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Memorandum

To: Honorable Bill Haslam, Governor
Honorable Tre Hargett, Secretary of State
Honorable Justin P. Wilson, Comptroller of the Treasury
Honorable David H. Lillard, Jr., Treasurer
Commissioner Mark Emkes, Finance and Administration

From: Keith Boring, Legislative Research Analyst

Date: April 3, 2012

Re: Economic Report to the Governor

Pursuant to Tennessee Code Annotated (TCA) §9-4-5202, the State Funding Board (the Board) shall secure estimates of economic growth from the Tennessee econometric model published by the University of Tennessee's Center for Business and Economic Research (CBER) in its annual Economic Report to the Governor. The report provides an overview of the current estimates of economic growth statistics, such as nominal personal income growth and employment growth. TCA §9-4-5202 also prescribes the Board to comment on the "reasonableness" of CBER's estimate of nominal personal income growth in Tennessee. The Comptroller's staff assists the Board by evaluating current economic conditions and trends via outside forecasts.

Overall Conclusion: Based on a review of various economic forecasts, other trends in the world economy, and historical Tennessee growth, CBER's nominal personal income growth forecast of 4.27 percent for fiscal year 2012, 4.65 percent for calendar year 2012, and 4.92 percent for calendar year 2013 does not appear unreasonable.

STAFF COMMENTARY

An Economic Report to the Governor of the State of Tennessee: The State's Economic Outlook, January 2012 (Economic Report) by the University of Tennessee Center for Business and Economic Research (CBER) forecasts growth of 4.65 percent in Tennessee's nominal personal income for calendar year 2012 and 4.92 percent for calendar year 2013. The forecast growth for fiscal year 2012 is 4.27 percent. The revised forecast for calendar year 2011 was 4.78 percent. Exhibit 1 provides a table summarizing the 2012 Economic Reports' forecast year estimates.

Exhibit 1: Estimated Tennessee Personal Income Growth

Forecast Year	Report Year 2012
Fiscal Year 2013	4.89%
Fiscal Year 2012	4.27%
Calendar Year 2013	4.92%
Calendar Year 2012	4.65%
Calendar Year 2011	4.78%

Source: Matthew N. Murray, Center for Business and Economic Research, *An Economic Report to the Governor of the State of Tennessee: The State's Economic Outlook, January 2012*, Table 2.3: Selected U.S. and Tennessee Economic Indicators, Seasonally Adjusted, http://cber.utk.edu/erg/erg2012.pdf (accessed February 23, 2012).

Exhibit 2 provides a table summarizing forecasted calendar year indicators related to growth from the Economic Report.

Exhibit 2: Economic Report Forecast Summary

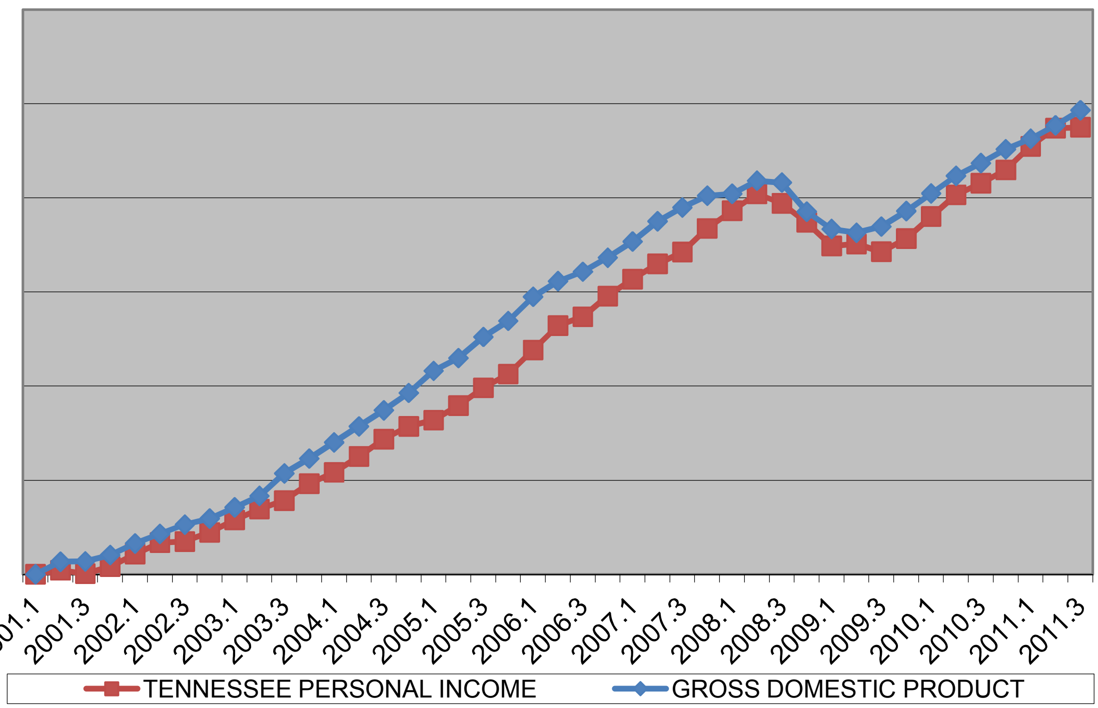
Indicator	2012	2013
US Real GDP Growth	1.96%	2.38%
TN Real GDP Growth	3.39%	3.43%
US Nominal Personal Income Growth	3.40%	3.75%
TN Nominal Personal Income Growth	**4.65%**	**4.92%**
US Unemployment Rate	8.80%	8.60%
TN Unemployment Rate	8.90%	8.40%
Consumer Price Index	1.49%	1.83%

