# AGENDA

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
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<tbody>
<tr>
<td>10:30am</td>
<td>Introductory Remarks</td>
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<tr>
<td></td>
<td>Jack Gutt, Executive Vice President</td>
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<tr>
<td>10:40am-11:10am</td>
<td>The National Economy</td>
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<td>Richard Peach, Senior Vice President</td>
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<tr>
<td>11:10am-11:30am</td>
<td>Regional Update</td>
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<td>Jason Bram, Research Officer</td>
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<tr>
<td>11:30am-12:00pm</td>
<td>International Update</td>
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<td>Matthew Higgins, Vice President</td>
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<tr>
<td>12:00pm</td>
<td>Adjourn to NWCR-10F</td>
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<tr>
<td>12:15pm</td>
<td>Lunch</td>
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<tr>
<td>12:15pm-1:55pm</td>
<td>Round Table Discussion with</td>
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<td>William Dudley, President</td>
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</table>

**Questions for discussion with President Dudley:**

Your experience and that of your customers and suppliers can give us insight into current economic conditions.

1. Has your firm experienced an increase in demand in recent months?
2. Has demand for your product or service increased sufficiently that you increased or plan to increase employment in 2016?
3. Has demand for your product or service increased sufficiently that you plan to increase investment in plant and equipment in 2016?
4. Can you please give us a brief overview of the process you typically go through and the major factor you take into account when setting average wage increase and starting wages for your workforce? In particular, how do you factor in recent and expected inflation — specifically, changes in the cost of living for your workers?
5. Has your access to credit changed in 2016?
6. How is the labor market in meeting your needs?

2:00 pm Adjourn
ATTENDEE LIST

Board Members

Scott Bieler
President & CEO
West Herr Automotive Group

Melanie LittleJohn
Regional Director
National Grid

Kenneth M. Franasiak
Chairman
Calamar

Linda MacFarlane
President & CEO
Community Loan Fund of the Capital Region

William Gisel
President & CEO
Rich Products Corporation

Martin Mucci
President & CEO
PayChex, Inc.

Dr. Anne Kress
President
Monroe Community College

Robert L. Stevenson
President
Eastman Machine Company

Jordan Levy
NY Partner
Softbank Capital

Carlos Unanue
President
Goya de Puerto Rico, Inc.

Federal Reserve Bank of New York

William Dudley
President

Jack Gutts
EVP, Head of Communications & Outreach Group

Richard Peach
SVP, Research & Statistics

Matthew Higgins
VP, Integrated Policy Analysis

Anika Pratt
AVP, Outreach & Education

Jason Bram
Research Officer, Research & Statistics

Luis Uranga
Officer and Chief of Staff, Chief of Staff’s Office

Tony Davis
Director, Community Engagement, Outreach & Education

Angela Sun
Associate, Legal
Overview

• US economic growth slowed over the course of 2015 due primarily to slower growth among our trading partners and substantial dollar appreciation.
  – Consumer spending and housing continued to be the engines of growth.
  – Growth of business fixed investment slowed substantially, due in part to the sharp contraction in oil and gas drilling activity.
  – Net exports exerted a substantial drag.

• The labor market is showing all the classic signs of being at or near full employment.

• Core inflation has moved up of late.
  – Rent inflation continues to edge higher.
  – Health care price inflation has turned the corner.
  – Rate of decline of core goods prices has slowed substantially.

• What is in store for 2016? Is the worst of the dollar shock behind us?
  – There are some “green shoots”.
Nominal Trade-Weighted Value of US$

Index

Jan-97=100

Source: Federal Reserve Board
Imports and Exports of Real Goods

Source: Bureau of Economic Analysis

Note: Shading shows NBER recessions.
Baker Hughes US Oil Rig Count

Source: Baker Hughes

Note: Shading shows NBER recessions.
Non-Investment Grade Corporate Bond Spread

Source: Standard & Poor, Federal Reserve Board
Aggregate Weekly Hours Worked

Source: Bureau of Labor Statistics

Note: Shading shows NBER recessions.
Real Wage & Salary Income versus Real PCE

Y/Y % Change

Source: Bureau of Economic Analysis

Note: Shading shows NBER recessions.
Change in Debt 2014Q4-2015Q4
By Credit Score Quintile

Note: * 2014Q4 Quintiles

Equifax Risk Score Quintiles*
Source: CoreLogic, National Association of Realtors, via Haver Analytics

