Macroeconomic Update

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The views expressed are those of the author and do not necessarily reflect the opinions of the Federal Reserve Bank of Kansas City or the Federal Reserve System.
## Economic Projections of the Federal Reserve Governors and Bank Presidents

<table>
<thead>
<tr>
<th>Central Tendency¹</th>
<th>2007 (Percent)</th>
<th>2008 (Percent)</th>
<th>2009 (Percent)</th>
<th>2010 (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real GDP growth</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>October projections</em></td>
<td>2.4</td>
<td>1.3 to 2.0</td>
<td>2.1 to 2.7</td>
<td>2.5 to 3.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.8 to 2.5</td>
<td>2.3 to 2.7</td>
<td>2.5 to 2.6</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>October projections</em></td>
<td>4.8</td>
<td>5.2 to 5.3</td>
<td>5.0 to 5.3</td>
<td>4.9 to 5.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.8 to 4.9</td>
<td>4.8 to 4.9</td>
<td>4.7 to 4.9</td>
</tr>
<tr>
<td>PCE inflation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>October projections</em></td>
<td>3.4</td>
<td>2.1 to 2.4</td>
<td>1.7 to 2.0</td>
<td>1.7 to 2.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.8 to 2.1</td>
<td>1.7 to 2.0</td>
<td>1.6 to 1.9</td>
</tr>
<tr>
<td>Core PCE inflation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>October projections</em></td>
<td>2.1</td>
<td>2.0 to 2.2</td>
<td>1.7 to 2.0</td>
<td>1.7 to 1.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.7 to 1.9</td>
<td>1.7 to 1.9</td>
<td>1.6 to 1.9</td>
</tr>
</tbody>
</table>

Source: Federal Reserve Board of Governors, February 2, 2008

*Note:* Projections of the growth of real GDP, of PCE inflation, and of core PCE inflation are percent changes from the fourth quarter of the previous year to the fourth quarter of the year indicated. Projections for the unemployment rate are for the average civilian unemployment rate in the fourth quarter of the year indicated.

¹ The central tendency excludes the three highest and three lowest projections for each variable in each year.
FOMC Statement
(March 18, 2008)

... the outlook for economic activity has weakened further.
- Growth in consumer spending has slowed and labor markets have softened.
- Financial markets remain under considerable stress, and the tightening of credit conditions and the deepening of the housing contraction are likely to weigh on economic growth over the next few quarters.

Inflation has been elevated, and some indicators of inflation expectations have risen.
- The Committee expects inflation to moderate …,
- reflecting a projected leveling-out of commodity prices
- and an easing of pressures on resource utilization.
Risks to the Outlook

• Housing: Are we close to bottom?
Low Interest Rates Fuel a Housing Boom

U.S. Building Permits and Mortgage Rates

Percent
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0

Millions
2.5
2.0
1.5
1.0
0.5
0.0

30 Yr Fixed Rate (Left Scale)
Building Permits (Right Scale)

Source: U.S. Dept. of Commerce
Home Prices Outpace Income Gains Nationally, But Not in Nebraska

U.S. and Nebraska Home Price-to-Income Ratio

Index (2000:Q1=100)

Source: Census Bureau and Bureau of Economic Analysis
As a Result, the Use of ARMs and Subprime Loans Accelerated

Mortgage Origination Shares

Percent

Source: Inside Mortgage Finance
## Hypothetical Initial and Reset Mortgage Payments by Loan Type

($200,000 first mortgage initiated in June 2004)

<table>
<thead>
<tr>
<th>Loan Type</th>
<th>Initial Payment</th>
<th>Payment at Reset</th>
<th>Payment Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-Yr FRM</td>
<td>$1237</td>
<td>$1237</td>
<td>-</td>
</tr>
<tr>
<td>3/1 Prime ARM</td>
<td>$1039</td>
<td>$1420</td>
<td>37%</td>
</tr>
<tr>
<td>3/1 Prime Interest-Only ARM</td>
<td>$786</td>
<td>$1462</td>
<td>86%</td>
</tr>
<tr>
<td>3/27 Subprime ARM</td>
<td>$790</td>
<td>$1741</td>
<td>120%</td>
</tr>
<tr>
<td>3/1 Subprime Option ARM</td>
<td>$643</td>
<td>$1907</td>
<td>196%</td>
</tr>
</tbody>
</table>

Source: Edmiston (2007)
Foreclosures Accelerated in 2007 ...

Home Foreclosure Inventory

Percent of loans serviced

Source: Mortgage Bankers Association
Led by Rising Foreclosures of ARMs and Subprime Loans

Foreclosure Rates by Mortgage Type

Source: Mortgage Bankers Association
Percent of Loans in Foreclosure
(Started during the Fourth Quarter 2007)

Source: Mortgage Bankers Association
## Subprime Adjustable Rate Mortgage Resets
### Fourth Quarter 2007