Source: Matthew N. Murray, Center for Business and Economic Research, *An Economic Report to the Governor of the State of Tennessee: The State's Economic Outlook, January 2012*, Table 2.3: Selected U.S. and Tennessee Economic Indicators, Seasonally Adjusted, http://cber.utk.edu/erg/erg2012.pdf (accessed February23, 2012).

FORECAST COMPARISONS

Historically, growth in Tennessee personal income has closely followed growth in the United States gross domestic product (GDP). Exhibit 3 shows the relationship between relative growth in Tennessee personal income as it compares to the relative growth in U.S. GDP over the past decade.

Exhibit 3: Relative Growth of Selected Economic Indicators



Source: United States Bureau of Economic Analysis, www.bea.gov (accessed February 23, 2012).

Because the relationship between the indicators is close and few other agencies produce estimates of growth in Tennessee Personal Income, for the purposes of this commentary, we will compare the GDP estimates produced by CBER with the GDP estimates produced by other economic forecasting agencies. The Economic Report forecasts real GDP growth of 1.96 percent for calendar year 2012 and 2.38 percent for calendar year 2013.

In 2010, the U.S. economy started to rebound from a recession that began in December 2007. This rebound, however, has been more modest than recovery periods following prior recessions. Optimism for a substantial recovery in 2011 dissipated with subdued growth over the first half of the year. The economy did, however, improve in the 4th quarter, posting a 3.0 percent increase from the 3rd quarter. According to the Bureau of Economic Analysis, the 2011 4th quarter acceleration in real GDP "reflected positive contributions from private inventory investment and accelerations in personal consumption expenditures and in residential fixed investment."[1]

Current expectations are for slight to modest growth levels to continue. Exhibits 4 and 5 compare CBER's forecast to central bank and government forecasts and select non-governmental economists' forecasts.

Exhibit 4: Central Bank and Government Forecasts: U.S. Real GDP Growth – by Calendar Year

Forecaster	2012	2013	Date
Congressional Budget Office	2.0	1.1	January 31, 2012
Office of Management & Budget	2.7	3.0	February 13, 2012
Fannie Mae	2.3	2.3	February 21, 2012
Freddie Mac	2.4	3.5	February 17, 2012
World Bank	2.2	2.4	January 18, 2012
Federal Reserve Board	2.2	2.8	January 25, 2012
International Monetary Fund	1.8	2.2	January 24, 2012
High	2.7	3.5	
Median	2.2	2.4	
Low	1.8	1.1	
CBER	2.0	2.4	January, 2012

Compared to the Economic Report's forecast, the central bank and government economists' median forecasts favor a slightly higher rate of increase in GDP for calendar year 2012 and approximately the same rate of increase in GDP for calendar year 2013.

[1] U.S. Bureau of Economic Analysis, National Income and Product Accounts Gross Domestic Product: Fourth Quarter and Annual 2011, February 29, 2012, http://www.bea.gov/newsreleases/national/gdp/gdpnewsrelease.htm (accessed March 1, 2012).

