

**Unemployment Insurance and  
the Great Recession**  
**Wayne Vroman**

## **Unemployment and Recovery Project**

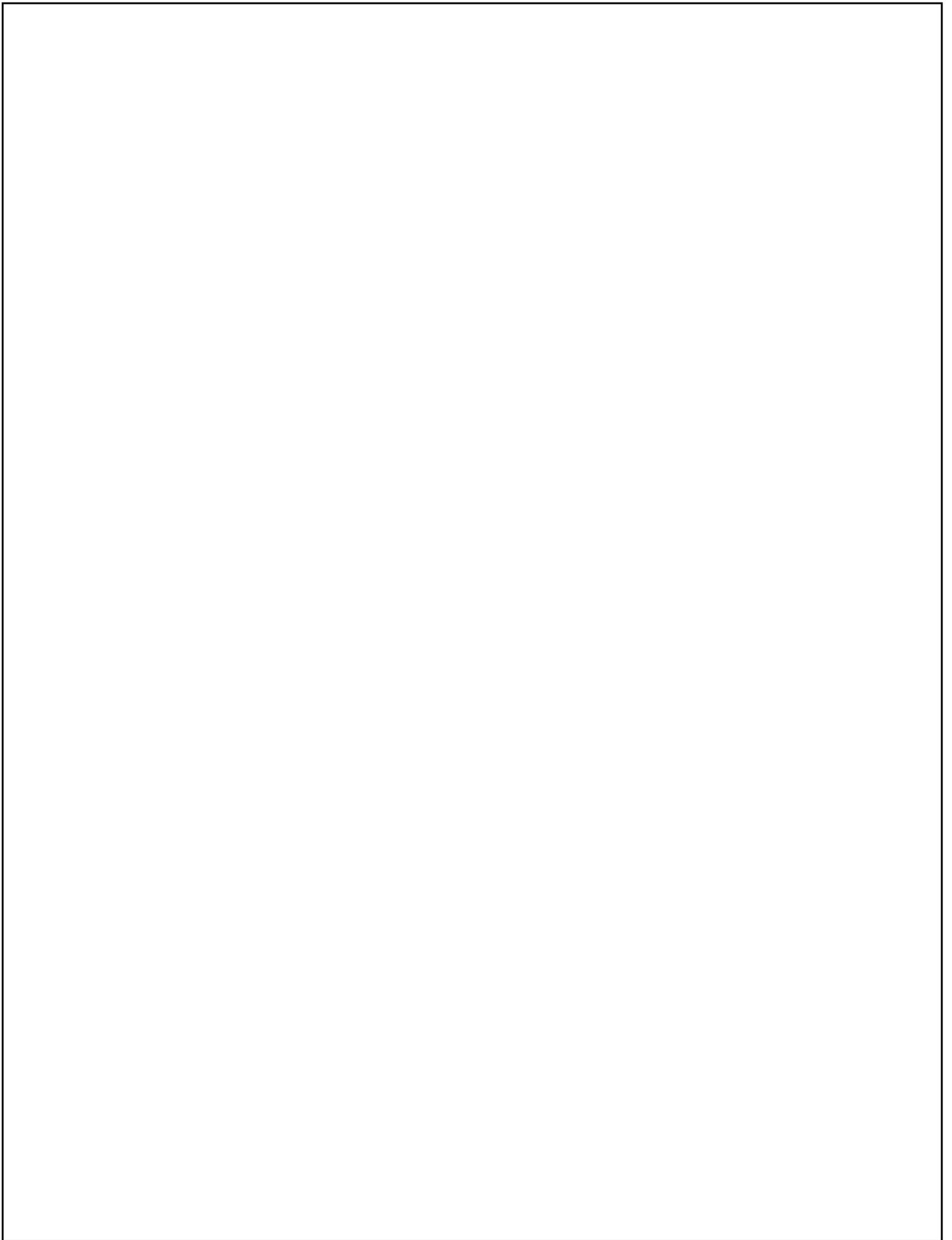
This working paper is part of the Unemployment and Recovery project, an Urban Institute initiative to assess unemployment's effect on individuals, families, and communities; gauge government policies' effectiveness; and recommend policy changes to boost job creation, improve workers' job prospects, and support out-of-work Americans.

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# Unemployment Insurance and the Great Recession

Wayne Vroman

The Great Recession of 2007–2009 has posed the most serious challenge to unemployment insurance (UI) financing since state UI programs were founded more than 75 years ago. Between 2008 and mid-2011, 36 of the 53 state UI programs secured loans from the United States Treasury to partially finance benefit payments in the so-called regular UI programs, the state-financed programs that pay up to 26 weeks of benefits to claimants. During and after the Great Recession, the number of states needing loans and the scale of borrowing have been unprecedented in the history of state UI programs.

This paper describes the scale of the financing problem, examines its causes, describes state responses, and identifies state and federal policy options for addressing the challenges that confront the UI programs. Section 1 describes the “perfect storm” of events that caused the present financing crisis. Section 2 outlines the borrowing options for states with depleted trust funds. Section 3 describes the experiences of states that have operated with indexed taxable wage bases and contrasts their experiences with the nonindexed states. Section 4 describes policy responses intended to restore trust fund solvency in selected states. Section 5 outlines the major state and federal policy options to improve long-run solvency for the state UI programs.

## 1. The Current Situation

State Unemployment Insurance (UI) programs have experienced unprecedented draw-downs of trust fund balances during the past three years. Net reserves which had totaled \$39.7 billion at the end of June 2008 stood at -\$25.0 billion at the end of June 2011, a reduction of \$64.7 billion. Twenty-nine states plus the Virgin Islands had outstanding loans from the Treasury at the end of June 2011. For seven states, the loans exceeded \$2.0 billion, and California’s debt exceeded \$10 billion.

While the loss of trust fund reserves has helped stabilize the economy during the Great Recession (through the effects of UI benefit payments on aggregate demand), it poses major challenges for the program’s future functioning. States need to restore trust fund balances and the process will extend until at least the middle years of the current decade, and longer if there is another recession. Individual state UI programs will have to

implement a combination of tax increases and benefit reductions, and many states already face increases in federal UI taxes this year. Already in 2011 six states (Arkansas, Florida, Michigan, Missouri, South Carolina, and Pennsylvania) have reduced the maximum duration of regular UI benefits to less than 26 weeks. These and other benefit restrictions will weaken the role of UI as an income stabilizer for families experiencing unemployment and for the macro economy.

The present scale of state UI trust fund indebtedness reflects the combined effects of four identifiable factors. These are (1) low pre-recession reserve balances, (2) the unusual depth and duration of the recession, (3) the timing of the downturn, and (4) the continuing loss of employment and associated UI tax revenues from the recession and the slow recovery. The first two factors have been responsible for most of current indebtedness, but the final two have also contributed to the loss of trust fund reserves. Each will be discussed briefly.

