The Recession of 2001 and Unemployment Insurance Financing

by<br>Wayne Vroman*

September 2004

* Economist, the Urban Institute. This research was supported by the Rockefeller Foundation. Interpretations and conclusions made in the report are the author's and are not necessarily shared by the Urban Institute or the Rockefeller Foundation. The author thanks several readers from individual states for explanations and helpful comments. Any errors in this report, however, are the sole responsibility of the author.


## Table of Contents

Page
Introduction ..... 1
I. The Recession of 2001 ..... 2II. Aggregate UI Trust Fund Balances
III. Trust Fund Balances in Individual States ..... 6
IV. State Solvency Legislation of 2003-2004 ..... 9
V. State Borrowing Options ..... 15
VI. Borrowing Costs ..... 19
VII. UI Programs After Bond Issuances ..... 23
VIII. Conclusions ..... 25
Charts and Tables

## Introduction

By the standard macroeconomic yardstick (the change in real Gross Domestic Product or GDP) the economic downturn of 2001 was one of the mildest of the past 50 years. Yet in mid-2004 several large states are experiencing difficulties in financing their unemployment insurance (UI) programs. To date, nine state UI programs have secured loans to pay UI benefits. The loans have been obtained from one or more of three sources: the U.S. Treasury, the private bond market and other agencies of state government. The U.S. labor market in mid 2004 continues to exhibit softness with unemployment averaging more than eight million persons during the April-June quarter despite measurable increases in employment. Should the economic recovery suffer new reverses, it is possible that other UI programs will have to borrow this year or in 2005.

Individual UI programs are following different approaches in addressing their funding problems. Strong interest is present in several states to utilize loan arrangements that depart from the traditional borrowing from the U.S. Treasury. Four states have already authorized borrowing with state-issued debt instruments and others may follow suit later in 2004. Additional states such as Minnesota might have issued state debentures absent state constitutional constraints on borrowing options. The potential savings on interest costs is a major reason why states are exploring various alternatives.

This paper has three objectives. 1) It will describe developments in the macro economy and labor market that have relevance for UI funding issues 2) It will describe the important developments in UI financing associated with the recession of 2001. 3). It will discuss and compare borrowing options available to states whose trust fund reserves are inadequate to finance benefit payments. The pros and cons of alternative borrowing arrangements will be evaluated.

States have several alternatives for financing UI trust fund deficits. The report describes the alternatives and the options already taken by some states. The objective is to identify options rather than recommend a "preferred" method of borrowing. In choosing a financing strategy, a state must consider factors such as state constitutional constraints and prohibitions, federal requirements for borrowing, the size of the funding
problem, interest rates on alternative debt instruments and the terms and conditions of debt repayment.

## I. The Recession of 2001

The economic downturn of 2001 was mild, in fact so mild that its dating was not finally established until more than one year after its trough. In most post-World War II recessions, the quarterly decrease in real GDP was some 1.0 to 3.0 percent for one or two quarters followed by a rebound where real GDP growth often exceeded 4.0 percent for one or two quarters. During these episodes, changes in the unemployment rate occurred at nearly the same time as the changes in real GDP. For eight recessions between 1949 and 1982 the month of highest unemployment occurred within four months of the month deemed to have been the trough by the experts at the National Bureau of Economic Research who officially date U.S. recessions.

The recessions of the early 1990s and of 2001 have differed in important respects from the earlier downturns. The decrease in real GDP has been smaller and the rebound in real GDP has been more modest. Perhaps most relevant for the present discussion, the time interval between the business cycle trough and the peak in unemployment has lengthened. For the early 1990s recession the official cyclical trough was March 1991, but the highest unemployment rate occurred in June 1992, 15 months later. The corresponding dates for the 2001 recession were the official cyclical trough in November 2001 but the peak unemployment rate in June 2003, an interval of 19 months.

During the recovery from the 2001 recession labor productivity growth has been rapid, allowing output increases to be achieved with little change in employment. The result has been a period of sticky unemployment rates. After averaging 4.0 percent in 2000, the (seasonally adjusted) monthly unemployment rate increased during 2001, reaching 5.6 percent in November. The unemployment rate has equaled or exceeded 5.4 percent in every month between November 2001 and August 2004.

Chart 1 summarizes quarterly macroeconomic developments from 2000 through the second quarter of 2004. Real GDP and the employment rate ( 100 minus the unemployment rate) have both been indexed at 100 for the year 2000 and then traced
through the recession and recovery. The real output path in 2001 is remarkably flat and then increases at a modest pace during 2002 and the first two quarters of 2003. The acceleration in real GDP growth during the last half of 2003 and continuing into 2004 is apparent in the chart's last four data points.

The employment rate in Chart 1 declined during 2001 and then has been remarkably flat in the ten quarters of 2002-2004. In every month between November 2001 and July 2004 the absolute level of unemployment exceeded eight million persons. This is vividly illustrated in Chart 2 where the eight million threshold is highlighted.

It should be noted that the peak unemployment rate following the recession of 2001 (6.3 percent in June 2003) was not high by historic standards. During the four prior recessions the peak rate exceeded 7.5 percent, and for two the peak rate was 9.0 percent or higher (May 1975 and November 1982). What is unusual about the 2001 recession is the long duration of the spells experienced by the unemployed. Mean and median duration in 2003 (19.2 and 10.1 weeks respectively) were higher than their counterparts from the early 1990s recession and at levels roughly the same as those from the major recession of the early 1980s.

This period of high unemployment has also seen persistently high claims for regular UI program benefits. ${ }^{1}$ Chart 2 shows that during 2001 as unemployment increased the number of claimants increased from about 2.2 million and reached 3.0 million in July 2001. The number then remained above 3.0 million through March 2004. For the July 2001-July 2004 period, the monthly average exceeded 3.4 million. Two features of UI claims during 2002-2004 have been the long average duration of claims and the high rate of benefit exhaustions. UI claimants have faced greater difficulties in securing new jobs than in several previous recessions that had much higher unemployment rates.

Experiencing a long period of high claims volume means that states were faced with high UI benefit costs even though real GDP was increasing. This again illustrates that during the recovery from the recession of 2001the labor market and the product market have not behaved identically. In 2002 and 2003 regular UI programs paid about $\$ 40$ billion in benefits per year, or twice payments in 1999 and 2000. While the cost rates

[^0](benefits as a percent of covered payroll) for the regular UI program in 2002 and 2003 were not unusually high by historic standards, the long interval of high claims volume has caused a major drawdown in state UI trust funds.

Chart 2 also shows the volume of claimants under the emergency federal benefits program (Temporary Extended Unemployment Compensation or TEUC). Claims were highest during April-June 2002 (more than 1.3 million), immediately following the start of the program in mid-March. To a considerable extent the high initial caseload included many who had exhausted UI well before the start of TEUC. Following this initial bulge, the numbers averaged nearly 0.9 million or roughly 20 percent of the combined (regular plus TEUC) UI claims load between July 2002 and December 2003. TEUC paid about \$10 billion in both 2002 and 2003. Because TEUC was fully federally financed, this emergency program will not be emphasized in the following discussion.