Exhibit 5: Non-Governmental Forecasts: U.S. Real GDP Growth – by Calendar Year

Forecaster	2012	2013	Date
Bank of America/Merrill Lynch	1.6	1.4	February 13, 2012
The Conference Board	2.0	2.2	February 15, 2012
Wells Fargo	1.9	2.1	February 8, 2012
JP Morgan Chase	2.4	2.3	February 13, 2012
Moody's Investors Service	2.0	2.7	February 13, 2012
UBS	2.1	2.6	January 20, 2012
Barclays Capital	2.8	2.5	February 13, 2012
High	2.8	2.7	
Median	2.0	2.3	
Low	1.6	1.4	
CBER	2.0	2.4	January, 2012

Compared to the Economic Report, the median of the non-governmental forecasters favor approximately the same level of GDP growth in 2011 and slightly lower GDP growth for 2013. Nevertheless, the Economic Report's GDP forecasts for calendar years 2012 and 2013 lie within the range of all comparators.

FORECAST RISKS

Economic forecasts face risks due to uncertainty. Unexpected events or changes in the relationships of underlying explanatory data may decrease a model's ability to provide useful estimates.

These conditions may influence CBER's Tennessee forecast:

- Consumer spending weakness due to sustained high unemployment and low levels of consumer confidence
- Uncertainty regarding the European debt crisis
- Accelerated increases in the cost of energy and other commodities
- Lingering housing market weakness

CONSUMER SPENDING

The largest component of total GDP is consumer spending, accounting for approximately two-thirds of total output. The Economic Report notes, "Consumer purchases of big ticket items had a strong performance for the second consecutive year with solid growth of 8.3 percent in 2011."[2] Some of this strong performance could be attributable to pent-up demand and a lower savings rate. The Economic Report further explains, "Consumer spending on services is still weak….Overall, the lack of solid

[2] Matthew N. Murray, Center for Business and Economic Research, *An Economic Report to the Governor of the State of Tennessee: The State's Economic Outlook,* January 2012, p. 3, http://cber.utk.edu/erg/erg2012.pdf (accessed February23, 2012)..

foundation for better consumer sentiment hindered the spending recovery in 2011."[3] The outlook for 2012 appears similar to the results experienced in 2011. Consumer spending is anticipated to be slow for the first two quarters. Big ticket item sales are projected to fall slightly. Much like 2011, however, pent-up demand is expected to drive purchases later in the year.

The U.S. Federal Reserve Board meeting minutes from January 25, 2012, report that consumer spending has fluctuated some, but consumer sentiment remains low:

> Real personal consumption expenditures continued to rise moderately in November, boosted by spending for motor vehicles and other durables, although households' real disposable income edged down. In December, however, nominal retail sales excluding purchases at motor vehicle and parts outlets declined, and sales of motor vehicles also dropped slightly. Consumer sentiment improved further in early January but was still at a low level.[4]

UNEMPLOYMENT

Current Conditions and Forecasts

Since 2009, Tennessee unemployment has been at its highest annual levels since 1982 and 1983, when the annual unemployment rate was 11.7 percent. On average, Tennessee's unemployment rate has been higher than the national rate since the beginning of the recession in December 2007. The latest Tennessee unemployment rate of 8.2 percent for January 2012 is slightly lower than the January U.S. unemployment rate of 8.3 percent. The Economic Report forecasts that Tennessee's unemployment rate will track closely with total U.S. unemployment. For 2012, the Economic Report estimates an 8.9 percent unemployment rate for Tennessee, compared to a U.S. rate of 8.8 percent. The 2013 forecast displays 8.4 percent unemployment in Tennessee, while the U.S. estimate is 8.6 percent.[5] Exhibit 6 shows a comparison of national and state unemployment rates from the Federal Reserve Bank of St. Louis.

