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# January 2012 Economic Review and Revenue Forecast Update

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Prepared for the  
State of Vermont  
Emergency Board and  
Legislative Joint Fiscal Committee

January 18, 2012

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# Economic Review and Revenue Forecast Update

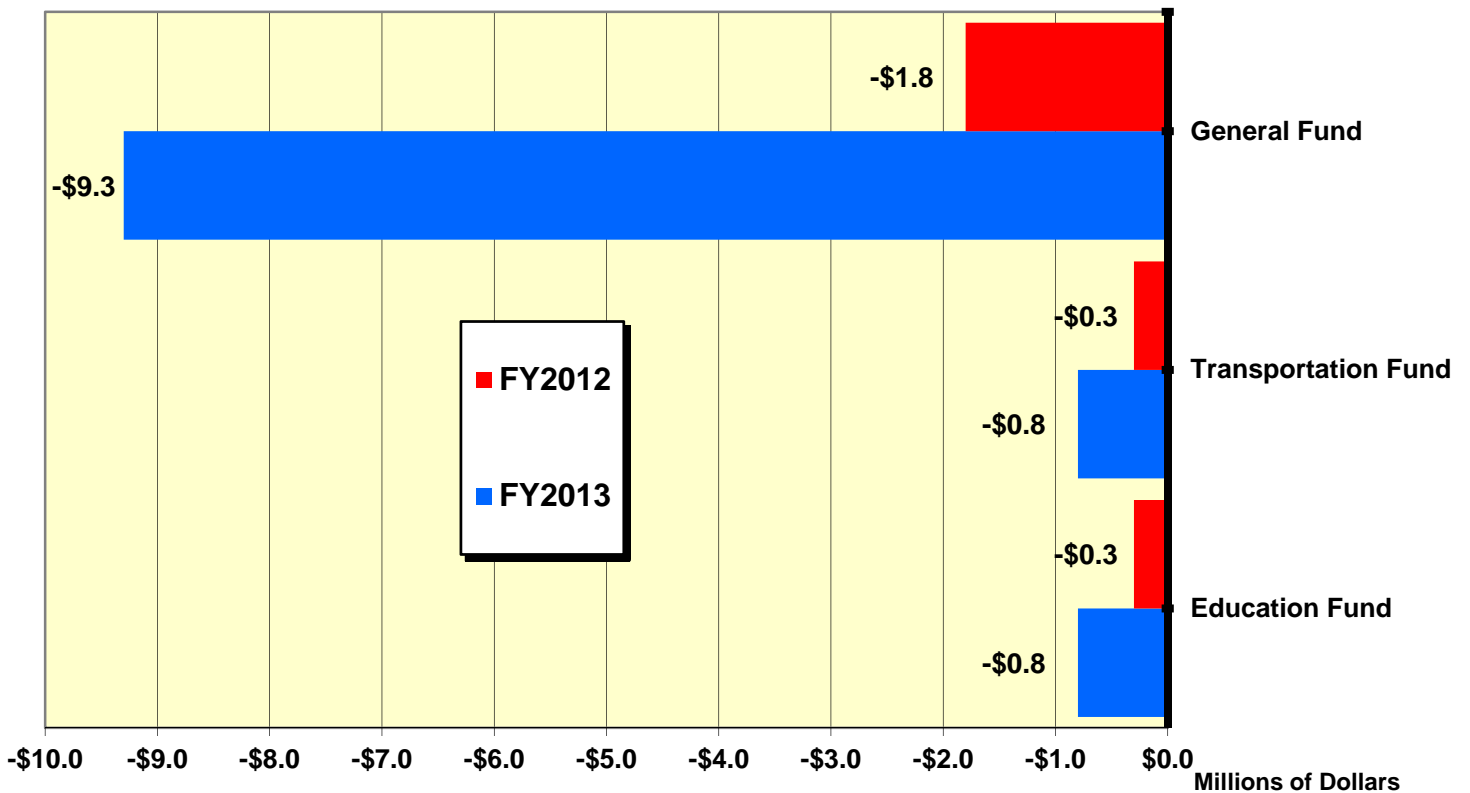
## January 2012

### Overview

*A slower U.S. economic recovery than forecast last July will temper revenue growth over the next two fiscal years. Multiple economic headwinds that developed in 2011 have yet to fully subside, as the European debt crisis continues to fester, oil prices again top \$100 per barrel, and domestic political gridlock precludes federal fiscal and other policy measures that could accelerate the recovery. Although the Vermont economy continues to outperform the U.S. as a whole, minor revenue downgrades in all three major State funds are recommended relative to prior July 2011 projections.*

*FY12 revenues to date have performed very close to projections, with total revenues across all three funds closing the second quarter of the fiscal year within 0.5% of targets. Mounting Corporate refunds, higher gas prices, a tepid start to the winter tourism season and slower projected macro-economic growth, however, will result in \$1.8 million less in FY12 and \$9.3 million less in FY13 General Fund revenues, and reductions of \$0.3 million in FY12 and \$0.8 million in FY13 in both the Transportation and Education Funds, relative to prior July 2011 forecasts.*

**Recommended Net Revenue Changes from July 2011 Forecast**

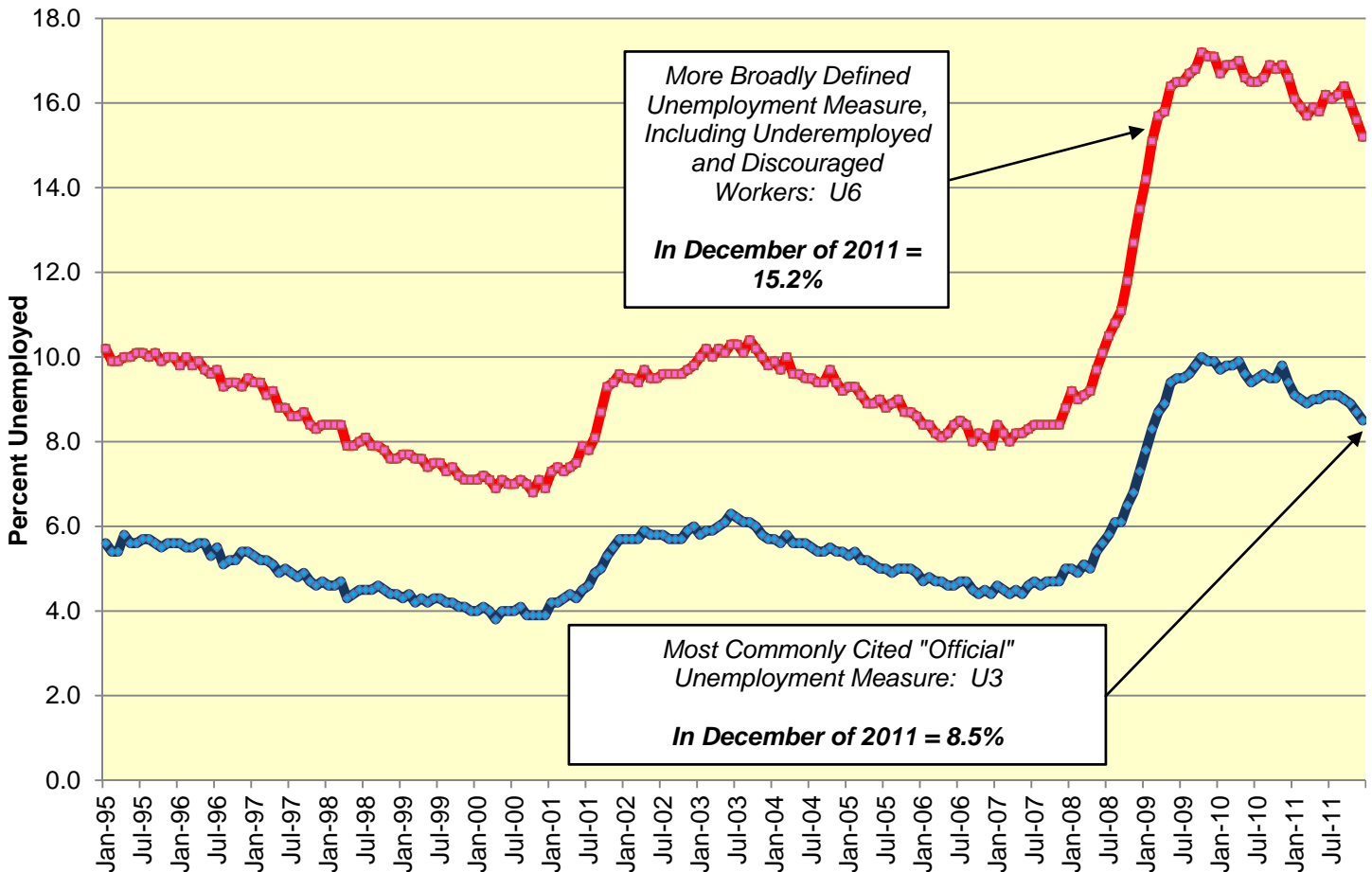


## July 2011 Economic and Revenue Forecast Commentary

- Despite nascent signs of improvement in the U.S. economy in recent months, including likely real GDP growth of about 3% in the 4<sup>th</sup> quarter and job growth that nudged the unemployment rate to its lowest level in 34 months, the economy is still harassed by threats of systemic financial chaos in Europe and self-inflicted fiscal policy mistakes in the U.S. that could still further delay or derail recovery. These threats, along with the Japanese earthquake and continued weakness in the housing and real estate sector, conspired to reduce 2011 growth to only 1.8%, vs. the 2.7% expected last July, and will lower projected 2012 growth from 4.2% to 2.6% while lowering gains in 2013 from 4.1% to 3.4% (see Table A, page 18). In digging out of the deepest economic downturn since the Great Depression, the economy is still highly vulnerable to further policy errors and external economic shocks.

### U.S. Unemployment Rates Decline But Labor Market Slack is Evident...

Source: U.S. Bureau of Labor Statistics

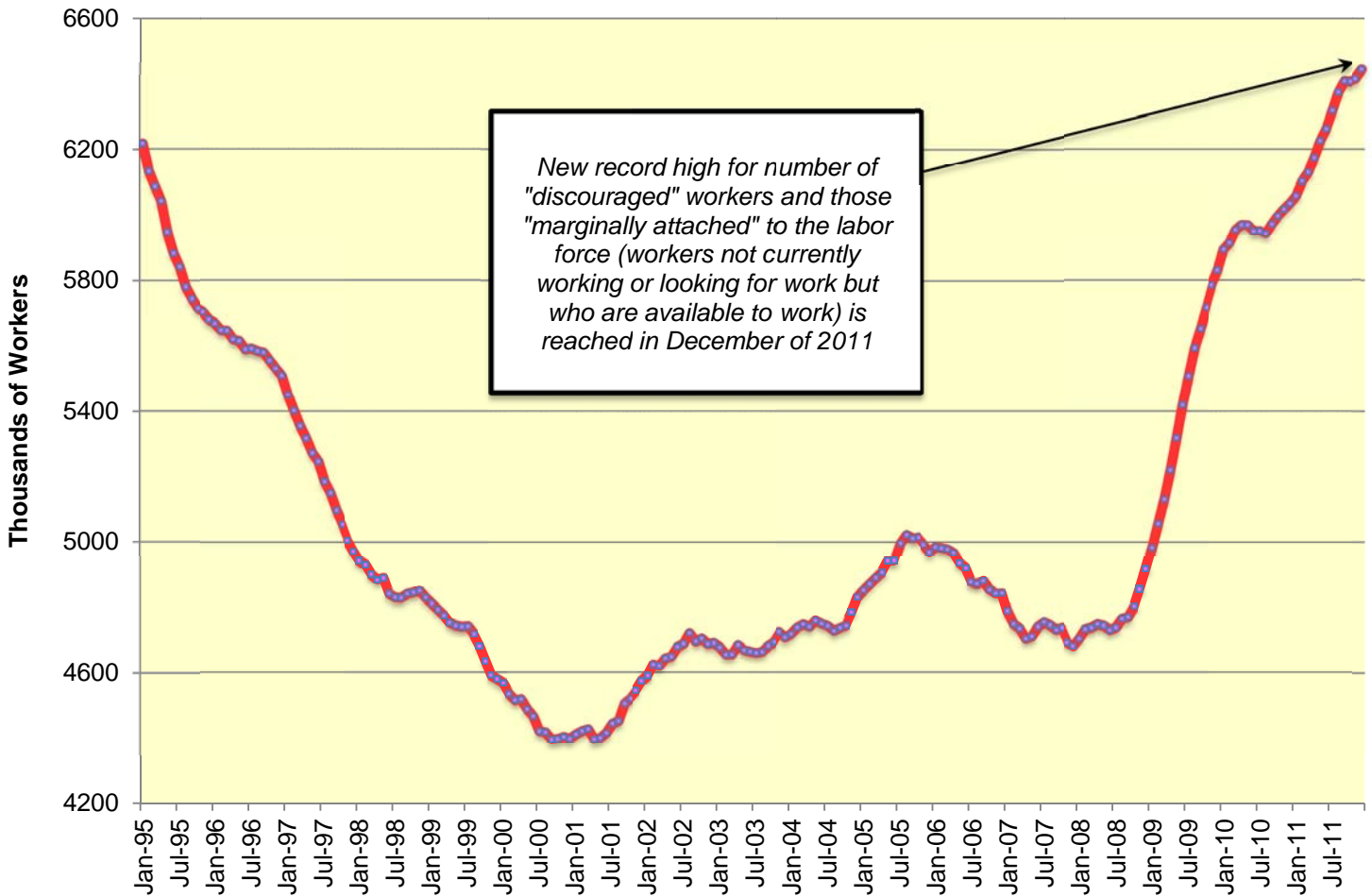


- As illustrated in the above chart, the U.S. unemployment rate in December dropped to 8.5%. However, until and unless real GDP growth exceeds about 2.5%, very little further improvement in the unemployment rate can be expected. Part of the reason for this is that the number of so-called “discouraged” and “marginally attached” workers, who are not counted as a part of the labor force because they are not technically looking for work

despite being available for work, could re-enter the labor force and absorb new job growth without moving the most commonly cited unemployment rate (called “U3”) much lower. Per the below chart, in December of 2011, the number of such workers reached a record high of more than 6.4 million, driving the labor force participation rate down nearly 3 percentage points (from 67% to 64%) over the past 10 years and eliminating virtually all labor force growth over the past 4 years. As the economy improves, the labor force is likely to resume growth, thereby moderating unemployment rate declines.