## II. Aggregate UI Trust Fund Balances

The long period of high regular UI claims has substantially reduced state UI trust fund balances. Total net reserves across the 53 programs (the 50 states plus the District of Columbia, Puerto Rico and the Virgin Islands) decreased from $\$ 54.1$ billion at the end of 2000 to $\$ 21.0$ billion at the end of $2003 .{ }^{2}$

Chart 3 traces developments in UI trust fund balances from 1960 to 2003. Since absolute balances do not reflect growth in the scale of the economy, reserves are more accurately tracked by measuring them relative to annual UI covered wages (termed a reserve ratio). The design of UI financing arrangements anticipates that trust funds will be drawn down during recessions and replenished during economic recoveries. Chart 3 identifies five recessionary periods with major trust fund reductions, ${ }^{3}$ with the largest changes occurring during 1974-1976 and 1980-1983. Compared to these earlier periods the drawdowns during 1991-1992 and 2001-2003 were more modest.

Using reserve ratios as a signal of UI trust fund health, note how the ratios fall neatly into broad two periods. Prior to 1975 all reserve ratios exceeded 2.0 percent while

[^1]after 1975 no ratio exceeded 2.0 percent. There has been a long run trend towards smaller balances when reserves are measured relative to an economy-wide aggregate like total covered payroll. ${ }^{4}$

Note the very low reserve ratios during 1975-1976 and then during 1982-1983 when the overall ratio was actually negative. These two periods were characterized by large scale borrowing by the states to pay benefits and by substantial adjustments in UI benefits and taxes to improve program solvency. Despite present difficulties in several states, the current funding situation is much better than during these two earlier periods.

Chart 3 also traces the increases in reserve ratios during four periods of economic expansion: the 1961-1969, 1977-1979, 1983-1989 and 1993-2000. Note the large increases in the reserve ratio between 1984 and 1989. These were years of strong economic growth. Additionally, because more than half the states had required loans from the U.S. Treasury during 1980-1983, there was strong motivation to restore trust fund balances to higher levels. Sustained reserve accumulations were widespread, and the aggregate reserve ratio increased from -0.47 percent at the end of 1983 to about 1.90 percent at the end of 1989 and 1990. This was the largest sustained accumulation of reserves of all four recovery periods shown in Chart 3.

The rapid pace of trust fund building during 1983-1989 stands in sharp contrast to the experiences of the 1990s. Note that the reserve ratio only increased from 1.25 percent at the end of 1992 and 1993 to about 1.50 percent at the end of the decade. The failure of aggregate reserves to grow more rapidly during these years reflects mainly the cumulative effects of UI tax reductions enacted in several states. Thus entering the 2001 recession, aggregate trust fund reserves were less adequate than just before the 19901991 recession. In fact, the pre-recession reserve ratio in 2000 of 1.46 percent was lower than in all previous recessions extending back to 1949 with the sole exception of 1979. The $\$ 54.1$ billion in the state UI trust funds at the end of 2000 simply was not that large when measured relative to the overall scale of the U.S. economy.

It should be noted that the fund balances underlying Chart 3 include $\$ 8.0$ billion distributed to the states in March 2002 under provisions of the Reed Act. Absent this distribution, net reserves at the end of 2003 would have totaled only $\$ 12.0$ billion and the

[^2]reserve ratio would have been 0.34 percent, not 0.55 percent as shown in Chart 3 . The infusion of the $\$ 8.0$ billion prevented larger drawdowns of reserves and helped the financing situation of many states.

The Reed Act distribution of 2003 also gave states increased flexibility in the use of UI trust fund monies. Tax receipts deposited into state UI trust funds can be used for only a single purpose: to pay UI benefits. Reed Act deposits, in contrast, can be used for administration and/or worker adjustment activities as well as paying benefits. Several states have used Reed Act monies to support such activities.

## III. Trust Fund Balances in Individual States

The standard measure of trust fund adequacy for UI is the reserve ratio (or high cost) multiple. This is a ratio measure that recognizes three factors: the trust fund balance at a point in time, annual covered payroll and the highest cost rate experienced by a state in the past. The numerator of this ratio is the reserve ratio (the trust fund balance as a percent of payroll), exactly analogous to the national reserve ratios displayed earlier in Chart 3. The denominator is the highest previous twelve month cost rate (benefits as a percent of payroll). Most who study trust fund reserve adequacy recommend that a state achieve a pre-recession reserve ratio multiple of at least 1.0 (or, sometimes, 1.5). A multiple of 1.0 means that the trust fund can support twelve months of payouts at the historically highest payout rate.

In fact, many individual states fall short of achieving this solvency level. At the end of 2000, the national reserve ratio multiple was only $0.66,{ }^{5}$ and just 11 states had multiples that exceeded 1.0. By the end of 2003 the national reserve ratio multiple had decreased to 0.25 or by 0.41 . This decrease means that during the recent recession, as in past recessions, the UI program has performed a stabilizing function for the macro economy by making much larger benefit payouts than tax collections. The drawdown is to be reversed in the ensuing recovery as tax revenues will increase through experience rating, exceed benefit payouts and replenish the state trust funds.

[^3]Having a low reserve ratio multiple prior to a recession means that a state will have less time to make solvency adjustments if it wants to avoid exhausting the fund. Although a well-established borrowing mechanism exists, states prefer to avoid borrowing if possible. In the past, especially during 1975-1977 and again during 19801983, widespread and large-scale borrowing occurred. States with low and negative reserves responded with legislation to both raise UI taxes and reduce benefits. Part of the tax response occurs automatically through experience rating, but the states also made other adjustments to taxes and benefits to improve solvency. ${ }^{6}$

The recession of 2001 affected nearly all states, causing lower employment and increased unemployment. When state unemployment rates for 2000 and 2003 are compared, all states had higher unemployment in 2003 except Hawaii (no change) and Montana (lower by 0.3 percentage points). Across all 53 "state" UI programs, only three experienced increases in their reserve ratio multiples between December 2000 and December 2003 (Hawaii, Maine and North Dakota). The other 50 all had reductions in their multiples.

Seventeen states entered the 2001 recession with reserve ratio multiples lower than 0.60 . Between the end of 2000 and the end of 2003 almost exactly half (eight) of the 17 states experienced above-average reductions in their reserve ratio multiples. Many of the states with low pre-recession reserve ratio multiples have had to borrow to make benefit payments. Thus low initial reserves and above-average reductions in reserves both contributed to the funding problems in individual states.

Table 1 provides descriptive detail for fifteen states with low net reserve ratio multiples at the end of 2003, all below 0.25 . The states are divided into two groups. Nine that have undertaken some form of borrowing between July 2002 and June 2004 appear in Panel A while the other six with low reserves appear in Panel B.

Note the large size of the states in Table 1. Column [1] shows each state's size ranking. ${ }^{7}$ Panel A has four of the five largest states and eight of the largest 15. Combined, the two panels include 11 of the 15 largest states. In fact, just one of the 15 states in Table

[^4]1 (Arkansas) is below-average in size. ${ }^{8}$ Using the pre-recession reserve ratio multiple as an indicator of prudent UI trust fund management, the large states, on average, have been less prudent managers than the small states. The simple (unweighted) average reserve ratio multiple for the 13 largest states at the end of 2000 was 0.54 (roughly half of the recommended standard) compared to 0.98 for the 13 smallest states.

