

- **Average 9.1%**
- **Average 5.3%**

Source: Bureau of Labor Statistics and Old Dominion University Economic Forecasting Project.
Unemployment Duration in the US, January 1980 – December 2013

3-month moving average

Source: Bureau of Labor Statistics and Old Dominion University Economic Forecasting Project.
Civilian Labor Force Participation Rate by Age

Comparison of Pre-Recession Average and Current, Seasonally Adjusted

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Average 2004-2006</th>
<th>Current</th>
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</thead>
<tbody>
<tr>
<td>Ages 16-19</td>
<td>43.7</td>
<td>33.9</td>
</tr>
<tr>
<td>Ages 20-24</td>
<td>74.7</td>
<td>70.7</td>
</tr>
<tr>
<td>Ages 25-54</td>
<td>82.8</td>
<td>80.7</td>
</tr>
<tr>
<td>Ages 55+</td>
<td>37.1</td>
<td>39.9</td>
</tr>
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Source: Bureau of Labor Statistics and Old Dominion University Economic Forecasting Project.
Civilian Labor Force Participation Rate by Education

Comparison of Pre-Recession Average and Current, Seasonally Adjusted

- Less than High School:
  - Avg 2004-2006: 45.6
  - Current: 43.8

- High School Graduate:
  - Avg 2004-2006: 63.2
  - Current: 58.2

- Some College:
  - Avg 2004-2006: 72.4
  - Current: 67.3

- Bachelor Degree and Higher:
  - Avg 2004-2006: 77.9
  - Current: 75.0

Source: Bureau of Labor Statistics and Old Dominion University Economic Forecasting Project.
Reasons and Changes for Not Being Part of the Labor Force

Between 2007:Q4 and 2013:Q4

12.6 million people have dropped out of the labor force since 2007:Q4

- Retired (5.5 million)
- Disabled or Ill (2.9 million)
- In School (2.5 million)
- Wants a Job (1.5 million)
- Caring for Family/House (161,000)
- Other (99,000)

Actual vs Projected Labor Force Participation Rates

Annual Data, 1970-2013

Source: Bureau of Labor Statistics and Old Dominion University Economic Forecasting Project.
Workers Employed Part-Time Because of Economic Reasons

January 2000 – December 2013, Seasonally adjusted

Average = 4.3 million

2001 Recession

2007-09 Recession

7.7 million

Source: Bureau of Labor Statistics and Old Dominion University Economic Forecasting Project.
Employment-Population Ratio

January 1948 – December 2013, Seasonally Adjusted

Mid 1970s – Late 1980s

Average 1948 to 1980: 56.8

Average 1983 to 2008: 62.3

Average since June 2009: 58.5
Currently: 58.6

Source: Bureau of Labor Statistics and Old Dominion University Economic Forecasting Project.
Job Growth Needed to Restore the Employment-Population Ratio

Assume a Target Ratio of 62%

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<th>Hypothetical Target Date</th>
<th>Average Monthly Job Growth Needed</th>
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<tr>
<td>2016</td>
<td>+359,000</td>
</tr>
<tr>
<td>2018</td>
<td>+267,000</td>
</tr>
<tr>
<td>2020</td>
<td>+228,000</td>
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Source: Bureau of Labor Statistics and Old Dominion University Economic Forecasting Project.
National Outlook for 2014

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Components of Real Gross Domestic Product (average since 2008)

Real GDP = $15.7 trillion (in 2009 dollars)

- Consumption (68% of GDP)
- Government (20% of GDP)
- Investment (15% of GDP)
- Net Exports (-3% of GDP)
A Comparison of Post-Recession Growth in Real GDP

Cumulative percentage change the first 18 quarters following the recession’s end

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<td>15.1%</td>
<td>14.8%</td>
<td>11.2%</td>
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<td>Consumption</td>
<td>23.5%</td>
<td>16.4%</td>
<td>15.0%</td>
<td><strong>10.5%</strong></td>
</tr>
<tr>
<td>Investment</td>
<td>50.5%</td>
<td>34.4%</td>
<td>29.6%</td>
<td>45.5%</td>
</tr>
<tr>
<td>Exports</td>
<td>34.8%</td>
<td>41.4%</td>
<td>32.7%</td>
<td>34.8%</td>
</tr>
<tr>
<td>Imports</td>
<td>71.8%</td>
<td>45.4%</td>
<td>38.6%</td>
<td>28.7%</td>
</tr>
<tr>
<td>Government</td>
<td>22.4%</td>
<td>0.5%</td>
<td>8.8%</td>
<td><strong>-7.3%</strong></td>
</tr>
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</table>

12% decline in defense and a 7% decline in state & local government

Source: Bureau of Economic Analysis and Old Dominion University Economic Forecasting Project.
Net Exports (-3% of GDP)