**...As a Mounting Backlog of Discouraged Workers Reaches Record Levels**

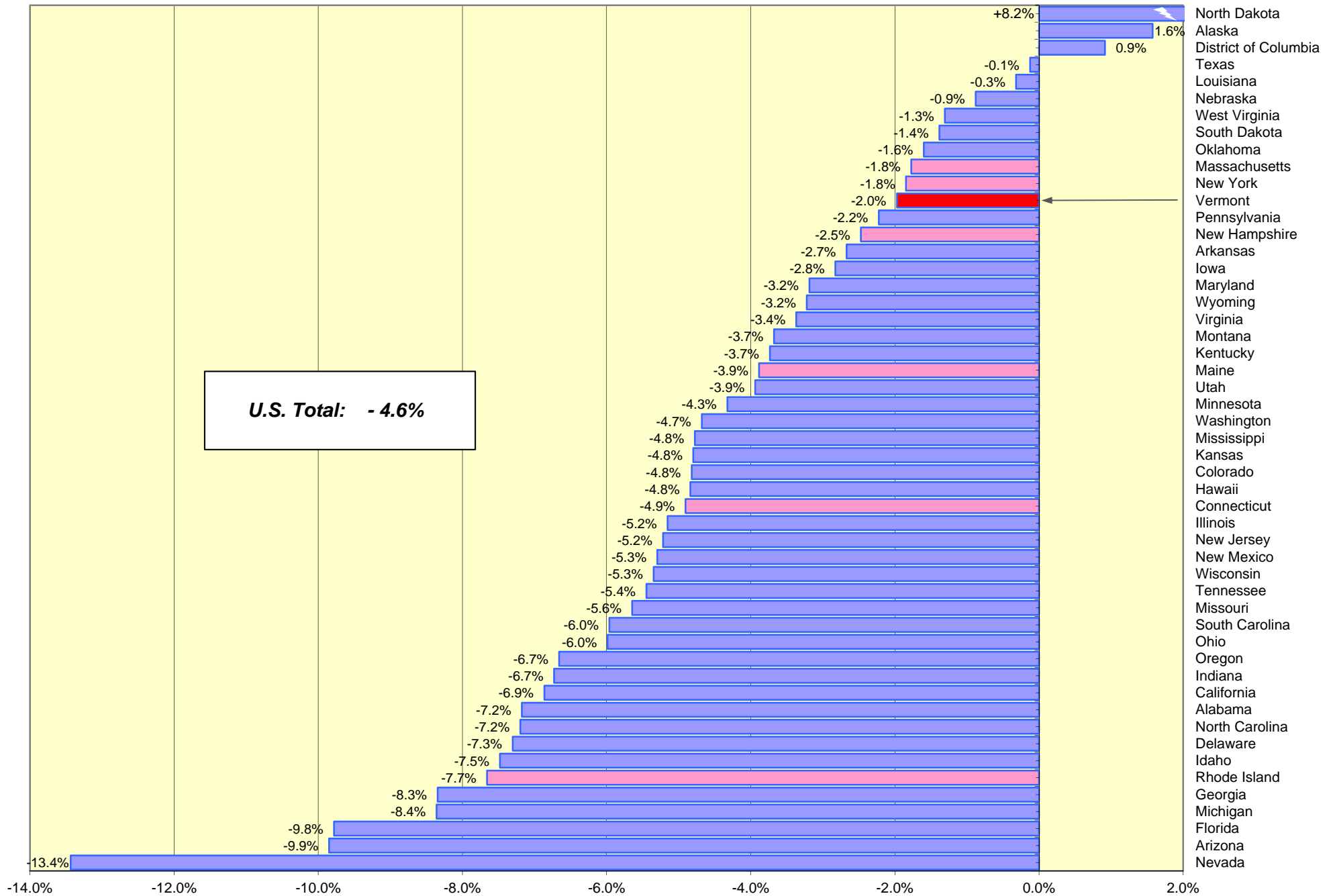
(Number of persons not counted in the labor force because they are no longer looking for work, but are available to work. 12 Month Moving Averages, Source: U.S. Bureau of Labor Statisti



- “Job growth” seems to be on every political agenda, national and local, with wildly varying assertions of regional and state supremacy. The charts on the following two pages present a factual basis for assessing comparative job growth by state from the peak pre-recession employment level reached for most states in 2007 or 2008 to current (November 2011) levels and also compare growth from the recessionary low-point (for most states in 2009 or 2010) to the present. While total U.S. employment over this same period remains 4.6% below its pre-recession peak (reached in January of 2008),

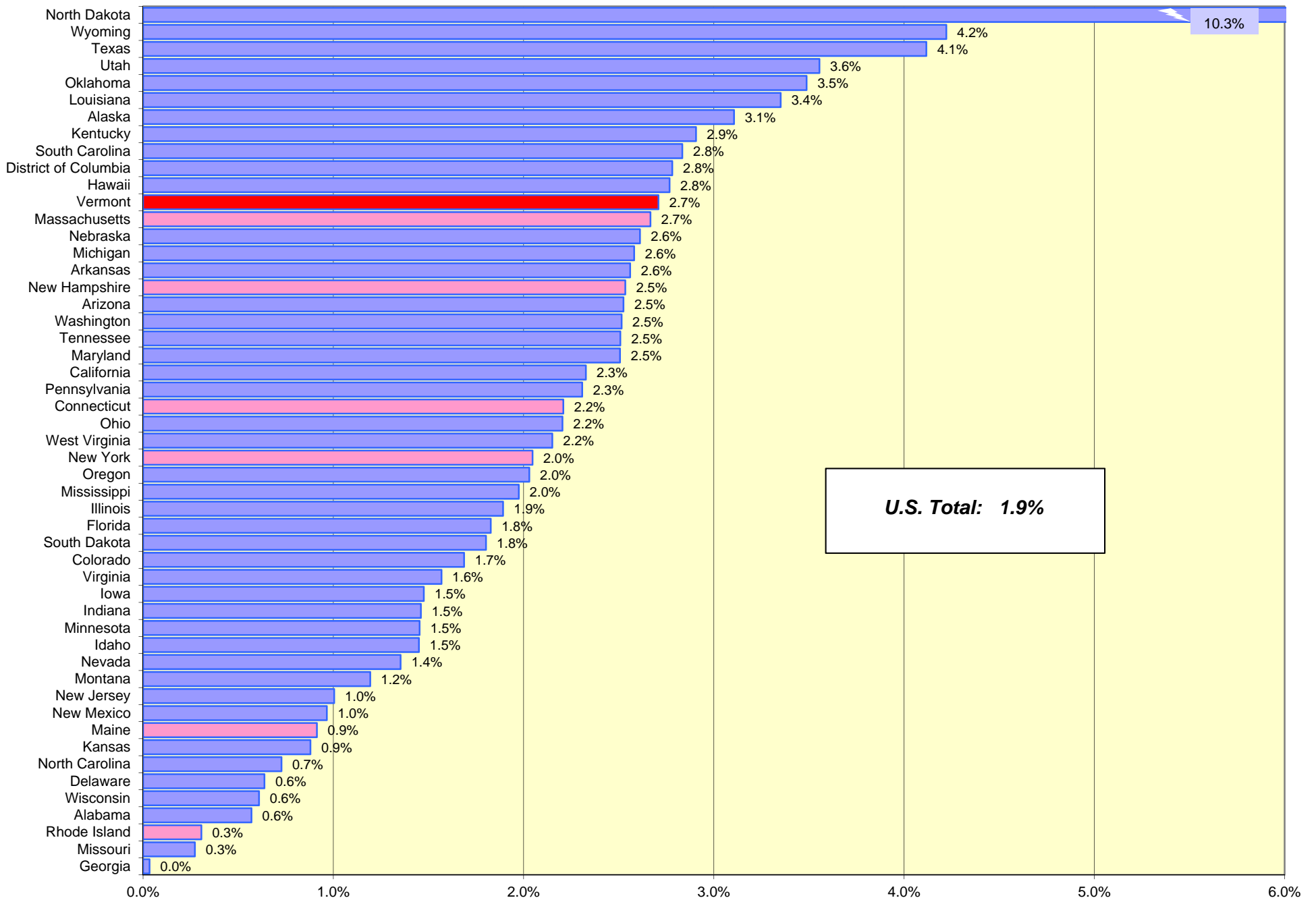
# Where Are the Jobs? Current Employment Relative to Pre-Recession Peak

Seasonally Adjusted Data, November 2011 Employment vs. Highest Level in 2007-2008, Source: U.S. Bureau of Labor Statistics



# Where Are the Jobs? Current Employment Relative to Recessionary Low

Seasonally Adjusted Data, November 2011 Employment vs. Lowest Level in 2009-2010, Source: U.S. Bureau of Labor Statistics



representing a loss of nearly 6.3 million jobs, the U.S. economy has created about 2.5 million jobs since its low water mark in February of 2010, up 1.9%.

- As illustrated in the charts on the preceding two pages, job losses during the recession (for most, but not all, states) and job growth during the recovery (for all states) have been notably divergent among the 50 states and the District of Columbia. States with proportionally large energy resources have generally fared most favorably during the recession, with North Dakota, Alaska and Texas leading all states except the District of Columbia, which has benefitted from federal government job growth.



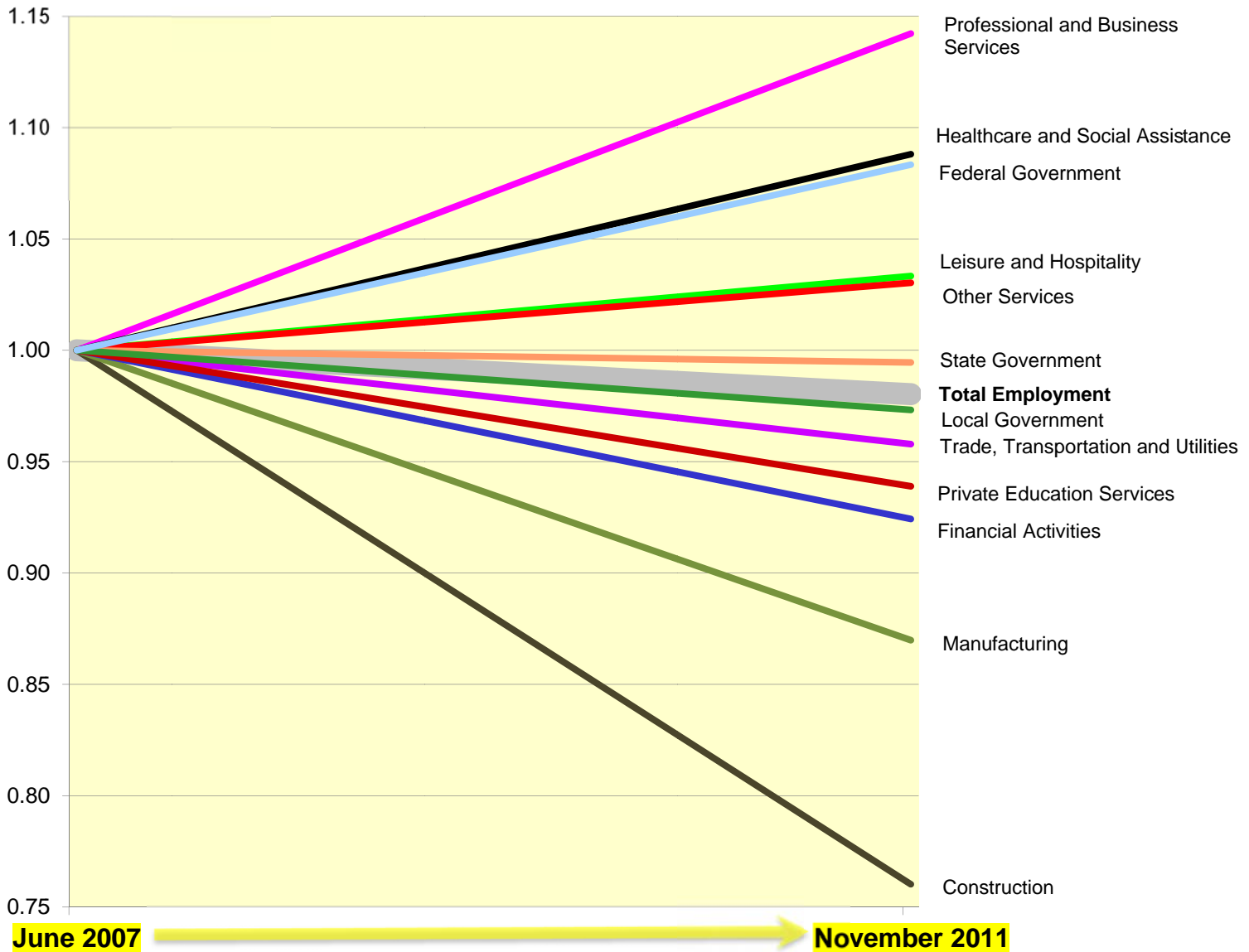
*"I want you to switch from alchemy and shape-shifting to job creation."*

- The worst performing states in terms of job losses relative to their prior cyclical peaks are those states that have been most severely impacted by the housing market crash (see, also, chart on page 12): Nevada, Arizona and Florida. In New England, Rhode Island falls in the same category, suffering housing price declines of more than 23% since their peak in late 2006 and employment declines of almost 8% since prior peak levels in January of 2007. Rhode Island has also been among the states with the slowest growth since its recessionary trough, eking out a mere 0.3% improvement since its low point in September of 2009.
- Vermont ranks in the upper tier of states (12<sup>th</sup> best) in both current employment change relative its 2007-2008 peak, with a -2.0% loss to date,

and relative to its recessionary low point in September of 2009, with growth of 2.7%. It boasts the best employment growth rate since its recessionary low among New England and surrounding (NY) states and is the third best in the region relative to its prior peak levels, just behind New York (-1.8%) and Massachusetts (-1.8%). The Vermont unemployment rate at 5.3% in November of 2011 continued to be among the lowest (5<sup>th</sup>) in the nation and region (2<sup>nd</sup>), only slightly above that of New Hampshire at 5.2%.

