

## SIMON CENTER FOR REGIONAL FORECASTING 2009 REPORT

### *Continued Difficult Times for Missouri, U.S. in 2009*

The Simon Center for Regional Forecasting at Saint Louis University's John Cook School of Business predicts continued weak conditions for Missouri and U.S. labor markets, with expected contractions in Missouri and U.S. employment in 2009. Missouri employment growth is projected to be  $-0.4\%$  in 2009, compared to an average growth rate of  $0.9\%$  for 1991–2008. The Simon Center forecasts U.S. employment growth of  $-2.3\%$  in 2009, substantially below the 1991–2008 average of  $1.2\%$ . Employment is also expected to contract in the St. Louis region, with growth projected at  $-0.1\%$ .<sup>1</sup>

The Simon Center predicts Missouri real personal income to increase a modest  $1.0\%$  in 2009, well below the  $2.4\%$  average for 1991–2008.<sup>2</sup> The corresponding U.S. forecast is  $-0.4\%$ , compared to a 1991–2008 average of  $2.8\%$ .

The housing market is at the center of the current financial crisis and has correspondingly received significant attention in the popular and financial press. After contracting by  $1.5\%$  in 2008, the Simon Center forecasts real housing prices to increase by  $2.0\%$  in 2009.<sup>3</sup> Many analysts anticipate further substantial contractions in housing prices in a number of other, primarily coastal, U.S. states.

The complete set of point forecasts is reported in Table 1 on page 2. The table also reports 1991–2008 averages, one-standard-deviation ( $68\%$ ) confidence intervals for the 2009 forecasts, and the probabilities that the variables will increase in 2009. Figure 1 on page 3 depicts annual growth rates for Missouri and U.S. employment and real personal income for 1991–2008, as well as the 2009 forecast for each variable. Figure 1 indicates that these variables exhibit considerable volatility, and this contributes to a significant degree of uncertainty in the 2009 forecasts. This uncertainty can be quantified by the forecast intervals reported in Table 1. To provide additional insight into the range of likely outcomes, Figure 2 on page 4 presents density forecasts for Missouri and U.S. employment and income growth.

The Simon Center forecasts are generated using time-series econometric models and forecast combining methods. The combining methods use information from a large number of individual models based on a host of regional and national economic variables.<sup>4</sup> By utilizing information from many potential predictors, combining methods are able to generate more robust forecasts in environments characterized by substantial model uncertainty and structural instability.

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<sup>1</sup>The employment forecasts correspond to employment as measured by the Bureau of Labor Statistic's Establishment Survey.

<sup>2</sup>Due to data availability, the forecast for Missouri real personal income growth is based on data through 2008:3, while all of the other forecasts are based on data through 2008:4.

<sup>3</sup>The Missouri real housing price forecast corresponds to Freddie Mac's Conventional Mortgage Home Price Index. The index uses matched transactions on the same property over time to account for quality changes and uses data from both purchase and refinance-appraisal transactions.