Columns [2]-[4] focus on losses of reserves during 2001-2003. Reserves are measured on a net basis so that outstanding loans are subtracted from the gross balances held in the state accounts at the U.S. Treasury. ${ }^{9}$ Recall that the national ratio decreased by 0.41 during these three years. Among the nine states in Panel A, only New York experienced a below-average decrease in its reserve ratio multiple. Note in Panel B that Colorado and Virginia experienced very large losses in reserves during 2001-2003. ${ }^{10}$

Columns [5] and [6] respectively identify when each state first borrowed and its level of indebtedness at the end of 2003. The total for six states was $\$ 3.2$ billion. Borrowing is seasonal, being especially large during January-March as seasonal payouts are high while tax receipts are low. This borrowing (termed cash flow loans) is followed by repayments occurring after the inflow of tax receipts from first quarter accruals. For example, total indebtedness (from all borrowing) at the end of March 2004 was $\$ 5.6$ billion compared to $\$ 3.6$ billion at the end of June 2004.

California, Massachusetts and Pennsylvania first borrowed in 2004. Pennsylvania’s borrowing was from another state fund (the Motor License Fund). This was effectively a cash flow loan to cover a potential revenue shortfall in the months just prior to the large seasonal revenue inflow of April-May. A loan of $\$ 300$ million was secured in March, and it was fully repaid in May. Borrowing by California (\$238 million) and Massachusetts (\$418 million) was also fully repaid by the end of May 2004. One or more of these three states may borrow later in 2004 or during the early months of 2005.

Most states faced with declining trust fund reserves would follow one of two courses of action. A state can try to ride-it-out, hoping that the economic recovery will improve revenues and reduce benefit outlays sufficiently for the trust fund to bottom out

[^5]before reaching zero. The main element of a ride-it-out response relies on an automatic response of UI taxes through experience rating (and, in some states, automatic benefit reductions). Experience rating systems cause UI taxes to increase automatically when trust fund balances fall below designated thresholds. Column [7] identifies states with experience rating responses to the trust fund drawdowns caused by the 2001 recession. ${ }^{11}$

A second possible response is to "do something" legislatively. Usually this involves legislation with a combination of tax increases and benefit reductions. Column [8] of Panel A shows that five states enacted solvency legislation in 2003 or 2004. Important details of the legislative responses are given in Part IV.

One possible element of a legislative response is to authorize and then to issue state debt instruments. This represents an alternative to using loans from the U.S. Treasury. To date, four states have authorized this form of borrowing, and Illinois, North Carolina and Texas have issued state debt instruments. A principal argument for this financing strategy is that it costs less due to the low interest rates on state-issued debt. Compared to borrowing from the Treasury under provisions specified by Title XII of the Social Security Act, state debt instruments may carry interest rates some 200-300 basis points (or more) below the interest rates on Title XII loans.

Part V discusses borrowing alternatives. It covers state bond issuances of earlier recessions as well as the issuances of 2003 and 2004. The requirements on states and other details of Title XII loans are included in the discussion.
IV. State Solvency Legislation of 2003-2004

States have responded to their trust fund drawdowns in different ways. Column [8] of Table 1 identifies six states where some form of legislation or administrative action was undertaken to improve solvency. Table 2 focuses on the details of the solvency adjustments made by seven states where borrowing occurred between December 2002

[^6]and June 2004. The six states that have enacted some type solvency package (or administrative response) are included in Table 2 along with Pennsylvania. ${ }^{12}$

Table 2 identifies detailed aspects of benefit reductions, tax increases and borrowing activities for the seven states. Four states (Illinois, Massachusetts, Minnesota and Missouri) have included in their solvency packages several traditional provisions of benefit reductions and tax increases. The other three states have followed more unusual approaches to achieve improved solvency. The discussion will start with Pennsylvania.

In the late 1980s, Pennsylvania and Illinois modified their UI statutes to implement a funding strategy that has been described as flexible financing. Unlike advance funding which relies on having a large fund balance prior to a recession, flexible financing deliberately aims to have a small fund balance, but then to activate automatic tax increases and benefit reductions to counteract recession-related trust fund drawdowns.

One can question the rationale for flexible financing. Household income and business profits both decline during recessions. To impose added burdens on the parties during a recession, i e., reduced UI benefits and higher UI taxes, seems inappropriate to many. In addition to this objection, there is a second important question: does flexible financing actually work? During the recession of 1990-1992, Illinois and Pennsylvania did not experience important financing problems as neither state was among the seven that secures loans to pay UI benefits. ${ }^{13}$ However, both states have experienced financing problems following the 2001 recession, hence their inclusion in Table 2.

The flexible financing provisions adopted by Illinois in the late 1980s included modifications of its tax setting mechanism and provisions to freeze or reduce the maximum weekly benefit in response to a trust fund drawdown. Different triggers were established to activate individual solvency features. These included specific trust fund threshold amounts to trigger individual tax features along with the use of changes in tax rates and first payment volume as well as a trust fund threshold to activate solvencyrelated benefit reductions. Other features of this legislation included a redefinition

[^7](reduction) in the weekly wage used to calculate maximum weekly benefit and establishing a floor for the state experience factor used to set the rate for the solvency tax. In reality, the latter two features were not flexibility features since they operated in all years after 1988. Nevertheless, this package was described as flexible financing by the then-director of the Illinois UI program ${ }^{14}$ and helped to justify a policy of maintaining a modest UI trust fund balance.

Pennsylvania’s UI law includes four flexible financing features. All four operate automatically as the level of a single solvency trigger (UI reserves on June $30^{\text {th }}$ as a percent annualized benefit payments for the preceding 36 months) changes over seven designated ranges. The four features are: 1) a solvency surcharge on employers that can range from a minimum of -2.5 percent (a tax reduction) to a maximum increase of 7.2 percent of the basic UI tax liability; 2) a flat rate (additional) surcharge on employers of up to 0.6 percent of taxable wages, 3) an employee tax of up to 0.09 percent of total covered wages, and 4) a weekly benefit reduction of 2.3 percent.

The solvency features have been active during 2003 and 2004, and are slated to be in effect (at least) through 2005 and 2006. During 2003, a solvency surcharge of 3.6 percent was in effect along with an employee tax of 0.02 percent. This year the surcharge is 7.2 percent, the flat tax is 0.4 percent and the employee tax is 0.09 percent. During 2005 and 2006 all four features are projected to be operative at their respective maxima. Thus Pennsylvania's flexible financing strategy is being seriously tested. It will be of interest to note whether or not the four features will act with enough combined strength to restore the fund balance without the need for additional borrowing or the need for new solvency legislation. The entries in Table 2 for Pennsylvania refer to the activation of its automatic features during 2003-2006.

Pennsylvania's borrowing from the Motor License Fund had two motivations. First, and most obvious, it wanted to ensure that its trust fund balance was adequate to make benefit payments during March-May without borrowing from the U.S. Treasury.

[^8]Second, it wanted to ensure that some of its Reed Act monies (included in the state's UI trust fund balance) would remain available for future uses other than paying benefits. ${ }^{15}$

Unlike Pennsylvania, the other six states in Table 2 have all implemented some form of active initiative to address their UI funding problem. Five have enacted new legislation while North Carolina has responded through purely administrative actions. The North Carolina Council of State, a select committee of elected department heads including the Governor and the State Treasurer, has authorized the issuance of tax anticipation notes secured by the future UI tax revenues. North Carolina issued \$172 million of tax anticipation notes in 2003 and fully repaid the notes with UI tax receipts from January-May 2004. During 2004, it has again borrowed from the U.S. Treasury, repaid the January-September Title XII loans at the end of September, issued new tax anticipation notes in late September 2004 and may issue more before the end of the year. These 2004 issuances will be repaid with tax receipts from the initial months of 2005.