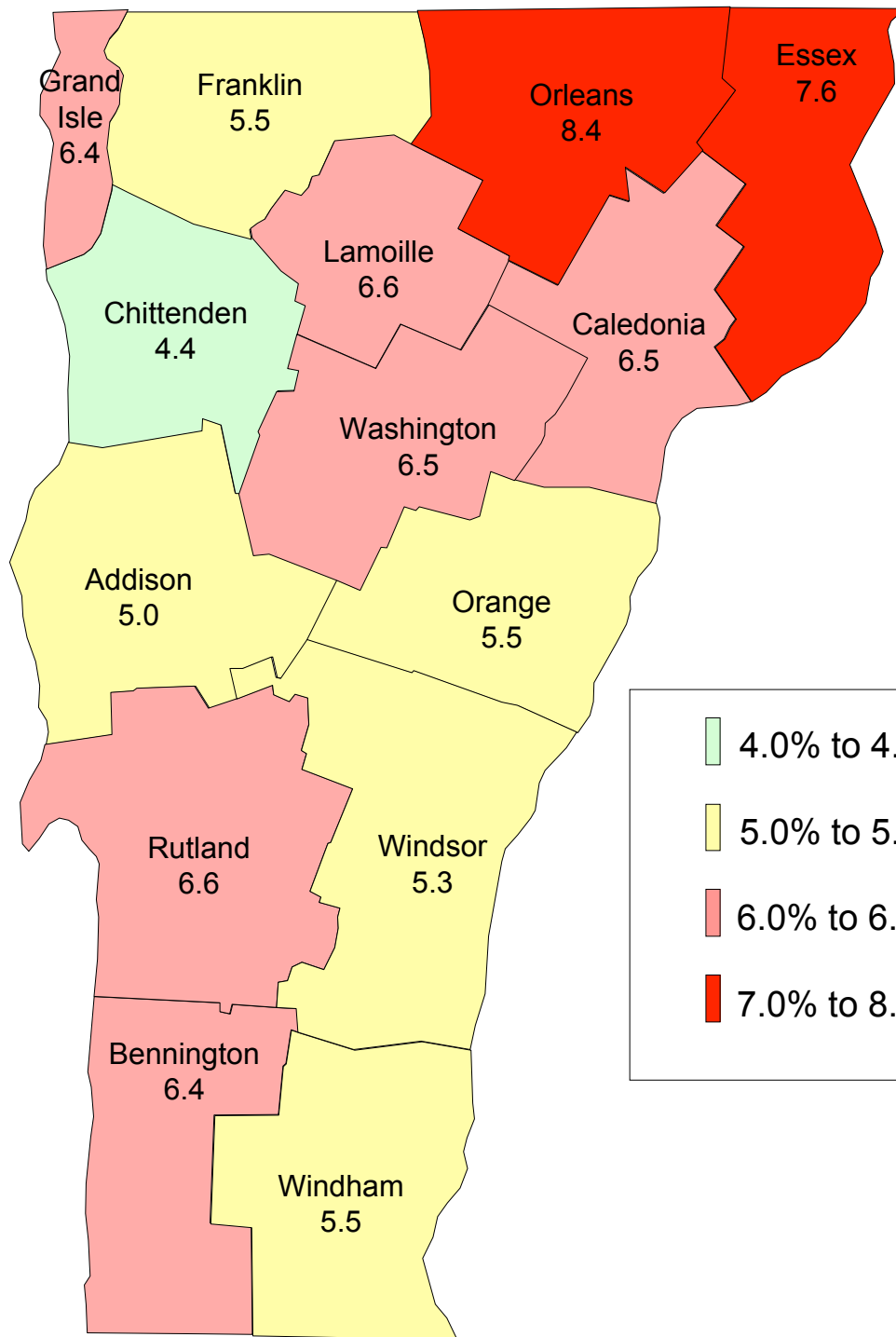
### Where Are the Vermont Jobs? Change in Employment Since Prior Peak

Current Employment by Industry in November 2011 Indexed to Prior Peak Levels (June 2007 = 1.00), SAAR, Source: VT DOL



- Within the overall 2% decline in Vermont employment since prior peak levels in June of 2007, there have been significant differentials in performance between industry sectors. As shown in the above chart, the greatest job losses have occurred in the construction (-24%) and manufacturing (-13%) sectors while the strongest growth has been in professional and business services (+14%) and healthcare and social assistance (+9%). In a





# Vermont Unemployment Rates by County

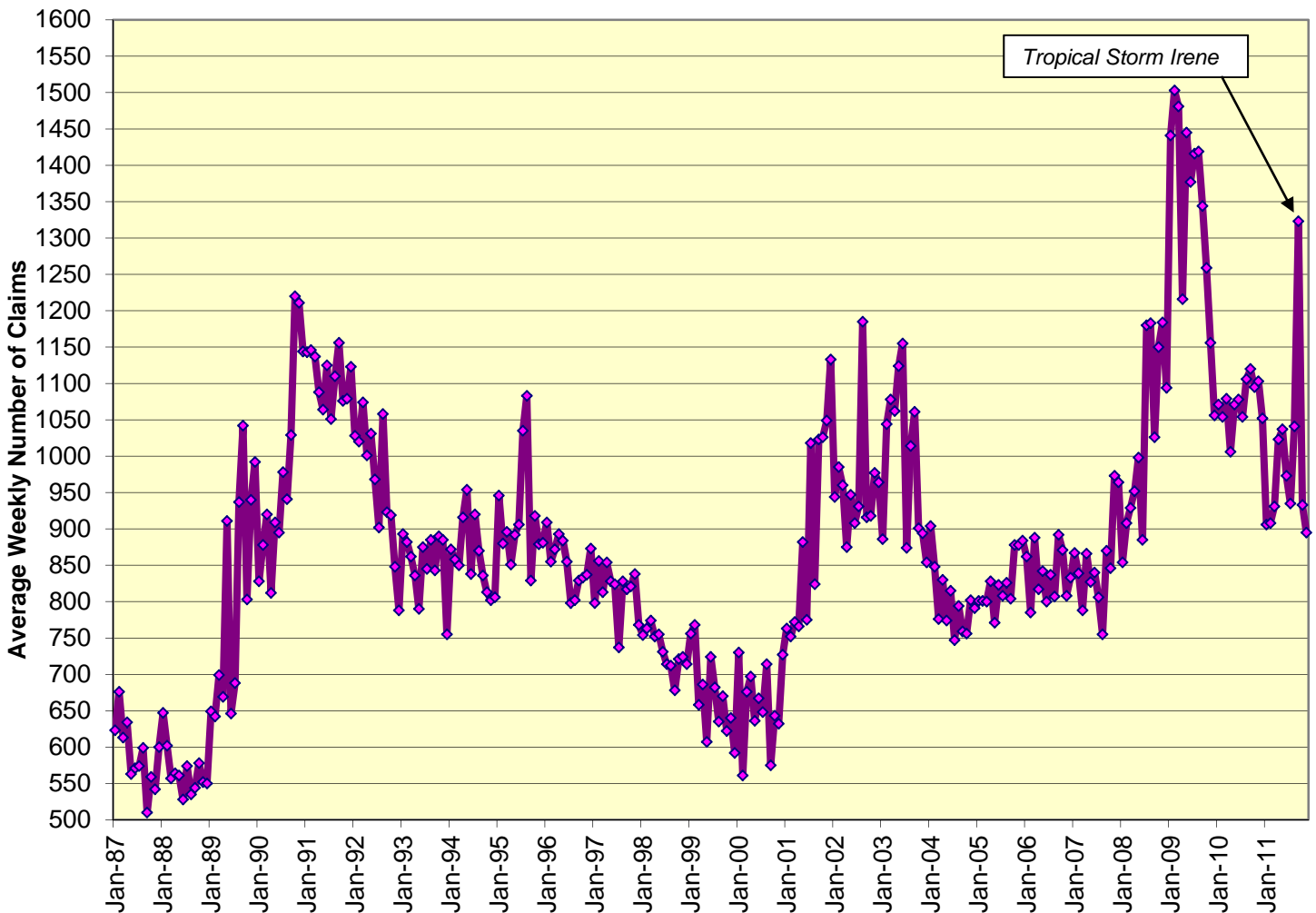
12 Month Average, December 2010 to November 2011

Source: Vermont Department of Labor

noteworthy development, the sub-sector of professional, scientific and technical services has grown more than 21% since June of 2007. While manufacturing employment has continued to contract, extraordinary productivity gains in this sector over the past decade have allowed continued growth in real manufacturing output. In 2000, the Vermont manufacturing sector employed 46,300 workers and produced \$2.27 billion in real (constant \$2005) output. In 2010, the sector employed only 30,800 workers, but produced \$2.82 billion in real output. Thus, while employment fell by more than 33%, output increased by almost 25%. Real output per worker grew from about \$49,000 in 2000 to more than \$91,000 ten years later, an astounding compound average annual rate of nearly 6.5%.

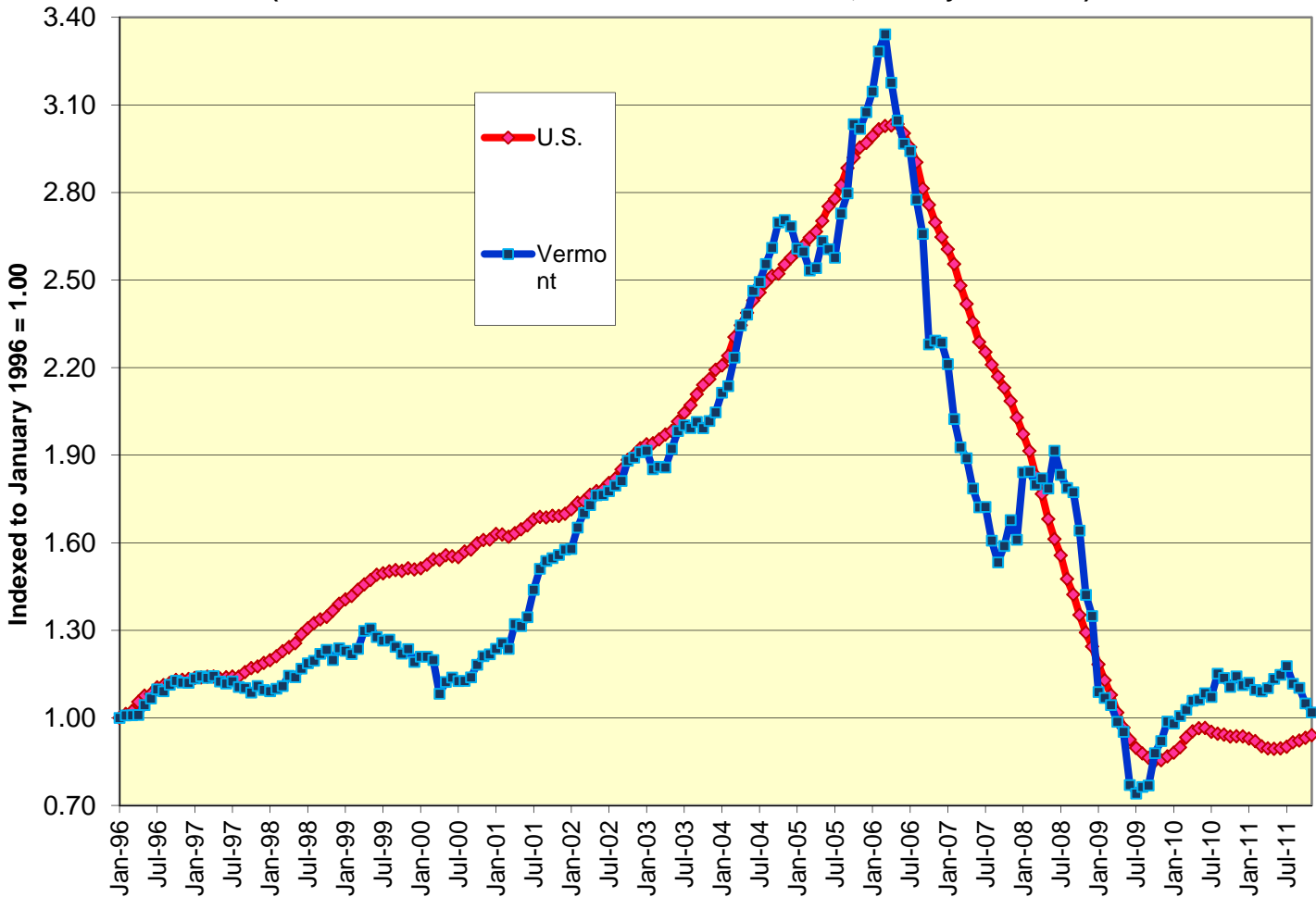
- As illustrated in the map on the preceding page, regional Vermont labor markets have continued to exhibit perennial differentials, with Chittenden County enjoying an unemployment rate at 4.4% that is close to half that of Orleans County at 8.4%. Despite decades of economic development discussion and initiatives that have attempted to spur growth in the Northeast Kingdom, no meaningful progress has been made in balancing economic progress in the state across all regions.

