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Member SIPC
Speaker
Charles W. Calomiris
Henry Kaufman Professor of Financial Institutions,
Columbia School of Business
Feeless Forecasts

Charles W. Calomiris
Columbia University

October 22, 2015
## Forecasting Flat Growth Year

<table>
<thead>
<tr>
<th>Economic Indicator</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployment</td>
<td>4.8%</td>
</tr>
<tr>
<td>GDP growth</td>
<td>2.5%</td>
</tr>
<tr>
<td>CPI inflation</td>
<td>1.5%</td>
</tr>
<tr>
<td>WTI Oil Price</td>
<td>$47</td>
</tr>
<tr>
<td>Dow</td>
<td>17,000</td>
</tr>
<tr>
<td>10-year Treasury</td>
<td>2.5%</td>
</tr>
</tbody>
</table>
Why These Numbers?

• Begin with a forecast of aggregate demand (nominal GDP growth), and I assume that it will be flat in growth (4%), despite some arguments in favor of positive acceleration, and some in favor of deceleration.

• Inflation and inflation expectations (medium-term) are unchanged in near term, in my view, so real growth is 2.5%.

• Very low recent CPI inflation reflects the fact that the data are noisy and that inflation was reduced temporarily due to new low level of energy prices.

• Unemployment forecast reflects a modified version of Okun’s Law.
Gross Domestic Product

Source: US. Bureau of Economic Analysis

Shaded areas indicate US recessions - 2015 research.stlouisfed.org
Why These Numbers? (Cont’d)

• Fed will move slowly on interest rate rise, so 10-year Treasury will move slowly too, and problems in EMs and Europe and China will keep uncertainty high, which will prop up U.S. Treasury’s prices.

• Energy supply in U.S. is price elastic and efficiency is improving, so oil price will not bounce back.

• Stocks will be flat, which is how they have behaved in the last two Fed rate rising environments. They may be a bit high right now (P/E of 20 for S&P), but we have already had a correction, from which we are recovering slowly, and there is no reason to expect a collapse.
## Stock Returns before and during Fed Tightening Periods

<table>
<thead>
<tr>
<th>Period</th>
<th>Pre-Period Returns</th>
<th>Period Returns</th>
</tr>
</thead>
<tbody>
<tr>
<td>1983-84</td>
<td>14.7%</td>
<td>5.0%</td>
</tr>
<tr>
<td>1987-89</td>
<td>6.8%</td>
<td>1.2%</td>
</tr>
<tr>
<td>1994</td>
<td>21.2%</td>
<td>2.2%</td>
</tr>
<tr>
<td>2004-06</td>
<td>41.1%</td>
<td>0.2%</td>
</tr>
</tbody>
</table>
Digging Deeper: Nominal Growth

• Some factors will be pushing nominal growth up (reactions to low commodity prices in U.S., housing expansion, acceleration of real personal income growth and consumption, as consumers' finances have recovered), other (global) factors will be pushing nominal growth both down and up, and the two pressures will balance with little change.

• Drags that matter most will continue (taxation, regulation policies, political uncertainties that affect consumer behavior, etc.). An acceleration in growth will happen in medium term, if those change, but not this year.

• Other drags that will increase will not make things much worse for U.S. (China, Europe, EMs, Middle East, Geopolitics).
What I’m Rejecting and Why

• Upside nominal GDP argument based on monetarist view about very high Divisia M2 growth (neglects repo effects of QE3).

• Deflation projections (don’t take account of temporary effects of energy price changes).

• Deflation worries about demand (three factors are needed: large size, surprise, and lack of offset by real income – focus should be on nominal demand growth).

• Downside view based on global factors exaggerates their importance and one-sidedness.
Medium Term

• Fed is now behind the curve on rate increases and will continue that mistake.

• After 2016 election, eventually reversion to normalcy will cause regulatory and tax policy to improve, and risk environment will improve, causing money multiplier to rise.

• We will also see much higher interest rates.

• Fed, therefore, will face new political pressures that will make it harder to tighten quickly (balance sheet effects), and Fed is politicized and adrift, so those factors will aggravate the problem.