Two aspects of North Carolina’s strategy are noteworthy. First, it is carefully adhering to the requirements for interest-free borrowing under Title XII. Loans from the Treasury are repaid before September $30^{\text {th }}$ and no new borrowing from the Treasury takes place between October $1^{\text {st }}$ and December $31^{\text {st }}$. Second, it is operating exclusively with short term notes for its the interest bearing loans. Given the upward slope of the term structure of interest rates (the association between interest rates and the maturity date of debt instruments), this ensures that it will borrow at very low short term rates, e g., about 1.1 percent for the notes issued in 2003.

Texas is the third state to follow a nonstandard approach to its UI financing problem. It entered the 2001 recession with one of the lowest reserve ratio multiples of all states ( 0.24 as shown in column [2] of Table 1), and it started to borrow in December 2002. By September 2003 its indebtedness totaled about $\$ 280$ million. Late in the month, Texas authorized $\$ 2.0$ billion in state bonds and issued a total of $\$ 1.4$ billion in state debt instruments. These were issued as four separate series, differing in their tax status and call features. The bonds have maturity dates between July 2004 and January 2009, but over half are callable so that they can be retired before maturity.

[^9]Part of the bond proceeds was used to repay all outstanding Title XII advances and the rest was deposited into the Texas UI trust fund. These actions allowed the state to avoid two things: interest charges on its Title XII loans (roughly $\$ 17$ million) and a large UI tax surcharge that would have been due on January 1, 2004. The surcharge (deficit tax) would have totaled about $\$ 750$ million and would have been levied on top of other UI taxes for 2004. The bond issuance allowed employers to pay much lower taxes in 2004 compared to their obligations under the earlier Texas tax statute.

Thus while UI taxes paid in 2004 are higher than in 2003, they are much lower than would have been the case absent the bond issuance. By issuing bonds, tax obligations have been smoothed and repayment will be spread over five years. Texas also has borrowed at a lower interest rate than the rate charged on Title XII advances. State officials estimate that over $\$ 300$ million in interest has been saved as a result. Additional details of the Texas bond issuance are discussed in section V.

The other four states included in Table 2 enacted solvency legislation that included several traditional adjustments, i e. tax increases and benefit reductions. In all four states, tax increases accounted for most of the solvency adjustments. ${ }^{16}$ All four states increased one or more aspect of solvency taxes triggered by low trust fund balances. Three of the four also increased their taxable wage base. Note in Illinois and Missouri that benefit liberalizations as well as benefit reductions were part of the legislation.

Of the states with solvency tax increases, the changes in Massachusetts were especially noteworthy. In setting taxes for the upcoming year, Massachusetts examines the statewide reserve balance on August $31^{\text {st }}$ and sets its solvency tax (assessed as a reduction in the employer's trust fund account on the computation date) as a percent of taxable wages. Legislation of December 2003 empowered the Department of Employment and Training (DET) to levy a solvency assessment that would cover not only traditional costs such as noncharged benefits but also ensure that the state repays all outstanding Title XII loans secured before September $30^{\text {th }}$ and collects enough additional revenue so that the state would not borrow between October $1^{\text {st }}$ and December $31^{\text {st }}$. In

[^10]effect, this new authority ensures that Massachusetts will avoid interest charges on Title XII loans but adds uncertainty among employers liable for the solvency assessment in September. The new solvency provisions have their first test in 2004.

The solvency legislation in two of the four states (Illinois and Missouri) included authorizations to issue state notes/bonds. Illinois authorized $\$ 1.4$ billion and issued bonds totaling $\$ 712$ million on July 1, 2004. Missouri authorized $\$ 450$ million in three year notes, is presently (September $30^{\text {th }}$ ) discussing options and could issue notes before the end 2004. More details of these issuances will be presented in section V.

As noted in Table 2, solvency legislation in three states (Illinois, Massachusetts and Missouri) increased the taxable wage base. Massachusetts raised its base from \$10,800 per employee in 2003 to $\$ 14,000$ in 2004 where it is slated to remain for ensuing years. Illinois and Missouri raised their tax bases in annual steps after 2004, reaching \$12,300 and \$12,500 respectively in 2009 and possibly \$13,000 for both in 2010. Minnesota, which already has an indexed taxable wage base, did not alter its tax base.

Chart 4 traces the taxable wage proportions for these four states between 1965 and 2010. The proportions through 2003 are historic data while the years 2004-2010 display regression-based estimates. The peaks in the sawtooth patterns identify years of major increases in the taxable wage base including the federally mandated increases in 1972, 1978 and 1983.

Three aspects of Chart 4 are noteworthy. 1. The proportions for the earliest years are substantially higher than for the latest years. 2. The pattern for Minnesota departs substantially from the other three patterns. The state adopted indexation in 1982, and since then the taxable wage proportion has varied within a narrow range between 0.47 and 0.50 while it has declined in the other three states. 3 . Most important, note the generally small size of the tax base increases after 2004. In Massachusetts, the taxable wage proportion changed much more between 1991 and 1992 (increasing from 0.31 to 0.40) following the tax base increase of 1992 than between 2003 and 2004 (from 0.28 to an estimated 0.33). The increases in Illinois after 2004 roughly matches wage growth (assumed to be three percent per year) so that the higher tax base from the new legislation does not substantially increase the taxable wage proportion. In all three states, the taxable
wage proportion in 2010 is substantially lower than during the mid-1990s despite recent legislation to raise the tax base.

## V. 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 utilized advances from the U. S. Treasury under loan provisions specified in Title XII or the Social Security Act. During 1974-1979 25 separate programs borrowed from the Treasury with loans totaling $\$ 5.54$ billion. Between 1980 and 198732 different programs borrowed a total of $\$ 24.0$ billion. More recently, seven states needed loans in the early 1990s and eight borrowed from the Treasury between December 2002 and June 2004. Roughly three quarters of the programs have borrowed from the Treasury at some point in the past. The terms of these loans are well understood and are briefly summarized below. ${ }^{17}$ In contrast, only six states have ever borrowed in the private capitol market to finance trust fund deficits.

## Borrowing from the U.S. Treasury

Short term (cash flow) borrowing from the Treasury does not carry interest charges when certain provisions are met. The most important of these are: 1) the full repayment by the end of September of all loans secured between January and September and 2) no new borrowing during October-December. As noted above, these loans help to maintain benefit payments in the early months of the year when monthly outlays are highest but revenues are lowest.

Loans that last longer carry interest charges levied at an interest rate equal to the rate earned on positive fund balances, i e., the rate on longer term Treasury debt. In 20032004 this rate has been close to 6.0 percent. Interest is charged on the average daily balance of debt. States with funding problems manage their debts with the objective of

[^11]ending each day with a UI trust fund balance of zero. Thus, either borrowing or debt repayment occurs each day, a strategy that minimizes the average daily balance.

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 obliged to use their trust funds only to pay benefits except for unusual circumstances such as trust fund monies received from special Reed Act distributions. The principal can be repaid from the trust fund balance because the original debt was incurred to pay benefits.

Title XII also has provisions to ensure automatic repayment of outstanding debts. When the principal of 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 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. ${ }^{18}$ Debts are repaid starting with the oldest.