**Irene Floods Vermont UI Claims in September, But Labor Markets Improve**  
 (Average Weekly Initial Claims for Unemployment in Vermont, Seasonally Adjusted, Source: BLS, Boston Fed)



- Initial claims for unemployment insurance in Vermont (see chart, preceding page) have declined more than 40% from their peak levels in February of 2009, after spiking briefly following Tropical Storm Irene. As a leading indicator of labor market conditions, continued improvement in this metric would bode well for future State job growth.

**Continued Housing Price Declines Weigh on New Construction Starts**  
(Indexed Value of Residential Construction Starts, January 1996=1.00)

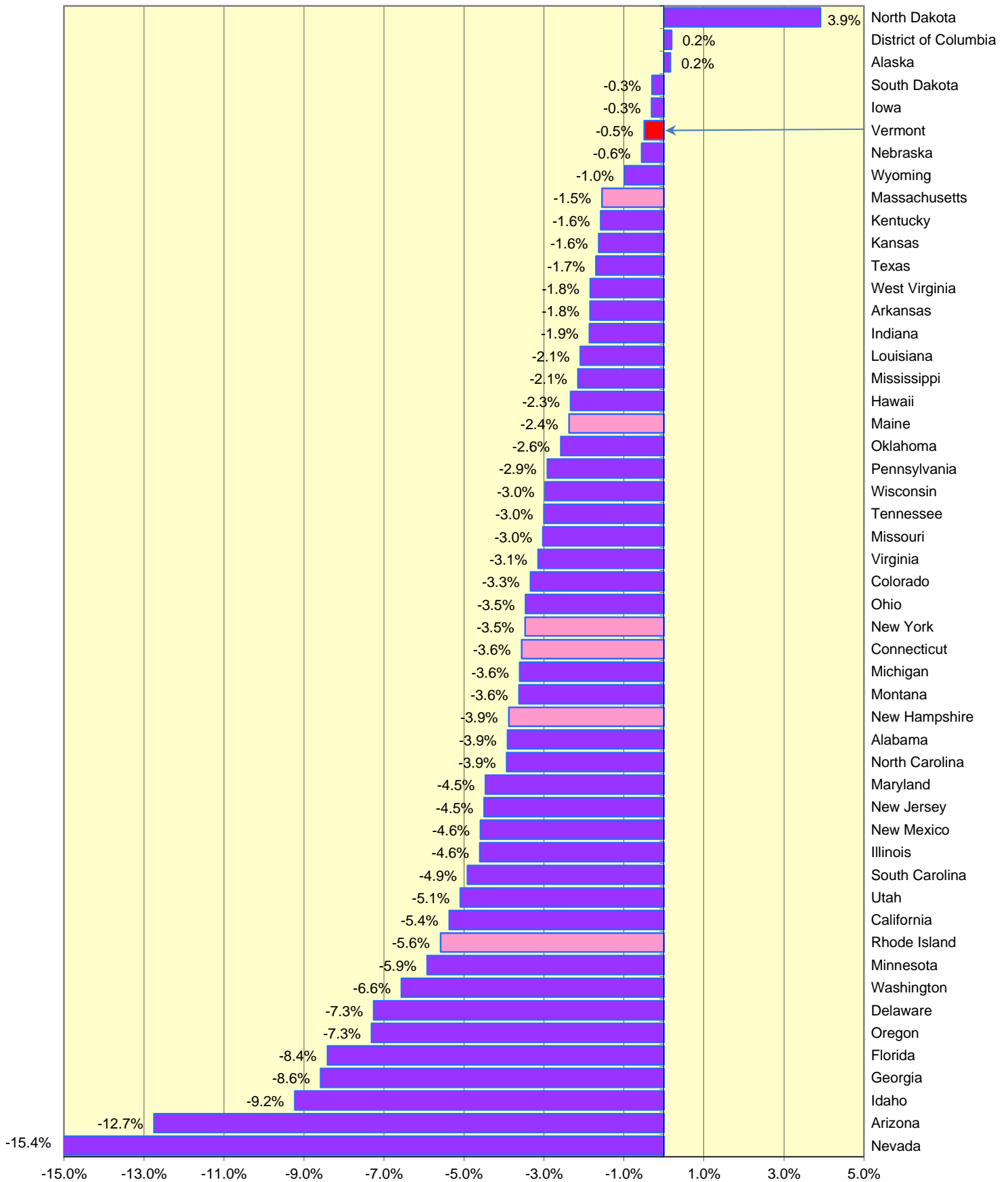


Source: F.W. Dodge, McGraw-Hill

- Construction and real estate sectors in Vermont and the nation continue to stagger amidst continued housing price declines, as inventories of foreclosed properties are absorbed into the market. In response to this, new construction starts have been virtually stagnant since bottoming out in mid-2009 (see above chart).
- As depicted in the chart on the following page, year over year housing prices declined in all but three states in the third quarter of 2011 (the latest available data point): North Dakota, Alaska and the District of Columbia. Of the 51 states and DC, Vermont posted the 6<sup>th</sup> best numbers in the quarter, with home prices slipping only 0.5% from the third quarter of 2010. This was the best in the region, which ranged from -1.5% in Massachusetts to -5.6% in

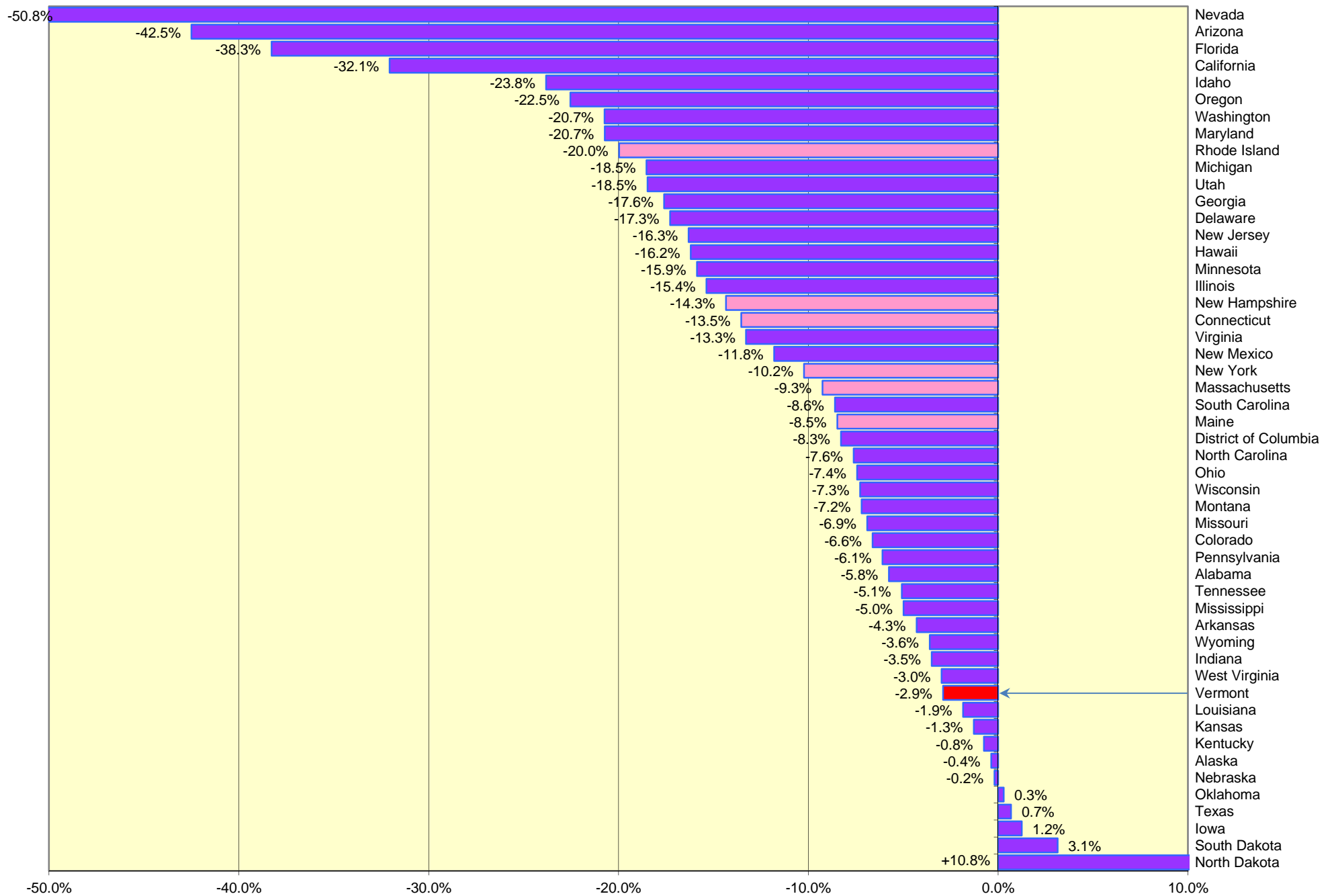
# Foreclosures Push Home Prices Lower in the 3rd Quarter of 2011

Percent Change, Third Quarter of 2011 vs. Third Quarter of 2010, Source: FHFA Home Price Index



# Real Estate Market Crash Continues to Exhibit Pronounced Regional Variation

Percent Change, Third Quarter of 2011 vs. Third Quarter of 2007, Source: FHFA Home Price Index



Rhode Island. As has been the case throughout this recession, the steepest declines were registered in Nevada and Arizona, which fell an additional 15.4% and 12.7%, respectively.

- As shown in the chart on the preceding page, these two states have suffered the steepest price declines as a result of the housing crash, with values plunging more than 50% in Nevada and more than 42% in Arizona over the past four years. Not far behind, Florida prices are down 38%, while California has endured a 32% decline. Vermont has fared relatively well, with a 4 year price decline over this same period of 2.9%, the best in the region, with Maine a distant second at -8.5%.
- Vermont housing price declines are expected to persist for 2-3 more quarters, before an extended period of very low home price appreciation ensues. As a result of this, the Vermont Grand List will not approach 2011 levels until 2015 and is not likely to exceed peak levels reached in 2009 until 2016.

### ***European Contagion Conduits: From Milan to Montpelier?***

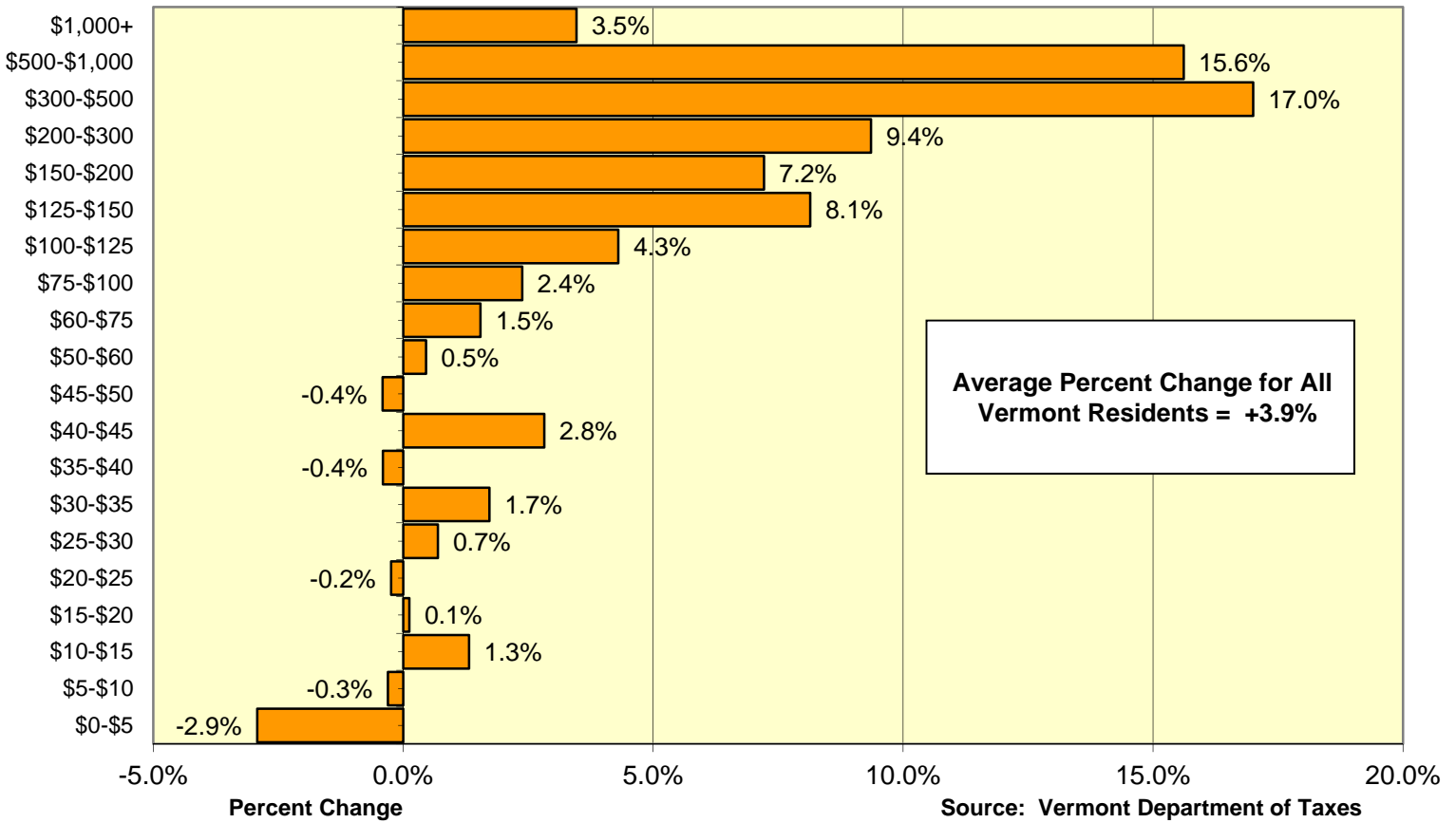
*As the Vermont economy becomes ever more dependent upon and interconnected with both the U.S. and global economies, economic events in distant places can increasingly impact the State economy and tax revenues. One of the most serious risks to the emerging economic recovery is the financial crisis now gripping Europe. The Eurozone countries are already entering recession as a result of the absence of political institutions through which to manage this crisis - the main question now is just how deep the recession will be. If relatively mild, it may have only minor impacts. Without the rapid development of political institutions to match its economic integration, however, Europe is unlikely to be able to resolve the crisis. In this event, there could be a much more severe recession, with dire consequences for both the global and Vermont economies.*