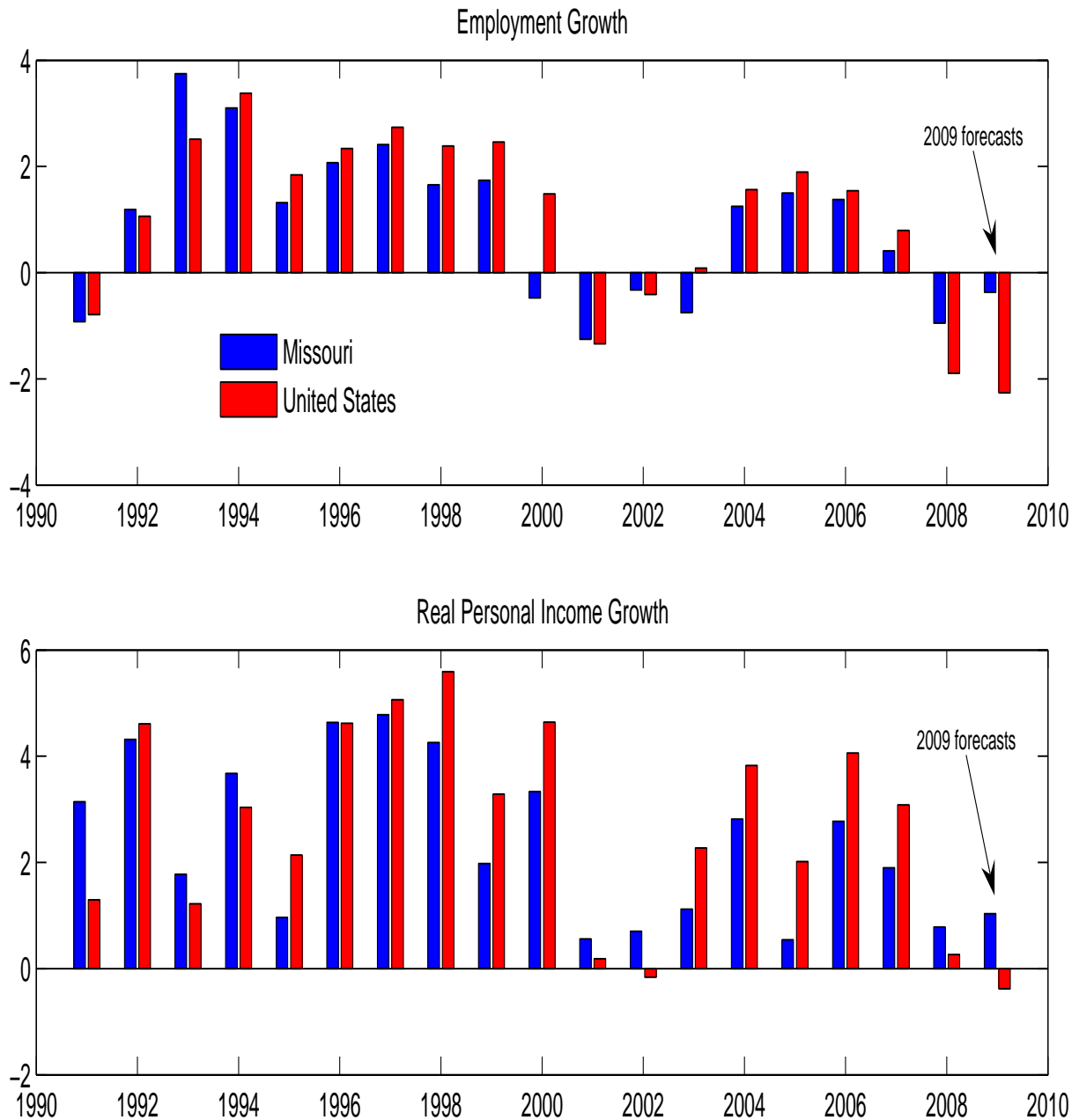
<sup>4</sup>Research studies related to the methodologies used in the construction of the Simon Center forecasts, as well as other Simon Center projects, are available at <http://pages.slu.edu/faculty/rapachde/Simon.html>.

**Table 1: Simon Center Forecasts for 2009**

(1)	(2)	(3)	(4)
Variable	1991–2008 average	2009 forecast	Prob. > 0
<i>Missouri</i>			
Employment growth	0.9%	–0.4% [–1.7%, 1.0%]	40%
Real personal income growth	2.4%	1.0% [–0.7%, 2.8%]	72%
Real housing price growth	1.7%	2.0% [–0.1%, 4.1%]	83%
<i>United States</i>			
Employment growth	1.2%	–2.3% [–3.4%, –1.2%]	2%
Real personal income growth	2.8%	–0.4% [–1.8%, 1.0%]	39%
<i>St. Louis</i>			
Employment growth	0.7%	–0.1% [–1.5%, 1.3%]	46%