When debt repayment takes place through increased federal taxes (reduced credit offsets) the taxes are paid at the same rate regardless of employer experience. The desire to avoid such flat rate assessments was an important consideration in using bond financing in Illinois. The majority of its debt repayments will be 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. ${ }^{19}$

A final aspect of borrowing from the Treasury relevant today pertains to the disposition of monies received by the states under the Reed Act, most recently the $\$ 8.0$ billion disbursement of March 2002. As noted earlier, states can use these monies to finance UI-ES administration and worker adjustment activities as well as for paying benefits. However, any Reed Act monies not specifically obligated for one of these "alternative" uses must be fully used up in paying benefits before a state may receive a

[^12]Title XII loan. Pennsylvania’s borrowing from the Motor License Fund was undertaken to preserve some of its Reed Act monies for alternative uses.

## Borrowing in the Capital Market

Starting with Louisiana and West Virginia in 1987, six states have secured loans from the private capitol market to cover UI funding deficits. Table 3 gives some details of these loans. The first three states to utilize these loans have completed their repayments while the three that borrowed recently have only started their repayments. In addition to the six states, Table 3 also includes Missouri which has authorized this type of borrowing but had not yet issued debt instruments as of the end of September 2004.

Several uncertainties surround this form of borrowing and this is reflected in provisions of the debt issuances. Should the state economy perform worse than expected during the repayment period, there could be a need for additional borrowing. Note in columns [2] and [3] that Louisiana and West Virginia borrowed their full authorizations while Connecticut, Texas and Illinois issued 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, but Texas and Illinois at present retain the authority to borrow some $\$ 600-700$ million more should the need arise.

Column [4] shows a clear pattern as to the size of the loans, much smaller in the present decade than in the 1980s and 1990s. Even if Missouri borrows its full authorization, the amount will only represent about 0.6 percent of covered wages. For Louisiana in particular it seems that the loan of 1987 was unnecessarily large. Its borrowing was fully repaid in seven years not the fifteen years potentially contemplated at issuance. Similarly, West Virginia fully repaid its loans in four years not the six years originally authorized.

Because of uncertainty about future macroeconomic performance and future interest rates, the bonds were issued with hedging features. As noted in column [8], all five bond issuances have had early redemption (call) provisions. Interest rate uncertainty is addressed by having variable rate bonds (Connecticut, Texas and Illinois) and potential future convertibility of variable rate bonds to fixed rate bonds (Connecticut, Texas and Illinois). Connecticut both called and converted some its bonds before repayment was completed in 2001.

North Carolina's approach to uncertainty stands in sharp contrast to five states that have issued bonds. Rather than issue debt instruments with long maturities, it (in 2003 and 2004 at least) has been borrowing using Title XII cash flow advances and short maturity notes and doing both on an "as needed" basis. This has two advantages: 1) low interest rates associated with the short-term notes and 2) no "over-issuance" of statesupported debt instruments. A similar strategy was considered by Massachusetts in the early 1990s but not implemented because its debt was successfully addressed by solvency legislation.

The Texas issuance of 2003 also involved considerations of the tax treatment of the bonds. Earlier offerings by other states had been exclusively tax-free municipal bonds. However, Texas issued both tax-free and taxable bonds, respectively $\$ 280$ million and $\$ 1,120$ million. The state's strategy in having this mixture was influenced by the solvency tax feature of its UI law. Texas law requires the imposition of a solvency tax whenever its trust fund balance falls below one percent of taxable payrolls on the computation date, October $1^{\text {st }}$. Any shortfall is to be made up by solvency tax revenues in the upcoming year. Absent bond financing, the solvency taxes due in 2004 would have totaled about $\$ 1.0$ billion. The tax-free component of the bond issuance was used to payoff the outstanding UI trust fund debt at the end of September 2003. An additional \$1,120 million from taxable bonds was deposited into the trust fund, satisfying the one percent minimum balance requirement.

To avoid losing interest income on its trust fund balance, Texas deposited the proceeds from taxable bonds into the trust fund. Thus the state avoided imposing a large solvency tax. Because of the structure of bond market interest rates, Texas also realized a monetary gain from its financing package. Positive UI trust fund balances have yielded about 6.0 percent per year in 2003 and 2004 while the interest rate on the state’s taxable bonds has averaged less than 4.0 percent. ${ }^{20}$

For other states, the debt instruments have been exclusively tax-free bonds (notes in North Carolina). The proceeds have been used mainly to repay existing Title XII

[^13]advances. However, small amounts have been reserved for administrative costs and to repay possible future Title XII advances.

The typical time to issue state bonds has been the July-September months. Bond proceeds can be deposited into the trust fund prior to September $30^{\text {th }}$ to satisfy Title XII cash flow borrowing requirements. Also, since second quarter tax receipts arrive during July-August, the bond issuance can be made in light of up-to-date information about the trust fund balance.

Some states have considered issuing bonds, but then concluded there were constitutional impediments. In Minnesota, for example, the state discussed the possibility of issuing bonds. However, Minnesota's constitution is restrictive as to the activities that can be financed with general obligation bonds. The proceeds must be used to make improvements in public infrastructure or programs. Allowable activities are identified, e g., building classrooms for schools, upgrading parks, and financing UI trust fund deficits is not an allowable activity. The state can also borrow short term, but short-term loans must be fully repaid before the end of the same biennium. In the fall of 2003, this implied full repayment by the end of June 2005. Since UI taxes were already slated to increase during 2004 and 2005 (through experience rating), adding to employer taxes in these two years (to repay state-issued notes) had little appeal. In sum, issuing bonds was not allowed and issuing notes was not an attractive option.

States issuing bonds establish an administrative apparatus to collect the taxes needed to repay principal and interest on the bonds and to cover associated administrative expenses. If the administrative entity judges it appropriate, "excess" revenues are used to repay parts of the callable bonds. This administrative entity also transfers monies into the UI trust fund to prevent the accrual of new interest-bearing Title XII advances.

## VI. Borrowing Costs

Except for Title XII cash flow loans, all forms of borrowing entail costs. For a state trying to minimize UI borrowing costs, the basic contrast between Title XII later years is uncertain, dependent on future variation in the relevant interest rates.
advances and other forms of borrowing is straightforward. Because borrowing and repaying under Title XII can be executed on a daily basis, a state can minimize the average daily balance of its outstanding loans through appropriate debt management. It simply retires debt on days when revenues exceed benefit payments and borrows on days when payments exceed revenues. Thus the cost of borrowing under Title XII is the product of this minimum average daily balance times the Title XII interest rate. Interest costs accrue as long as there is outstanding debt, but there are no other borrowing costs.

The Title XII interest rate is set annually by the U.S. Treasury and is capped at 10.0 percent. In the six years between 1982 and 1987 the rate consistently exceeded 9.0 percent, equaling 10.0 percent in three of these years. Column [1] of Table 4 displays Title XII interest rates from 1991 to 2004. The highest rate during these recent 14 years was the 8.60 percent of 1991. Rates have been below 7.0 percent since 1994 and below 6.0 percent during 2003 and 2004. With the low inflation of recent years, this and other interest rates have been trending downward.

Borrowing in the private bond market involves several considerations. Two are: the type of debt to issue and the size of the issuance. Compared to Title XII loans, this form of borrowing will almost certainly carry a lower interest rate, but the amount of borrowing will exceed the average daily balance of Title XII loans. Also, other costs besides interest rate costs need to be considered.

Columns [2] and [3] of Table 4 respectively display interest rates for taxable corporate bonds and tax-free municipal bonds (the type of instruments issued by most state UI programs that have borrowed in the private bond market). Interest rates are lower for the latter because the interest paid to owners of such bonds is not taxable under federal and state income taxes. The lower interest rates on municipal bonds is emphasized in columns [8] and [9] which respectively show spreads between municipals, on the one hand, and Title XII loans and corporate bonds respectively.