Exports (12% of GDP)
- Goods (8%)
- Services (4%)

Imports (15% of GDP)
- Goods (12%)
- Services (3%)

- Primarily driven by
  - Domestic economic conditions
  - Economic conditions of our trading partners
  - Exchange rates
Net Exports in 2014

• Expected to provide a **small** boost to GDP

• Positive factors...
  – Sovereign debt problems of Europe have stabilized
  – Eurozone will grow at its fastest rate in nearly 3 years
    • Including Germany, France, United Kingdom, and Italy

• Negative factors...
  – Growth in China and Japan should slow in 2014
    • Estimates for China’s slowdown range from -0.2% to -1%
Real Trade-Weighted US Exchange Rate Broad Index

January 2000 – December 2013, not seasonally adjusted

Dollar is depreciating

Source: Board of Governors of the Federal Reserve System.
# Projected Change in Growth for Our Major Trading Partners

**Expected percentage change between 2013 and 2014**

<table>
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<tr>
<th>Top Export Partners</th>
<th>Projected Change in Growth</th>
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<tr>
<td>Canada</td>
<td>0.55%</td>
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<td>Mexico</td>
<td>0.02%</td>
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<tr>
<td>China</td>
<td>-0.35%</td>
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<tr>
<td>Japan</td>
<td>-0.71%</td>
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<tr>
<td>UK</td>
<td>0.44%</td>
</tr>
<tr>
<td>Germany</td>
<td>0.91%</td>
</tr>
<tr>
<td>Brazil</td>
<td>-0.04%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>1.59%</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>0.91%</td>
</tr>
<tr>
<td>South Korea</td>
<td>0.82%</td>
</tr>
<tr>
<td><strong>TRADE-WEIGHTED</strong></td>
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<tr>
<td><strong>TRADE-WEIGHTED</strong></td>
<td><strong>+0.1%</strong></td>
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Source: IMF, Bureau of the Census, and Old Dominion University Forecasting Project.
Primarily driven by

- Expectations of future economic performance
- Interest rates
- Access and availability of credit
Investment in 2014

• Although investment spending has been strong since 2009, it should moderate some in 2014
  – Purchases of equipment slowed considerably in 2013

• Business confidence remains somewhat fragile
  – However, the upside risks far outweigh the downside risks

• Federal Reserve “tapering”
Small Business Optimism Index (1986=100)


Source: National Federation of Independent Business.
Firms Expecting “Better” or “Worse” Conditions in 6 Months

Net Percentage Responding, January 2003 – November 2013

More respondents expect conditions to be “better” in 6 months

13 consecutive months respondents have been expecting “worse” conditions

More respondents expect conditions to be “worse” in 6 months

Government shutdown

Source: National Federation of Independent Business.
Loan Standards for Commercial and Industrial Loans

Net Percentage of Banks Reporting Tightening Standards, 1990:Q2 – 2013:Q3

Source: Board of Governors of the Federal Reserve System.
Government (20% of GDP)

Federal (8% of GDP)
→ Defense spending (5%)
→ Non-defense (3%)

State and local (12% of GDP)
State and Local Government Tax Revenue Recovery

% Decline in Total Nominal Tax Revenue From Start of 2007-2009 Recession

Cumulative % change since start of recession

Quarters since start of recession

Source: Nelson Rockefeller Institute of Government.
Composition of Federal Government Expenditures, FY 2012

Share of $3.54 trillion

- Social Security: 21.7%
- Medicare: 15.6%
- Medicaid: 7.1%
- Income Security: 10.0%
- Retirement and Disability: 19.0%
- Other: 17.4%
- Defense: 5.2%
- Non-Defense Discretionary: 4.1%

Source: Congressional Budget Office.
Highlights of the 2014 Federal Budget

Discretionary Spending in FY 2014 = $1.012 Trillion
- $28 billion increase over FY13
- 2.85% (nominal) increase

- $63 billion in sequester “relief” will be spread over the next two years
  - Split equally between Defense and Non-Defense
  - $22 billion for Defense in FY14, $9.5 in FY15

- This is roughly a 5% boost over funding levels expected due to sequestration
- 1% pay raise for military personnel and federal civilian employees
Presently, the debt limit is suspended until Feb. 7, 2014
- A new limit *should* be reset on or before Feb. 8

If the new limit is not raised or suspended, Treasury Secretary Jack Lew will use “extraordinary measures” to pay our obligations until late Feb/early March

What happens if the debt limit is *not* raised?
- Federal spending will fall by 25% immediately (6% of GDP)
- US economy will almost certainly enter a recession
- Our default risk/credit rating will be negatively impacted
Consumption (68% of GDP)

Goods (23% of GDP)
- Motor vehicles & parts (2.3%)
- Recreational goods (2.4%)
- Food & beverages (5.3%)