### Low Pre-recession Reserves

Figure 1 displays aggregate year-end UI reserve ratios (net reserves as a percentage of total covered payroll) from 1960 to 2010. Before 1973 the reserve ratio consistently exceeded 2.0 percent of payroll, whereas since 1973 it has never reached 2.0 percent. Three early periods of economic recovery were accompanied by large-scale trust fund buildups (1961–1969, 1976–1979, and most noticeably 1983–1989). Between 1983 and 1989, the reserve ratio increased from -0.47 percent to 1.92 percent. Later recovery periods had much smaller increases. This meant that the pre-recession reserve ratio was lower in 2001 than it had been in 1989 and was even lower at the end of 2007 than in 2001. The reserve ratio was 0.79 percent of payroll in December 2007, the lowest ever for a pre-recession year.<sup>1</sup>

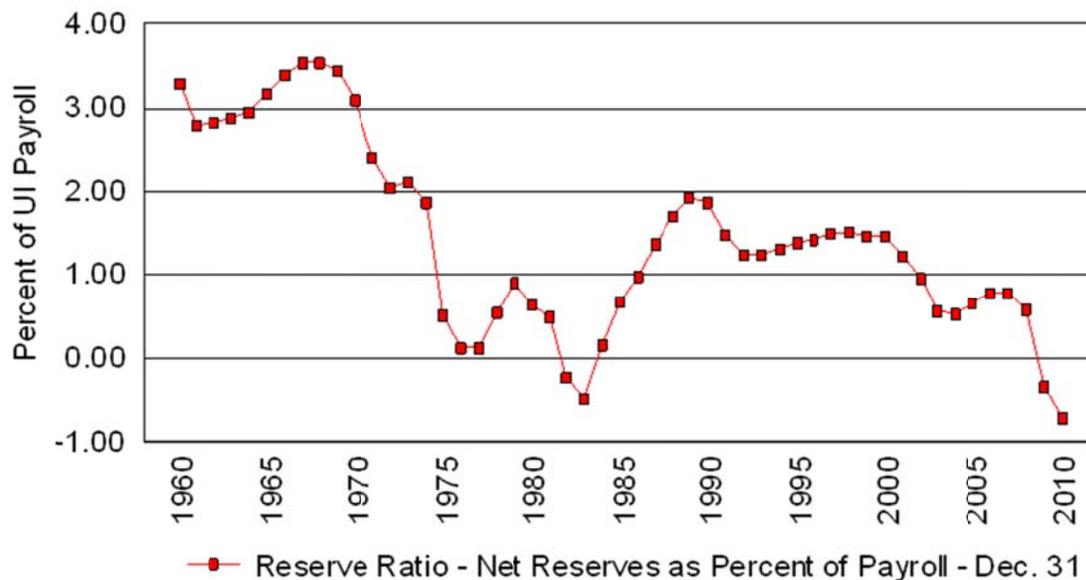
How low were UI trust fund reserves at the end of 2007? A common measure of UI reserve adequacy is termed the reserve ratio multiple (or RRM) (also termed the high-cost multiple, or HCM). The RRM is measured as a ratio of two ratios. The numerator ratio is the reserve ratio, reserves as percent of payroll (the series depicted in figure 1). The denominator ratio is the highest previous annual benefit payout rate, also expressed as a percent. This payout rate was 2.22 percent during 1975. Thus the RRM at the end of 2007 was 0.36. Many have suggested that a pre-recession RRM of 1.0 (representing 12 months of benefits) generally provides adequate pre-recession reserves. Aggregate net reserves totaled \$38.2 billion at the end of 2007, but the associated RRM of only 0.36

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<sup>1</sup> The second lowest pre-recession reserve ratio was 0.91 percent at the end of 1979, just prior to the 1980 recession.

meant that aggregate reserves represented only 4.3 months of benefits when paid at the highest-ever payout rate.

**Figure 1. Aggregate Reserve Ratio, 1960 to 2010**



The explanation for low reserves prior to the Great Recession lies mainly in the failure of UI tax revenue to restore trust fund balances following recent recessions, not in unusually high benefit payout rates during the 1990s and 2000s.<sup>2</sup> Thus, the UI system entered the Great Recession with historically low trust fund reserves.

### The Deep Recession

The recession that commenced in November 2007 was the deepest and longest of the entire post-World War II period. Between 2007 and 2009 the national unemployment rate doubled, increasing from 4.6 percent to 9.3 percent. It then increased to 9.6 percent in 2010 and has remained high, averaging 9.0 percent during 2011.<sup>3</sup> Because of its unusual depth and length many now refer to this downturn as the Great Recession. Unemployment averaged 14.8 million in 2010 and has remained above 13.5 million this year. Associated with increased unemployment has been an increase in average unemployment duration, which reached an unprecedented 24.4 weeks in 2009 and 33.0 weeks in 2010.

<sup>2</sup> One summary of the patterns of UI benefits and taxes is given in Vroman (2011).

<sup>3</sup> Bureau of Labor Statistics, Current Population Survey.

Table 1 summarizes developments in unemployment and UI benefits between 2007 and 2010. It depicts aggregate unemployment in column 1, then first payments, weeks compensated, and payments from the regular UI program that pays up to 26 weeks of benefits. The table does not include long-term benefits financed by the federal government.

**Table 1. Unemployment and UI Benefits, 2007 to 2010**

	Total unemployment	UI first payments (millions)	UI weeks compensated	Total UI benefit payments (\$ billions)
2007	7.1	7.6	116.3	32.2
2008	8.9	10.1	149.5	42.7
2009	14.3	14.2	266.0	79.5
2010	14.8	10.7	203.4	58.5

*Sources:* Annual data from the U.S. Department of Labor. Column 1 from the Bureau of Labor Statistics. Columns 2–4 from the Office of Unemployment Insurance.

The entries in columns 2–4 show a large response from the regular UI program to the Great Recession. Between 2007 and 2009 first payments of new UI claims roughly doubled while weeks compensated and total benefit payments increased by 129 and 149 percent respectively.

The payments shown in column 4 are the responsibility of the state UI trust funds. The \$79.5 billion paid by the states in 2009 represented 1.69 percent of payroll. While the 2009 payout rate was very high, the highest since 1982, annual payout rates higher than 1.69 percent were experienced during five earlier recessions. Note also in table 1 that regular benefits totaled \$58.5 billion in 2010, nearly twice the volume of 2007. These payouts have caused 36 of 53 state UI programs to borrow during the past three years.

The benefits summarized in table 1 refer just to the regular state programs and not to federally financed extended benefits programs. Emergency Unemployment Compensation (EUC) and Extended Benefits (EB) have also made large payouts during the Great Recession. Their combined total in 2010 of \$74.8 billion exceeded the regular program's annual total of \$58.5 billion. This was the first year when extended benefit payments exceeded regular UI benefits. Because both EUC and EB are fully financed by the federal partner, however, they have not had important effects on the state UI trust fund balances.

The third and fourth factors (the timing of the downturn and continuing low employment due to the slow economic recovery) have both negatively affected UI tax revenue. While each is of lesser importance than the low pre-recession trust fund balances and the severity of the recession, both have had measurable effects on state UI trust funds.

### The Timing of the Downturn

Most states set UI taxes for the upcoming calendar year based on trust fund reserves as of June 30. Usually net reserves on June 30 are similar to reserves at the end of the year, but not in 2008. Because UI payouts increased sharply during the second half of 2008 (roughly \$10 billion more than in the second half of 2007), the end-of-year balance in 2008 was \$10.7 billion lower than it had been six months earlier (\$29.0 versus \$39.7 billion). Thus employers in most states were taxed at lower rates during 2009 because very little of the late-2008 surge in benefits entered the calculations that determined their 2009 tax rates.

### Low Post-recession Employment

The fourth factor, continuing low employment, has affected UI tax revenue in all years since 2008. Covered employment in the decade prior to the recession grew 1.1 percent per year. Projecting covered employment to grow by 1.0 percent per year after 2007 implies that, absent the recession, it would have reached 110.8 million in 2010, whereas actual employment last year averaged 99.5 million. This represented an employment shortfall of 10 percent in 2010. The shortfall has been present since 2008, and, depending upon the pace of future employment growth, it will persist for several future years. The depressing effect on annual UI tax revenue during 2009, 2010, and 2011 has averaged more than \$3.0 billion per year.

