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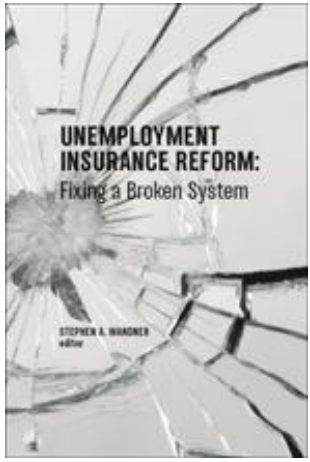

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Chapter 4

State UI Financing Response to the Great Recession

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The Great Recession of 2007–2009 placed a heavy strain on state unemployment insurance (UI) programs and their method of financing. This short chapter introduces and discusses several aspects of the state UI responses during and after the downturn. Individual programs within the state UI system are highly varied. Whereas many states still have low net balances in their UI trust fund accounts at the Treasury, many other states have restored their trust funds to pre-recession or even higher levels. This chapter documents the varied financing responses of the state programs to the recession with special attention to a number of specific elements in their responses. The chapter also assesses the health of the state trust funds as of mid-2016.

PROGRAM FINANCING RESPONSES

Two factors that contributed to the financing difficulties experienced by state UI programs during and after the Great Recession were the low level of reserves prior to the recession and the severity (both depth and duration) of the downturn. At the end of March 2011, the states had trust fund debts that exceeded $40 billion. At the end of June 2016, net reserves totaled roughly $36 billion. While the states still owed approximately $8 billion, this $76 billion turnaround was achieved by taking several distinct types of state-level actions.

Trust fund restoration was achieved both by actions that increased tax revenue and those that reduced UI benefit payments. Table 4.1

summarizes six different actions that states took affecting revenues. For each type of financing response, the states are sorted according to their prerecession reserve ratio multiple (RRM, also termed the average high-cost multiple [AHCM]) measured at the end of 2007.[1] The RRM is an index of trust fund adequacy that incorporates information on three factors: past payouts, the current trust fund balance, and

Table 4.1 State Actions to Improve UI Program Financing (Number of States), 2007 to 2016

Reserve ratio multiples (RRM)	State programs (1)	Let UI tax law work (2)[a]	Early active changes (3)[b]	Tax base indexation (4)[c]	Large tax base increases (5)[d]	Issued muni bonds (6)[e]	FUTA credit offsets (7)[f]
Below 0.25	13	0	1	0	1	1	7
0.25–0.499	17	1	4	1	5	5	2
0.50–0.749	8	3	0	2	3	2	0
0.75–0.999	6	6	0	0	0	0	0
1.0–1.249	3	3	0	0	0	0	0
1.25 and above	4	2	0	0	2	0	0
Total number	51	15	5	3	11	8	9
Mean RRM	0.54	0.92	0.30	0.52	0.61	0.37	0.17
Median RRM	0.43	0.83	0.30	0.59	0.44	0.40	0.16

[a] Alabama, Alaska, District of Columbia, Iowa, Louisiana, Montana, Maine, Maryland, New Mexico, North Dakota, Oklahoma, Oregon, Utah, Washington, and Wyoming.

[b] Legislation to improve solvency in 2008 and 2009: Arkansas, New Hampshire, South Dakota, Tennessee, and West Virginia.

[c] Tax base indexation adopted after 2009: Colorado, Rhode Island, and Vermont.

[d] Tax base in 2015 at least 50 percent higher than in 2007: Delaware, Kansas, Mississippi, New Hampshire, North Dakota, Rhode Island, South Carolina, South Dakota, Vermont, West Virginia, and Oklahoma (2013).

[e] Municipal bonds issued during 2010–2013 to repay Treasury UI loans: Arizona, Colorado, Idaho, Illinois, Michigan, Nevada, Pennsylvania, and Texas.

[f] FUTA tax credit offsets during 2012–2015 equal to at least 10% of total tax revenue: California, Connecticut, Georgia, Indiana, Kentucky, Missouri, New York, North Carolina, and Ohio.