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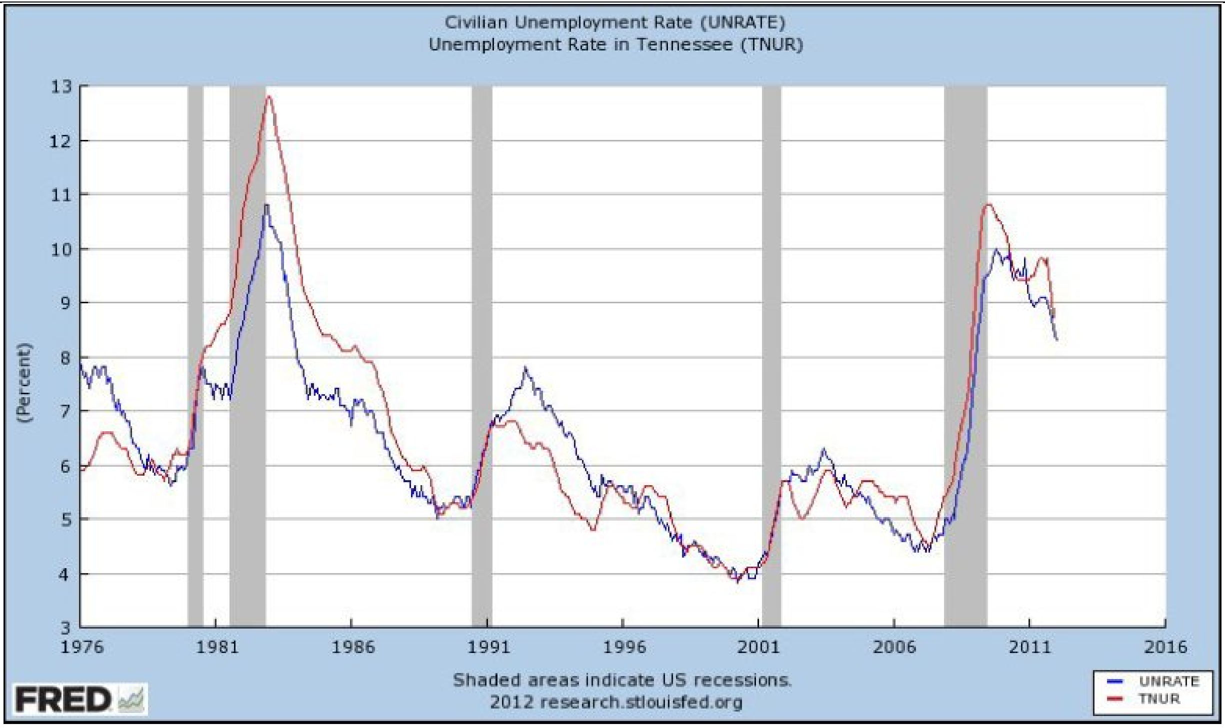
[3] Ibid.

[4] Federal Reserve Board, *Minutes of the Federal Open Market Committee*, February 25, 2012, http://www.federalreserve.gov/monetarypolicy/fomcminutes20120125.htm (accessed March 5, 2012).

[5] CBER, *An Economic Report to the Governor*, 2012, p. 24.

Exhibit 6: Federal Reserve Bank of St. Louis: Unemployment Rate Comparison



Source: Federal Reserve Bank of St. Louis, http://www.stlouisfed.org/ (accessed March 5, 2012).

The Economic Report forecasts Tennessee and U.S. annual unemployment rates will "remain elevated for many years to come. The job losses that occurred over the recession were nothing less than staggering, and it will take a considerable period of time to re-absorb these individuals into the workforce."[6] CBER does not expect state unemployment to drop below 8.0 percent until at least the second quarter of 2014.[7] In short, the Economic Report forecasts continued high unemployment in the short term for Tennessee and likely higher than average unemployment for several years in the future. This analysis is consistent with the expectations of other economists.

Many economists do not expect unemployment to fall below 8.0 percent until at least 2013, a level it last reached in January 2009 when the economy was losing more than 700,000 jobs a month. "There is going to be hiring," states Paul Edelstein, Director of Financial Economic for IHS Global Insight. "It's just not going to be what we would normally see at this point in an economic recovery."[8] Edelstein believes about 200,000 new jobs must be added each month for the unemployment rate to drop, but does not forecast those results. He expects the unemployment rate to be 8.8 percent at the end of 2012. "People should maintain

[6] CBER, *An Economic Report to the Governor*, 2012, p. 27.
[7] Ibid., p. 24.
[8] Governing.com, "Top Economists Doubt Further Jobless Rate Drop," Feb. 3, 2012, http://www.governing.com/blogs/by-the-numbers/economists-give-2012-unemployment-rate-forecast.html (accessed March 7, 2012).

modest expectations for this recovery," Edelstein says.[9]

While Edelstein may be in the majority, others are more optimistic. Charles Plosser, President and CEO of the Federal Reserve Bank of Philadelphia, commented on January 30, 2012:

> We've seen unemployment fall almost a full percentage point in the last year. The last time that happened was 1995. It never fell a full percentage point in a year after the 2001 recession, so I'm a little more optimistic. I think, by the end of 2012, unemployment will be close to 8 percent….maybe even a little below that.[10]

Dean Maki, chief U.S. economist at Barclays Capital, expects the unemployment rate to be 7.8 percent by the end of the year, and then drop to 7.0 percent by the end of 2013. He views demographics as the underlying key to the falling unemployment rate. On March 5, 2012, Maki told Bloomberg Television:

> Because of the ongoing retirements of the baby boomers, you need less job growth to push the unemployment rate down. We think you only need about 75,000–100,000 new jobs per month to keep the unemployment rate steady. Anything significantly above that is going to push the unemployment rate down….Two-thirds of the decline in labor force participation rates, we estimate, to be due to demographic trends, specifically retirements among the baby boomers. Two-thirds of those leaving the labor force tell the Bureau of Labor Statistics that they do not want a job. Many of these people are retiring and not coming back into the labor force.[11]

Labor Force and Utilization

The unemployment rate can be deceptive because it measures the number of people holding jobs compared to the total labor force. The labor force does not include unemployed people who are not looking for jobs. The Tennessee civilian labor force increased in size during 2011 by 1.57 percent. Exhibit 7 shows recent estimates from the U.S. Bureau of Labor Statistics for Tennessee.

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[9] Ibid.

[10] Charles Plosser, CNBC Exclusive: Federal Reserve Bank of Philadelphia President Charles Plosser Sits Down with CNBC's Steve Liesman, January 30, 2012, http://www.cnbc.com/id/46132551/CNBC_EXCLUSIVE_CNBC_TRANSCRIPT_FEDERAL_RESERVE_BANK_OF_PHILADELPHIA_PRESIDENT_CHARLES_PLOSSER_SITS_DOWN_WITH_CNBC_S_STEVE_LIESMAN_TODAY (accessed March 5, 2012).

[11] Bloomberg, Video: Barclays's Maki on U.S. Labor Market Outlook, March 5, 2012, http://www.bloomberg.com/video/87707552/ (accessed March 5, 2012).

Exhibit 7: Annual Tennessee Employment, Unemployment, and Labor Force Information

Year	Period	Labor force	Employment	Unemployment	Unemployment Rate (%)	Labor Force Growth (%)
2002	Annual	2,877,831	2,725,721	152,110	5.3	0.29%
2003	Annual	2,898,595	2,734,344	164,251	5.7	0.72%
2004	Annual	2,909,018	2,750,754	158,265	5.4	0.36%
2005	Annual	2,942,585	2,779,121	163,463	5.6	1.15%
2006	Annual	3,008,978	2,852,178	156,800	5.2	2.26%
2007 (F)	Annual	3,047,811	2,902,175	145,636	4.8	1.29%
2008 (F)	Annual	3,058,652	2,855,240	203,412	6.7	0.36%
2009 (F)	Annual	3,034,758	2,716,855	317,903	10.5	-0.78%
2010 (B)	Annual	3,084,169	2,783,434	300,734	9.8	1.64%
2011 (B)	Annual	3,132,470	2,844,578	287,892	9.2	1.57%

Note: F : Reflects model reestimation and new seasonal adjustment.
B : Reflects revised population controls, model reestimation, and new seasonal adjustment
Source: U.S. Bureau of Labor Statistics (seasonally adjusted), (accessed March 5, 2012).

EUROPEAN DEBT CRISIS

The Economic Report highlights the Eurozone sovereign debt crisis as one of the two greatest threats to the U.S. economy. Since the fall of 2009, the European Union has faced a crisis over the tremendous debts faced by some of its weaker economic nations. The accessibility of easy credit led Greece, Spain, and Ireland to rely heavily on external debt to fund domestic debts. After the extent of Greece's debt was revealed in October 2009, interest rates in the regions soared, not only for borrowing by Greece, but by Spain, Portugal, and Ireland, as well. A series of bailouts have not restored the growth needed to give these struggling countries a way out of their debt. In August 2011, European leaders feared Italy and Spain were also at risk. The crisis has produced much political tension in the region, as some countries have refused aid to their neighbors.