These four factors' combined effects caused a large-scale drawdown of reserves in nearly all states and borrowing from the U.S. Treasury by most UI programs. The confluence of the four can be characterized as a perfect storm in their effects on state UI trust fund balances.

## 2. State Borrowing Options

States with inadequate UI reserves and needing loans to pay benefits have two broad borrowing options: from the U.S. Treasury or from the private capital market. Over the history of UI, the majority of states have used advances from the U.S. Treasury under loan provisions specified in Title XII of the Social Security Act. During 1974–1976, 25 separate programs borrowed from the Treasury, with loans totaling more than \$5.5 billion. Between 1980 and 1987, 32 different programs (including Puerto Rico and the Virgin Islands) borrowed a total of \$24.0 billion. More recently, seven states needed loans in the recession of the early 1990s and eight borrowed from the Treasury between December 2002 and December 2004.

Borrowing during and after the Great Recession has been the most widespread and extensive of any post–World War II recessionary period. To date, 36 separate pro-

grams have borrowed (35 states plus the Virgin Islands) and net indebtedness (the difference between gross reserve balances and outstanding loans) is the highest ever recorded. Net indebtedness at the end of 2010 was \$32.7 billion and outstanding loans totaled \$42.2 billion. Negative net reserves represented 0.68 percent of total covered payroll, the largest year-end negative net reserve ratio ever experienced by state UI programs in the United States.

Reviewing state experiences back to 1974–1975, borrowing during recessions has been a frequent occurrence. If the closely timed recessions of 1980 and 1982 are treated as a single major recessionary episode, the years since 1974 have included five recessions: 1974–1975, 1980–1983, 1991–1992, 2001–2002, and 2007–2009. Of the 53 state UI programs, just five did not borrow at least once between 1974 and 2011.<sup>4</sup> Over these 38 years, seven states borrowed during four recessions and 11 borrowed during three recessions. The terms of the loans from the U.S. Treasury are well understood and are briefly summarized below.<sup>5</sup> In contrast, only seven states have ever borrowed in the private capital market to finance trust fund deficits. As this number is likely to increase in the next few years, borrowing in the private securities market is also described.

### Borrowing from the U.S. Treasury

Short-term (cash-flow) borrowing by state UI programs from the Treasury does not carry interest charges when certain requirements are met. The most important of these are (1) full repayment by the end of September of all loans secured between January and September and (2) no new borrowing during October–December. These loans have helped finance benefit payments in several states during January–April when monthly outlays are highest but revenues and net reserves are at seasonal lows.

Loans that last longer carry interest charges levied at an interest rate equal to the rate earned on positive trust fund balances, that is, the rate on longer term Treasury debt. In 2003 and 2004 this rate was close to 6.0 percent. More recently it is 4.1 percent during 2011 but may be higher during 2012.<sup>6</sup> Interest is charged on the average daily balance of outstanding debt. Most states with Treasury loans manage their debts trying to end each day with a UI trust fund balance of zero. Thus, either borrowing or debt repayment occurs daily, a strategy that minimizes average daily indebtedness.

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<sup>4</sup> The five are Alaska (which borrowed before 1974), Mississippi, Nebraska, New Mexico, and Oklahoma.

<sup>5</sup> Two summaries of this method of borrowing are given in chapter 1 of Vroman (1990) and in McHugh (2004).

<sup>6</sup> The interest rate on loans is the rate on long-term Treasury bonds during the last quarter of the preceding year. This was 4.1 percent during the last quarter of 2010 but could be higher at the end of 2011 and later years.

Repayment of the principal on Treasury loans may come from the trust fund or external sources. Repayment of interest, in contrast, must come from an external source. States are required to use their trust fund balances only to pay benefits except for unusual circumstances, such as the monies received from the special Reed Act distribution of 2002 or the so-called modernization monies distributed to the states under the American Recovery and Reinvestment Act (ARRA) of February 2009. The loan principal can be repaid from the trust fund balance because the original debt was incurred in paying benefits.

Title XII also has provisions to ensure automatic repayment of outstanding debts. When the principal on a loan has been outstanding on January 1 of two consecutive years and remains unpaid as of November 1 of the second year, an automatic flat rate assessment on (federal) taxable wages is levied starting in January of the following year and continues each year until the debt is fully repaid. The penalty rate starts at 0.3 percent but then increases by increments of 0.3 percent or more during subsequent years.<sup>7</sup> Debts are repaid starting with the oldest. New York employers paid this penalty tax in 2005 and 2006.

If a state has sufficient reserves to repay an amount equivalent to this flat rate incremental federal tax, it may do so, thus repaying with experience-rated taxes rather than flat rate taxes. Missouri exercised this repayment option in both 2005 and 2006.

Following the Great Recession, these automatic repayment provisions were deferred during 2009 and 2010. The ARRA legislation provided both interest forgiveness and deferral of automatic increases in federal UI taxes (termed Federal Unemployment Tax Act, or FUTA, tax credit offsets) for these two years.<sup>8</sup> In 2011, however, interest is being charged on outstanding loans and FUTA credit offsets are operative. Interest will be owed by 31 states in 2011 and 24 states are subject to FUTA credit offsets.

When debts are repaid through increased federal UI taxes (reduced FUTA credit offsets), the taxes are paid at a single rate by all employers regardless of experience. The desire to avoid such flat rate assessments was an important consideration in using bond financing in Illinois in 2004. The majority of its debt repayment came from experience-rated taxes, (e.g., solvency taxes paid into the UI trust fund) and only a minority from flat rate assessments to repay fixed term bonds issued in July 2004.

A final aspect of borrowing from the Treasury pertains to the disposition of monies received by the states under special conditions, monies that can be used for purposes

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<sup>7</sup> Technically this tax increase is a reduction of the credit states are allowed to take on their federal UI taxes when their experience-rating system (their method for assigning contribution rates to individual employers) is deemed acceptable by the federal partner and other federal requirements are also satisfied.

<sup>8</sup> Employers covered by UI pay both a federal and a state UI tax. The federal tax since July 1, 2011, is levied at a rate of 0.6 percent on the first \$7,000 of each worker's annual earnings.

other than paying benefits.<sup>9</sup> The states can use these Reed Act monies to finance UI and employment services administration and worker adjustment activities as well as to pay benefits. However, any Reed Act monies not specifically obligated for one of these “alternative” uses must be fully used for paying benefits before a state may receive a Title XII loan. More recently, ARRA provided up to \$7.0 billion to the state UI programs for “modernization.” A recipient state can use its share of this money to pay UI benefits, to improve UI administration, for UI/employment services/one-stop activities, and for worker training. While these other uses of monies exist, the bulk of trust fund receipts can be used only to pay UI benefits.

### Borrowing in the Private Capital Market

Starting with Louisiana and West Virginia in 1987, seven states have secured loans from the private capital market to cover UI funding shortfalls. Table 2 shows some details of these loans. Connecticut used this option in 1993 as did Illinois, North Carolina, and Texas during 2003–2005. Following the Great Recession, Texas borrowed in the private market at the end of 2010 and Idaho in August 2011. Arkansas has authorized a debt issuance for 2011, but it must first be approved by a statewide ballot initiative. Other states are presently examining this option.

Several uncertainties accompany this form of borrowing and uncertainty, as reflected in provisions of past UI debt issuances. Should the state economy perform worse than expected during the repayment period, additional borrowing could be needed. Note in columns 2 and 3 of table 2 that Louisiana and West Virginia borrowed their full authorizations while Connecticut in 1993 and both Texas and Illinois in 2003–2004 issued bonds that totaled less than their full legislative authorizations. The latter arrangement allows for additional borrowing without the need for new legislation. Connecticut found it did not need additional loans. Texas and Illinois also did not need to make later issuances. Texas issued new private securities that totaled \$1.96 billion at the end of 2010. The latest maturity date of these bonds is 2020.