SOURCE: Table developed by the author with data from the Office of Unemployment Insurance, U.S. Department of Labor.

the size of a state's economy. The latter is approximated by the total payroll of employers covered by the UI program in each state. Higher RRM levels signal more adequate trust fund balances. An RRM equal to 1.0 means there are 12 months of benefits in the trust fund, and many view an RRM of 1.0 as signaling an adequate UI trust fund balance.

Column (1) in Table 4.1 summarizes the distribution of RRMs for the 51 UI programs[2] at the end of 2007 or just prior to the Great Recession. The mean and median RRMs for the 51 programs of 0.54 and 0.43 indicate that the average prerecession trust fund balances were about half of the balances needed to meet the suggested actuarial standard of 1.0. Only seven states had an RRM of 1.0 or higher and 30 had RRMs below 0.50, so many states entered the Great Recession with low trust fund reserve balances.

Columns (2) to (7) identify the number of states undertaking specific revenue-enhancing actions. The identification of specific actions in individual states is somewhat arbitrary, reflecting my own judgments. The 15 states in column (2) allowed their UI tax laws to operate as written in their tax statutes. These states moved to higher tax rate schedules and made other adjustments automatically without legislative changes. Note that these states had trust funds with mean and median RRMs of 0.92 and 0.83, respectively, much larger than the group as a whole. This group also included 11 of the 13 states with a prerecession RRM of 0.75 or higher. Having large trust funds meant that these states had limited need for loans from the Treasury, and only two (Alabama and Maryland) borrowed from the Treasury from 2009 to 2012.

Column (3) summarizes five states that took early policy actions to avoid or reduce the volume of borrowing. All five of these states had low prerecession reserves, with RRMs below 0.50. Three of the five (New Hampshire, South Dakota, and Tennessee) instituted temporary quarterly taxes to enhance revenue. These taxes were to sunset when the trust fund's recovery was deemed adequate by program administrators.

Prior to the Great Recession, 16 states plus the Virgin Islands had indexed taxable wage bases with increases tied automatically to changes in statewide average wages. Following the recession, three states adopted indexation. In two, the tax base started to increase automatically in 2013 (Colorado and Rhode Island). In the third, Vermont, the base increased from $8,000 in 2009 to $16,000 in 2012, with indexed increases commencing in 2015.

During and after the recession, 11 states increased their tax bases by at least 50 percent (column [5]). The largest increases occurred in Delaware, Mississippi, South Carolina, and Vermont, where the tax base at least doubled between 2007 and 2015. Note that the states making these large increases had a prerecession average RRM that about matched the national average.

Six of the eight states that issued municipal bonds (column [6]) had prerecession RRMs below 0.50. Four of these states (Illinois, Michigan, Pennsylvania, and Texas) issued municipal bonds with long maturities (final maturities of 2020 or later). Each of the four used the proceeds from the bonds to repay Treasury loans that carried higher interest rates than the bonds. The issuances could be described as arbitrage (or debt-restructuring) transactions that delayed repayment dates as well as secured lower interest rates. It is quite likely some of these bonds will still be outstanding when the U.S. economy enters the next recession.

If a state's debt to the Treasury is outstanding on January 1 of two consecutive years and not fully repaid by November 10 of the second year, it may be subject to Federal Unemployment Tax Act (FUTA) credit offsets payable in January of the following year. Roughly half the state UI programs were subject to FUTA credit offsets in at least one year between 2009 and 2015. From 2012 to 2015, these added federal taxes accounted for 10 percent or more of state UI tax revenue in nine states. These nine states had very low prerecession reserves, with seven of nine RRMs falling below 0.25 in 2007 (column [7]). These states exhausted their trust funds early in the recession and became subject to FUTA credit offsets in 2012.

Several of the nine states experienced prolonged indebtedness to the Treasury, hence multiple years of reduced FUTA credit offsets. The mean and median RRMs for these states in 2007 are the lowest of any group in Table 4.1, both below 0.20.