Two other points should also be noted. 1) The interest rates in columns [2] and [3] are average yields, averaged across bonds of differing maturities. Newly issued bonds can carry interest rates that depart substantially from these averages. State UI programs issuing municipal bonds in 2003-2004 have paid interest rates in the 2.0-4.0 percent range. The large contrasts with Title XII interest rates make this form of borrowing
attractive for a debtor state. 2) The interest rate spreads in columns [8] and [9] exhibit considerable year-to-year variability. In both columns, the widest spread is more than twice the size of the smallest spread. The municipal bond differential with Title XII, column [8], has not been constant.

Columns [4]-[7] of Table 4 display interest rates for debt instruments of successively shorter maturities. In general, rates decrease at shorter maturities and municipals carry lower rates than other instruments. Interest rates at the short end of the market have been very low since the onset of the recession in 2001 with basis point spreads vis-à-vis Title XII loans, corporate bonds and municipal bonds typically exceeding 300 basis points (columns [10] and [11]).

One purpose in showing several interest rate series in Table 4 is to suggest something of the range of debt instruments that might be considered by a state in borrowing from the private bond market. As indicated above, North Carolina issued notes in 2003 and 2004. During 2002-2004, interest rates on one-year and shorter obligations (columns [5], [6] and [7]) have consistently fallen below 2.0 percent.

Besides interest costs, at least three other costs of issuing private debt instruments should also be noted. 1) Underwriting fees are charged by the companies that issue bonds. These fees are assessed at the time of the issuance. 2) Insurance and other issuance costs must be recognized. Bonds need to be insured against default risk and other incidental costs also arise. 3) Exercising the call features of municipal bonds involves a fee in that the principal must be redeemed at a price above the face value of the bond. Some examples of these costs based on past bond issuances are instructive.

Reviewing the bond sales made by Louisiana, Connecticut, and Illinois, underwriting discounts (fees) ranged from 0.22 to 0.34 percent of the loan amounts while insurance and other issuance costs ranged from 0.23 to 0.56 percent of the loan amounts. For these three states, the total of all issuance costs ranged from 0.48 to 0.89 percent of the loans. Although analogous detailed information for Texas has not been found, the sum of all issuance costs was about 0.33 percent. Expressed as an annual percentage interest rate prorated over the lives of the associated borrowing, the sum of these costs would represent less than 0.2 percent.

Early redemption premiums for callable bonds were generally between one and three percent for Louisiana, Connecticut and Illinois. Calls exercised three years after issuance would amount to an annualized percentage of less than one percent in nearly all instances and less than 0.5 percent for a call exercised after six years.

The sum of all of the preceding "additional" cost components can be combined and expressed as a number of basis points to be added to the interest rate costs of debt issuance in the private market. The preceding discussion suggests that the increment would be equivalent to between 25 and 75 basis points. In financial markets where the spread between Title XII interest rates and municipal bonds have generally exceeded 100 basis points (column [8] of Table 4), these additional costs still imply a lower overall interest rate in issuing municipal bonds. The interest rate cost advantages are, of course, even larger when the comparison involves short-term debt instruments as in columns [10] and [11] of Table 4.

To summarize, a generic comparison of Title XII borrowing versus borrowing in the bond market leads to three conclusions. 1) The principal upon which interest is charged is always lower under Title XII loans. 2) The effective interest rate under a bond issuance (including the added costs just discussed) will be lower than the Title XII interest rate. 3) The difference in costs under the two forms of borrowing is ambiguous. However, as the interest differential in favor of private debt instruments is larger, it becomes increasingly likely that this will be the less expensive of the two options.

In earlier work where the comparative costs (Title XII versus municipal bonds) were assessed for Louisiana and West Virginia, I concluded that the costs of municipal bond issuance were not clearly lower for either of these two states. ${ }^{21}$ Obviously, as the spread between Title XII interest rates and other interest rates is larger, it becomes more likely that the borrowing in the private bond market will lead to cost savings vis-à-vis using Title XII loans. It also seems likely that the largest savings will be realized (at least in the current financial environment) when a state borrows by issuing short term debt instruments with their very low interest rates as illustrated in Table 4.

[^14]
## VII. UI Programs After Bond Issuances

Does issuing bonds have effects on subsequent UI program performance? Since just three states have fully repaid the loans secured from "bonding," the range of experiences to date is limited. This section examines two aspects of post-bonding performance: trust fund accumulations and benefit payments. The latter considers both the recipiency rate (beneficiaries as a share of statewide unemployment) and the replacement rate (weekly benefits as a proportion of weekly wages). The discussion focuses on the years 1979 to 2003 and places heavy emphasis on charts to make a few key points.

Chart 5 displays reserve ratio multiples for the three states. Recall that Louisiana and West Virginia issued bonds in 1987 and Connecticut in 1993. Recall also that having a reserve ratio multiple of 1.0 is a frequently used measure of trust fund solvency. Reserves underlying Chart 5 are measured as the total balances held at the U.S. Treasury and do not net out outstanding balances owed in the private bond market. Thus while these debts were still outstanding, the multiples shown in Chart 5 overstate the net solvency position of the three states. ${ }^{22}$

In all three states the bond issuance had a large effect on the state's trust fund balance. For both Louisiana and West Virginia, the reserve ratio multiple at the end of 1987 was about 1.0 higher than one year earlier. The increase for Connecticut between 1992 and 1993 was about 0.5. ${ }^{23}$

As their bonds were being repaid, the three states also were increasing reserves in their Treasury balances. The reserve ratio multiple for Louisiana increased steadily throughout the decade after bonds were issued. The multiple first reached 1.0 at the end of 1995 and has remained above 1.0 through 2003. For West Virginia and Connecticut, the multiples peaked at about 0.5 and have never substantially exceeded this level.

All three states have had quite favorable trust fund experiences during and after the recession of 2001. Between December 2000 and December 2003 the national reserve

[^15]ratio multiple decreased by 0.41 , from 0.66 to 0.25 . The analogous decreases for Connecticut, Louisiana and West Virginia, however, were 0.21, 0.10 and 0.05 respectively. All eight states with Title XII loans in the current recession (identified in Panel A of Table 1) have had larger decreases in their multiples and seven (all but New York) have had decreases that exceeded the national average of 0.41 . Given their low initial reserve ratio multiples entering the recession, Connecticut and West Virginia have been fortunate in the small decreases in their multiples during 2001-2004.

States with UI trust fund solvency problems have traditionally addressed their problems with policies that both increase taxes and reduce UI benefits. Each of these three states has followed this route. Chart 6 traces four series over the 1979-2003 period showing recipiency rates and replacement rates. Recipiency in Louisiana and West Virginia decreased after 1986, by ten percentage points in Louisiana and nine percentage points in West Virginia. ${ }^{24}$ Louisiana's and Connecticut's replacement rates both decreased substantially in the years following "bonding." Specific policy changes that contributed to the changes in replacement rates included moving to a two-high-quarter procedure for calculating weekly benefits in Connecticut and both reducing and freezing the weekly benefit maximum in Louisiana.

Finally, note in Chart 6 that the benefit series increase between 2000 and 2003. While explaining the cause(s) of these recent changes is beyond the scope of this report, a likely explanation is a shift in the mix of the claimants towards high wage and experienced workers. Considering Chart 5 along with Chart 6, it appears the improvement in Louisiana's trust fund reserve position after 1987 is substantially due to benefit restrictions that have reduced both the recipiency rate and the replacement rate.