Note: Shading shows NBER recessions.
Housing Starts and Existing Homes Sales Per Capita

Source: BLS, Census Bureau, NAR

Note: Shading shows NBER recessions.
Household Formations

2 Year Avg. Change

Total (Left Axis)

Renter (Left Axis)

Owner (Right Axis)

Source: Bureau of the Census

Note: Shading shows NBER recessions.
Credit Score at Mortgage Origination: All First Mortgages

Credit Score

Credit Score

Median

25th Percentile

10th Percentile

About 35 to 40 Million People

Source: FRBNY Consumer Credit Panel

About 35 to 40 Million People
Equipment Investment Spending and Capacity Utilization

Real Business Investment in New Equipment (% Change – Year to Year)

Source: Federal Reserve Board, Bureau of Economic Analysis
Real Government Consumption and Gross Investment

Source: Bureau of Economic Analysis

Note: Shading shows NBER recessions.
Labor Market Indicators

Source: Bureau of Labor Statistics, via Haver Analytics

Note: Shading shows NBER recessions.
Labor Share of National Income and Unemployment

Percent

Unemployment Rate (Right Axis)

Labor Share of National Income (Left Axis)

Source: Bureau of Economic Analysis, BLS

Note: Shading shows NBER recessions.
PCE Deflator

12 Month % Change

Source: Bureau of Economic Analysis, via Haver Analytics

Note: Shading shows NBER recessions.
CPI Inflation: Core Goods and Core Services

12 Month % Change

Source: Bureau of Labor Statistics
Note: Shading shows NBER recessions.
Rental Vacancy Rate and Rent of Primary Residence

Percent

Rental Vacancy Rate (Left Axis)

Rent of Primary Residence (Right Axis)

Source: Census Bureau, BLS

Note: Shading shows NBER recessions.
Personal Consumption Expenditures: Health Care Price Index
12 Month % Change

Source: Bureau of Economic Analysis
Note: Shading shows NBER recessions.

17% of total PCE deflator
19% of core PCE deflator
TIPS-based Inflation Expectations

Source: Federal Reserve Board

Note: Dashed lines represent 2 standard deviations from the mean.

5-10 Years

2011 – Present
Average
2.44

As of 3-1-16
Energy, Industrial Metals and Livestock

Source: Standard & Poor’s

Note: Shading shows NBER recessions.

Index Dec-31-1969=100
Overview of the Regional Economy
Presentation to the Upstate New York Regional Advisory Board
Jason Bram, Research Officer
March 22, 2016

The views expressed here are those of the presenter and do not necessarily represent the views of the Federal Reserve Bank of New York or the Federal Reserve System.
Overview of Regional Conditions

• Recent benchmark revisions show slower job growth in upstate New York, while home prices remain buoyant.

• New York City’s economy continues to grow briskly.

• New Jersey’s economy is looking a bit stronger after benchmark revisions.

• Puerto Rico’s economy continues to languish at depressed levels.
Regional Economic Activity
Index of Coincident Economic Indicators (CEI)

Source: Federal Reserve Bank of New York
Private-Sector Employment
Seasonally Adjusted Index

Source: Bureau of Labor Statistics and Moody's Economy.com
Employment Growth in Upstate NY
Before and After Benchmark Revisions

Shading indicates NBER recession

Source: New York State Department of Labor, Bureau of Labor Statistics, and Moody's Economy.com
Employment Growth in Upstate NY
Before and After Benchmark Revisions

Note: Employment growth calculated as percent change between 2014 and 2015 annual total employment.
Employment Growth in New York City
Before and After Benchmark Revisions

Source: New York State Department of Labor, Bureau of Labor Statistics, and Moody's Economy.com
Employment Trends in Puerto Rico
Before and After Benchmark Revisions

Source: Bureau of Labor Statistics and Moody's Economy.com
For more detail on these two surveys, please see https://www.newyorkfed.org/survey/business_leaders/bls_overview and https://www.newyorkfed.org/survey/empire/empiresurvey_overview.html

Source: Federal Reserve Bank of New York
March 2016 Supplementary Questions
FRBNY Business Surveys

By what percentage do you expect each of the following to change over the next 12 months?