FUTA CREDIT REDUCTIONS

As just noted, one feature of the Great Recession was the widespread and prolonged indebtedness of most state UI trust funds. From 2009 to 2011, 35 state programs (36 including the Virgin Islands) borrowed from the Treasury. Many states had debts for multiyear periods, and 11 programs were still making debt repayments in April 2016.[3]

Because these debts were outstanding for multiyear periods, 26 programs were subject to the automatic debt repayment through reductions in their FUTA tax credits. Typically 5.4 percent of the 6.0 percent FUTA tax levied on the first $7,000 of taxable payroll is waived in states with acceptable experience-rating systems. However, if Treasury loans are outstanding on January 1 of two consecutive years and not fully repaid by November 10 of the second year, the 5.4 percent FUTA tax waiver usually starts to be reduced, with the reduction payable in January of the following year. The initial reduction is 0.3 percent of federal taxable payroll ($21), but the reduction then grows with each successive year of continued indebtedness.

From 2009 to 2015, 24 states and the Virgin Islands were subject to FUTA credit reductions. Eighteen states plus the Virgin Islands experienced credit reductions for three or more years during this period. The aggregate revenue from the credit reductions totaled $10.7 billion, with $10.4 billion paid from 2012 to 2015.[4] Total state UI taxes (including FUTA credit reductions) paid during this period were $128.3 billion. Thus, over these four years, the credit reductions accounted for 8.3 percent of total state UI tax revenue.

The FUTA credit reductions were of varying importance in individual states. Table 4.2 focuses on the experiences of 18 states

Table 4.2 FUTA Credit Reductions as a Share of Total UI Tax Revenue, 2012 to 2015

Share of total tax revenue	Number of state programs	States
0.20 and above	2	IN, OH
0.15–0.199	1	KY
0.10–0.149	6	CA, CT, GA, MO, NY, NC
0.05–0.099	3	AR, FL, WI
0.00–0.049	4	IL, NJ, PA, VA
0	2	MA, TX
Total	18	

SOURCE: Estimates of FUTA credit reduction shares made by the author.

from 2012 to 2015, the 13 largest states (in terms of taxable covered employment in 2013) and five other states where FUTA credit reductions accounted for at least 5.0 percent of total UI tax revenue during the period. The 13 largest states were singled out for two reasons: 1) they dominate in aggregate UI program performance, accounting for about two-thirds of tax revenue and benefit payments; and 2) their debt repayment behavior differs from that of smaller states, as documented in Vroman (2016). Only 2 of the 13 largest states (Texas and Massachusetts) were not subject to FUTA credit reductions from 2012 to 2015. Texas issued municipal bonds in late 2010, while Massachusetts incurred debts for just a few months during 2011. The other 11 states paid $8.0 billion in credit offsets, about 77 percent of the national total in that four-year period.

With widespread trust fund restoration now underway, 2017 and 2018 may be the final years when FUTA credit offsets will make a measurable contribution to state UI tax revenue. Estimates made at the Urban Institute indicate that the credit reductions will total $2.0 billion in 2017 (California) and $2.4 billion in 2018 (again California). Although the payments could extend into 2019, it seems more likely that California's trust fund balance on November 10, 2018, will be positive, obviating the need for a credit offset in 2019. If this is the

case, FUTA credit offsets will have been active for nine consecutive years from 2010 to 2018, with total offsets exceeding $18.0 billion.

Although FUTA credit offsets have helped many states to repay their debts, their positive effect on tax revenue occurs only in years when a state's net trust fund balance is negative. Once the net balance starts to consistently exceed zero, these added UI taxes automatically stop. Thus, only California, Connecticut, Ohio, and the Virgin Islands paid FUTA credit offsets in 2016. FUTA credit offsets, in other words, help states eliminate negative trust fund balances, but they do not continue to help in fund building after a positive balance has been achieved.