• Medium-term acceleration in nominal demand, real growth, and inflation seem likely.
Speaker
Ellen Hughes-Cromwick
University of Michigan
former Chief Global Economist, Ford Motor Company
• Global economy to pick up next year

• U.S. economy in 7\textsuperscript{th} year of sustained economic expansion, and will likely begin its 8\textsuperscript{th} year of growth by mid-2016

• Federal Reserve to remove modest amount of policy stimulus with minimal effect on business conditions

• Inflation to remain well contained in 2016

• Further decline in unemployment rate to below 5%

• Risks and opportunities are balanced this year
2016 Outlook Summary

• Strongest sectors of U.S. economy in 2016 likely to be:
  – Housing, chemicals, business services, and health care
  – Consumer spending on services

• Oil price decline to provide positive underpinning for net importers – China and India

• Weak currencies among several emerging markets will make their businesses more competitive in U.S. and Europe next year

• Euro area growth to improve from 2015 pace

• U.K. strength to edge down from current near-3% pace
Global GDP

Global GDP
% Chg Over Prior Year

Note: Global growth rate, inflation adjusted, at market exchange rates; historical data are IMF World Economic Outlook (October 2015); author’s estimate for 2015-16 outlook
A complete business cycle is:
  - Expansion in economic activity, followed by a recession period, and then, to complete the cycle, another expansion period

This is called “peak to peak” – a complete cycle of activity

33 cycles since mid-1800s

Current economic expansion started in June 2009

Q4 2015 is 26th quarter of U.S. economic expansion

Only 3 expansions have lasted as long as current one:
  - 1961 - 1969 35 Quarters
  - 1982 - 1990 31
  - 1991 - 2001 40
Economic policy mistakes

“Errors in optimism”

Unexpected surge in oil prices ("oil price shock")

Expansions do not die of old age

Very positive that this expansion is still going after 6 years

Better to have sustained, somewhat lower growth than recessionary setbacks
## U.S. Outlook For 2016

<table>
<thead>
<tr>
<th>Variable</th>
<th>Units</th>
<th>Forecast</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real GDP</td>
<td>% Change for Q2 2015 – Q2 2016</td>
<td>2.5</td>
<td>2.0 – 3.0</td>
</tr>
<tr>
<td>CPI</td>
<td>% Change for Sept 2015 – Sept 2016</td>
<td>1.7</td>
<td>1.5 – 2.0</td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>% as of Sept 2016</td>
<td>4.3</td>
<td>4.0 – 4.5</td>
</tr>
<tr>
<td>10-Year Treasury Bond Yield</td>
<td>% per Annum as of Sept 2016 Average</td>
<td>2.50</td>
<td>2.25 – 3.00</td>
</tr>
<tr>
<td>Dow Jones Industrial Average</td>
<td>Index Average for Sept 2016</td>
<td>17,000</td>
<td>16,500 – 17,500</td>
</tr>
<tr>
<td>West Texas Intermediate Crude Oil Price</td>
<td>USD per Barrel Average for Sept 2016</td>
<td>60</td>
<td>40 – 80</td>
</tr>
</tbody>
</table>
Behind The GDP Forecast

• Consumer spending growth trending in 3% range
  – Income growth in 3.0 – 4.0% range (inflation adjusted wage growth of 1.5% PLUS job growth of 2% EQUALS income growth in this range)

• Still low inflation

• Modest build in inventories next year

• Housing investment growth trending around 8%

• Modest contributions from growth in plant and equipment investment

• Bigger trade deficit

• Government spending growth trending under 2%
Global Commodity Price Declines

Global Commodity Price Index
2005=100

Source: IMF World Economic Outlook, October 2015; non-fuel, includes food and beverages and industrial
USD Up Cycle

- USD bull run may be through initial phase: Expectations adjustment resulting from improved growth outlook and Fed closer to policy pivot point
- Real trade-weighted USD up 22% since 2011 trough over nearly 4 years
- Two prior USD up cycles shown in chart lasted 6+ years and were cumulative gains of 52% in the early 1980s and 34% in the 1990s

Source: Federal Reserve; averages of daily figures. Series is price adjusted. A weighted average of the foreign exchange value of the U.S. dollar against the currencies of a broad group of major U.S. trading partners. Broad currency index includes the Euro Area, Canada, Japan, Mexico, China, United Kingdom, Taiwan, Korea, Singapore, Hong Kong, Malaysia, Brazil, Switzerland, Thailand, Philippines, Australia, Indonesia, India, Israel, Saudi Arabia, Russia, Sweden, Argentina, Venezuela, Chile, and Colombia.
**Top Five Job Creating Sectors**
Contributions to Job Gains by Sector And Year-Over-Year Job Growth
September 2014 – September 2015

- Job growth at 2% with 2.8 million jobs created since September 2014
- Wage growth at 2.2% during last 12 months

<table>
<thead>
<tr>
<th>Sector</th>
<th>Contribution to Overall Job Gains</th>
<th>Year-Over-Year Job Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional and Business Services</td>
<td>22%</td>
<td>3.2%</td>
</tr>
<tr>
<td>Education and Health Care</td>
<td>21%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Leisure and Hospitality</td>
<td>15%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>11%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Construction</td>
<td>7%</td>
<td>3.3%</td>
</tr>
</tbody>
</table>
• The average of 9 prior expansions grew a cumulative 28% from the trough
• The current expansion is one-half that pace at 14% gain since Q2 2009
• If the current expansion had been at average speed, it would translate into an additional $2 trillion of real income or over $6,500 per person*

* Civilian noninstitutional population
Consumer spending on durable goods has nearly matched the average pace of expansion. The demand is centered on automotive purchases. But even spending on appliances and furniture have done well. Funding channels are open and wealth effect supports this sector of the economy.
The big hole in GDP in current cycle is demand for consumer services.