For five of the six states in panels A and B of table 2, the debt instruments had maturity dates that extended several years into the future. North Carolina, on the other hand, initiated three separate issuances during 2003, 2004, and 2005, with the intention of repaying each during the upcoming year. The notes were issued near the end of September and fully repaid during April–May of the next year using the revenue from first quarter UI tax accruals. Full repayment of previously issued notes was achieved in each of the three years. In effect, North Carolina paid off its Treasury loans before the end of September and its private notes during April–May of three consecutive years. Its Treasury

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<sup>9</sup> The largest of these special distributions was an \$8.0 billion Reed Act distribution in March 2002.

loans were treated as interest-free cash flow loans even though the state had outstanding debts for most months between April 2003 and May 2006.

For the five states that issued multiyear debt instruments, early repayment usually occurred. Louisiana fully repaid its bonds in seven years, not the 15 years potentially contemplated at issuance. Similarly, West Virginia fully repaid its loans in four years, not the six years originally authorized. Texas and Illinois both completed their repayments in 2006, several years before the longest maturity dates of their debt instruments.

Column 4 shows a clear pattern as to the size of the loans, much smaller recently than during the 1980s and 1990s. All three issuances in panel A exceeded 2.0 percent of payroll while those in panel B and C, except Idaho's, were all smaller than 1.0 percent of payroll. For Louisiana, it appears that the loan of 1987 was unnecessarily large.

Because of uncertainties about future macroeconomic performance and future interest rates, the bonds were usually issued with hedging features. Note in column 8 of table 2, most multiyear bond issuances have had early redemption (call) provisions. Interest rate uncertainty is addressed by having variable rate bonds (Connecticut, Texas, and Illinois) and by potential future convertibility of variable rate bonds to fixed rate bonds (Connecticut, Texas, and Illinois). Connecticut both called and converted some of its bonds before completing repayment in 2001.

The other key elements in comparing borrowing costs are interest rates and costs associated with the issuance, conversion, and redemption of private securities. Of the two financing alternatives, the costs of borrowing from the Treasury are more easily described. Annual interest charges are the product of the average daily outstanding balance for the year, times the interest rate on daily balances. This interest rate changes yearly. It is 4.1 percent during 2011. Through daily debt management activities (borrowing and repayment), the loan balance owed the Treasury can be minimized.

To characterize borrowing costs in the private market, several factors besides interest rates must be considered. Most important are (1) insurance, (2) other issuance costs, (3) costs of early redemption (i.e., exercising call features), and (4) costs of converting between fixed rate and flexible rate instruments. The combined effect of these costs could add from 0.5 to 1 full percentage point (50 to 100 basis points) to the nominal interest rate charged on these instruments. While the interest rate on municipal bonds and notes will generally be lower than the interest rate on Treasury loans, a full comparison of the two types of loans should also include the differences in average daily balances (unambiguously lower with Treasury loans) and the various additional costs from debt issuances in the private securities market. Both latter considerations weigh in favor of securing loans from the Treasury. Whether they completely offset the advantages of lower interest rates can only be determined by carefully weighing all factors affecting the cost of borrowing.

**Table 2. UI Issuances in the Private Securities Market**

State	Issuance year	Loan authorization (\$ millions)	Loan amount (\$ millions)	Loan/payroll (%) <sup>a</sup>	Max bond/note maturity	Fixed rate bonds	Variable rate bonds	Some bonds callable	Some bonds convertible	Year fully repaid
<b>A. Recessions before 2001</b>										
LA	1987	1,315	1,315	6.3	2002	1,315	n.a.	Yes	n.a.	1994
WV	1987	258	258	3.2	1993	258	n.a.	Yes	n.a.	1991
CT	1993	1,142	1,021	2.6	2001	450	571	Yes	Yes	2001
<b>B. 2001–2002 Recession</b>										
TX	2003	2,000	1,400	0.5	2009	800	600	Yes	Yes	2006
NC	2003	b	172 <sup>c</sup>	0.2	2004 <sup>c</sup>	c	c	c	c	2004
NC	2004	b	270 <sup>c</sup>	0.3	2005 <sup>c</sup>	c	c	c	c	2005
NC	2005	b	77 <sup>c</sup>	0.1	2006 <sup>c</sup>	c	c	c	c	2006
IL	2004	1,400	712	0.4	2013	340	372	Yes	Yes	2006
<b>C. 2007–2009 Recession</b>										
TX	2010	2,000	1,960	0.5	2020	n.a.	n.a.	Yes	Yes	n.a.
ID	2011	207	188	1.3	2015	188	0	No	No	n.a.

*Source:* Data derived by author from state sources and the U.S. Department of Labor, Office of Unemployment Insurance.

n.a. = not applicable

a. Loan amount expressed as a percentage of total payroll of taxable covered employers.

b. Borrowing authorized by administrative action. Amount determined as needed. In each of 2003, 2004, and 2005 notes were repaid in the year following their issuance, using UI tax receipts.

c. Short-term notes redeemable on demand.

To conclude, we can make four assertions in comparing costs for the two options: (1) the interest rate will almost always be lower in the private securities market; (2) the average daily loan balance will always be lower for Treasury loans if optimal debt management is followed; (3) comparative cost calculations must consider all factors relevant in measuring the costs of loans, not just interest rates; and (4) all loan options entail uncertainties. These may be reduced but cannot be eliminated. The most important uncertainties are (1) the future strength of the state's economy, which affects repayment under both types of borrowing; (2) future interest rates on Treasury loans; and (3) the future term structure and average interest rates in the private securities market. This final uncertainty spans a range of debt instruments that a state might utilize.

### 3. Recent Experiences of States with Indexed Tax Bases

In 2011, 16 states plus the Virgin Islands operate UI programs with indexed taxable wage bases. The UI tax base increases automatically with changes in statewide average earnings of covered workers. The indexation percentages vary between 50 percent and 100 percent of lagged average earnings.

Three features of the indexed programs are obvious: (1) On average, they have much higher tax bases than programs with nonindexed tax bases. The simple averages of the tax bases for the two groups in 2011 are \$27,656 for the indexed programs and \$10,313 for the nonindexed programs. (2) Because of higher tax bases, the indexed programs derive their revenues from a much higher share of covered payroll. The average taxable wage proportion (the ratio of taxable to total payroll) in 2010 was 0.546 in the indexed programs compared to 0.249 in the nonindexed programs. (3) Borrowing during and after the Great Recession was both less likely and smaller among the indexed programs. Six of 16 indexed programs (37.5 percent) borrowed during 2009–2011 compared to 29 of 35 nonindexed programs (82.9 percent).<sup>10</sup> More details on these latter two points are instructive.