To summarize the responses of the state UI tax systems following the Great Recession, four points should be emphasized. 1) The individual states responded in a wide variety of ways, and Table 4.1 summarizes the responses. 2) About one-third of the states, mostly those with adequate prerecession reserves, allowed their experience-rating systems to operate as specified in their state statutes. These states had limited need for Treasury loans, and their trust funds have been restored to generally high levels. 3) Eleven states made large increases in their taxable wage bases, and each of them had a tax base in 2015 that was at least 50 percent higher than it had been in 2007. 4) One-third of the states either issued municipal bonds (eight) or allowed FUTA credit reductions to account for at least 10 percent of their postrecession tax revenue responses (nine). Neither strategy promoted robust trust fund recoveries. The states that issued bonds deferred part of their debt repayment until much later time periods. The FUTA credit offsets stopped contributing to trust fund recoveries after net trust fund balances became positive. Both strategies retarded the restoration of adequate trust fund balances in the states that followed these policies.

POSTRECESSION RESPONSES OF STATE UI BENEFITS

Improvements in fund solvency also can be achieved through benefit reductions. Over the long run, of course, benefit reductions also weaken the performance of UI as an automatic stabilizer of the macro economy. Documenting the recent changes in program benefits can provide a basis for estimating how much UI's stabilizing performance has been weakened.

Among various benefit adjustments made by states following the Great Recession, three were particularly prevalent, one passive and two active. The passive adjustment was not increasing the maximum weekly benefit for several consecutive years. One active adjustment was reducing the maximum number of potential weeks of regular UI benefits starting in 2011. The other active adjustment was increasing the amount of administrative activity to monitor payment accuracy, which, coupled with ongoing problems of program administration, could adversely affect receipt of benefits.

Changes in the Replacement Rate

About half the state programs operate with an indexed maximum weekly benefit that increases automatically as statewide wages increase. Other states raise the maximum periodically by state legislation. Several of these latter states have not increased their maximum benefits for many years.

To document the prevalence of this nonadjustment pattern, each state's maximum weekly benefit amount (WBA) was noted for January 2016 and for previous Januarys, and the number of consecutive Januarys with the same maximum was counted. Of the 24 states without an indexed maximum, the number of consecutive years with an unchanged maximum ranged from 4 to 19. In all but one state, the maximum WBA was unchanged for at least 5 consecutive years, and in five states, it ranged from 13 to 19 (Florida). The mean for the 24

states was 9.75 years, and the average 2016 maximum WBA had been unchanged for a decade.

From 2004 to 2015, the annual earnings in taxable covered employment nationwide increased from $39,141 to $52,066 or by 33.0 percent. For a state with average wage inflation and whose maximum was stable during 12 consecutive years, the maximum benefit would be 33.0 percent lower relative to annual wages at the end of the period. This decrease would exert a downward pressure on the replacement rate (the ratio of weekly benefits to the average weekly wage).[5] Because so many states have operated with unchanged maximum benefits for several consecutive years, many replacement rates have also been adversely affected. From 2005 to 2015, the replacement rate decreased in 35 of 51 programs. Although changes in monetary eligibility requirements and some actual reductions in weekly maxima also contributed to these decreases,[6] the average replacement rate decreased by 0.03 or more in 10 states from 2010 to 2015. Seven of the 10 experienced reductions of between 0.03 and 0.049,[7] while even larger reductions occurred in Indiana (–0.086), Rhode Island (–0.091), and North Carolina (–0.116). Thus, the generosity of weekly benefits decreased in the majority of states from 2010 to 2015, with particularly large reductions occurring in Indiana, North Carolina, and Rhode Island.

Figure 4.1 provides a visual summary of the national replacement rate for the 31 years from 1985 to 2015. The figure identifies three multiyear periods when the national replacement rate was noticeably lower than in adjacent years: 1997 to 2000, 2005 to 2008, and 2011 to 2015. The 2011 to 2015 period has the lowest average replacement rate of all five-year periods covered by Figure 4.1. A large part of the explanation for these low replacement rates has been the failure of many nonindexed states to increase their maximum WBAs in the years following the Great Recession. Compared to the earliest five years in Figure 4.1, the national average replacement rate from 2011 to 2015 was 2.6 percentage points lower (32.8 versus 35.4).