The Economic Report states that a debt crisis in Europe has broader implications worldwide. A lending crisis could occur, as banks would refuse to make new business loans. Additionally, a recession in Europe will lower U.S. exports to and increase imports from the Eurozone, thus, slowing domestic recovery.[12]

Fears regarding the European debt crisis subsided slightly in recent months, but have recently returned. On March 6, 2011, Goldman Sachs researchers released in a statement, "Markets have been supported over the past few months by the concomitant strengthening in global data and easing in worries about the European

[12] CBER, *An Economic Report to the Governor*, 2012, p. 9.

crisis….[W]ith the data a bid muddier recently, we are happier on the sideline for now."[13]

INFLATION

The Economic Report forecasts inflation to be relatively flat for 2012 and 2013 compared to 2011. Headline consumer price index (CPI) inflation is estimated to be 1.49 percent for 2012 and 1.83 percent in 2013, following 3.15 percent in 2011.[14]

In the participants' views on current condition and economic outlook submitted on January 25, 2012, by the members of the Board of Governors of the Federal Reserve, the staff forecast continued to project that inflation would remain subdued in 2012 and 2013. This forecast was "essentially unchanged" from December. With unemployment expected to remain elevated, and with longer-term inflation expectations stable, almost all participants expected inflation to remain subdued in coming quarters—that is, to run at or below the 2.0 percent level.[15]

OIL PRICES

The Economic Report highlights the turmoil in the Middle East as the second greatest threat to the U.S. economy. With concerns that gasoline may reach $4 per gallon later this year, oil prices have made significant news headlines. As in prior years, unrest in the Middle East and other international political issues are impacting the prices. Continued problems could contribute to increasing oil prices in the short-term future. As a result, the Energy Information Administration (EIA) has raised its forecast for the average cost of crude oil to refiners to $100 per barrel in 2012, almost $6 higher than the average price last year.[16] As Exhibit 8 displays, higher gas price levels have returned and projections for 2012 and 2013 appear likely to remain higher than normal.

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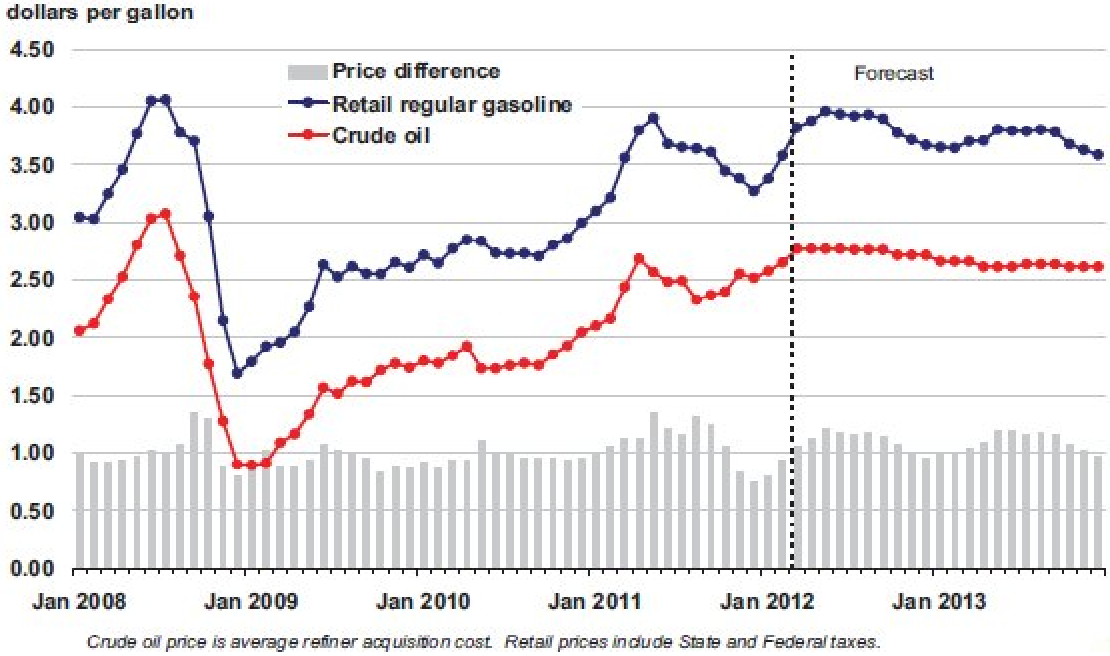
[13] Reuters, "U.S. Stocks-Greece economy worries hit Wall Street," March 6, 2012, http://uk.reuters.com/article/2012/03/06/markets-stocks-idUKL2E8E62EK20120306 (accessed March 7, 2012).
[14] CBER, *An Economic Report to the Governor*, 2012, Table 2.3, p. 24.
[15] Federal Reserve Board, *Minutes of the Federal Open Market Committee,* January 25, 2012, p. 12. http://www.federalreserve.gov/newsevents/press/monetary/fomcminutes20120125.pdf (accessed March 7, 2012).
[16] U.S. Department of Energy, Energy Information Administration, "Short-Term Energy Outlook," February 2012, http://205.254.135.24/forecasts/steo/pdf/steo_full.pdf (accessed March 5, 2012).