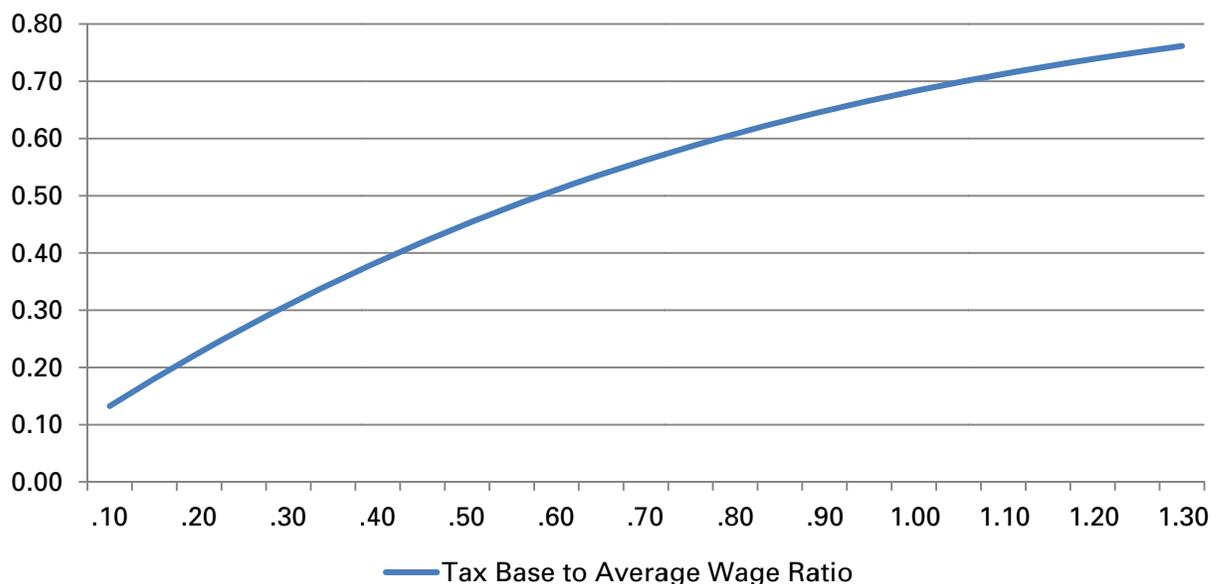
#### The Taxable Wage Proportion

The taxable wage proportion in UI is linked to the level of the UI tax base. The ratio of the tax base to average annual earnings mainly determines the taxable wage proportion. Figure 2 illustrates this relationship with a random sample of nearly 18,000 earnings records from Ohio in 2009. A simulation algorithm developed at the Urban Institute calculated taxable wages at all levels of the tax base between \$7,000 and \$110,000. The range of the tax base to average wage ratios in figure 2, from 0.1 to 1.3, spans the full range

<sup>10</sup> The statistics in this paragraph refer to 51 programs, the 50 states plus the District of Columbia.

currently operative in state UI programs. Hawaii and Idaho have the highest tax bases, 100 percent of statewide average annual earnings. Taxable wages in these two states are roughly 70 percent of total wages, similar to the 2009 ratio in the Ohio data shown in figure 2. The lowest indexation percentages in 2011 are 50 percent in North Carolina and Oklahoma. The other indexed states range from 54 to 80 percent. In contrast to the generally low tax bases in UI programs, the 2011 tax base for Social Security’s Old-Age, Survivors, and Disability Insurance program is \$106,800, or about 2.5 times average annual earnings, and the associated taxable wage proportion is about 0.850.

**Figure 2. Taxable Wage Proportions and Tax Base to Average Wage Ratios in 2009**



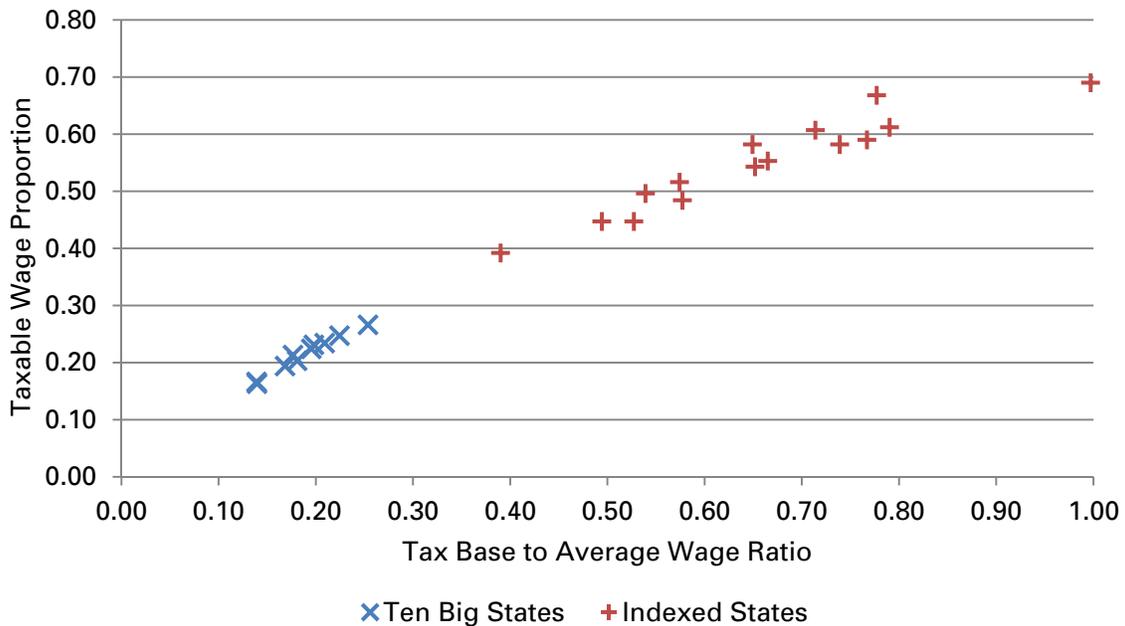
*Source:* A 2009 sample of 17,860 quarterly UI earnings records from the Ohio Department of Jobs and Family Services.

Figure 3 displays actual taxable wage proportions for 25 state UI programs in 2009. The two groups consist of the 10 largest states (based on employment) with non-indexed tax bases and the 15 states where the tax base was fully indexed in 2009. While the states vary widely in their economic structures, average wages, and other characteristics, the link between the tax base to average wage ratio and the taxable wage proportion is obvious. The curvature in the relationship so apparent in figure 2 is repeated in figure 3.

Figure 3 illustrates the long-run effects of UI tax base indexation. The 10 large states are bunched to the left with low tax base to average wage ratios and taxable wage proportions between 0.16 and 0.27. The contrast with the 15 indexed programs is vivid. All but one (Oklahoma) have tax-base-to-average-wage ratios of 0.50 or higher and

taxable wage proportions between 0.45 and 0.70. Indexation has allowed the tax base in the latter states to grow with average wages.

**Figure 3. Taxable Wage Proportions in 2009**



Source: U.S. Department of Labor, Handbook of Unemployment Insurance Financial Data, columns 5, 6, and 14, 2010.

Most UI programs with indexation adopted it in the 1970s and 1980s, most recently Oklahoma in 1986. Between 1987 and 2009, proposals to adopt indexation were uniformly unsuccessful. During these 23 years North Carolina reduced its indexation percentage (from 60 to 50 percent of average earnings) and Rhode Island discontinued indexation. In 1998 Rhode Island replaced its tax base indexed at 70 percent of statewide annual wages with a tax base that could vary between \$12,000 and \$19,000, depending upon its trust fund balance. With its recent loss of reserves, the \$19,000 base has been operative since 2009.

Because all 16 states have been operating indexed systems for 25 or more years, the effects of automatic tax base increases on solvency during the Great Recession can be inferred. The most obvious feature is that in 2011 all 16 states have comparatively high tax bases, between \$18,600 (Oklahoma) and \$37,300 (Washington). Besides the \$19,000 base in Rhode Island, not a single nonindexed state has a tax base above \$15,000 this year. The highest nonindexed tax bases are \$15,000 in Connecticut and \$14,000 in Massachusetts and Mississippi.

Since 1983, all states have been required to have a taxable wage base of at least \$7,000 per covered worker. While nearly all programs (48 of 51) now have a tax base that exceeds \$7,000, most of the nonindexed programs (21 of 35) have bases of \$10,000 or less in 2011. In 2007, prior to the Great Recession, several states were operating with the same tax base as in 1985. Yet average covered earnings in 2007 were more than twice their 1985 level.