As of Q2 2015, $1 trillion below average.

Represents 60% of the below-average GDP performance.
In the aggregate, nonresidential investment spending is growing at historical average rate
First half 2015 setback
Business spending on equipment is the outperformer among all major end markets
This lays substantive groundwork for productivity growth in the years ahead
• Consumer spending on health care services is well below historical average.
• If this grew at the historical pace, it would represent $226 billion in demand.
• Health care services spending growth is below average due to two forces at play: a positive supply shock (health care reform) and some trimming of discretionary purchases.
Global economy entering period well beyond financial crisis and 7 years of expansion in the U.S.

- Expect global GDP gains to improve in the next 12 – 24 months
- U.S. economic growth projected at 2.5% (year-over-year) by mid-2016 and above its long-run sustainable trend of 2.0%
- U.S. businesses have several strengths centered in energy, manufacturing, capital goods, IT, and healthcare
Speaker
Ronald J. Kruszewski
Chairman of the Board of Directors, Stifel Financial Corporation and Stifel, Nicolas & Company Incorporated
St. Louis Economic Outlook Forum

Ron Kruszewski
Chairman and Chief Executive Officer

STIFEL
30 Years of Steady Growth

How Did The U.S. Economy Slip Off Track?

U.S. Real Gross Domestic Product

1980-2007 Trend Growth = 3.3%
How Did The U.S. Economy Slip Off Track?

1980-2007 Trend Growth = 3.3%

New Trend = 1.5%
# What Changed?

<table>
<thead>
<tr>
<th>Structural Factors Driving Growth</th>
<th>Trend Annual Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor Hours</td>
<td>1.4%</td>
</tr>
<tr>
<td>Capital Investment</td>
<td>5.6%</td>
</tr>
<tr>
<td>Productivity</td>
<td>1.6%</td>
</tr>
<tr>
<td>Total Output</td>
<td>3.3%</td>
</tr>
</tbody>
</table>

What changed in the growth factors from 1980-2007 to 2007-Today?
Immigration
Other Keys to Turning the Ship Around

1. Sound fiscal policy a must
2. Minimal intrusion by public sector on the private sector
3. Competition is encouraged
4. Support investment in infrastructure and human capital
5. Maintain sound tax policies
China
China and the U.S. Industrial Revolution

1850-1900 U.S. Industrial Revolution

China Today
China’s Amazing Growth
1/3 of World’s GDP Growth Since 2009

- $59 Trillion World GDP 2009
- $77 Trillion World GDP 2014
- Total World Grew $18 Trillion

- China Grew $5 Trillion
- Rest of World Grew $13 Trillion
## China’s Borrowing Binge

### China Credit
**Billions USD (Non-Financial Sector)**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Fourth Quarter 2009</th>
<th>First Quarter 2015</th>
<th>Change (Billions $)</th>
<th>Total % Change</th>
<th>Annualized % Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households</td>
<td>$1,195</td>
<td>$3,838</td>
<td>+$2,643</td>
<td>221%</td>
<td>25%</td>
</tr>
<tr>
<td>Corporations</td>
<td>6,216</td>
<td>16,745</td>
<td>+10,529</td>
<td>169%</td>
<td>21%</td>
</tr>
<tr>
<td>Government</td>
<td>1,829</td>
<td>4,376</td>
<td>+2,547</td>
<td>139%</td>
<td>18%</td>
</tr>
<tr>
<td>Total Credit</td>
<td>$9,240</td>
<td>$24,959</td>
<td>+$15,719</td>
<td>170%</td>
<td>21%</td>
</tr>
<tr>
<td>Total GDP</td>
<td>$5,100</td>
<td>$10,400</td>
<td>+$5,300</td>
<td>104%</td>
<td>15%</td>
</tr>
</tbody>
</table>

Source: Bank of International Settlements

Credit growing 3x faster than GDP is not sustainable.
U.S. Forecasts
STRONG DOLLAR WEIGHS ON EMERGING MARKETS

Brazilian Real / USD

Down 50%

South African Rand / USD

Down 50%

Russian Ruble / USD

Down 60%

Malaysian Ringgit / USD

Down 30%

Indian Rupee / USD

Down 25%

Mexican Peso / USD

Down 30%
In economics, the Phillips Curve is a historical inverse relationship between rates of unemployment and corresponding rates of inflation that result in an economy.