In sum, of the three states where the processes of issuing and repaying bonds have been completed, only one (Louisiana) subsequently built a large reserve that meets a common UI actuarial standard, i e., a reserve ratio multiple of 1.0. The fact that the other two states have not experienced financing problems following the 2001 recession has more to do with favorable economic developments than with having large pre-recession

[^16]trust fund reserves. In two of these three states, issuing bonds was not followed by policies to build trust fund balances to levels widely viewed as prudent.

## VIII. Conclusions

This paper examined state experiences with funding problems following the recession of 2001. Five final observations can be offered.

First, the states have undergone a variety of experiences related to the size of their trust fund drawdowns and the types of loans used to address their funding problems. At this time (late September), the full set of state situations even includes inaction by both California and New York. Their actions remain to be determined.

Second, there are no real surprises in the identities of the states that have had to borrow. As shown in Panel A of Table 1, all had low trust fund balances at the end of December 2000, just before the onset of the recession of 2001. Just one of the nine (North Carolina) had a reserve ratio multiple above 0.60 on that date. Table 1 also vividly shows that the funding problems have been concentrated among the large states.

Third, the states fully understand how Title XII cash flow loans operate. Several state actions regarding borrowing and debt repayment have been timed to avoid interest charges on Title XII loans, e g., by ensuring that full repayment occurs before September $30^{\text {th }}$ and no new borrowing occurs during October-December. Further, Massachusetts and Pennsylvania have undertaken other actions linked to Title XII borrowing requirements. Under legislation of 2003, Massachusetts can avoid borrowing during October-December by levying a solvency assessment imposed in September. During March-May 2004 Pennsylvania borrowed from another state fund to preserve access to Reed Act monies to be used for improving UI program administration.

Fourth, in comparing the costs of borrowing under Title XII versus the private bond market, the former consistently has a smaller principal on outstanding debt while the latter consistently has a lower interest rate (even recognizing underwriting fees, insurance and other issuance costs and early redemption premiums). Thus to compare costs, one must recognize both the average amount of outstanding loans as well as the interest rates on the loans. As the interest rate spread between Title XII loans and private
debt instruments is larger, it becomes increasingly likely that the latter will carry lower total borrowing costs for a state.

Fifth, if a state explores the private securities market, it is important to explore all maturities in the municipal bond market. To minimize interest costs, it may be least expensive to borrow in the very short end of this market from late September to the end of December, to repay this debt in the early months of the following year and to rely on Title XII loans from January to late September of the next year. This is the strategy currently being followed by North Carolina.
Table 1. Summary of Trust Funds, Borrowing and Solvency Legislation in Selected States, Information Through July 1, 2004

|  | State <br> Size <br> Rank <br> [1] | Res. Ratio Multiple Dec. 2000 [2] | Res. Ratio Multiple Dec. 2003 [3] | Change in RRM [3]-[2] [4] | Year of First Loan [5] | UI Debt Dec. 2003 (\$millions) [6] | Experience Rating Response [7] | Solvency Legislation [8] | Bond/Note Authorization [9] | Bond/Note Issuance [10] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Panel A. States that have borrowed |  |  |  |  |  |  |  |  |  |  |
| California | 1 | 0.51 | 0.09 | -0.43 | 2004 | 0 | Yes | No | No | No |
| Illinois | 5 | 0.42 | -0.10 | -0.52 | 2003 | 511 | Yes | 2003 | Yes | Yes |
| Massachusetts | 13 | 0.55 | 0.02 | -0.54 | 2004 | 0 | Yes | 2003 | No | No |
| Minnesota | 15 | 0.50 | -0.11 | -0.61 | 2003 | 176 | Yes | 2003 | No | No |
| Missouri | 19 | 0.36 | -0.10 | -0.46 | 2003 | 143 | Yes | 2004 | Yes | No |
| New York | 2 | 0.16 | -0.10 | -0.26 | 2002 | 751 | Yes | No | No | No |
| North Carolina - a | 12 | 0.69 | -0.07 | -0.76 | 2003 | 172 | Yes | 2003 | Yes | Yes |
| Pennsylvania | 6 | 0.58 | 0.15 | -0.43 | 2004 | 0 | Yes | No | No | No |
| Texas | 3 | 0.24 | -0.19 | -0.43 | 2002 | 1400 | No | 2003 | Yes | Yes |
| Panel B. States with low reserves at the end of 2003 |  |  |  |  |  |  |  |  |  |  |
| Arkansas | 33 | 0.42 | 0.09 | -0.33 |  | 0 | Yes | 2003 | No |  |
| Colorado | 21 | 0.91 | 0.15 | -0.76 |  | 0 | Yes | No |  |  |
| Connecticut | 22 | 0.41 | 0.20 | -0.21 |  | 0 | Yes | No |  |  |
| Michigan | 9 | 0.59 | 0.24 | -0.35 |  | 0 | Yes | No |  |  |
| Ohio | 7 | 0.50 | 0.19 | -0.31 |  | 0 | Yes | No |  |  |
| Virginia | 11 | 0.84 | 0.17 | -0.67 |  | 0 | Yes | 2003 | No | No | a - Net reserves in December 2000 include $\$ 200$ million in the state's reserve fund.

Table 2. Solvency Adjustements in Selected States

|  | Illinois | Massachusetts | Minnesota | Missouri | North Carolina | Pennsylvania | Texas |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Solvency Legislation in 2003 or 2004 | Yes | Yes | Yes | Yes | No | No | Yes |
| Benefit Reductions |  |  |  |  |  |  |  |
| Monetary Eligibility | Y-a |  |  | $X$ |  |  |  |
| Replacement Rate | X |  |  |  |  | X |  |
| Maximum WBA | $X$ |  | $X$ | X, Y |  | X |  |
| Maximum Duration |  | $X$ |  |  |  |  |  |
| Waiting Week |  |  |  | X, Y |  |  |  |
| Other Reductions |  | X-b | X-c | X-d |  |  |  |
| Increased Taxes |  |  |  |  |  |  |  |
| Solvency Taxes | $X$ | $X$ | Z | $X$ |  | Z | W |
| Max Rated Employers | $X$ | X |  | X |  |  |  |
| Tax Schedule Triggers |  |  | $X$ |  |  |  |  |
| Taxable Wage Base | $X$ | $X$ |  | $X$ |  |  |  |
| Borrowing Activities |  |  |  |  |  |  |  |
| Loans from U.S. Treas. | $X$ | $X$ | $X$ | $X$ | X |  | $X$ |
| Bond/Note Authorization | $X$ |  |  | $X$ | $X$ |  | $X$ |
| Bond/Note Issuance | X |  |  |  | X |  | X |
| Loan from State Account |  |  |  |  |  | X |  |

Key: $X=$ Benefit reduction, tax increase, or loan-related activity
Y = Benefit increase
$Z=$ Increases in two solvency tax provisions in Minnesota and three provisions in Pennsylvania.
W = Reduction in solvency taxes
a - Alternative base period created, to become operative in 2008.
b-Increased penalities for fraud and overpayments, tightened eligibility for employees of temporary help agencies
c - New UI benefit offsets against severance pay and vacation pay
d - Increased penalties for misconduct, new language for misconduct related to drug and alcohol abuse
Table 3. Loans to UI Programs from the Private Debenture Market

