

INFLATION / WAGE ESCALATION OUTLOOK

January 2016

The Philadelphia Federal Reserve Bank's Livingston Survey is the oldest continuous survey of economists' expectations. The survey was started in 1946 by the late columnist Joseph A. Livingston. It summarizes the forecasts of economists from industry, government, banking, and academia. It is published twice a year, in June and December. The Federal Reserve Bank of Philadelphia took responsibility for the survey in 1990.

On December 10, 2015, the Federal Reserve Bank of Philadelphia released the most recent Livingston Survey forecast of future inflation. Historical inflation is not an indicator of future performance: the Livingston Survey is a forward-looking survey, not a historical average. On an annual average basis, CPI inflation is expected to be 1.8% in 2016 and 2.2% in 2017. Inflation is expected to average 2.25% over the next ten years, slightly higher than the 2.20 percent estimated in the previous survey of six months ago.

The Livingston Survey also projects yields on three-month Treasury Bills to average .68% in June 2016, 1.12% in December 2016 and 2.03% in December 2017. These projected yields are less than the projected inflation rate.

The long-term relationship between inflation and discount rates has been distorted by the Federal Reserve Bank's intervention (Quantitative Easing) to stimulate the economy with a massive infusion¹ of "new" money to drive down long-term interest rates. In an effort to restart the recession comatose economy, the Federal Reserve added 3.5 trillion dollars to the U.S. financial system² by buying U.S. Treasury Bonds funded by an increase in the monetary supply.

Contrary to normal economic expectations and indicative of the recession trauma, this massive infusion of cash into the economy did not spur on inflation.³ Since 2009, the yield on 3-month Treasury Bills has hovered just above zero and the rate of inflation has exceeded the yield on 3-month Treasury Bills.

¹ The value of the assets held by the Federal Reserve increased from less than \$1 trillion on 2007 to more than \$4.5 trillion in 2015. Federal Reserve Bank of St. Louis Review

² Quantitative Easing began in 2009 and was completed in October 2014. Federal Reserve Bank of St. Louis Review

³ Inflation has averaged 1.4% for the period 2009 to 2015. Inflation from 1952 to 2015 has averaged 3.6%. The Federal Reserve Bank's targeted inflation is 2%. FRBSF Economic Letter, Financial Market Outlook for Inflation 5/12/2014

Since 2010, inflation has been significantly higher than discount rates. When inflation is greater than discount rates, current damages need to be increased to future damages. Instead of discounting future amounts to calculate present value; current amounts need to be increased.

Wage Escalation

On average, over the past fifteen years, wages have increased slightly more than inflation. Refer to Table 1 for additional information.

TECHNICAL NOTE

The Employment Cost Index (ECI) measures the change in the cost of labor, free from the influence of employment shifts among occupations and industries. Detailed information on survey concepts, coverage, and methods can be found in BLS Handbook of Methods, Chapter 8, "National Compensation Measures," Bureau of Labor Statistics, on the Internet at www.bls.gov/opub/hom/pdf/homch8.pdf.

Table 1
WAGE ESCALATION RATES

| Year | Inflation CPI - U | Employment Cost Index | | | | |
|-------------------------|----------------------|------------------------|--------------|--------------|-------------------------|-------------------------|
| | | Service Occupations | Sales | Construction | All Civilian Workers | State and Local Gov. |
| 2001 | 2.8% | 3.5% | 2.4% | 3.6% | 3.7% | 3.8% |
| 2002 | 1.6% | 2.4% | 2.6% | 2.7% | 2.8% | 3.1% |
| 2003 | 2.3% | 2.4% | 3.2% | 2.6% | 2.9% | 2.2% |
| 2004 | 2.7% | 2.0% | 3.0% | 2.6% | 2.5% | 2.1% |
| 2005 | 3.4% | 2.5% | 3.5% | 2.7% | 2.6% | 3.1% |
| 2006 | 3.2% | 3.2% | 2.5% | 3.7% | 3.2% | 3.5% |
| 2007 | 2.8% | 4.0% | 2.9% | 3.9% | 3.4% | 3.5% |
| 2008 | 3.8% | 2.8% | 0.1% | 3.3% | 2.7% | 3.1% |
| 2009 | -0.4% | 2.1% | 0.6% | 1.3% | 1.5% | 1.9% |
| 2010 | 1.6% | 1.2% | 2.3% | 1.1% | 1.6% | 1.2% |
| 2011 | 3.2% | 1.3% | 2.0% | 1.5% | 1.4% | 1.0% |
| 2012 | 2.1% | 1.4% | 2.1% | 0.9% | 1.7% | 1.1% |
| 2013 | 1.5% | 1.3% | 2.6% | 1.5% | 1.9% | 1.1% |
| 2014 | 1.6% | 2.0% | 2.4% | 2.2% | 2.1% | 1.6% |
| 2015 | <u>0.1%</u> | <u>1.7%</u> | <u>1.9%</u> | <u>1.6%</u> | <u>2.1%</u> | <u>1.8%</u> |
| Average | <u>2.15%</u> | <u>2.25%</u> | <u>2.27%</u> | <u>2.35%</u> | <u>2.41%</u> | <u>2.27%</u> |
| Wage Escalation Premium | | 0.10% | 0.12% | 0.19% | 0.25% | 0.12% |
| Long-Term Inflation | | <u>2.25%</u> | <u>2.25%</u> | <u>2.25%</u> | <u>2.25%</u> | <u>2.25%</u> |
| Wage Escalation Rate | | <u>2.35%</u> | <u>2.37%</u> | <u>2.44%</u> | <u>2.50%</u> | <u>2.37%</u> |