Onwards and Upwards

Economic Outlook
GLOBAL TRENDS
Developed Economies Are Rebooting

Real GDP in selected regions (percent change from four quarters earlier)

THE U.S. OUTLOOK
Getting There But Not There Yet

Selected unemployment rate measures (percent of the labor force)

Sources: NBER-designated recession bars; U.S. Department of Labor. Updated through March 2015.
Good News: “Unemployable” Are Getting Jobs

Unemployment by duration of unemployment spells (percent of the labor force)

Ditto On Inflation

Core PCE chain price index (percent change from 12 months earlier)

Sources: Vertical bars denote recessions and are designated by the NBER; U.S. Department of Commerce. Updated through March 2015 (inflation) and March 18, 2015 (FOMC forecast).

Overall PCE inflation¹
Core PCE inflation¹
Forecast

The range of FOMC’s forecast for PCE chain price inflation, including its longer-run goal

¹ PCE inflation excludes food and energy price changes.
But Zero’s Not the Final Answer ...

Nominal funds rate (% per annum) and core inflation (% ch. from 12 months earlier)¹

¹ Chain price index for personal consumption expenditures excluding food and energy.

Source: Federal Reserve Board. Updated through April 2, 2015.
... Nor Is a Steep Yield Curve

Federal funds rate less 10-year Treasury yield (percentage points)

Source: Federal Reserve Board. Updated through March 2015.
I. Noise Versus News
Really?

Real GDP (annualized percent change)

Cargo handled in ship ports (20-foot equivalent units)

Source: Various port administrations. Updated through February 2015.

¹ Seattle and Tacoma.
... and Bad Winter Weather

Heating degree days, population weighted (deviation from normal)

(2) Oil’s Drop Hurts Some ...

Employment in energy-related sectors (thousands)

Jobless claims in Texas (ratio to 2007 Q4 level)

Source: U.S. Department of Labor. Updated through April 25, 2015 (state) and May 2, 2015 (U.S.).
Total nonfarm payroll employment and employment in energy-related sectors (thousands)

Oil Cuts Many Ways ...

Nonfarm payroll employment, Texas versus the nation (thousands)

Source: U.S. Department of Labor. Updated through March 2015 (Texas) and April 2015 (U.S.).
... Even for Texas

Unemployment rate, Texas versus the U.S. (percent of the labor force)

Source: U.S. Department of Labor. Updated through March 2015 (Texas) and April 2015 (U.S.).
Oil’s Drop Helps Many

Petroleum Used Less Petroleum Produced (percent of nominal GDP)

# (3) Seasonal Distortions Mask the Truth

Seasonally adjusted GDP less published GDP (percentage points)

<table>
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<th>Q3</th>
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<tr>
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Average:
- 1990-14: 0.9, -0.5, -0.1, -0.3
- 2008-14: 1.8, -0.7, -0.7, -0.5

*Source: U.S. Department of Labor. Updated through 2015 Q1.*
(4) Revisions

Subsequent revisions by month to nonfarm payroll changes (% revised up or down)

(5) Statistical Noise

Deviation of monthly payroll change from trend (percentage points)

Sources: NBER-designated recession bars; U.S. Department of Labor. Updated through March 2015.
When Confused, Trust Supply-Side Data ...

Aggregate hours, payroll employment, and real GDP (% change from 12 months earlier)

Sources: Macroeconomic Advisers; U.S. Department of Labor. Updated through February 2015 (GDP) and April 2015 (hours and employment)
... Especially This One ...

Real GDP (% ch. from 4 quarters earlier)       Jobless claims (‘000 weekly, scale reversed)

Sources: U.S. Deps. of Labor and Com. Updated through 2015 Q1 (GDP) and May 2, 2015 (claims).
... Which Says ‘All Systems Go’

Real GDP (% ch. from 4 quarters earlier)  Jobless claims (% of labor force, scale reversed)

Sources: U.S. Deps. of Labor and Com. Updated through 2015 Q1 (GDP) and May 2, 2015 (claims).
All a Reason to Look for a Bounceback

Real GDP (annualized percent change)

Note: Numbers refer to the percent change over the four quarters of the year.