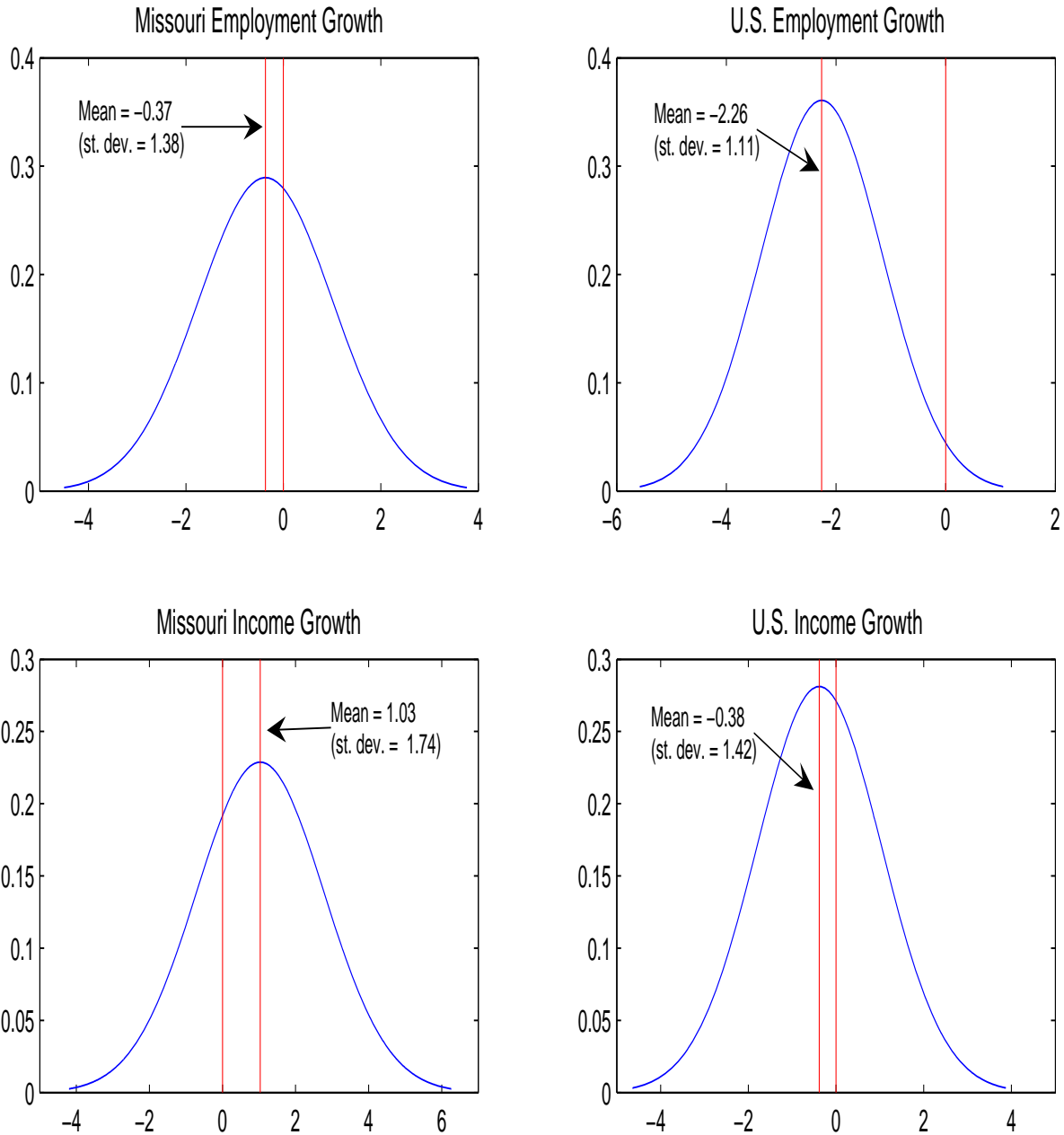
Notes: figures for Missouri real personal income growth are based on data available through 2008:3; the brackets below the 2009 forecasts in column (3) give approximate 68% confidence intervals for the forecasts.

**Figure 1: Missouri and U.S. Employment and Real Personal Income Growth, 1991–2008 and 2009 Forecasts**



Notes: values and forecasts are in annual percentage growth rates.

**Figure 2: 2009 Density Forecasts for Missouri and U.S. Employment and Real Personal Income Growth**



Notes: density forecasts are for annual percentage growth rates and have a normal distribution with mean and standard deviation indicated in the figures; red vertical lines indicate zero and the mean of the density forecast.