

# Economics Group

## Interest Rate Weekly

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### Investors and the Imperfect Information Problem

*Over the past week, investors have faced the challenge of gathering good information in making decisions. While we focus so much on what is news, the greater challenge is the reliability and signal in the news.*

#### Imperfect Information: A Fact of Investing

Imperfect information—information that does not precisely reflect reality—is more often the rule than the exception for decision makers. The challenge is faced all the time because so much economic information comes via initial surveys of activity that are frequently revised, sometimes significantly, as further information is gathered. This past week we received the results of a labor market survey that indicated below-expectation job gains in January, yet higher wages, along with a pattern of higher labor costs more broadly (top graph). These signals raise the uncertainty premium on future FOMC moves.

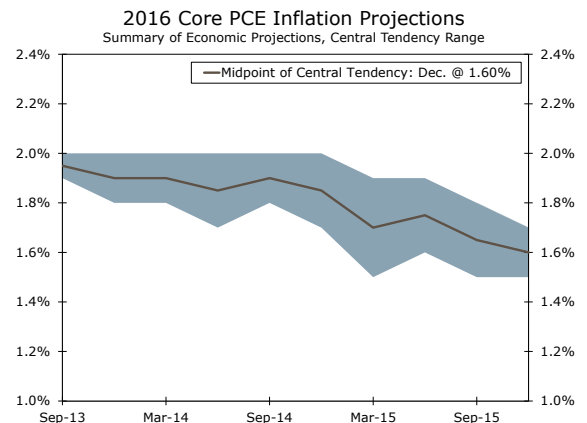
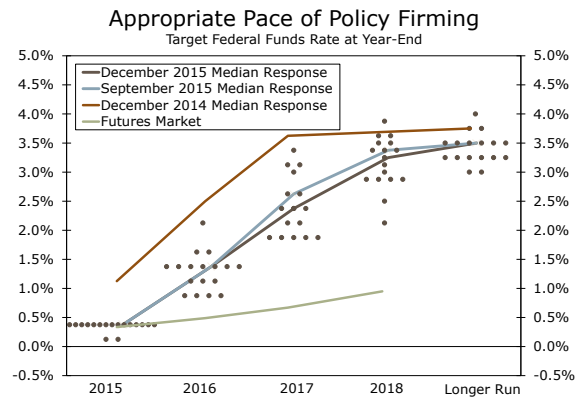
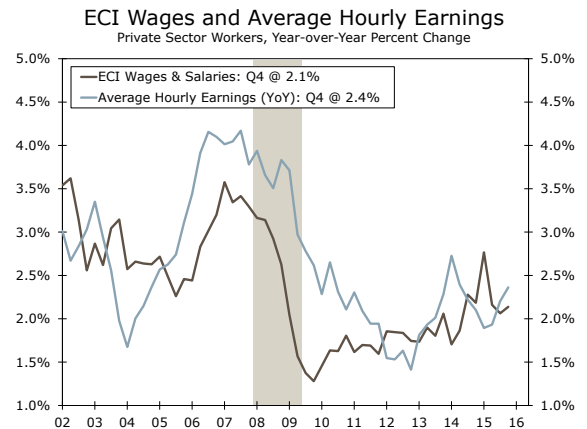
For the Federal Reserve, so much of the current debate surrounds the labor market. Wages are considered soft—although we would question that perception given the contemporaneous softness of inflation and productivity numbers.

#### Incomplete Information

Incomplete information provides another rationale for the fat tail problem and the apparent rise in market volatility since last fall. Allowances must be made to account for the reality that the current set of data does not precisely reflect the actual state of affairs. The likelihood of extreme outcomes is greater than their statistical probability based upon the unrevised historical data. There are missing variables. We certainly see the impact of incomplete information when evaluating the Chinese economy and even more importantly the clarity of information on central bank policy intentions in China, Europe and Japan. As illustrated in the middle graph, the intentions of the FOMC here in the U.S. have continually downshifted with respect to the path of the funds rate as the FOMC itself responds to incomplete and imperfect information on the economy. We are dependent on information—even though it is often imperfect and incomplete.