P.S. Tea Leaf Reading Is an Art
The Demand Side ... Slow

Real GDP (percent change over the four quarters of the year)

Average historical growth = 3.75% annually

Sources: NBER-designated recession bars; U.S. Departments of Commerce. Updated through 2014 Q4.
The Income Side ... a Little Better

Real GDP (percent change over the four quarters of the year)

Sources: NBER-designated recession bars; U.S. Departments of Commerce. Updated through 2014 Q4.
The Production Side ... Normal ...

Nonfarm payroll employment
(monthly change in thousands)

Change in thousands from the previous month (left)
Percent change over the most recent 12 months (right)

Nonfarm payroll employment

Percent change over the period indicated (annual rate)

... Even in Percentage Terms

Two Explanations

a) Slow labor productivity and labor force
b) Obsolete metrics:
   - Failure to keep pace with new trends in retailing:
     - the growing subsidy provided by online shopping;
     - the failure to account for the falling price of economic value tapped by smart phones;
     - the growing purchases of energy commodities from big box retailers
   - The failure to account for price pressures driven by consumer driven health initiatives (Affordable Care Act and high deductible health insurance plans are pushing healthcare providers to move away from fee-for-service to pay-for-performance)
Record Profits Belie Productivity Pessimism

After-tax GDP profits of all U.S. businesses (percent of nominal Gross Domestic Income)

Sources: NBER-designated recession bars; U.S. Department of Commerce. Updated through 2014 Q3.
II. New Themes for 2015
New Jobs Unlock Pent-up Housing Demand

Employment and household formation (thousands over the most recent 12 months)

Source: U.S. Department of Labor. Updated through March 2015 (household formation) and April 2015 (employment).
Low Oil Prices Spur New Growth ...

Petroleum Used Less Petroleum Produced (percent of nominal GDP)

Jobs and Low Gas Prices Help Consumers

Nominal and real disposable income (percent change from 12 months earlier)

New Jobs and Income the Key Support

Real consumer spending and disposable income (percent change from 12 months earlier)

Full Recovery in Autos Speaks Volumes

Motor vehicle sales (millions at a seasonally adjusted annual rate)

MARKET ISSUES
Zero Isn’t Normal ...

Nominal funds rate (% per annum) and core inflation (% ch. From 12 months earlier)¹

¹ Chain price index for personal consumption expenditures excluding food and energy.

Source: Federal Reserve Board. Updated through April 2, 2015.
“Normalization” Is Coming

Forecasts of the federal funds rate (percent)

Sources: FRB; Bloomberg. Updated through March 18, 2015 (FOMC) and May 8, 2015 (futures).
But Subpar Inflation Keeps It Slow

Core PCE chain price index (percent change from 12 months earlier)

Sources: Vertical bars denote recessions and are designated by the NBER; U.S. Department of Commerce. Updated through February 2015 (inflation) and March 18, 2015 (FOMC forecast).
... and Won’t Stop the Stock Market

Wilshire 5000 (December 31, 1970 = 830.27)  After-tax GDP profits (billions of dollars)

Note: Since 1952, the Wilshire 5000 P/E climbed to 14 times earnings near cyclical peaks, excluding the unprecedented multiples during 1997 - 2001, and that would occur when the line floated at the upper boundary of earnings.

Line represents the Wilshire 5000 index (left scale)

Shaded area represents after-tax GDP profits (right scale)

Sources: US Department of Commerce; Haver Analytics. Updated through 2014 Q4 (profits) and April 7, 2015 (stock prices).
QE Lowers Real Bond Yields ...

Real versus inflation components of future interest rates (percent per annum)

Source: Federal Reserve Board; Bloomberg. Updated through April 7, 2015.
... and Term Premia

Term premium and expected short-term rates in 10-year Treasury yields (% per annum)

All About the Slack ...

Output gap in selected regions (actual less potential real GDP, % of potential real GDP)

... and Falling Inflation ...

Core CPI (percent change from 12 months earlier)

Sources: U.S. Department of Labor; ECB; Bank of Japan. Updated through February 2015.
ECB & BOJ QE Does This to Rates ...

10-year risk-free interest rates (percent per annum)

Sources: Bloomberg; Federal Reserve Board. Updated through April 2, 2015.
... and Currencies

Selected foreign exchange rates (ratio to summer 2012 level)

Source: Federal Reserve Board. Updated through March 2015.