Over the past sixty years, the relationship between employment and inflation is weak.
### U.S. Forecasts (Third Quarter 2016)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Q3 2016 Forecast</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>+2.1%</td>
<td>Slow Growth Continues</td>
</tr>
<tr>
<td>Inflation (CPI)</td>
<td>+1.0%</td>
<td>Excess Capacity Remains / Deleveraging Continues</td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>5%</td>
<td>Employment Gains Continue as Labor Force Growth Picks Up</td>
</tr>
<tr>
<td>10-Year Treasury Yield</td>
<td>2%</td>
<td>No Big Move Higher Yet as Growth and Inflation Remain Below Trend</td>
</tr>
<tr>
<td>Dow Jones</td>
<td>18,100</td>
<td>Better return than bonds or cash. Multiples and margins above average. Lower returns than recent years.</td>
</tr>
<tr>
<td>Oil (West Texas Intermediate)</td>
<td>$40</td>
<td>Struggles with slower global growth and demand. Oversupply takes time to clear. Benefits to consumer and energy intensive industries / net energy importers.</td>
</tr>
</tbody>
</table>
Forecast #1:
GDP RISES 2.1%

U.S. Domestic Production (GDP)
% Change, Adjusted for Inflation

Recessions Shaded

2.1% Estimate

Forecast #1:
GDP RISES 2.1%

U.S. Domestic Production (GDP)
% Change, Adjusted for Inflation

Recessions Shaded

2.1% Estimate
Forecast #2:
Inflation Remains Near 1%
Forecast #3:
Unemployment Rate at 5%

U.S. Unemployment Rate

Recessions Shaded
Forecast #4:
Interest Rates Remain Near 2%
Forecast #5:
Dow Rises to 18,100
Forecast #6: Oil Remains Under Pressure
Risks to Forecast

1. Debt brinksmanship
2. Fed tightens too soon
3. Global deflation
Thank you.
<table>
<thead>
<tr>
<th>Expert Projections</th>
<th>Percent Change in Gross Domestic Product (GDP)</th>
<th>Percent Change Growth in Consumer Price Index (CPI)</th>
<th>Ten-Year Treasury</th>
<th>Dow Jones Industrial Average</th>
<th>U.S. Unemployment Rate</th>
<th>Crude Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mickey Levy</td>
<td>2.75% - 3.00%</td>
<td>2.4%</td>
<td>2.8%</td>
<td>17,700</td>
<td>5.4%</td>
<td>$85 bbl</td>
</tr>
<tr>
<td>Laurence Meyer</td>
<td>2.8%</td>
<td>2.0%</td>
<td>3.6%</td>
<td>17,400</td>
<td>5.6%</td>
<td>$82 bbl</td>
</tr>
<tr>
<td>Yong Yang</td>
<td>2.9%</td>
<td>2.0%</td>
<td>3.25%</td>
<td>Likely moving sideways</td>
<td>5.6%</td>
<td>Weak</td>
</tr>
<tr>
<td>Actuals</td>
<td>2.4%</td>
<td>0%</td>
<td>2.1%</td>
<td>17,100</td>
<td>5.1%</td>
<td>$45</td>
</tr>
</tbody>
</table>
What the Experts Expect by October, 2016

<table>
<thead>
<tr>
<th>Expert Projections</th>
<th>Percent Change in Gross Domestic Product (GDP)</th>
<th>Percent Change Growth in Consumer Price Index (CPI)</th>
<th>Ten-Year Treasury</th>
<th>Dow Jones Industrial Average</th>
<th>U.S. Unemployment Rate</th>
<th>Crude Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charlie Calomiris</td>
<td>2.5%</td>
<td>1.5%</td>
<td>2.5%</td>
<td>17,000</td>
<td>4.8%</td>
<td>$47</td>
</tr>
<tr>
<td>Ellen Hughes-Cromwick</td>
<td>2.5%</td>
<td>1.7%</td>
<td>2.5%</td>
<td>17,000</td>
<td>4.3%</td>
<td>$60</td>
</tr>
<tr>
<td>Ron Kruszewski</td>
<td>2.1%</td>
<td>1.0%</td>
<td>2.0%</td>
<td>18,100</td>
<td>5.0%</td>
<td>$40</td>
</tr>
</tbody>
</table>