A regression analysis of tax base changes between 1985 and 2007 identified two factors associated with tax base increases: indexing the tax base and experiencing a financing problem (i.e., borrowing from the Treasury) during the recessions of this period. The dependent variable in the regression was the ratio of the tax base in 2007 to the tax base in 1985. For reference, average annual earnings nationwide increased from roughly \$19,000 to \$46,000 during this period. The two explanatory variables were a 0–1 dummy to identify programs with tax base indexation<sup>11</sup> and a 0–1 dummy that identified the 12 states where the trust fund was insolvent sometime between 1991 and 2004.

This regression explained 70 percent of the growth in the tax base with both variables making statistically significant contributions to explained variation. The indexation dummy was the more important of the two variables, and its slope coefficient indicated the tax base roughly doubled. For the 12 programs that borrowed, the coefficient indicated the tax base increased by about 30 percent. Thus, a financing problem led to a higher tax base, but the increase was much smaller than the automatic increases that occurred through indexation.<sup>12</sup>

### Reserves in Indexed States

Tax base indexation helped state reserves grow in line with overall growth in state economies. Figure 4 plots reserve ratios (end-of-year trust fund reserves as a percent of covered payroll) for two groups of states: 17 indexed programs (the 16 plus Rhode Island) and 17 of the largest programs (based on covered employment). The figure shows simple averages of reserve ratios for both groupings from 1960 to 2010. When indexation was fully operative in all 17 indexed states in the mid-1980s, their average reserve ratio increased from about 1.5 percent and ranged between 2.0 and 3.0 percent during most later years. For the 17 large nonindexed states, the average reserve ratio was consistently much smaller. Entering the Great Recession, the average for the indexed states was roughly four times the average for the 17 large states.<sup>13</sup> Note also that the average reserve ratio for

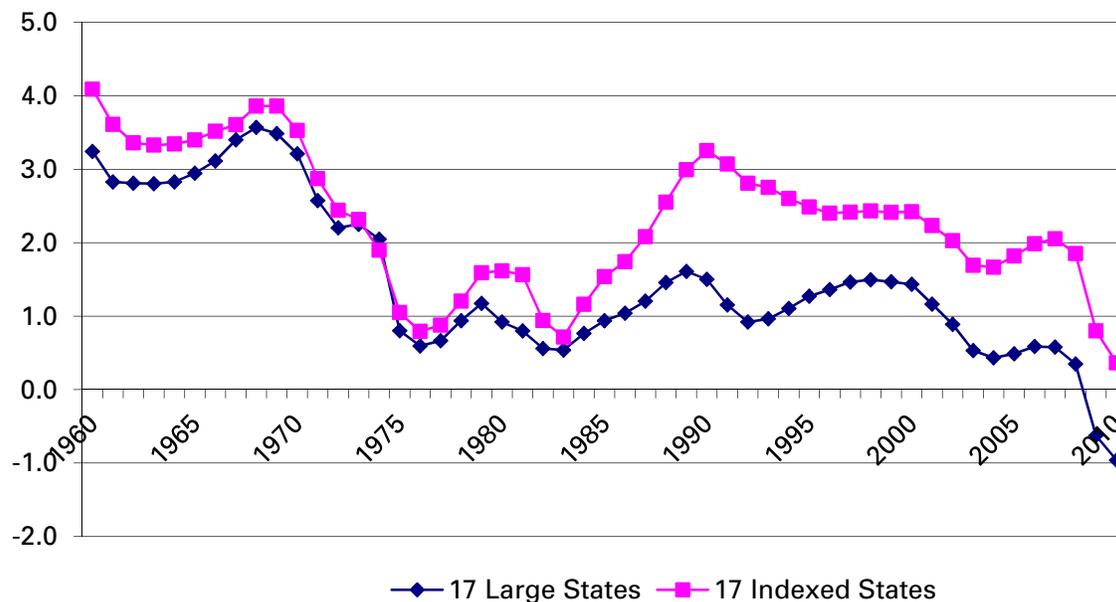
<sup>11</sup> For Rhode Island the dummy was assigned a value of 0.5 to signal indexation for part of the period.

<sup>12</sup> Details of the regression are available from the author upon request.

<sup>13</sup> When the reserve ratios in two groups of 17 states were weighted by total payroll, the average reserve ratios at the end of 2007 were respectively 0.29 percent for the large states and 1.48 percent for the indexed

the indexed states at the end of 2010 was still positive, albeit much smaller than at the end of 2007.

**Figure 4. Reserve Ratios: 17 Indexed States and 17 Large States, 1960 to 2010**



*Source:* Calculations made at the Urban Institute with data from U.S. Department of Labor, Unemployment Insurance Financial Handbook (1960–2011).

*Note:* Reserve ratios are measured as the ratio of year-end reserves as a percentage of UI covered payroll.

Since the indexed states entered the Great Recession with much larger reserve ratios, it is hardly surprising that they borrowed less during 2009–2011. As noted, only 6 of 16 indexed programs needed loans from the Treasury compared to 29 of 35 nonindexed programs.

Differential reserve adequacy is also shown by comparisons of average trust fund indebtedness at the end of 2010. For the six indexed states that have borrowed, this average was 0.55 percent of payroll compared to 0.80 percent for the nonindexed states that borrowed. Considering both the borrowing probability and the size of the loans, the trust funds in the indexed states fared much better during the Great Recession.

Indexation of the UI tax base has been under active consideration in 2010 and 2011 as a policy to improve long-run UI solvency. Proposals by both the Obama administration

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states. The weighted mean reserve ratio for the indexed states was five times the weighted mean for the large states.

and Senator Dick Durbin (D-IL) include provisions to raise the federal taxable wage base to \$15,000 in 2014 and to index the federal tax base to average wage growth in later years.<sup>14</sup> In the states, Rhode Island, Vermont, and Colorado have passed legislation to index the UI tax base. Rhode Island in 2012 will institute a tax base indexed at 45.6 percent of statewide average earnings. The tax base will be \$19,000 (the same as in 2011), but it will then increase after 2012 as average wages increase.

Vermont is raising its tax base in stages: from \$8,000 in 2009 to \$10,000 in 2010, \$13,000 in 2011, and \$16,000 in 2012. Currently Vermont has a negative UI trust fund balance with loans from the Treasury totaling \$78 million at the end of August 2011. In future years, after the trust fund achieves a positive balance, the \$16,000 tax base will increase automatically through indexation. The tax base will equal about 40 percent of average wages and the taxable wage proportion will equal about 0.40 percent of total wages (compared to 0.244 in 2009).

Colorado included tax base indexation in recent solvency legislation. The tax base will increase from \$10,000 to \$11,000 in 2012 and will increase automatically with average wage growth in later years. Like Vermont, Colorado will commence automatic tax base increases only after the trust fund has been restored to a positive balance. Since Colorado has roughly halved its indebtedness during 2011 (from \$578 million at the end of March to \$246 million at the end of August), indexation may be implemented in 2013 or 2014. It should be noted, however, that an \$11,000 tax base in 2012 will represent only about 21 percent of average earnings and an even lower proportion if indexation is delayed past 2012. Thus, even with this legislation, Colorado's future taxable wage proportion is unlikely to exceed 0.25.

At present, only Rhode Island, Vermont, and Colorado included tax base indexation provisions in their recent UI legislation.