*There are three main conduits through which a European financial crisis could impact Vermont's economy and state revenues:*

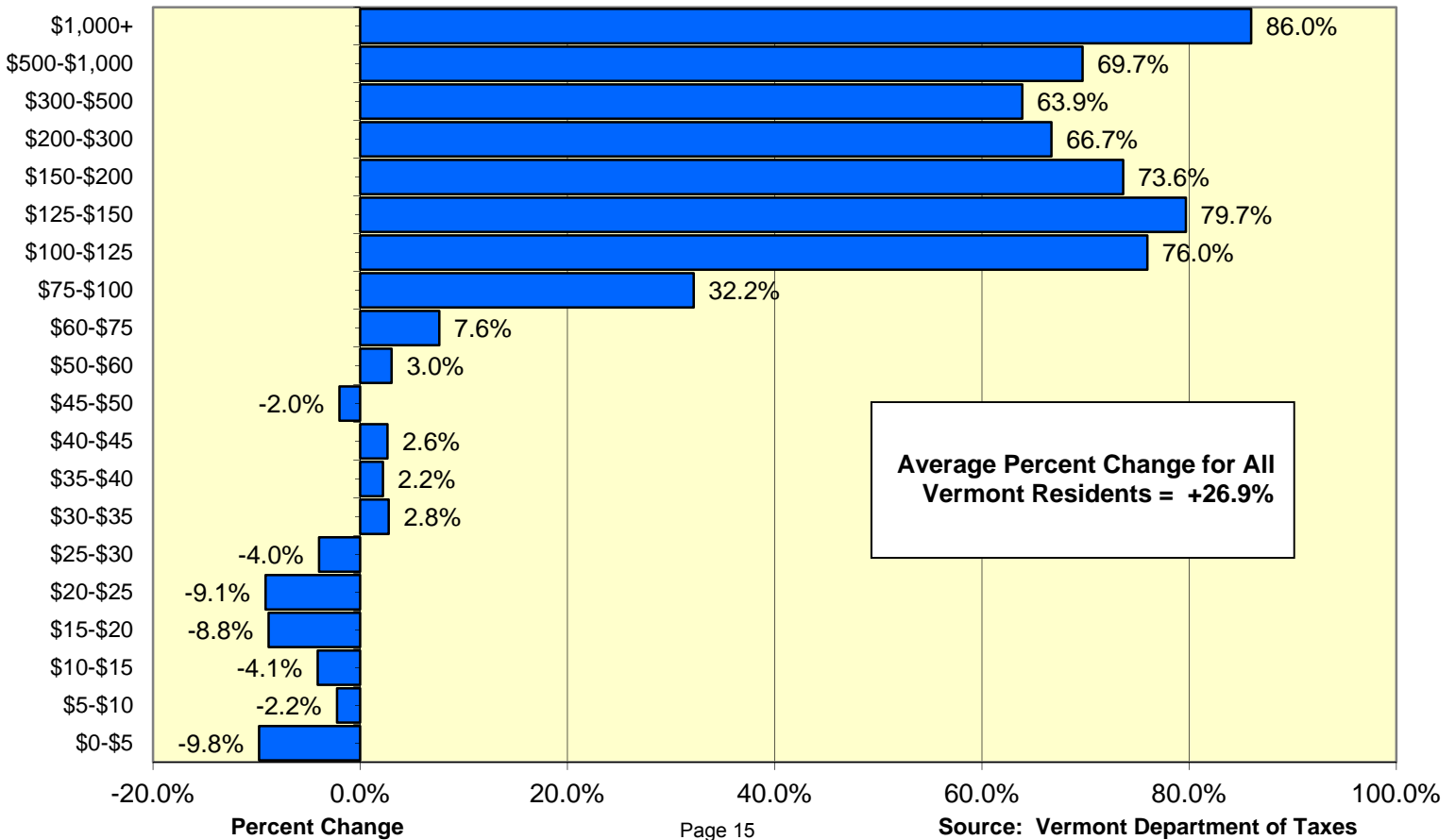
- 1) ***Equity Markets:*** *Although the U.S. stock market has already discounted a mild recession in Europe, if the downturn is severe, it would likely impact U.S. and global equity prices, with attendant wealth effects and revenue reductions in personal and corporate income and consumption and estate tax receipts.*
- 2) ***Banking and Financial:*** *With more than 20% of all U.S. commercial and industrial loans now originating with European banks, U.S. economic activity would slow unless and until U.S. banks could fill this void. A disorderly default of a major Eurozone sovereign could trigger a broader financial panic similar to that engendered by the Lehman Brothers collapse, with widespread collateral damage.*
- 3) ***Trade and Exports:*** *A more severe recession in Europe would slow global demand for U.S. exports, a major component of economic growth at present, and weaken the Euro (if it survives) and other global currencies relative to the dollar, reducing U.S. export competitiveness. This could affect corporate and personal income receipts, along with foreign tourism visitation and related real estate activity.*

- Aggregate Vermont revenues closed the first half of FY12 very close to expectations, with the General Fund less than one-half of one percent above target, the Transportation Fund less than 2% above target and the Education Fund less than one half of one percent below target.
- Due to the close year-to-date tracking, most of the recommended revenue adjustments to the General Fund in FY12 and FY13 were of a technical nature, with selected sub-categories receiving minor changes. With the delayed economic recovery, net FY12 (-\$1.8M) and FY13 (-\$9.3M) adjustments were negative, with FY14 (+\$13.8) and beyond receiving positive revisions. For the balance of FY12, an additional \$1.4M was included in Electric Energy receipts, based on the assumption that even if the pending legal decision regarding future Vermont Yankee operation is unfavorable to the plant's owner, it will be allowed to operate during a likely appeal period.
- Year-to-date personal income tax receipts are close to targets, however, weaker than expected equity and property markets in 2011 will add both uncertainty and downside risk to the April filing season. Calendar 2010 data from the Tax Department shows a continuation of the trend towards greater income growth among the higher income groups. Per the charts on page 15, virtually all of the income growth in 2010 was concentrated among those earning \$100,000 or more, a pattern that has been present for the past 25 years. While this increases the state-wide effective tax rate over time, it also adds greater volatility and cyclicity to revenue collections (see chart on page 16).
- Although corporate income tax receipts in FY12 are currently \$4.5M above targets, the pipeline of known refunds and other advance payments will likely render revenues about \$0.6M below prior July estimates by year-end.
- Due primarily to technical adjustments and higher oil price assumptions in the revised macro-economic forecast, the Transportation Fund received minor negative revisions in FY12 (-\$0.3M) and FY13 (-\$0.8M), with small positive adjustments recommended for FY14 (+\$0.5M). Transportation Infrastructure Bond revenues (not included in the T-Fund, but affecting State transportation budgets), which are essentially additional gasoline and diesel taxes with a price-based gasoline consumption component that benefits from higher gasoline prices, were adjusted upward in FY12 (+\$2M), FY13 (+\$1.0M) and FY14 (+\$0.9). This should reinforce the very high debt ratings awarded to these bonds, since these dedicated revenues are the source of bond interest payments.
- Like the G-Fund and T-Fund, the Education Fund in FY11 received minor negative adjustments in FY12 (-\$0.3M) and FY13 (-\$0.8M), with no change to FY14. The delayed economic recovery and weaker projected Lottery revenues account for most of these changes.
- Following the imposition of a tax rate increase to \$2.62 per pack in FY12 that some believed would yield little if any net new revenues, cigarette and