<table>
<thead>
<tr>
<th>State</th>
<th>Percent of Subprime ARMs Already Reset</th>
<th>Percent of Subprime ARMs Resetting in the next 11 Months</th>
<th>Percent of Subprime ARMs Resetting in 12-23 Months</th>
<th>Percent of Subprime ARMs Resetting in 24+ Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>41.1</td>
<td>39.0</td>
<td>19.5</td>
<td>5.7</td>
</tr>
<tr>
<td>Wyoming</td>
<td>37.8</td>
<td>41.3</td>
<td>23.9</td>
<td>3.1</td>
</tr>
<tr>
<td>Nebraska</td>
<td>53.6</td>
<td>37.4</td>
<td>13.5</td>
<td>1.8</td>
</tr>
<tr>
<td>Missouri</td>
<td>49.7</td>
<td>36.0</td>
<td>17.0</td>
<td>4.9</td>
</tr>
<tr>
<td>New Mexico</td>
<td>36.0</td>
<td>35.8</td>
<td>25.3</td>
<td>8.4</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>51.8</td>
<td>34.9</td>
<td>14.7</td>
<td>2.8</td>
</tr>
<tr>
<td>Colorado</td>
<td>51.4</td>
<td>32.6</td>
<td>15.4</td>
<td>4.4</td>
</tr>
<tr>
<td>Kansas</td>
<td>52.7</td>
<td>31.6</td>
<td>15.4</td>
<td>4.1</td>
</tr>
</tbody>
</table>

Source: Federal Reserve Board of Governors
When Will Home Prices Stabilize?

Home Inventories and Prices

Percent change from year ago

Months supply

Case-Schiller Home Price Index (Left Scale)

Home Inventories (Right Scale)

Source: National Association of Realtors and Standard and Poor’s
Liquidity Problems Emerge

Commercial Paper Rates and Fed Funds Rate

Percent

Jun-07 Jul-07 Aug-07 Sep-07 Nov-07 Dec-07 Jan-08 Mar-08

Discount rate cut
Term Auction Facility
Discount rate cut
Primary Dealer Credit Facility
Term Security Lending Facility

AA Asset Backed 30 day
AA Nonfinancial 30 day
Intended Fed Funds Rate
Risks to the Outlook

- Housing: Are we close to bottom?
- Consumer spending: Will it push us into recession?
Automobile sales continue to decline, especially for gas-guzzling vehicles.

U.S. Automobile Sales

Percent change year-over-year

-40.0 -30.0 -20.0 -10.0 0.0 10.0 20.0

Feb-06 Jun-06 Oct-06 Feb-07 Jun-07 Oct-07 Feb-08

Autos

Trucks
Will Consumers Continue to Spend?

U.S. Personal Consumption Expenditures

Percent change from previous quarter, annualized

Source: Blue Chip Economic Advisors
Risks to the Outlook

• Housing: Are we close to bottom?
• Consumer spending: Will it push us into recession?
• Business Investment: “Hunkering Down”? 
Economic Activity Has Slowed

Manufacturing and Non-Manufacturing Purchasing Managers Index

Index - three month moving average

Source: Institute of Supply Management
Will slower profit growth lead to softer capital spending?

Corporate Profits and Nonresidential Fixed Investment

Percent change from year ago


Source: Bureau of Economic Analysis
Banks are Tightening Credit Standards

Net Percent of Domestic Banks Tightening Credit Standards

Source: Federal Reserve Board of Governors
Risks to the Outlook

- Housing: Are we close to bottom?
- Consumer spending: Will it push us into recession?
- Business Investment: “Hunkering Down”?
- Government spending: Will politicians cut spending in an election year?
Deficit spending provides fiscal policy stimulus.

U.S. Government Revenue and Expenditures

Billion dollars

Source: Office of Management and Budget
Risks to the Outlook

- Housing: Are we close to bottom?
- Consumer spending: Will it push us into recession?
- Business Investment: “Hunkering Down”?
- Government spending: Will politicians cut spending in an election year?
- Exports: A bright spot for the U.S. economy
Growth in developing countries surges.

World GDP Growth

Source: International Monetary Fund
The Dollar Has Fallen to Boost Exports

Dollar Value and U.S. Net Exports

Dollar Index Value (Left Scale)

Net Exports (Right Scale)
Risks to the Outlook

• Housing: Are we close to bottom?
• Consumer spending: Will it push us into recession?
• Business Investment: “Hunkering Down”?
• Government spending: Will politicians cut spending in an election year?
• Exports: A bright spot for the U.S. economy
Commodity Prices Have Surged

Commodity Prices

Index (January 2007 = 100)
Will slower economic growth, ease tight labor markets ...

U.S. Non-farm Job Growth and Unemployment Rate

Change from previous month (Thousands)

Source: Bureau of Labor Statistics
... and reduce employment costs.

Employment Cost Index

Percent change from year ago

Source: Bureau of Labor Statistics
Will Inflation Expectations Remain Anchored?

U.S. Inflation Forecasts

Source: Survey of Professional Forecasters, Federal Reserve Bank of Philadelphia
Conclusion

• The housing sector remains weak.
• Financial conditions remain strained.
• Weakness has spilled into other segments of the economy.
• Will inflation remain well anchored?

Today’s policy action, combined with those taken earlier, including measures to foster market liquidity, should help to promote moderate growth over time and to mitigate the risks to economic activity. However, downside risks to growth remain. The Committee will act in a timely manner as needed to promote sustainable economic growth and price stability.

FOMC Statement, March 18, 2008