#### The Incomplete Model: How Is Inflation?

This leads to the third information problem—that of an incomplete model of the economy/inflation and thereby a challenge to decision making. Right now, the concern, as evidenced by the papers of the latest Federal Reserve Bank of Kansas City’s Jackson Hole Conference, is that policy makers and many financial market participants are seeking a unified theory of inflation. But that remains elusive and very likely does not exist. Following the declining unemployment rate/Phillips Curve approach has been unsatisfying recently as evidenced by the Fed’s systematic overestimation of inflation over the past two years (bottom graph). So the challenge for decision makers is how to make an investment/business decision with an incomplete model of how the economy actually works when the model itself employs imperfect information. Imperfect information breeds volatility.



## Wells Fargo U.S. Interest Rate Forecast

	<b>Actual</b>				<b>Forecast</b>							
	<b>2015</b>				<b>2016</b>				<b>2017</b>			
	<b>1Q</b>	<b>2Q</b>	<b>3Q</b>	<b>4Q</b>	<b>1Q</b>	<b>2Q</b>	<b>3Q</b>	<b>4Q</b>	<b>1Q</b>	<b>2Q</b>	<b>3Q</b>	<b>4Q</b>
<b>Quarter End Interest Rates</b>												
Federal Funds Target Rate	0.25	0.25	0.25	0.50	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25
3 Month LIBOR	0.27	0.28	0.33	0.61	0.70	0.95	1.20	1.45	1.70	1.95	2.20	2.45
Prime Rate	3.25	3.25	3.25	3.50	3.50	3.75	4.00	4.25	4.50	4.75	5.00	5.25
Conventional Mortgage Rate	3.77	3.98	3.89	3.96	3.96	4.01	4.06	4.16	4.29	4.36	4.41	4.55
3 Month Bill	0.03	0.01	0.00	0.16	0.39	0.67	0.90	1.18	1.33	1.59	1.88	2.15
6 Month Bill	0.14	0.11	0.08	0.49	0.50	0.69	0.95	1.20	1.41	1.64	1.97	2.21
1 Year Bill	0.26	0.28	0.33	0.65	0.52	0.84	1.02	1.33	1.52	1.79	2.03	2.27
2 Year Note	0.56	0.64	0.64	1.06	0.91	1.13	1.36	1.59	1.82	1.98	2.09	2.29
5 Year Note	1.37	1.63	1.37	1.76	1.55	1.66	1.74	1.85	1.95	2.06	2.16	2.33
10 Year Note	1.94	2.35	2.06	2.27	2.01	2.06	2.12	2.23	2.39	2.48	2.55	2.67
30 Year Bond	2.54	3.11	2.87	3.01	2.75	2.77	2.80	2.84	2.87	2.92	2.97	3.14

Forecast as of: February 10, 2016

## Wells Fargo U.S. Economic Forecast and FOMC Central Tendency Projections

	<u>2016</u>	<u>2017</u>
<b>Change in Real Gross Domestic Product</b>		
Wells Fargo	2.0	2.3
FOMC	2.3 to 2.5	2.0 to 2.3
<b>Unemployment Rate</b>		
Wells Fargo	4.6	4.4
FOMC	4.6 to 4.8	4.6 to 4.8
<b>PCE Inflation</b>		
Wells Fargo	1.6	1.9
FOMC	1.2 to 1.7	1.8 to 2.0

Forecast as of: February 10, 2016

NOTE: Projections of change in real gross domestic product (GDP) and in inflation are from the fourth quarter of the previous year to the fourth quarter of the year indicated. PCE inflation is the percentage rate of change in the price index for personal consumption expenditures (PCE). Projections for the unemployment rate are for the average civilian unemployment rate in the fourth quarter of the year indicated.

Fed Data as of: December 16, 2015

Source: IHS Global Insight, Bloomberg LP, Federal Reserve Board and Wells Fargo Securities, LLC

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