### Percent Change in Adjusted Gross Income in Vermont, 2010 vs. 2009 by Income Class

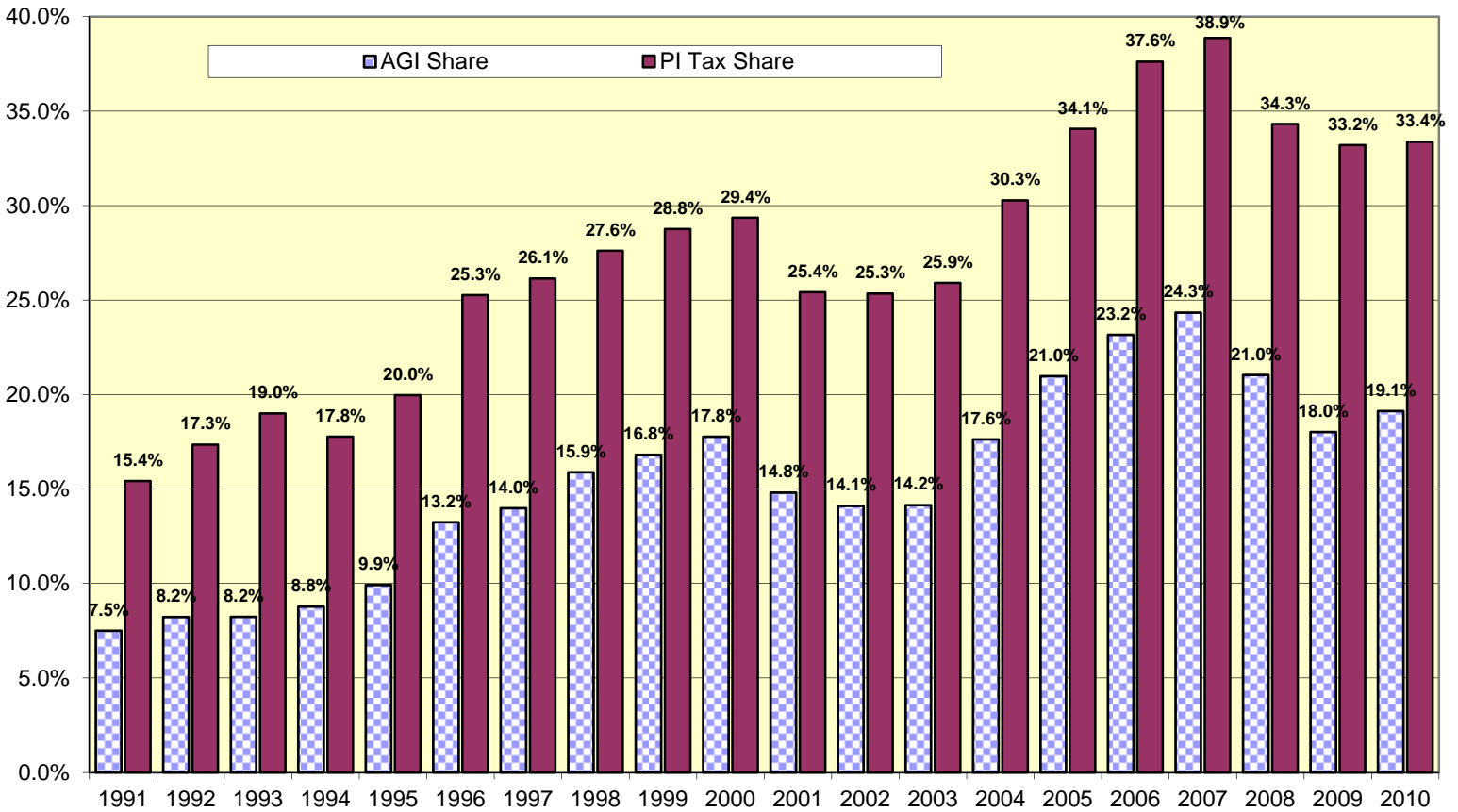


### Percent Change in Adjusted Gross Income in Vermont, 2010 vs. 2003 by Income Class



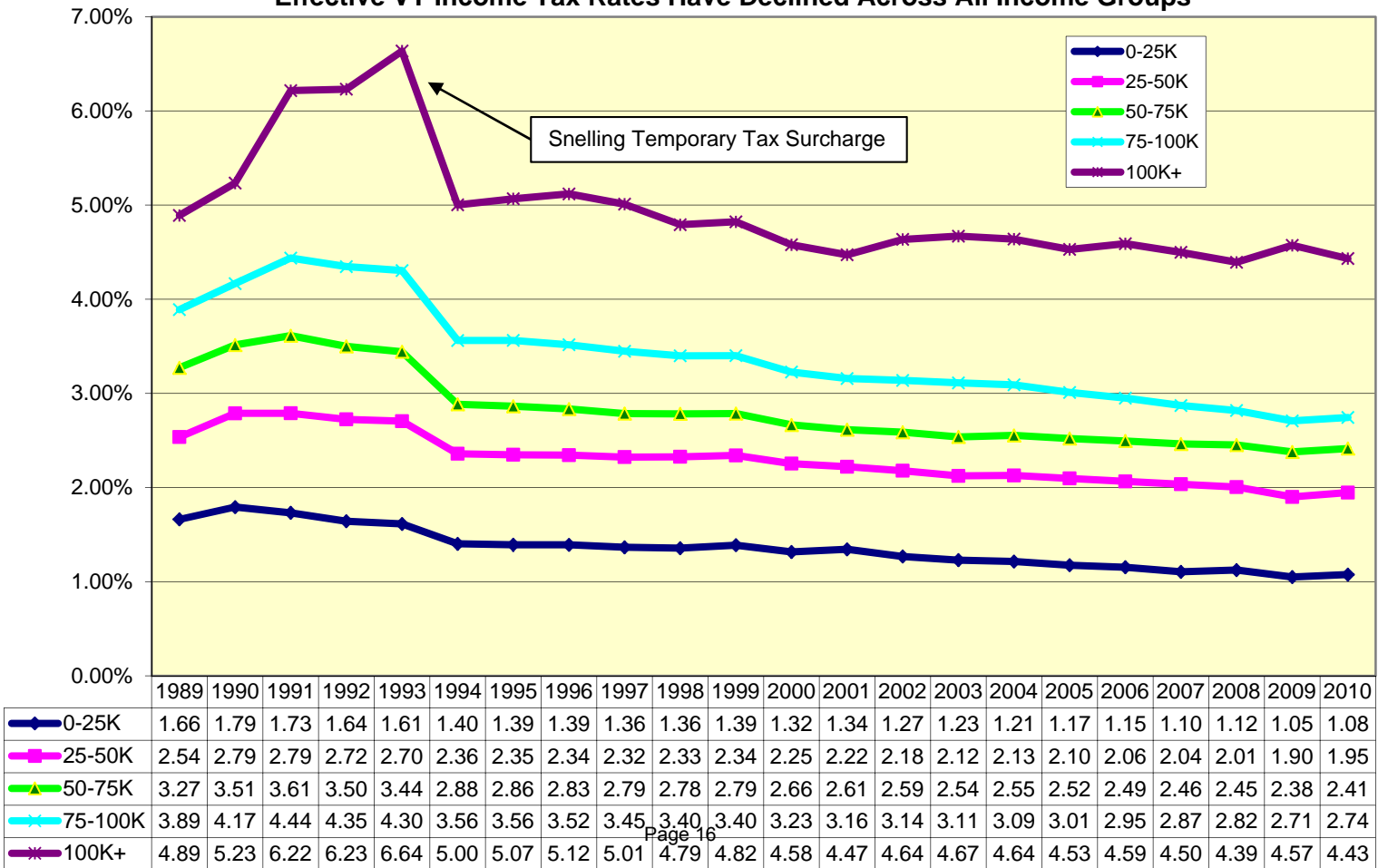


### High Income (\$200K+) Taxpayers' Share of Total VT Income and Income Tax Receipts



Source: Vermont Department of Taxes

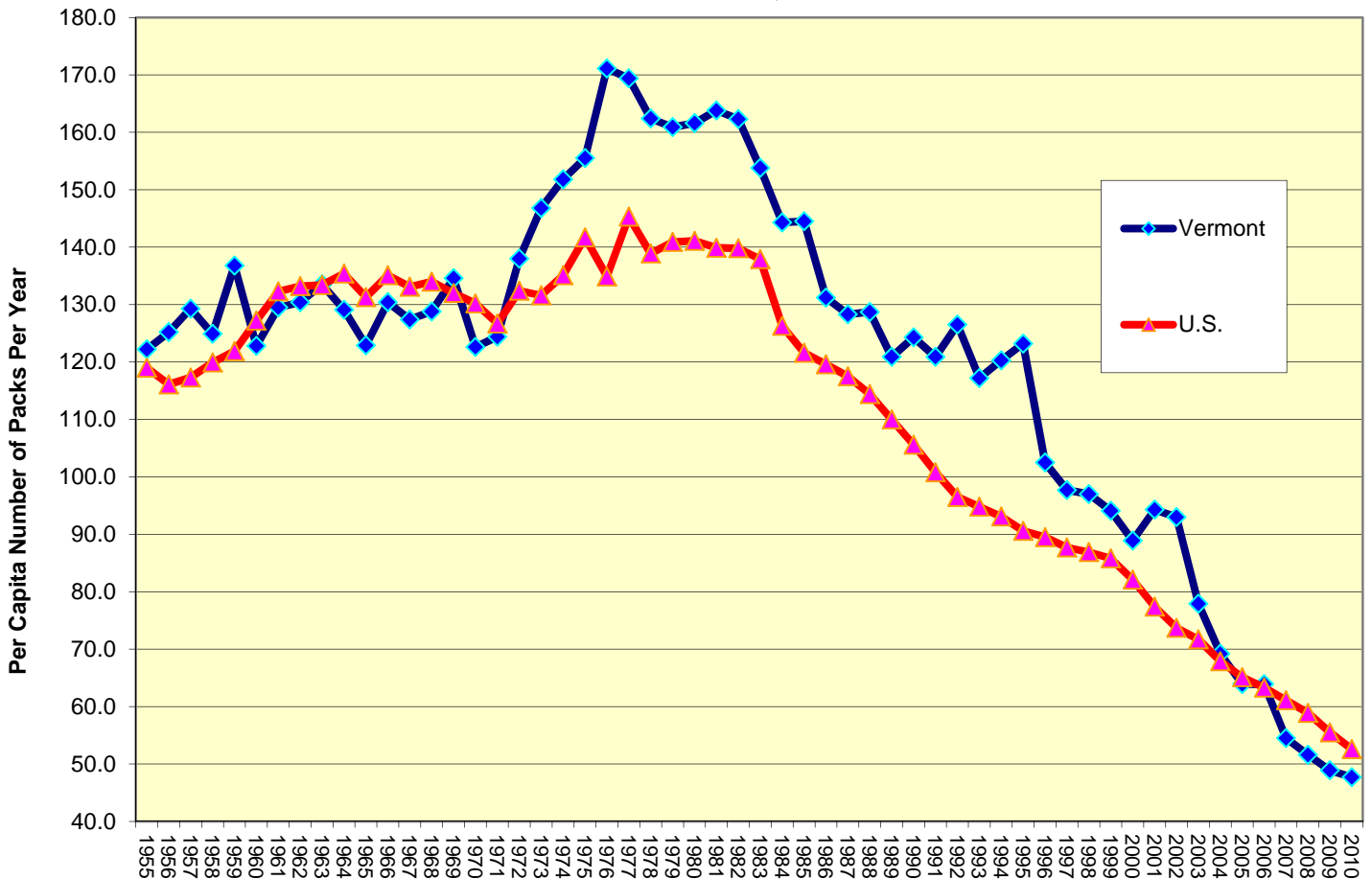
### Effective VT Income Tax Rates Have Declined Across All Income Groups



tobacco products tax revenues have exceeded revenue targets through the first half of the fiscal year and are expected to close the year nearly \$2 million above July estimates. The combination of higher gasoline prices, which reduce the distance beyond which it is cost-effective to travel to lower cost jurisdictions (primarily NH) for purchases, and the sustained price differential with New York of more than 23% (retail price basis) have resulted in greater than expected revenue growth. Of note, the recent tax rate *reduction* effected in New Hampshire has had no net positive revenue impact for the state, as distributors are reported to have raised prices by the same amount as the tax reduction and little, if any, additional cross-border traffic has ensued as a result.

### U.S. and Vermont Per Capita Cigarette Sales Converge

Source: Orzechowski and Walker, The Tax Burden on Tobacco



- The U.S. and Vermont macro-economic forecasts upon which the revenue forecasts in this Update are based are summarized in the below Tables A and B, and represent a consensus JFO and Administration macro-economic forecast developed using internal JFO and Administration State economic models with input from Moody's Analytics December 2011 projections and New England Economic Partnership (NEEP) November 2011 forecasts. These forecasts assume passage of a U.S. federal debt limit extension and a full-year extension of the payroll tax holiday and further extension of unemployment benefits.

**TABLE A**  
**Comparison of Recent Consensus U.S. Macroeconomic Forecasts**  
**June 2010 Through December 2011, Selected Variables, Calendar Year Basis**

	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Real GDP Growth</b>									
June-10	2.7	2.1	0.4	-2.4	3.1	3.9	5.0	3.4	
December-10	2.7	1.9	0.0	-2.6	2.9	3.9	4.5	4.4	
June-11	2.7	1.9	0.0	-2.6	2.9	2.7	4.2	4.1	3.4
December-11	2.7	1.9	-0.3	-3.5	3.0	1.8	2.6	3.4	4.1
<b>S&amp;P 500 Growth (Annual Avg.)</b>									
June-10	8.6	12.7	-17.3	-22.5	21.2	5.8	4.2	5.9	
December-10	8.6	12.7	-17.3	-22.5	20.5	12.4	6.8	5.8	
June-11	8.6	12.7	-17.3	-22.5	20.5	18.4	1.2	-2.4	1.5
December-11	8.6	12.7	-17.3	-22.5	20.3	0.0	9.2	11.5	8.7
<b>Employment Growth (Non-Ag)</b>									
June-10	1.8	1.1	-0.6	-4.3	-0.4	1.5	2.9	3.2	
December-10	1.8	1.1	-0.6	-4.3	-0.5	1.7	2.3	3.3	
June-11	1.8	1.1	-0.6	-4.4	-0.7	1.2	2.0	2.6	2.9
December-11	1.8	1.1	-0.6	-4.4	-0.7	1.0	1.0	1.5	3.0
<b>Unemployment Rate</b>									
June-10	4.6	4.6	5.8	9.3	9.9	9.5	7.5	6.1	
December-10	4.6	4.6	5.8	9.3	9.6	9.5	8.0	6.4	
June-11	4.6	4.6	5.8	9.3	9.6	9.0	8.4	7.3	5.8
December-11	4.6	4.6	5.8	9.3	9.6	9.0	8.8	8.4	7.0
<b>West Texas Int. Crude Oil \$/Bbl</b>									
June-10	66.1	72.4	99.6	61.7	79.5	87.3	89.4	90.2	
December-10	66.1	72.4	99.6	61.7	79.4	93.0	96.4	97.9	
June-11	66.1	72.4	99.6	61.7	79.4	101.2	99.4	100.5	101.0
December-11	66.1	72.4	99.6	61.7	79.4	94.7	104.2	106.5	106.8
<b>Prime Rate</b>									
June-10	7.96	8.05	5.09	3.25	3.20	4.60	6.78	7.07	
December-10	7.96	8.05	5.09	3.25	3.23	3.21	4.43	6.55	
June-11	7.96	8.05	5.09	3.25	3.25	3.24	3.63	5.05	6.69
December-11	7.96	8.05	5.09	3.25	3.25	3.21	3.08	3.32	4.69
<b>Consumer Price Index Growth</b>									
June-10	3.2	2.9	3.8	-0.3	1.8	2.1	3.1	2.8	
December-10	3.2	2.9	3.8	-0.3	1.6	1.5	2.6	3.0	
June-11	3.2	2.9	3.8	-0.3	1.6	3.0	1.9	2.5	2.7
December-11	3.2	2.9	3.8	-0.3	1.6	3.2	2.1	2.4	2.9
<b>Avg. Home Price Growth</b>									
June-10	7.2	2.0	-3.0	-4.0	-4.6	-0.7	0.4	1.5	
December-10	7.2	2.0	-3.0	-4.0	-3.7	-1.1	0.3	1.4	
June-11	7.4	1.4	-4.2	-4.5	-3.5	-4.0	0.0	1.7	4.6
December-11	7.3	1.4	-4.3	-4.6	-3.6	-3.9	-0.4	1.0	4.1

**TABLE B**  
**Comparison of Consensus Administration and JFO Vermont State Forecasts**  
**June 2009 Through November 2011, Selected Variables, Calendar Year Basis**

	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Real GSP Growth</b>									
June-09	1.3	1.7	1.7	-3.3	0.5	3.4	5.1		
November-09	1.3	1.7	1.7	-3.1	-0.5	4.5	5.3	4.3	
June-10	1.3	1.7	1.7	-0.3	3.5	4.0	5.1	3.2	
December-10	1.2	0.1	2.0	-0.7	3.4	4.1	5.3	3.8	
June-11	1.2	-0.7	0.4	-2.3	3.2	3.5	4.0	3.9	3.0
December-11	1.2	-0.7	0.4	-2.3	3.2	2.3	2.8	3.5	3.6
<b>Population Growth</b>									
June-09	0.1	0.1	0.1	0.0	0.1	0.3	0.3		
November-09	0.1	0.1	0.1	0.0	0.2	0.3	0.3	0.3	
June-10	0.2	0.1	0.1	0.1	0.1	0.3	0.3	0.3	
December-10	0.2	0.1	0.1	0.1	0.1	0.3	0.4	0.5	
June-11	0.2	0.2	0.2	0.1	0.2	0.3	0.3	0.3	0.3
December-11	0.2	0.2	0.2	0.1	0.2	0.3	0.3	0.3	0.4
<b>Employment Growth</b>									
June-09	0.7	0.2	-0.7	-4.6	-1.7	1.4	2.9		
November-09	0.7	0.2	-0.7	-3.8	-1.1	1.3	2.3	2.9	
June-10	0.7	0.2	-0.4	-3.3	-0.4	0.8	2.2	1.9	
December-10	0.7	0.2	-0.4	-3.3	-0.9	0.5	1.8	2.7	
June-11	0.8	0.2	-0.4	-3.2	0.1	2.6	1.0	1.9	2.4
December-11	0.8	0.2	-0.4	-3.2	0.1	1.8	1.3	1.9	2.5
<b>Unemployment Rate</b>									
June-09	3.7	4.0	4.8	8.0	8.9	7.7	6.1		
November-09	3.7	4.0	4.8	7.2	8.1	7.4	6.0	5.1	
June-10	3.7	3.9	4.5	6.9	6.7	6.6	5.4	4.5	
December-10	3.7	3.9	4.5	6.9	6.2	6.1	5.2	4.1	
June-11	3.7	3.9	4.5	6.9	6.2	5.7	5.5	4.6	3.4
December-11	3.7	3.9	4.5	6.9	6.2	5.5	5.4	5.1	4.4
<b>Personal Income Growth</b>									
June-09	7.6	6.7	3.8	0.1	0.7	2.4	4.4		
November-09	7.6	6.7	4.3	1.4	1.1	2.4	3.5	5.1	
June-10	8.0	4.8	2.7	-0.3	2.8	3.4	5.5	6.0	
December-10	8.0	4.8	2.7	0.2	2.5	2.8	5.8	6.5	
June-11	7.9	5.5	3.7	-0.3	3.4	5.5	4.8	6.8	6.1
December-11	7.9	5.5	3.7	-1.3	3.4	4.0	5.0	5.3	5.1
<b>Home Price Growth (JFO*)</b>									
June-09*	8.9	3.4	0.9	-1.7	-1.6	0.5	1.1		
November-09*	8.5	3.2	0.8	-1.8	-1.9	0.4	1.1	2.1	
June-10	8.4	3.1	0.4	-1.5	-2.1	0.1	1.1	2.1	
December-10	8.3	3.0	0.3	-1.5	-1.3	-0.1	0.7	1.3	
June-11	8.2	2.9	0.1	-1.5	-0.9	0.0	0.7	1.3	1.5
December-11	8.2	2.8	0.1	-1.5	-0.8	-0.5	0.5	1.2	1.6