<table>
<thead>
<tr>
<th></th>
<th>Empire State Manufacturing Survey</th>
<th>Business Leaders (Service Sector) Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compensation your firm will pay per employee</td>
<td>Mean: 2.79 Median: 3.00</td>
<td>Mean: 3.44 Median: 3.00</td>
</tr>
<tr>
<td>(for wages and benefits)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prices your employees will pay</td>
<td>Mean: 2.27 Median: 2.00</td>
<td>Mean: 2.69 Median: 2.00</td>
</tr>
<tr>
<td>(for goods and services where they live)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prices U.S. consumers will pay</td>
<td>Mean: 2.03 Median: 2.00</td>
<td>Mean: 2.64 Median: 2.00</td>
</tr>
<tr>
<td>(for goods and services)</td>
<td></td>
<td></td>
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</tbody>
</table>

For full report, please see
https://www.newyorkfed.org/medialibrary/media/survey/business_leaders/2016/2016_03supplemental.pdf
Home Prices
CoreLogic Home Price Index, Seasonally Adjusted

Source: CoreLogic Home Price Index (including distressed sales)
Home Prices
CoreLogic Home Price Index, Seasonally Adjusted

Source: CoreLogic Home Price Index (including distressed sales)
Roadmap

- Foreign advanced economies’ struggle to escape “lowflation”
- Political economy risks in Europe
- Market and economic stresses facing EMEs
- China’s ongoing economic slowdown and recent policy surprises
- High EME corporate debt and the risk of disorderly deleveraging
Euro Area: Real GDP vs. Potential

Trillions of 2010 euros

Real GDP
EC Potential Estimate
Linear Trend, 1998-2005

Sources: Eurostat, EC CIRCA database.
G-3: Core Consumer Price Inflation

Percent change from year ago

United States

Euro Area

Japan

Sources: BEA, Eurostat, BoJ. U.S. inflation measured using the PCE index.
Central Bank Credit as a Share of GDP

Sources: BoJ, ECB, Federal Reserve. Projections assume that announced BoJ and ECB asset purchase programs proceed as planned, and that Federal Reserve credit remains constant at its current level. Nominal GDP is assumed to grow in line with current market forecasts.
## AE Core Inflation Performance with Negative Policy Rates

<table>
<thead>
<tr>
<th>Country</th>
<th>Date Adopted</th>
<th>Initial Core Inflation</th>
<th>Current Core Inflation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>January 2016</td>
<td>0.8</td>
<td>0.7</td>
</tr>
<tr>
<td>Sweden</td>
<td>February 2015</td>
<td>0.9</td>
<td>1.4</td>
</tr>
<tr>
<td>Switzerland</td>
<td>December 2014</td>
<td>0.2</td>
<td>-1.0</td>
</tr>
<tr>
<td>Denmark</td>
<td>September 2014</td>
<td>1.0</td>
<td>1.3</td>
</tr>
<tr>
<td>Euro Area</td>
<td>June 2014</td>
<td>0.7</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Sources: National sources, OECD. Policy rates are as follows: Japan, marginal current account balances; Sweden, repo rate; Switzerland, 3-mo. LIBOR target; Denmark, CD rate; Euro Area, deposit rate.
Bank Net Interest Margins

Source: Bloomberg, Federal Reserve Board
Support for Radical Political Parties

Percent

<table>
<thead>
<tr>
<th>Party</th>
<th>Country</th>
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<tbody>
<tr>
<td>AfD</td>
<td>Germany</td>
</tr>
<tr>
<td>SYRIZA</td>
<td>Greece</td>
</tr>
<tr>
<td>Podemos</td>
<td>Spain</td>
</tr>
<tr>
<td>Le Front National</td>
<td>France</td>
</tr>
<tr>
<td>Lega Nord</td>
<td>Italy</td>
</tr>
<tr>
<td>Five Star</td>
<td>Italy</td>
</tr>
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2014 European Parliament Election Results

Note: The 2014 European Parliament elections performance is compared against the last general election in Greece (September 2015) and Spain (December 2015), and recent regional elections in France. In Italy, the 2014 EP performance is compared against recent polls. Le Front National, Lega Nord, and the Five Star Movement are classified as euroskeptic parties, given their stance opposed to the merits of continued euro area membership. Sources: National polling organizations; poll data as of March 2016.
UK Poll: Should the UK Remain in the EU?

