Economic Outlook

Robert Fry
DuPont Economist’s Office

Georgia State University Economic Forecasting Center
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If economists could manage to get themselves thought of as humble, competent people on a level with dentists, that would be splendid.

--John Maynard Keynes
Industrial Production: World

Index 2005=100

Gray Bars = Recession Periods

Peak

Trough

Industrial Production: World

Index 2005=100

Gray Bars = Recession Periods

Peak

Trough
Industrial Production: World

Rate of Change Yr/Yr

Trend Rate
Industrial Production: Asia

2005 = 100, Seasonally Adjusted

Total industrial production in China, manufacturing elsewhere.
*Data seasonally adjusted by this office.

Japan Taiwan Korea China India
Industrial Production: Latin America

2005 = 100, 3-Month Moving Averages

Argentina

Brazil

Mexico

lata2005
Industrial Production: Central Europe & Russia

2005 = 100

- Poland
- Hungary
- Czech Republic
- Russia
Industrial Production: European Union

2005 = 100

Industrial Production, Manufacturing
OECD Leading Indicator
Industrial Production*: Western Europe

2007-2008 Peak = 100

*Total in Spain. Manufacturing elsewhere.
US Industrial Production: Manufacturing

Cycle Trough = 100

- June 2009 Trough
- May 1975 Trough
- December 1982 Trough

Dates on bottom axis apply to current recovery (June 2009 trough).
Global growth reaccelerated into 2011, but has slowed again.

Growth in industrial production reaccelerated late in 2010 after mid-year slowdown, especially in US and China.

European manufacturing remained surprisingly strong, though uneven, through February, but production fell sharply in June.

Growth slowed first because of rising oil prices and supply-chain disruptions caused by the March 11 earthquake and tsunami in Japan.

Growth has slowed more recently because of government debt in the US and Europe and because of unwillingness of governments to deal with it.
10-Year Government Bond Yields

*Percent*

- Greece
- Ireland
- Portugal
- Spain
- Italy
- France
- Portugal
- Germany

OJAJOJAJOJAJOJA

2011 2010 2009 2008

35 30 25 20 15 10 5 0

10-Year Government Bond Yields (%) for various European countries from 2008 to 2011.
US Manufacturing Production & Stock Prices

Percent Change from Year Ago, Smoothed

Long-term average of both series

Correlation = .50

Manufacturing Production ex high tech (Right)
Wilshire 5000, 7 months prior (Left)
US Consumer Confidence
1985 = 100
US Manufacturing Production & Consumer Sentiment

Change/Percent Change from Year Ago, Smoothed

1979-2010 Correlation = .68

Industrial Production, Mfg ex hi-tech (Right)
Consumer Sentiment, 6 months prior (Left)
Diffusion Index

6-Month Annualized Growth Rate

US Manufacturing Production & ISM New Orders Index

- Industrial Production, Manufacturing (Right)
- ISM New Orders Index (Left)

Production & ISM New Orders Index

Industrial Production, Manufacturing (Right)
ISM New Orders Index (Left)
US Manufacturing Production ex High-Tech Sectors

Percent Change from Year Ago

- Industrial Production Index
- 1979-2007 Average (1.4%)
- 2010 Leading Indicator Model

1979-2010 Correlation = .83

*Based on Baa bond yield, yield spread, stock prices, housing permits, ISM new orders index, and dollar.
US Manufacturing Production ex High-Tech Sectors

2007 = 100

*Based on Baa bond yield, yield spread, stock prices, housing permits, ISM new orders index, and dollar.
US Composite Leading Indexes

January 2006 = 100

- Conference Board
- OECD
Global Composite Leading Indexes

January 2007 = 100

- OECD + 6
- OECD Members Only

OECD + 6
OECD Members Only
### Real GDP
(Annual % Change)

<table>
<thead>
<tr>
<th>Region</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
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<tbody>
<tr>
<td>World</td>
<td>-2.1</td>
<td>4.0</td>
<td>2.7</td>
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<tr>
<td>North America</td>
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<tr>
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<tr>
<td>C. &amp; E. Europe</td>
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<td>4.4</td>
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<tr>
<td>Asia</td>
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<td>6.8</td>
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<td>5.0</td>
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<td>Japan</td>
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<tr>
<td>South America</td>
<td>-0.5</td>
<td>5.7</td>
<td>4.1</td>
<td>3.7</td>
</tr>
<tr>
<td>M. East &amp; Africa</td>
<td>1.4</td>
<td>4.4</td>
<td>3.4</td>
<td>3.3</td>
</tr>
</tbody>
</table>
Are we scaring ourselves into recession?

Consumers & investors have lost confidence in “leaders” in US and Europe.

Consumer sentiment has plummeted.

Stock prices are down sharply, especially in Europe.

Stock price declines are both a predictor and a cause of slower growth.
- Prices discount expected future dividends.
- Prices affect consumer spending through wealth effect.
- Prices affect business investment through cost of equity.

Five times since 1960, there have been U.S. stock price declines of this magnitude that were not followed by a recession.

US recession is not inevitable, but risks have risen.
- Slow growth makes economies vulnerable to shocks.
- Big uncertainties: China, impact of European defaults on banks, inventories.
Crude Oil Prices

*Dollars per barrel*

- Egypt Erupts
- Libyan Government Ousted
- Violence in Libya

Graph showing the price of crude oil from 2010 to 2011, with key events marked on the graph. The graph compares the prices of Louisiana Light Sweet, Brent blend, and WTI.
Value of US Dollar versus Yen & Euro

Yen/$

$/Euro

Euro (Right)

Yen (Left)
Federal Reserve Broad Dollar Index: Real

March 1973 = 100
US Crude Oil and Natural Gas Futures Prices

$/mmbtu

$/bbl

Louisiana Light Sweet Crude (Right)
Natural Gas (Left)
“Now, gentlemen, we have tried spending money. We are spending more than we have ever spent before and it does not work . . . I say after eight years of this administration we have just as much unemployment as when we started . . . and an enormous debt, to boot.”

--Henry Morgenthau, Jr., 1939