## 4. Solvency Actions by State UI Programs

State policy responses to the Great Recession have varied highly. Even though elevated claims activity has now extended for more than three years, most states have not yet enacted legislation to restore their UI trust fund balances. This year, more than half the programs will incur interest charges on their outstanding loans. Other responses in the states have ranged from overriding the experience-rating statute to prevent movement to higher tax rate schedules to aggressive reductions in benefits. The latter include six states reducing the maximum duration of regular UI benefits to fewer than 26 weeks, increasing disqualification penalties and monitoring of claims accuracy more closely.

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<sup>14</sup> Section 5 discusses these indexation proposals.

Within the UI system, five state programs addressed their solvency problem through aggressive actions to increase revenues. Their responses combined traditional measures (raising the taxable wage base and allowing statutory experience-rating provisions to operate) with innovative new measures such as instituting temporary part-year tax increases for subperiods within calendar years. While details of the responses have varied across the states, a common result has been a substantial increase in UI tax revenue. As a group, these states reacted quickly to their trust fund drawdowns and thus prevented the accumulation of large debts. Four of the five did borrow during 2009–2011, but their loans were small and of short duration, and all expect to end 2011 with positive trust fund balances. Barring a new recession, their prospect during 2012 and beyond is to continue rebuilding their trust funds to higher positive balances.

Table 3 summarizes the various actions taken by these five states: Maryland, New Hampshire, South Dakota, Tennessee, and West Virginia. Four of the five enacted solvency legislation, three in 2009. In four states the response included raising the taxable wage base. All five states allowed their experience-rating statutes to operate so that automatic tax rate increases caused by the loss of reserves were part of their response.

**Table 3. Policy Responses to UI Trust Fund Insolvency in Five Activist States**

	UI legislation	Tax base increase	Experience-rating response	New tax assessment	Benefits reduction	Annual tax rate		
						2008	2009	2010
MD	n.a.	n.a.	X	n.a.	n.a.	0.39	0.44	0.89
NH	2009	X	X	X	X	0.21	0.39	0.71
SD	2010	X	X	X	n.a.	0.26	0.31	0.75
TN	2009	X	X	X	n.a.	0.45	0.75	0.79
WV	2009	X	X	n.a.	X	0.74	0.92	1.02

*Sources:* Information assembled at the Urban Institute from U. S. Department of Labor, Office of Unemployment Insurance, and state sources.

*Note:* Tax rates are measured as a percentage of total payroll.

n.a. = not applicable.

Each covered employer typically pays state UI taxes at a single tax rate, which differs according to experience but applies during all 12 months of the tax year. A new response in three of the five activist states was to enact temporary tax increases that applied for shorter periods. The effect was to make the tax response faster, helping offset the trust fund drawdown caused by the recession. These temporary taxes were levied quarterly and were deactivated when a designated trust fund balance was reached.

Finally, New Hampshire and West Virginia included benefit reductions as part of their legislative responses.

The final three columns of table 3 display effective tax rates (UI taxes as a percentage of total payroll) for 2008, 2009, and 2010. All states had large increases with the annual effective tax rate more than doubling in three. For Maryland, the increase in 2010 was totally due to an increase in the tax rate with no response of the tax base. The other four programs collected higher revenue through changes in both the tax base and the tax rate.

A comparative perspective on these solvency adjustments is provided by the effective UI tax rate nationwide during 2008–2010. The average effective rates on total payroll for these three years were 0.62, 0.63, and 0.78 percent, respectively. In contrast, the simple averages of the effective tax rates for the five states in table 3 were 0.41, 0.56, and 0.83 percent, respectively. While the national average effective tax rate increased by 26 percent between 2008 and 2010, it roughly doubled for these five states. Their average rate was about two-thirds of the national average in 2008, but by 2010 it exceeded the national average.

During 2011, six states (Arkansas, Florida, Michigan, Missouri, Pennsylvania, and South Carolina) enacted solvency packages that emphasized benefit reductions. A common feature was to reduce the maximum duration of regular UI benefits to fewer than 26 weeks (already effective in three states in 2011). These changes represent the first time since the late 1950s that any state UI program has had a maximum benefit duration below 26 weeks. These six states have also been characterized by modest increases in their effective tax rates since the onset of the Great Recession. The simple averages of their effective tax rates during 2008, 2009, and 2010 were 0.74, 0.73, and 0.84 percent, respectively. Their effective tax rates increased by just 14 percent between 2008 and 2010. This increase was less than the increase of 26 percent in the national average tax rate for the same period.

Solvency adjustments that both increase UI revenues and reduce benefits lessen the effectiveness of UI program performance as an automatic stabilizer of the economy. Policy actions to restore trust funds to more adequate levels conflict with the program's stabilization objective, which operates through benefit payments. The rationale for forward-funding unemployment insurance programs is to lessen this conflict through the timing of trust fund restorations. When the economy experiences short recessions where the time path of real GDP follows a sharp V shape, the tax response occurs during the upturn phase and does not cause a problem. In the Great Recession, with its long and slow period of economic recovery, the conflict between the two objectives is more apparent. There is a serious ongoing need for regular UI benefit payments in 2010 and

2011, but trust funds are already depleted and in debt. The lack of a policy response that increases UI revenue means that UI trust funds will remain depleted for several years.

## 5. Policy Options

The federal statutes governing UI program financing provide a mechanism for full repayment of Title XII loans. The outstanding principal on loans will be repaid by FUTA tax credit offsets according to an offset schedule that starts at 0.3 percent of federal taxable payroll during the first repayment year (a total FUTA rate of 0.9 percent during July–December 2011). Absent state actions that worsen solvency (benefit increases and tax reductions), FUTA credit offsets increase by 0.3 percent per year for five years and then by even more if the Title XII balance is not fully repaid. The credit offset rate is the same for all employers, meaning those with high-cost experiences pay at the same rate as those with low-cost experiences.

In 2011, 24 debtor UI programs are subject to increased FUTA taxes (0.3 percent for 21 and larger increments for Indiana, Michigan, and South Carolina). The aggregate amount of increased FUTA taxes will be about \$2.0 billion this year and will grow by about \$2.0 billion per year. Since total state UI indebtedness at the end of July 2011 was about \$40 billion, repayment by FUTA credit offsets will likely extend through most of the current decade. The credit offsets during 2011–2013, for example, will yield about \$12.0 billion.

The states with outstanding loans are subject to interest charges starting this year. The cumulative amount owed through late July was about \$1.0 billion and the total for 2011 will approach \$2.0 billion. Uncertainty attends future interest charges since interest rates are likely to increase from their current 4.1 percent annual rate. Debtor states could possibly pay interest costs of \$15–20 billion before their debts are fully repaid.

While aggregate trust fund debts appear to have bottomed out in mid-2011, the low or negative balances in most states mean that rebuilding will extend over much, or perhaps most, of the current decade. State-level solvency legislation will speed the rebuilding process, but unlike the five activist states discussed earlier, most states have not yet addressed their solvency problem. While rebuilding, state UI programs will be especially vulnerable to a new recession.

Policy initiatives that affect solvency can originate in either the state or federal governments. During 2010 and 2011 several states have enacted UI legislation that affects solvency. The content of state-level legislation changed noticeably during 2011, placing greater emphasis on benefit reductions and less emphasis on increased revenues. With the expiration of the ARRA in 2011 and inertia on federal initiatives to provide debt

relief, solvency legislation seems slated to be much more widespread during 2012 and 2013 than in 2010 and 2011.

To date, the most common tax adjustment has been to increase the taxable wage base. Increases have been legislated in Arkansas, Colorado, Florida, Hawaii,<sup>15</sup> Illinois, Indiana, and South Carolina. Other tax increases included a tax surcharge for negative balance employers in Kansas and a differentially higher tax base for negative balance employers in Rhode Island. The enactment of tax base indexation in Rhode Island, Vermont, and Colorado was noted previously.