5-poll moving average

Evolution of EME Market Growth Forecasts

Sources: Blue Chip Economics, Consensus Economics. Figures are GDP-weighted averages for 24 EMEs outside China.
U.S. and EME equity performance

Indexes, January 2014 = 100

Note: Index values are in dollar terms
China: Export and Import Volume Growth

Percent from year ago month, based on 12-month sum

Sources: China National Bureau of Statistics, BEA.
China: GDP growth and labor market tightness

China: Cumulative Rate and RR Cuts

Required reserve ratio

Policy Rate
Credit to Private Nonfinancial Sector (% GDP)

Source: BIS.
"Basic balance" includes current account and net FDI. Net private non-FDI financial flows includes errors and omissions. Last data point for reserves is estimated from partial data.
China: Hypothetical Basket-Implied Exchange Rate

RMB per USD

Spot rate required to fix CFETS basket at level of 8/13/2015

Spot Rate (actual)

Step devaluation

Sources: Bloomberg, FRBNY calculations
Change in Private Credit to GDP Ratio
End-2007 to June 2015 or 7½ years preceding crisis

Percentage points

Sources: BIS, staff estimates.
Nonfinancial Corporate Credit by Source of Financing

$U.S. trillions, 2015:Q1

Sources: BIS, staff estimates. Other EMEs includes India, Indonesia, Hong Kong, Korea, Malaysia, Singapore, Thailand, Brazil, Mexico, Czech Rep., Hungary, Poland, Russia, Turkey and South Africa.
EME Corporate Debt at Risk

ICRs < 2x assuming a 200 bps rate hike and 25% EBITDA decline

Note: Represents the 1,800 most indebted companies listed on the national stock exchanges in 10 EMEs. Firms at risk have ICRs less than 2.
Source: Capital IQ, IPA estimates
REFERENCE CHARTS
Correlation = 0.85

Sources: Markit Economics, national surveys
Emerging Market Manufacturing PMI

Diffusion Index

Average 2005 – 2008:Q1 = 53.3

Average 2012 – 2015:Q1 = 50.5

Source: Markit.
<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016F</th>
<th>2017F</th>
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<tbody>
<tr>
<td>World</td>
<td>2.6</td>
<td>2.7</td>
<td>3.1</td>
</tr>
<tr>
<td>Advanced</td>
<td>1.8</td>
<td>1.8</td>
<td>2.0</td>
</tr>
<tr>
<td>o/w: United States</td>
<td>2.4</td>
<td>2.1</td>
<td>2.4</td>
</tr>
<tr>
<td>Euro Zone</td>
<td>1.5</td>
<td>1.6</td>
<td>1.7</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>2.2</td>
<td>2.0</td>
<td>2.2</td>
</tr>
<tr>
<td>Japan</td>
<td>0.4</td>
<td>0.8</td>
<td>0.7</td>
</tr>
<tr>
<td>Emerging Markets</td>
<td>3.6</td>
<td>4.0</td>
<td>4.7</td>
</tr>
<tr>
<td>o/w: China</td>
<td>6.9</td>
<td>6.4</td>
<td>6.2</td>
</tr>
<tr>
<td>India</td>
<td>7.4</td>
<td>7.5</td>
<td>7.5</td>
</tr>
<tr>
<td>NIE+ 1/</td>
<td>2.7</td>
<td>2.9</td>
<td>3.2</td>
</tr>
<tr>
<td>Russia</td>
<td>-3.7</td>
<td>-1.2</td>
<td>1.3</td>
</tr>
<tr>
<td>Brazil</td>
<td>-3.8</td>
<td>-2.9</td>
<td>1.0</td>
</tr>
<tr>
<td>Mexico</td>
<td>2.5</td>
<td>2.5</td>
<td>2.9</td>
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</tbody>
</table>

Sources: Blue Chip Economics as of March where available, Consensus Economics as of March or February elsewhere. Aggregates are dollar-GDP weighted averages. 1/ Hong Kong, Korea, Malaysia, the Philippines, Singapore, Taiwan and Thailand.
Japanese GDP Growth

Percent SAAR and Q/Q-4

- Tōhoku earthquake
- VAT hike
- Market forecast

Q/Q-4
Oil: Supply and Demand Growth
Millions of barrels per day, 4 quarter moving average, y/y

Source: IEA. Forecast assumes OPEC ex-Iran supply continues at current rates, and Iran rejoins the market in Q3 at 0.6 mbpd. Forecast as of Feb-2015.
Credit to the Nonfinancial Sector

$U.S. trillions

Sources: BIS, staff estimates. Other EMEs includes India, Indonesia, Hong Kong, Korea, Malaysia, Singapore, Thailand, Brazil, Mexico, Czech Rep., Hungary, Poland, Russia, Turkey and South Africa.