Exhibit 8: U.S. Gasoline and Crude Oil Prices



Source: U.S. Department of Energy, Energy Information Administration, Short-Term Energy Outlook, February 2012.

EIA anticipates 2012 gas prices will average $3.55 per gallon, two cents higher than 2011.[17] Oil and gas price increases negatively impact the U.S. economy by increasing the payments to foreign countries for oil, which might lead to lower domestic production of goods and services. Such a scenario could result in lower growth in goods-producing industries.

HOUSING MARKET

The fiscal crisis leading to the recent recession came from the housing market meltdown and subsequent turmoil in the financial markets. According to the Federal Reserve Board's meeting minutes from January 25:

> Activity in the housing market improved a bit in recent months but continued to be held down by the large overhang of foreclosed and distressed properties, uncertainty about future home prices, and tight underwriting standards for mortgage loans. Starts and permits for new single-family homes rose in November and December but remained only a little above the depressed levels seen earlier in 2011. Sales of new and existing homes also firmed somewhat in recent months, but home prices continued to trend lower.[18]

[17] U.S. Department of Energy, Energy Information Adminstration, "Short-Term Energy Outlook," February 2012, http://205.254.135.24/forecasts/steo/pdf/steo_full.pdf (accessed March 5, 2012).
[18] Federal Reserve Board, *Minutes of the Federal Open Market Committee,* January 25, 2012, p. 19. http://www.federalreserve.gov/newsevents/press/monetary/fomcminutes20120125.pdf (accessed March 7, 2012).

Purchases of new homes in January 2012 were up 3.5 percent from one year ago, to a seasonally adjusted annual rate of 321,000, according to the U.S. Commerce Department.[19] Similarly, existing home sales reached their fastest pace in 20 months in January and more Americans than forecast signed contracts to buy, according to the National Association of Realtors.[20]

In Tennessee, single-family home construction permits reached the highest level in two years in the 4th quarter of 2011, rising 27.9 percent from the previous year, according to the *Tennessee Housing Market* report. Compared to U.S. levels, Tennessee experienced a much greater rise, however, "the level of single-family permits is still lower than in the fourth quarter of 2009 when the federal tax credit for home purchases was in place and far below the level that existed prior to the recession."[21] The report also states collections for mortgage and real estate transaction taxes both increased during the 4th quarter, displaying a higher level of activity. Home prices continued to drop in Tennessee in 2011, but overall optimism in the Tennessee housing market is at its highest point in three years. Additional improvements for the housing market are expected, as long as labor market conditions continue to improve.[22] In the past, sale and resale of homes in Tennessee has provided substantial growth in sales tax revenue. Strong growth in sales tax revenue will not be sustainable until the housing market displays consistent improvement.

CONCLUSION

Based on this review, the Economic Report's forecast of 4.27 percent nominal personal income growth for fiscal year 2012, 4.65 percent for calendar year 2012, and 4.92 percent for calendar year 2013 does not appear unreasonable.

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[19] U.S. Department of Commerce, U.S. Census Bureau News, Joint Release, U.S. Department of Housing and Urban Development, "New Residential Sales in January 2012," February 24, 2012, http://www.census.gov/construction/nrs/pdf/newressales.pdf (accessed March 5, 2012).
[20] John Gittelsohn, Steve Matthews, and Chris Christoff, "U.S. Housing Lays Foundation for Recovery as Buyers Coaxed Back," *Bloomberg News*, March 1, 2012, http://www.bloomberg.com/news/2012-03-02/housing-in-u-s-lays-foundation-for-recovery-as-economy-coaxes-buyers-back.html (accessed March 5, 2012).
[21] Business and Economic Research Center, Middle Tennessee State University, *Tennessee Housing Market*, 4th Quarter 2011, p. 2.
[22] Ibid.