The November 2010 elections had obvious effects on state solvency legislation in 2011. Benefit reductions became the primary means for improving solvency. As noted, six states reduced the maximum duration of regular UI benefits to less than 26 weeks. Benefits were also reduced through higher disqualification penalties and increased emphasis on oversight of payment accuracy.

A final action with solvency implications was the freezing of tax rate schedules for either single years or multiyear periods in several states. Legislation with tax schedule freezes was passed in Florida, Georgia, Indiana, Massachusetts, New Jersey, New Mexico, and South Carolina. Prior to 2011, only Georgia and Massachusetts had a history of freezing their tax schedules to lessen their experience-rated tax increases.

The pace of solvency legislation has also been slow at the federal level. Both the Obama administration's budget proposal for fiscal year 2012 and a bill sponsored by Senators Durbin, Jack Reed (D-RI), and Sherrod Brown (D-OH) (the Unemployment Insurance Solvency Act of 2011, Senate bill S.386.IS) would raise the federal UI taxable wage base and provide financial rewards to debtor states that greatly improve program solvency. Both initiatives raise the federal UI tax base from its current \$7,000 to \$15,000 in 2014 and index the base to nationwide wage growth in subsequent years. Since total federal UI revenues would increase sharply, both proposals would decrease the federal tax rate to make the change in the federal UI taxes roughly revenue neutral. Both proposals partially forgive debts for states that substantially improve solvency and restore trust fund balances within a seven-year time horizon. Unfortunately, neither initiative has moved forward since being introduced in early 2011.

A third legislative proposal, the Jobs, Opportunity, Benefits, and Services Act of 2011, House bill H.R. 1745 sponsored by representatives Dave Camp (R-MI), Geoff Davis (R-KY), and Rick Berg (R-ND), was introduced in the House of Representatives in May. This bill proposes strengthening job search requirements and mandatory participation in employment services for claimants and shortens the potential duration of emer-

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<sup>15</sup> The change in Hawaii during 2010–2012 will restore the tax base to 100 percent of lagged annual earnings, its position prior to the very large tax base reductions of 2008 and 2009.

gency federal UI benefits. It also overrides existing regulations that require higher state UI taxes when state trust funds are depleted. The bill proposes a federal transfer of \$31 billion into state UI trust funds during fiscal years 2011 and 2012. These new monies would have wider possible uses than paying UI benefits. In effect, this bill places an increased burden of adjustment on UI claimants. It also potentially relieves employers from some of the future costs of supporting the regular UI program, as debt repayment is one of the possible uses of the federal disbursement. The bill was passed by the House of Representatives but has not advanced in the Senate. Compared to the Durbin and Obama administration proposals, the Camp proposal would bring about smaller solvency adjustments by the states, especially in the long run, as it actually would restrain the growth of future state UI tax revenue.

The tax base increase in the Obama and Durbin proposals would substantially increase federal taxable wages and taxable wages in most state UI programs. Since the proposed increases would also affect UI taxes levied by the states, describing the size of the changes may be helpful. In 2010 per worker annual earnings were \$46,100. Assuming 3 percent annual wage growth during the next four years, annual earnings would reach \$51,900 in 2014. The tax base to average wage ratio would increase from about 0.15 in 2010 to about 0.29 in 2014. The associated increase in the taxable wage proportion would be from 0.189 in 2010 to about 0.285 in 2014, and federal UI taxable payroll would increase from about \$870 billion to about \$1,530 billion, or by about three-quarters. To maintain revenue neutrality, the FUTA tax rate would have to decrease from its current 0.60 percent to about 0.35 percent.

Increasing the federal UI tax base would have important implications for regular UI revenue in most states. Under current federal UI tax conformity requirements, state UI programs must maintain a tax base at least at the level of the federal tax base. During 2011, 35 programs have tax bases below \$15,000. This number will likely decrease somewhat due to solvency legislation, but the majority of states would probably need to increase their tax bases in 2014 to reach the \$15,000 threshold. The effects on state UI tax revenue could be partially or totally offset by modification of tax rate schedules. In many states, however, the increase in the federal tax base would also cause state revenue to increase. This would help restore trust fund balances (or at least lessen future erosion), not only in 2014 but also in later years, through indexation of the federal tax base.

We can ask how much an increase to \$15,000 would enhance tax revenue in the states. If the federal tax base is to be increased and then indexed, why not make a larger increase in 2014? The indexation percentage implied by a \$15,000 base (the ratio of the tax base to average earnings) is only about 0.29. The lowest indexation percentage among the indexed programs in 2011 is 50 percent. Moving the federal tax base to 50 percent of

average wages would yield a tax base of about \$26,000 in 2014. This would certainly have a larger effect on tax revenue in several states.

Increasing the federal tax base would also affect the burden of UI taxes across employers. Estimates of experience rating in UI programs suggest that about 60 percent of benefit payments are charged back to the employers whose (current and former) employees receive UI benefits. The remaining benefits are paid through common or socialized charges typically levied at a single rate across all employers. With a higher tax base, more of the burden of common charges will be paid by high-wage employers and less by low-wage employers. This would improve equity in the distribution of the UI tax burden.

Despite the gradual loss of state reserves during the past 20 years, several state UI programs now operate with a very low minimum tax rate. Six have a minimum rate of 0.0 percent in 2011 while 14 have a minimum rate between 0.01 percent and 0.20 percent. Considerations of both equity and revenue needs suggest that such low minimum rates should be increased. As UI is a social insurance program, there is an argument that all employers should pay something into the program, even if at a low rate. This would help finance common charges that are all employers' general responsibility. While most employers who pay low rates are small, a nonzero minimum rate would increase total revenue. There is already precedent for the federal partner to require a maximum rate of at least 5.4 percent of taxable payroll and a taxable wage base of at least \$7,000 per worker. A federal tax rate conformity requirement could also set the minimum to at least 0.2 percent.

Since state UI trust fund indebtedness is so widespread, the Obama administration and Senator Durbin have both introduced bills to partially forgive states' debts when they substantially improve solvency through revenue enhancements. The proposals offer phased debt forgiveness in return for enacting tax increases and achieving stated solvency thresholds. State legislation would enhance revenue sufficiently to put the state on a path to achieving an RRM of 1.0 (i.e., reserves equal to 12 months of benefits measured at a highest previous payout rate) in seven years.

While this legislation provides a worthy target for restoring fund solvency, there are questions. First, can debtor states institute the required scale of tax increases? Can states, particularly those with large outstanding debts, both fully repay current loans and build a fund that reaches an RRM of 1.0 in seven years? Second, will the political process in debtor states permit all the solvency adjustments to be made in revenues? Both proposals preclude benefit reductions. In the past, state solvency packages have typically included both tax increases and benefit reductions. To the extent that old habits die hard, support for a tax-only path to trust fund restoration may not be possible. As of the fall of 2011, these are both open questions. These proposals have not moved in the six months following their introduction.

The Great Recession also revealed problems in UI program administration. Many states were not prepared to handle the increased volume of claims during 2008 and 2009. Payment promptness and payment accuracy both suffered. Administrative problems were exacerbated by features of the ARRA legislation (such as paying an added \$25 per week) and later legislation that further extended benefits for the long-term unemployed (with reach-back provisions and extended eligibility periods). In the long run, UI programs will increasingly conduct administrative transactions by telephone and the Internet. Financial support for these activities should be enhanced so that prompt and efficient administration becomes more widespread throughout the entire UI administrative apparatus. Since annual revenue from the federal part of UI taxes greatly exceeds spending for UI, employment service, and one-stop activities, increasing the allocation of these monies to UI administrative uses is not only feasible but also desirable.

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