ন্ন $\stackrel{\rightharpoonup}{\circ}$

State Issuance Loan Loan
State Issuance Loan Loan
Loan Loan/
Fixed
Rate
Bonds
[6]
Yes - 1315
Yes-258

| 8 |
| :--- |
| $\stackrel{3}{2}$ |
| $\vdots$ |
|  |


| -1 |
| :--- |
| $\vdots$ |
| $\vdots$ |
| 0 |


| 2001 Recession |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Texas | 2003 | 2,000 | 1,400 | 0.5 | 2009 | Yes - 800 | Yes - 600 | Yes | Yes |
| North Carolina | 2003 | b | 172-b | 0.2 |  |  |  |  |  |
| Illinois | 2004 | 1,400 | 712 | 0.4 | 2013 | Yes - 340 | Yes-372 | Yes | Yes |
| Missouri | 2004 | 450 |  |  |  |  |  |  |  |

Source: Information supplied to the author by individual states. Amounts in millions of dollars.
a - Loan amount as a percent of total state payroll of taxable covered employers in the year of issuance.
$a$ - Loan amount as a percent of total state payroll of taxable covered employers in the year of issuance.
$b$ - Borrowing authorized by administrative action. Amount determined on an "as needed" basis. $\$ 172$ m
b-Borrowing authorized by administrative action. Amount determined on an "as needed" basis. $\$ 172$ million borrowed in 2003.
Table 4. Selected Interest Rates and Interest Rate Spreads, 1990 to 2004.
Basis Point Spreads

末





Source: Table B-73 of the Economic Report of the President, January 2004 and Federal Reserve Bank of St Louis.
Data for 1990-2003 are annual averages except for Title XII loans for 1997-1999 which refer to the fourth quarter.
Data for 2004 are averages for the first six months. Each percentage point of an interest rate equals 100 basis points.



Chart 5. Reserve Ratio Multiples, States
Issuing Bonds,1979 to 2003

$\rightarrow$ Louisiana-1987 - W Virginia-1987 $\rightarrow$ Connecticut-1993




[^0]:    ${ }^{1}$ Regular UI pays up to 26 weeks of benefits in all states except Massachusetts and Washington where the limit is 30 weeks and Montana where the limit is 28 weeks. It is the main program for compensating the unemployed and is financed by employer payroll contributions.

[^1]:    ${ }^{2}$ The balance at the end of 2003 is a net balance that nets out $\$ 3.2$ billion in outstanding loans.
    ${ }^{3}$ These are 1970-1972, 1974-1976, 1980-1983, 1991-1992 and 2001-2003. The reductions in reserve ratios during these periods were respectively $1.05,2.00,1.38,0.63$ and 0.90 percent.

[^2]:    ${ }^{4}$ This downtrend has been present since the mid 1940s.

[^3]:    ${ }^{5}$ The national reserve ratio at the end of 2000 was 1.46 percent while the national high cost rate was 2.22 percent (costs during the twelve months of calendar year 1975), yielding a reserve ratio multiple of 0.66.

[^4]:    ${ }^{6}$ Automatic adjustments to UI trust fund drawdowns occur as states move to tax schedules with higher rates, individual employers move to higher tax rates due to worse experience (lower reserve ratios or higher benefit ratios) and solvency taxes increase. Additionally, about ten states also have provisions to automatically reduce benefits when trust fund balances are depleted.

[^5]:    ${ }^{7}$ The size indicator is total payroll of taxable employers in 2002.
    ${ }^{8}$ With 53 programs, the median size rank is 27 . Arkansas ranks $33{ }^{\text {rd }}$.
    ${ }^{9}$ Reserves for North Carolina at the end of 2000 included $\$ 200$ million in the state's reserve fund.

[^6]:    ${ }^{10}$ Three states in Table 1 (North Carolina, Colorado and Virginia) were among the top four in the decrease in their reserve ratio multiple as shown in column [4]. Only the Virgin Islands had a larger decrease.
    ${ }^{11}$ Two kinds of ride-it-out responses can be identified. The first is a traditional experience rating response where the automatic response of UI taxes restores the trust fund. To follow this, a state must have a large pre-recession reserve, hence emphasis in the earlier discussion on the reserve ratio multiple of 1.0. The

[^7]:    second is a flexible financing response, which causes taxes to increase and/or benefits to be reduced as the fund balance decreases. In the past Illinois and Pennsylvania have both advocated flexible financing. 12 The two states with borrowing but no response to date (New York and California) are not included in Table 2 because there is no (legislative or other) action to describe.

[^8]:    ${ }^{13}$ The seven states were Connecticut, the District of Columbia, Maine, Massachusetts, Michigan, Missouri, and New York. Of these, only Connecticut and Massachusetts had loans during 1990-1994 that totaled more than one percent of (1991) payroll.
    ${ }^{14}$ One description of the Illinois legislation is found in a statement by Sally Ward, the head of the UI agency in 1987. See U.S. House of Representatives, Committee on Ways and Means, "Reform of the Unemployment Compensation Program, Series 100-46, (Washington, D.C.: USGPO, December 1987).

[^9]:    ${ }^{15}$ Should an unexpected drawdown have occurred during March-May that caused the fund balance to go to zero, all monies in the trust fund would have had to be used to pay benefits.

[^10]:    ${ }^{16}$ In Pennsylvania the percentage breakdown was roughly 58 percent for employer tax increases, 33 percent for employee taxes and 9 percent for benefit reductions over the four years 2003 to 2006. In Illinois the percentage breakdowns were 92 percent for employer tax increases and 8 percent for benefit reductions. In Massachusetts nearly 100 percent of the changes were tax increases.

[^11]:    ${ }^{17}$ Two summaries of this method of borrowing are given in Chapter 1 of Wayne Vroman, Unemployment Insurance Trust Fund Adequacy in the 1990s, (Kalamazoo, MI: W.E. Upjohn Institute, 1990) and a recent paper by Rick McHugh, "Bond Financing for Insolvent State Unemployment Insurance Trust Funds," National Employment Law Project, (January 2004), pp. 7-8.

[^12]:    ${ }^{18}$ 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 (method for assigning contribution rates to individual employers) is deemed acceptable by the federal partner and other federal requirements are also satisfied.
    ${ }^{19}$ This statement reflects anticipated repayment patterns in Illinois where callable bonds will be repaid several years before present maturity dates as solvency (and other) tax receipts replenish the UI trust fund.

[^13]:    ${ }^{20}$ Placing tax-free bonds into the trust fund would have meant the associated interest income was subject to the Treasury Department's interest arbitrage rules. Essentially the interest rate spread between UI trust fund balances and the tax-free bonds would have to be repaid to the Treasury. Since $\$ 600$ million of the Texas

[^14]:    ${ }^{21}$ See Chapter 4 in Wayne Vroman, Topics in Unemployment Insurance Financing, (Kalamazoo, MI: W.E. Upjohn Institute, 1998).

[^15]:    ${ }^{22}$ Repayment was completed in West Virginia in 1991, Louisiana in 1994 and Connecticut in 2001.
    ${ }^{23}$ Note incidentally that Connecticut also had a large deficit at the end of the 1970s. In fact, it had Title XII loans continuously outstanding between 1972 and 1984.

[^16]:    ${ }^{24}$ In Louisiana the average recipiency rates during 1979-1986 and 1988-1995 were 0.294 and 0.187 respectively. The corresponding averages in West Virginia were 0.307 and 0.214 .