Figure 4.1 UI Replacement Rate, 1985 to 2015

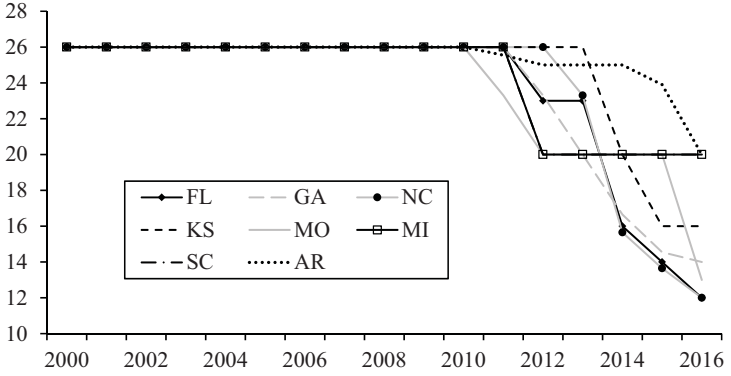
SOURCE: Replacement rates from column (33) of ET Handbook 394, Unemployment Insurance Financial Data.

Potential Benefit Duration

An important recent change in several state UI programs has been to reduce maximum potential benefit duration. Since 2011, eight states have reduced maximum potential duration to fewer than 26 weeks, and at least one additional state (Idaho) planned to implement a reduction in 2017. The reductions follow four decades when all state programs offered at least 26 weeks of potential benefits in every year.[8] During the first half of 2016, maximum duration was between 12 and 20 weeks in these eight states, and three of them have reduced potential benefit duration twice since 2011.[9] In the rest of this section, I examine the effects of the benefit reductions on benefit recipiency as well as the overall benefit recipiency rates in individual states.

Figure 4.2 shows maximum potential benefit duration in the eight states that paid fewer than 26 weeks of potential benefits during the first half of 2016. The maximum durations ranged from 12 weeks (Florida) to 20 weeks (Arkansas, Michigan, Missouri, and South Carolina). Shorter potential benefit durations would be expected to

Figure 4.2 Maximum Potential Benefit Duration, Eight States, 2000 to 2016 (weeks)



SOURCE: Data from "Significant Provisions of State Unemployment Insurance Laws," various issues through July 2016. The maxima can change in January and June of each year. Figure 4.1 shows annual duration with weights of 0.55 and 0.45 for the two periods.

reduce the recipiency rate (the ratio of weekly beneficiaries to weekly unemployment) through shorter periods of potential eligibility and more rapid exhaustion of benefits. Another potential determinant of the recipiency rate is the unemployment rate, because average unemployment duration increases during recessions when unemployment increases.

The approach followed here is to fit recipiency rate regressions for a period prior to the reduction in potential benefit duration, project the recipiency rate for later periods, and examine projection errors with particular attention to periods of shorter potential duration. A recipiency rate regression using annual data was fitted for each state for the years 1967 to 2007. Each regression used two explanatory variables: the state's current total unemployment rate (TUR) and TUR lagged one year. Table 4A.1 presents the regressions.

Table 4A.1 shows that state-level recipiency rates display considerable short-run noise. Although the table has regressions for 51 UI programs, the eight highlighted in bold in the table are shown in

Figure 4.2. Seven of the eight have adjusted R^2s of less than 0.50, and all eight standard errors of the estimates are between 0.034 and 0.049. The coefficient patterns for the TUR variables are consistent. All current TURs have positive coefficients, and six have *t* ratios of at least 2.0, a common threshold for statistical significance. All eight lagged TURs have negative coefficients, and all eight have *t* ratios of least 2.0. The recipiency rate increases in years with high unemployment rates but then decreases when the lagged unemployment rate is high.