Services (45% of GDP)
- Housing & utilities (13%)
- Health care (11%)
- Financial services (5%)

- Primarily driven by
  - Employment and income
  - Confidence about the future
  - Wealth (home values & financial wealth)
  - Interest rates
Consumption in 2014

• Consumption has been solid for 2+ years now
  – I expect consumer spending to accelerate and boost growth significantly in 2014

• Positive factors...
  – Housing correction is (virtually) complete
  – Consumer expectations have firmed considerably
  – Labor market conditions are improving more rapidly

• Negative factors...
  – “Tapering” should slow spending on durable goods
Household Expectations on Selected Measures, Jun. – Dec. 2013

Federal Reserve Bank of New York Rotating Survey of 1200 People

- Probability of Losing a Job over Next 12 Months: Avg. = 16.4
- Probability of Leaving a Job Voluntarily over Next 12 Months: Avg. = 21.2
- Expected Household Spending Growth over Next 12 Months: Avg. = 5.4
- Expected Home Price Growth over Next 3 Years: Avg. = 4.8

Source: Federal Reserve Bank of New York Survey of Consumer Expectations.
Total Household Debt Balances, 2003:Q1 – 2013:Q3

Source: Federal Reserve Bank of New York Household Debt and Credit Survey.

Estimates began in 1980:Q1

Financial Obligations Ratio (FOR) = (debt service + rent + auto leases + others) / (after-tax income)

Debt Service Ratio (DSR) = (minimum debt payments) / (after-tax income)

<table>
<thead>
<tr>
<th></th>
<th>2007-09 Peak</th>
<th>All-Time Low</th>
<th>Currently</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSR</td>
<td>13.2</td>
<td>9.9</td>
<td>9.9</td>
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<tr>
<td>FOR</td>
<td>18.1</td>
<td>15.1</td>
<td>15.4</td>
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Source: Board of Governors.
Monetary Policy and the Federal Reserve System

New Chair of the Board of Governors
Janet Yellen
Ph.D., Economics, Yale

New (Nominated) Vice-Chair of the Board of Governors
Stanley Fischer
Ph.D., Economics, MIT
What can we expect from “The FED” in the coming year?

• May 2013
  – Announced a “step down” in quantitative easing may occur soon

• December 2013
  – QE purchases would slow from $85 to $75 billion per month

• Quantitative easing (QE)
  – Purchases of mortgage-backed securities and other agency debt
  – MBS drop from $40 to $35B, Treasuries from $45 to $40B
    • QE3: 9/2012 - ?

Source: Board of Governors of the Federal Reserve.
What can we expect from “tapering”?

• It *should* lead to higher middle and longer term interest rates
  – Estimated increase: 80 to 100 basis points

• The *rate* at which the FED will taper remains uncertain and will likely depend on inflation expectations

• If inflation expectations remain anchored around 2%, then I suspect the FED will taper slowly

• If inflation expectations rise sharply during the year, then tapering is likely to be more rapid
Expected Inflation Yield Curve

Source: Federal Reserve Bank of Cleveland and Old Dominion University Economic Forecasting Project.
FOMC Expectations of Policy Firming

Expected year of first increase in target federal funds rate

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<tr>
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<tbody>
<tr>
<td>Number of Respondents</td>
<td>13</td>
<td>14</td>
<td>12</td>
<td>12</td>
</tr>
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Mean Expected Target Rate (Dec. 2013)

<table>
<thead>
<tr>
<th>Year</th>
<th>Rate</th>
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<tr>
<td>2013</td>
<td>0.25</td>
</tr>
<tr>
<td>2014</td>
<td>0.34</td>
</tr>
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<td>2015</td>
<td>1.09</td>
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<td>2016</td>
<td>2.28</td>
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Source: Board of Governors of the Federal Reserve System.
Upside risks

• Household deleveraging cycle appears to be over

• Leading labor market indicators are all moving the right direction

• The “energy boom” will continue to be a bright spot

• Quantitative easing is winding down
Downside risks

• No *obvious* significant headwinds

• Political and regulatory uncertainty remains elevated
  – Financial regulations are *way* behind schedule
  – Affordable Care Act rollout may dent confidence

• Fear that slowing growth in China will spread

• Inflation expectations grow
### 2014 National Forecast: Quarter-by-Quarter

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<td>Nominal GDP (level)</td>
<td>17275.6</td>
<td>17452.5</td>
<td>17632.3</td>
<td>17814.7</td>
<td>17543.8</td>
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<td>Real GDP (level)</td>
<td>16072.7</td>
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<td>Real GDP growth</td>
<td>2.71%</td>
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* Annual growth in real GDP does not equal the average growth rate of the 4 quarters of 2014. It is the percentage change between the average level of real GDP in 2013 and the average level of real GDP in 2014.