## Methodological Notes and Other Comments

- This analysis has benefited significantly from the input and support of Tax Department and Joint Fiscal Office personnel. In the Joint Fiscal Office, Sara Teachout, Stephanie Barrett, Catherine Benham, Neil Schickner and Mark Perrault have contributed to numerous policy and revenue impact analyses and coordinated JFO forecast production and related legislative committee support functions. Theresa Utton-Jerman has diligently organized and updated large tax and other databases in support of JFO revenue forecasting activities. In the Tax Department, Susan Mesner, Tax Department Economist, has made invaluable analytic contributions to many tax and revenue forecasts, including tax law change analyses, and Rachel Stanger, Tax Research and Statistics Analyst, has provided custom research and statistical and related background information from the detailed tax databases she maintains. Nancy Greenewalt, a Shoreham resident, recent Barnard College graduate, and KRA intern, made significant contributions to employment and labor market research in this forecast. Our thanks to all of the above for their many contributions to this analysis.
- The analysis in support of JFO economic and revenue projections are based on statistical and econometric models, and professional analytic judgment. All models are based on 35 years of data for each of the 25 General Fund categories (three aggregates), 31 years of data for each of the Transportation Fund categories (one aggregate), and 13 to 35 years for each of the Education Fund categories. The analyses employed includes seasonal adjustment using the X-11 and X-12 Census methods, various moving average techniques (such as Henderson Curves, etc.), Box-Jenkins ARIMA type models, pressure curve analysis, comparable-pattern analysis of monthly, quarterly and half year trends for current year estimation, and behavioral econometric forecasting models.
- Because the State does not currently fund an internal State or U.S. macro-economic model, this analysis relies primarily on macro-economic models from Moody's/Economy.com and the New England Economic Partnership (NEEP). The NEEP forecast for Vermont is managed by Jeff Carr, of Economic & Policy Resources, Inc., who is also the current Administration economist. Since October of 2001, input and review of initial Vermont NEEP model design and output prior to its release has been provided by the JFO Consulting Economist. Dynamic and other input/output-based models for the State of Vermont, including those from Regional Economic Models, Inc. (REMI), Regional Dynamics, Inc. (REDYN), and IMPLAN are also maintained and managed by the JFO for use in selected economic impact and simulation analyses used herein.
- The Consensus JFO and Administration forecasts are developed following discussion, analysis and synthesis of independent revenue projections produced by Administration and Joint Fiscal Office economic advisors.

**TABLE 1A - STATE OF VERMONT  
LEGISLATIVE JOINT FISCAL OFFICE  
SOURCE GENERAL FUND REVENUE FORECAST UPDATE  
Consensus JFO and Administration Forecast - January 2012**

**SOURCE G-FUND**

revenues are prior to all E-Fund allocations  
and other out-transfers. Used for  
analytic and comparative purposes only.

	<b>FY 2008</b>	<b>%</b>	<b>FY 2009</b>	<b>%</b>	<b>FY 2010</b>	<b>%</b>	<b>FY 2011</b>	<b>%</b>	<b>FY 2012</b>	<b>%</b>	<b>FY 2013</b>	<b>%</b>	<b>FY 2014</b>	<b>%</b>
	<i>(Actual)</i>	<i>Change</i>	<i>(Actual)</i>	<i>Change</i>	<i>(Actual)</i>	<i>Change</i>	<i>(Actual)</i>	<i>Change</i>	<i>(Forecast)</i>	<i>Change</i>	<i>(Forecast)</i>	<i>Change</i>	<i>(Forecast)</i>	<i>Change</i>
<b>REVENUE SOURCE</b>														
Personal Income	\$622.3	7.1%	\$530.3	-14.8%	\$498.0	-6.1%	\$553.3	11.1%	\$594.6	7.5%	\$642.1	8.0%	\$700.9	9.2%
Sales & Use*	\$338.4	1.4%	\$321.2	-5.1%	\$311.1	-3.1%	\$325.6	4.7%	\$339.8	4.4%	\$352.7	3.8%	\$366.3	3.9%
Corporate	\$74.6	2.4%	\$66.2	-11.3%	\$62.8	-5.1%	\$89.7	42.7%	\$77.3	-13.8%	\$81.0	4.8%	\$84.6	4.4%
Meals and Rooms	\$121.1	5.4%	\$117.1	-3.3%	\$118.0	0.8%	\$122.6	4.0%	\$126.7	3.3%	\$131.5	3.8%	\$136.2	3.6%
Cigarette and Tobacco**	\$59.2	-7.9%	\$64.1	8.3%	\$70.1	9.2%	\$72.9	4.0%	\$78.3	7.4%	\$75.6	-3.4%	\$73.9	-2.2%
Liquor	\$14.2	3.7%	\$15.0	6.0%	\$14.9	-1.0%	\$15.4	3.1%	\$16.5	7.5%	\$16.8	1.8%	\$17.2	2.4%
Insurance	\$54.8	3.8%	\$53.7	-2.1%	\$53.3	-0.9%	\$55.0	3.3%	\$56.0	1.8%	\$57.2	2.1%	\$58.5	2.3%
Telephone	\$9.5	-4.6%	\$9.1	-3.8%	\$7.9	-13.9%	\$11.4	44.4%	\$9.3	-18.1%	\$9.2	-1.1%	\$9.1	-1.1%
Beverage	\$5.6	1.9%	\$5.6	0.3%	\$5.7	0.4%	\$5.8	2.2%	\$5.9	2.0%	\$6.0	1.7%	\$6.1	1.7%
Electric***	\$2.7	3.3%	\$2.8	4.0%	\$2.9	2.5%	\$2.9	0.8%	\$2.8	-4.2%	\$0.0	-100.0%	\$0.0	NM
Estate	\$15.7	-11.9%	\$23.4	49.1%	\$14.2	-39.5%	\$35.9	153.3%	\$19.5	-45.7%	\$21.9	12.3%	\$23.1	5.5%
Property	\$34.0	-13.5%	\$25.9	-23.7%	\$23.8	-8.2%	\$25.6	7.7%	\$26.1	1.8%	\$28.2	8.0%	\$31.8	12.8%
Bank	\$10.2	-3.4%	\$20.6	102.5%	\$10.4	-49.7%	\$15.4	49.0%	\$10.9	-29.3%	\$11.0	0.9%	\$11.1	0.9%
Other Tax	\$3.2	-51.1%	\$2.8	-12.7%	\$3.7	32.1%	\$3.7	1.7%	\$3.5	-5.9%	\$3.8	8.6%	\$4.0	5.3%
<b>Total Tax Revenue</b>	<b>\$1365.5</b>	<b>3.0%</b>	<b>\$1257.9</b>	<b>-7.9%</b>	<b>\$1196.5</b>	<b>-4.9%</b>	<b>\$1335.1</b>	<b>11.6%</b>	<b>\$1367.2</b>	<b>2.4%</b>	<b>\$1437.0</b>	<b>5.1%</b>	<b>\$1522.8</b>	<b>6.0%</b>
Business Licenses	\$2.7	-1.0%	\$3.0	9.4%	\$3.0	-0.2%	\$3.0	-0.6%	\$3.1	4.6%	\$3.2	3.2%	\$3.3	3.1%
Fees	\$14.7	3.6%	\$19.1	29.5%	\$19.2	0.9%	\$20.5	6.4%	\$20.1	-1.8%	\$20.8	3.5%	\$21.5	3.4%
Services	\$1.7	15.9%	\$1.5	-11.0%	\$1.2	-19.9%	\$1.1	-8.7%	\$1.5	32.5%	\$1.4	-6.7%	\$1.5	7.1%
Fines	\$4.4	38.6%	\$9.8	122.0%	\$7.4	-24.8%	\$5.7	-22.2%	\$5.8	1.4%	\$6.0	3.4%	\$6.2	3.3%
Interest	\$3.9	10.1%	\$1.4	-63.9%	\$0.6	-57.0%	\$0.3	-49.7%	\$0.5	62.6%	\$1.2	140.0%	\$2.8	133.3%
Lottery	\$22.7	-2.5%	\$20.9	-7.7%	\$21.6	3.0%	\$21.4	-0.7%	\$21.3	-0.6%	\$21.8	2.3%	\$22.3	2.3%
All Other	\$0.6	-44.1%	\$0.2	-64.7%	\$0.3	57.4%	\$0.7	115.7%	\$0.5	-33.0%	\$0.6	20.0%	\$0.7	16.7%
<b>Total Other Revenue</b>	<b>\$50.9</b>	<b>2.5%</b>	<b>\$56.0</b>	<b>10.0%</b>	<b>\$53.3</b>	<b>-4.7%</b>	<b>\$52.8</b>	<b>-1.1%</b>	<b>\$52.8</b>	<b>0.1%</b>	<b>\$55.0</b>	<b>4.2%</b>	<b>\$58.3</b>	<b>6.0%</b>
<b>TOTAL GENERAL FUND</b>	<b>\$1416.4</b>	<b>3.0%</b>	<b>\$1313.9</b>	<b>-7.2%</b>	<b>\$1249.9</b>	<b>-4.9%</b>	<b>\$1387.9</b>	<b>11.0%</b>	<b>\$1420.0</b>	<b>2.3%</b>	<b>\$1492.0</b>	<b>5.1%</b>	<b>\$1581.1</b>	<b>6.0%</b>
<b>OTHER</b>														
Fuel Gross Receipts Tax	\$7.3	6.3%	\$7.5	3.7%	\$6.7	-10.6%	\$7.5	11.5%	\$8.2	9.0%	\$8.1	-1.2%	\$8.3	2.5%

\* Includes Telecommunications Tax; includes \$3.76M transfer in FY08 to the T-Fund for prior years Jet Fuel tax processing error

\*\* Includes Cigarette, Tobacco Products and Floor Stock tax revenues

\*\*\* Assumes Vermont Yankee operates during legal appeal process in FY12 if pending court ruling goes against Entergy Corp.

**TABLE 1 - STATE OF VERMONT  
LEGISLATIVE JOINT FISCAL OFFICE  
AVAILABLE GENERAL FUND REVENUE FORECAST UPDATE  
Consensus JFO and Administration Forecast - January 2012**