The regressions in Table 4A.1 were used to project recipiency rates through 2015. Two sets of average projection errors are shown in Table 4.3: 2008 to 2011 and 2012 to 2015. Note that all projections are for years beyond the regressions' estimation periods, which ended in 2007, and that nearly all of the reductions in average potential duration below 26 weeks occurred during 2012 to 2015, the latter of the two four-year projection periods.[10]

The reduced maximum durations would be expected to cause larger projection errors during 2012 to 2015 as compared to 2008 to 2011, and the average projection errors for the two periods generally support this expectation. Six of eight averages are negative (i.e., they are overprojections) in the first period, but all eight are negative in the second. Six of eight equations were overprojecting by larger amounts during the first period relative to the second one; that is, the changes in these four-year averages are negative in all states but Georgia and Kansas. When the changes are examined for individual states (bottom row of Table 4.3), note that five changes are more negative than –0.045 (Florida, North Carolina, Michigan, South Carolina, and Arkansas).

Table 4.3 Average Projection Errors by State, 2008 to 2015

Period	FL	GA	NC	KS	MO	MI	SC	AR
2008–11	0.025	–0.125	–0.054	–0.034	–0.034	–0.021	–0.066	0.034
2012–15	–0.051	–0.108	–0.112	–0.033	–0.070	–0.083	–0.113	–0.038
Change	–0.076	0.017	–0.058	0.001	–0.036	–0.062	–0.047	–0.072

SOURCE: Average projection errors based on the regressions displayed in Table 4A.1.

The projection analysis indicates that recipiency declined in the period of 2012 to 2015, the period when potential duration decreased in these states. The explanation for the decline may include factors besides changes in potential duration. For example, changes in UI program administration could be linked to the decreases. On the other hand, the 2012 to 2015 period was characterized by much lower unemployment than that of 2008 to 2011. Thus, the analysis yielded results consistent with the expectation that a shorter potential duration reduced recipiency rates in these eight states.

UI Program Administration

State UI administrative activities are financed mainly by grants allocated by the Office of UI, which is part of the Employment and Training Administration of the U.S. Department of Labor. These administrative grants are based mainly on workloads related to UI claims. About one-fifth of the states supplement their federal grants with state resources.

Over the past 20 years, program administration has evolved away from face-to-face contact between claimants and administrators to electronic contacts, either by telephone or over the Internet. Nearly all decisions affecting initial eligibility and continuing eligibility are now made through electronic media, with Internet claims accounting for more than half of all administrative decisions related to UI eligibility.

Several ongoing challenges have been faced in the transition to electronic program administration, particularly in providing timely and accurate eligibility decisions. The computer IT systems in many states use old programming languages, and updating them has proven challenging. Also, since administrative allocations are closely linked to claims volume, financial support has decreased as the economic recovery has progressed.

A recent analysis by the U.S. Government Accountability Office (GAO) documented these challenges with results from a recent survey of all states and intensive interviews with claimant focus groups

in three states (GAO 2016). Frequent problems with telephone claims identified by the GAO were long wait times, frequent dropped calls, difficulty in reaching program representatives, and frequent abandoned calls. Inadequate staffing was identified as a major cause of these problems. Inadequate administrative funding and outmoded IT systems also were frequently identified as underlying causes of administrative problems.

In recent years, the national office of the UI program has placed greater emphasis on payment accuracy. Increased emphasis is being paid to the states' Benefit Accuracy Measurement reports, which summarize payment accuracy and identify the source(s) of payment errors by the party (claimant, employer, or agency) and individual administrative process, and also include estimates of claimant fraud. While no research has thoroughly documented the effects of the administrative problems and increased emphasis on payment accuracy, these factors could be contributing to a decrease in UI recipiency. These administrative issues are present in all states to some degree, and they may have macro consequences in reducing the recipiency rate.

RECIPIENCY RATES IN INDIVIDUAL STATES

To develop a more nuanced understanding of the recent decline in UI recipiency, a state-level regression analysis was conducted. For each state, a background time series regression was fitted using annual data. The estimation period was from 1967 to 2007, the 41 years prior to the onset of the Great Recession. For each state, the recipiency rate was regressed on TUR and TUR lagged one year. The recipiency rate measure was the ratio of weekly regular UI beneficiaries to weekly total unemployment (the WKTU ratio), the latter measured by the Bureau of Labor Statistics (BLS).

It is well known that the recipiency rate increases at the start of a recession when unemployment increases but then declines in later periods because of UI benefit exhaustion and other factors. Hence,

the regressions included the current and lagged TURs as explanatory variables. In the highly varied labor markets of individual states, local factors besides unemployment undoubtedly also influence the recipiency rate, but this analysis used only the two unemployment rate variables as arguments to explain variation in state-level WKTU ratios.

After fitting the regressions, the equations were then used to project the recipiency rate for the eight years following the end of the estimation period, that is, from 2008 to 2015. The patterns in the projection errors were then examined. Table 4A.1 displays the underlying regressions for the period from 1967 to 2007. There are 51 equations, one for each state plus the District of Columbia. Generally, TUR had the expected positive coefficient while lagged TUR generally had a negative coefficient. The regressions had relatively low explanatory power, with a simple average of only 0.245 for the adjusted R^2s.

Table 4.4 displays the average equation residuals for the final eight years of the estimation period (2000 to 2007) and for the eight years after the estimation period (2008 to 2015). Because the underlying regressions had generally low explanatory power, the errors were averaged for four-year periods at the end of the estimation period and in the postestimation years: 2000 to 2003, 2004 to 2007, 2008 to 2011, and 2012 to 2015. The average residuals are shown for three groups: the whole group (51), the 8 that have shortened maximum potential durations of less than 26 weeks, and the 43 that have not shortened the maximum potential duration.

For the groups of 8 and 43 states, the averages during 2000 to 2003 and 2004 to 2007 are quite similar, positive, and greater than 0.030 for 2000 to 2003, and negative but only –0.0009 and –0.0046, respectively, for 2004 to 2007. During 2008 to 2011, the average residuals are noticeably more negative (i.e., larger overpredictions) for the 8 states compared to the other 43 (–0.0339 versus –0.0101). The average residuals for both groups of states become even more negative during 2012 to 2015, but the average overpredictions are much larger for the eight reduced-duration states (–0.0752 versus –0.0425). Measured relative to their respective averages during 1967

Table 4.4 Average Residuals for Selected Four-Year Periods

	2000–03	2004–07	2008–11	2012–15
Average residuals by four-year period				
All states (51)	0.0320	–0.0040	–0.0138	–0.0476
Reduced duration states (8)	0.0327	–0.0009	–0.0339	–0.0752
Others (43)	0.0319	–0.0046	–0.0101	–0.0425
Number of negative average residuals				
All states (51)	9	29	33	43
Reduced duration states (8)	2	4	6	8
Others (43)	7	25	27	35

SOURCE: Residuals based on the regressions in Table 4A.1. The averages weight each state equally.

to 2007, the overprediction averages are 27.3 percent for the reduced duration states and 13.2 percent for the other 43 states. Not surprisingly, recipiency decreased by a larger percentage in the states that have reduced maximum potential durations.

Table 4.4 also shows the number of state-level four-year average residuals that were negative during each of the four periods. Overall, 33 of 51 were negative during 2008 to 2011, and 43 were negative during 2012 to 2015. For the most recent four years, the averages were negative for all 8 reduced-duration states and for 35 of the 43 remaining states. Underlying the negative averages in Table 4.4's top panel were widespread negative averages for all 8 of the reduced maximum duration states and 35 of the 43 other states in the 2012 to 2015 period.

An important finding of this analysis is that on average recipiency in the most recent years has decreased in most state UI programs. Actual recipiency rates during 2012 to 2015 fell below projected recipiency rates in 43 of 51 programs. The decrease in recipiency apparent in national data (shown below) has occurred in most of

the individual state programs that make up the system of regular UI programs.