**CURRENT LAW BASIS**

*including all Education Fund*

*allocations and other out-transfers*

	<b>FY 2008</b>	<b>%</b>	<b>FY 2009</b>	<b>%</b>	<b>FY 2010</b>	<b>%</b>	<b>FY 2011</b>	<b>%</b>	<b>FY 2012</b>	<b>%</b>	<b>FY 2013</b>	<b>%</b>	<b>FY 2014</b>	<b>%</b>
	<i>(Actual)</i>	<i>Change</i>	<i>(Actual)</i>	<i>Change</i>	<i>(Actual)</i>	<i>Change</i>	<i>(Actual)</i>	<i>Change</i>	<i>(Forecast)</i>	<i>Change</i>	<i>(Forecast)</i>	<i>Change</i>	<i>(Forecast)</i>	<i>Change</i>
<b>REVENUE SOURCE</b>														
Personal Income	\$622.3	7.1%	\$530.3	-14.8%	\$498.0	-6.1%	\$553.3	11.1%	\$594.6	7.5%	\$642.1	8.0%	\$700.9	9.2%
Sales and Use*	\$225.6	1.4%	\$214.1	-5.1%	\$207.4	-3.1%	\$217.1	4.7%	\$226.5	4.4%	\$235.1	3.8%	\$244.2	3.9%
Corporate	\$74.6	2.4%	\$66.2	-11.3%	\$62.8	-5.1%	\$89.7	42.7%	\$77.3	-13.8%	\$81.0	4.8%	\$84.6	4.4%
Meals and Rooms	\$121.1	5.4%	\$117.1	-3.3%	\$118.0	0.8%	\$122.6	4.0%	\$126.7	3.3%	\$131.5	3.8%	\$136.2	3.6%
Cigarette and Tobacco	\$0.0	NM	\$0.0	NM	\$0.0	NM	\$0.0	NM	\$0.0	NM	\$0.0	NM	\$0.0	NM
Liquor	\$14.2	3.7%	\$15.0	6.0%	\$14.9	-1.0%	\$15.4	3.1%	\$16.5	7.5%	\$16.8	1.8%	\$17.2	2.4%
Insurance	\$54.8	3.8%	\$53.7	-2.1%	\$53.3	-0.9%	\$55.0	3.3%	\$56.0	1.8%	\$57.2	2.1%	\$58.5	2.3%
Telephone	\$9.5	-4.6%	\$9.1	-3.8%	\$7.9	-13.9%	\$11.4	44.4%	\$9.3	-18.1%	\$9.2	-1.1%	\$9.1	-1.1%
Beverage	\$5.6	1.9%	\$5.6	0.3%	\$5.7	0.4%	\$5.8	2.2%	\$5.9	2.0%	\$6.0	1.7%	\$6.1	1.7%
Electric**	\$2.7	3.3%	\$2.8	4.0%	\$2.9	2.5%	\$2.9	0.8%	\$2.8	-4.2%	\$0.0	-100.0%	\$0.0	NM
Estate***	\$15.7	-11.9%	\$21.9	39.4%	\$14.2	-35.2%	\$21.0	48.3%	\$19.5	-7.1%	\$21.9	12.3%	\$23.1	5.5%
Property	\$10.7	-16.3%	\$8.5	-21.1%	\$7.8	-8.2%	\$8.4	7.7%	\$8.4	0.8%	\$9.1	8.0%	\$10.3	12.8%
Bank	\$10.2	-3.4%	\$20.6	102.5%	\$10.4	-49.7%	\$15.4	49.0%	\$10.9	-29.3%	\$11.0	0.9%	\$11.1	0.9%
Other Tax	\$3.2	-51.1%	\$2.8	-12.7%	\$3.7	32.1%	\$3.7	1.7%	\$3.5	-5.9%	\$3.8	8.6%	\$4.0	5.3%
<b>Total Tax Revenue</b>	<b>\$1170.3</b>	<b>4.1%</b>	<b>\$1067.7</b>	<b>-8.8%</b>	<b>\$1006.7</b>	<b>-5.7%</b>	<b>\$1121.6</b>	<b>11.4%</b>	<b>\$1158.0</b>	<b>3.2%</b>	<b>\$1224.8</b>	<b>5.8%</b>	<b>\$1305.3</b>	<b>6.6%</b>
Business Licenses	\$2.7	-1.0%	\$3.0	9.4%	\$3.0	-0.2%	\$3.0	-0.6%	\$3.1	4.6%	\$3.2	3.2%	\$3.3	3.1%
Fees	\$14.7	3.6%	\$19.1	29.5%	\$19.2	0.9%	\$20.5	6.4%	\$20.1	-1.8%	\$20.8	3.5%	\$21.5	3.4%
Services	\$1.7	15.9%	\$1.5	-11.0%	\$1.2	-19.9%	\$1.1	-8.7%	\$1.5	32.5%	\$1.4	-6.7%	\$1.5	7.1%
Fines	\$4.4	38.6%	\$9.8	122.0%	\$7.4	-24.8%	\$5.7	-22.2%	\$5.8	1.4%	\$6.0	3.4%	\$6.2	3.3%
Interest	\$5.3	7.2%	\$1.2	-77.8%	\$0.5	-56.3%	\$0.3	-49.9%	\$0.4	56.7%	\$1.1	175.0%	\$2.6	136.4%
All Other	\$0.6	-44.1%	\$0.2	-64.7%	\$0.3	57.4%	\$0.7	115.7%	\$0.5	-33.0%	\$0.6	20.0%	\$0.7	16.7%
<b>Total Other Revenue</b>	<b>\$29.5</b>	<b>6.5%</b>	<b>\$34.8</b>	<b>18.0%</b>	<b>\$31.7</b>	<b>-8.9%</b>	<b>\$31.3</b>	<b>-1.2%</b>	<b>\$31.4</b>	<b>0.4%</b>	<b>\$33.1</b>	<b>5.4%</b>	<b>\$35.8</b>	<b>8.2%</b>
<b>TOTAL GENERAL FUND</b>	<b>\$1199.7</b>	<b>4.2%</b>	<b>\$1102.5</b>	<b>-8.1%</b>	<b>\$1038.4</b>	<b>-5.8%</b>	<b>\$1152.8</b>	<b>11.0%</b>	<b>\$1189.4</b>	<b>3.2%</b>	<b>\$1257.9</b>	<b>5.8%</b>	<b>\$1341.1</b>	<b>6.6%</b>

\* Includes \$2.5M transfer to the T-Fund in FY08 for prior years Jet Fuel tax processing errors

\*\* Assumes Vermont Yankee operates during legal appeal process in FY12 if pending court ruling goes against Entergy Corp.

\*\*\* Excludes transfer to the Higher Education Trust Fund of \$2.4M in FY05, \$5.2M in FY06 and \$11.0M in FY11

**TABLE 2A - STATE OF VERMONT  
LEGISLATIVE JOINT FISCAL OFFICE  
SOURCE TRANSPORTATION FUND REVENUE FORECAST UPDATE  
Consensus JFO and Administration Forecast - January 2012**

**SOURCE T-FUND**

revenues are prior to all E-Fund allocations

and other out-transfers. Used for  
analytic and comparative purposes only.

	<b>FY 2008</b>	<b>%</b>	<b>FY 2009</b>	<b>%</b>	<b>FY 2010</b>	<b>%</b>	<b>FY 2011</b>	<b>%</b>	<b>FY 2012</b>	<b>%</b>	<b>FY 2013</b>	<b>%</b>	<b>FY 2014</b>	<b>%</b>
	(Actual)	Change	(Actual)	Change	(Actual)	Change	(Actual)	Change	(Forecast)	Change	(Forecast)	Change	(Forecast)	Change
<b>REVENUE SOURCE</b>														
Gasoline	\$62.6	-1.6%	\$60.6	-3.1%	\$61.0	0.6%	\$60.6	-0.6%	\$60.7	0.1%	\$61.6	1.5%	\$63.1	2.4%
Diesel	\$16.6	-7.8%	\$15.5	-6.5%	\$15.1	-2.6%	\$15.4	2.0%	\$15.7	2.0%	\$16.1	2.5%	\$16.6	3.1%
Purchase and Use*	\$79.0	-2.0%	\$65.9	-16.6%	\$69.7	5.7%	\$77.1	10.5%	\$82.9	7.6%	\$87.5	5.5%	\$91.3	4.3%
Motor Vehicle Fees	\$67.5	3.2%	\$65.5	-3.0%	\$72.5	10.7%	\$72.3	-0.3%	\$74.4	2.9%	\$75.6	1.6%	\$78.3	3.6%
Other Revenue**	\$23.7	17.2%	\$18.0	-24.0%	\$18.2	1.4%	\$17.9	-1.9%	\$19.1	6.8%	\$19.5	2.1%	\$20.0	2.6%
<b>TOTAL TRANS. FUND</b>	<b>\$249.4</b>	<b>0.6%</b>	<b>\$225.6</b>	<b>-9.6%</b>	<b>\$236.6</b>	<b>4.9%</b>	<b>\$243.3</b>	<b>2.8%</b>	<b>\$252.8</b>	<b>3.9%</b>	<b>\$260.3</b>	<b>3.0%</b>	<b>\$269.3</b>	<b>3.5%</b>

**TABLE 2 - STATE OF VERMONT  
LEGISLATIVE JOINT FISCAL OFFICE  
AVAILABLE TRANSPORTATION FUND REVENUE FORECAST UPDATE  
Consensus JFO and Administration Forecast - January 2012**

**CURRENT LAW BASIS**

including all Education Fund

allocations and other out-transfers

	<b>FY 2008</b>	<b>%</b>	<b>FY 2009</b>	<b>%</b>	<b>FY 2010</b>	<b>%</b>	<b>FY 2011</b>	<b>%</b>	<b>FY 2012</b>	<b>%</b>	<b>FY 2013</b>	<b>%</b>	<b>FY 2014</b>	<b>%</b>
	(Actual)	Change	(Actual)	Change	(Actual)	Change	(Actual)	Change	(Forecast)	Change	(Forecast)	Change	(Forecast)	Change
<b>REVENUE SOURCE</b>														
Gasoline	\$62.6	-1.6%	\$60.6	-3.1%	\$61.0	0.6%	\$60.6	-0.6%	\$60.7	0.1%	\$61.6	1.5%	\$63.1	2.4%
Diesel	\$16.6	-7.8%	\$15.5	-6.5%	\$15.1	-2.6%	\$15.4	2.0%	\$15.7	2.0%	\$16.1	2.5%	\$16.6	3.1%
Purchase and Use*	\$52.7	-2.0%	\$44.0	-16.6%	\$46.5	5.7%	\$51.4	10.5%	\$55.3	7.6%	\$58.3	5.5%	\$60.9	4.3%
Motor Vehicle Fees	\$67.5	3.2%	\$65.5	-3.0%	\$72.5	10.7%	\$72.3	-0.3%	\$74.4	2.9%	\$75.6	1.6%	\$78.3	3.6%
Other Revenue**	\$23.7	23.5%	\$18.0	-24.0%	\$18.2	1.4%	\$17.9	-1.9%	\$19.1	6.8%	\$19.5	2.1%	\$20.0	2.6%
<b>TOTAL TRANS. FUND</b>	<b>\$223.1</b>	<b>1.4%</b>	<b>\$203.6</b>	<b>-8.7%</b>	<b>\$213.3</b>	<b>4.8%</b>	<b>\$217.6</b>	<b>2.0%</b>	<b>\$225.2</b>	<b>3.5%</b>	<b>\$231.1</b>	<b>2.6%</b>	<b>\$238.9</b>	<b>3.3%</b>

**OTHER**

TIB Gasoline					\$13.4	NM	\$16.5	23.6%	\$20.6	24.7%	\$20.9	1.5%	\$22.0	5.3%
TIB Diesel					\$1.5	NM	\$2.0	31.7%	\$1.9	-3.2%	\$1.9	0.0%	\$2.0	5.3%
Total TIB					\$14.9	NM	\$18.5	24.4%	\$22.5	21.8%	\$22.8	1.3%	\$24.0	5.3%

\* As of FY04, includes Motor Vehicle Rental tax revenue

\*\* Beginning in FY07, includes Stabilization Reserve interest; FY08 data includes \$3.76M transfer from G-Fund for prior Jet Fuel tax processing errors and inclusion of this tax in subsequent years



**TABLE 3 - STATE OF VERMONT  
LEGISLATIVE JOINT FISCAL OFFICE  
AVAILABLE EDUCATION FUND\* REVENUE FORECAST UPDATE  
(Partial Education Fund Total - Includes Source General and Transportation Fund Allocations Only)  
Consensus JFO and Administration Forecast - January 2012**

**CURRENT LAW BASIS**

\* Source General and Transportation

Fund taxes allocated to or associated  
with the Education Fund only.

	<b>FY 2008</b>	<b>%</b>	<b>FY 2009</b>	<b>%</b>	<b>FY 2010</b>	<b>%</b>	<b>FY 2011</b>	<b>%</b>	<b>FY 2012</b>	<b>%</b>	<b>FY 2013</b>	<b>%</b>	<b>FY 2014</b>	<b>%</b>
	(Actual)	Change	(Actual)	Change	(Actual)	Change	(Actual)	Change	(Forecast)	Change	(Forecast)	Change	(Forecast)	Change
<b>GENERAL FUND</b>														
Meals and Rooms	\$0.0	NM	\$0.0	NM	\$0.0	NM	\$0.0	NM	\$0.0	NM	\$0.0	NM	\$0.0	NM
Sales & Use**	\$112.8	1.4%	\$107.1	-5.1%	\$103.7	-3.1%	\$108.5	4.7%	\$113.3	4.4%	\$117.6	3.8%	\$122.1	3.9%
Bank	\$0.0	NM	\$0.0	NM	\$0.0	NM	\$0.0	NM	\$0.0	NM	\$0.0	NM	\$0.0	NM
Corporate	\$0.0	NM	\$0.0	NM	\$0.0	NM	\$0.0	NM	\$0.0	NM	\$0.0	NM	\$0.0	NM
Security Registration Fees	\$0.0	NM	\$0.0	NM	\$0.0	NM	\$0.0	NM	\$0.0	NM	\$0.0	NM	\$0.0	NM
Interest	(\$1.3)	-0.8%	\$0.3	NM	\$0.1	-60.2%	\$0.1	-48.8%	\$0.1	NM	\$0.1	NM	\$0.2	NM
Lottery	\$22.7	-2.5%	\$20.9	-7.7%	\$21.6	3.0%	\$21.4	-0.7%	\$21.3	-0.6%	\$21.8	2.3%	\$22.3	2.3%
<b>TRANSPORTATION FUND</b>														
Purchase and Use***	\$26.3	-2.0%	\$22.0	-16.6%	\$23.2	5.7%	\$25.7	10.5%	\$27.6	7.6%	\$29.2	5.5%	\$30.4	4.3%
<b>TOTAL</b>	<b>\$160.5</b>	<b>0.3%</b>	<b>\$150.2</b>	<b>-6.4%</b>	<b>\$148.6</b>	<b>-1.1%</b>	<b>\$155.7</b>	<b>4.8%</b>	<b>\$162.3</b>	<b>4.2%</b>	<b>\$168.6</b>	<b>3.9%</b>	<b>\$175.0</b>	<b>3.8%</b>

\*\* Includes Telecommunications Tax; Includes \$1.25M transfer to T-Fund in FY08 for prior Jet Fuel Tax processing errors

\*\*\* Includes Motor Vehicle Rental revenues, restated