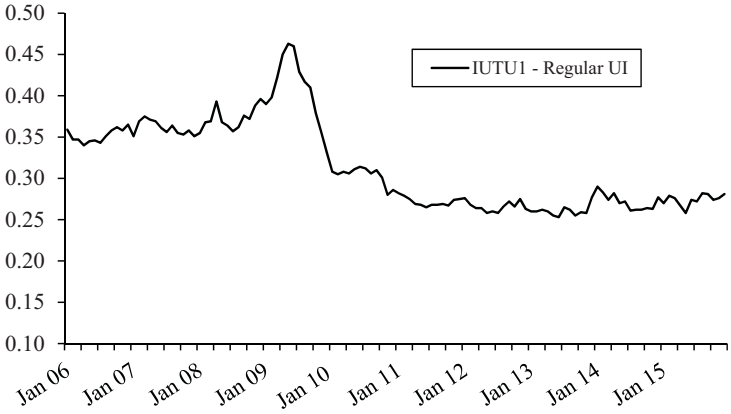
What underlies the decrease in UI recipiency? Since recipiency rates in the eight reduced-duration states decreased more than in the other states, one part of the explanation is the reductions in maximum potential duration. However, there must be other factors, as evidenced by the widespread negative error averages in the 43 other states during 2012 to 2015. The exact cause (or causes) for the decrease in recipiency cannot be determined from the regression analysis presented here. What the regressions in Table 4A.1 do show, however, is that the recent decrease in the recipiency rate has been widespread throughout the system of state UI programs.

THE UI PROGRAM NATIONWIDE

The final section of this chapter examines the regular state UI program at the national level, with attention to benefit recipiency and the aggregate trust fund. The analysis concentrates on the years from 2006 to 2015, that is, from just before the Great Recession to five years after it ended.

Figure 4.3 displays the ratio of weekly regular UI claims to unemployment (IUTU ratio), as measured in the monthly labor force survey from 2006 to 2015. A salient feature of the figure is the contrast in the recipiency rate prior to the Great Recession and the recipiency rate since 2012. The average monthly IUTU ratio between January 2006 and December 2007 was 0.356, whereas between January 2012 and December 2015, the average IUTU ratio was 0.268, or 24.7 percent below the average for 2006 and 2007. Note also that the IUTU ratio does not display a pronounced upward trend during 2012 to 2015 (at most an increase of 0.030) as the economy was moving closer to full employment. The UI recipiency rate is now substantially lower than it was prior to the Great Recession. This decline will have adverse

Figure 4.3 IUTU Ratio, 2006 to 2015



SOURCE: IUTU ratios calculated at the Urban Institute.

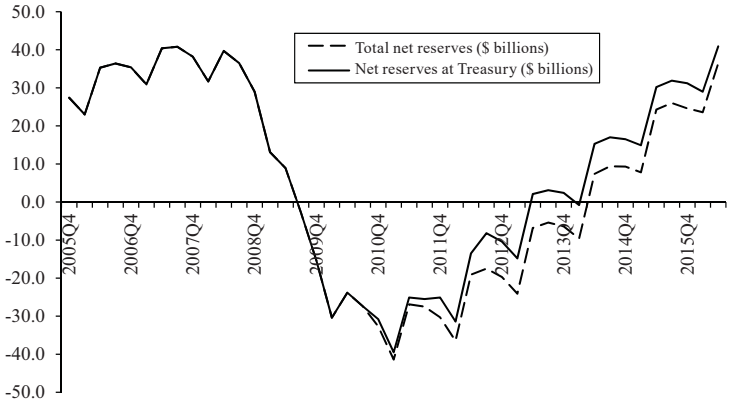
effects on the performance of state UI as an automatic stabilizer when the U.S. economy experiences the next recession.

Figure 4.4 traces the overall net trust fund balance of the state UI programs from the end of 2005 to mid-2016. The quarterly patterns clearly show how reserves are lowest at the end of the first calendar quarter and then recover sharply during April and May when first quarter tax accruals are received.

Figure 4.4 also shows the continuing presence of outstanding municipal bond principal (i.e., the vertical distance between total net reserves and the net reserves at the Treasury). At the end of June 2016, the states owed approximately $4.5 billion in the municipal bond market as well as approximately $3.5 billion to the U.S. Treasury. These debts were owed by UI programs in eight states plus the Virgin Islands, despite the fact that seven full years have elapsed since the end of the Great Recession.

Finally, note that net reserves at the end of June 2016 totaled $36.0 billion, which was nearly back to the prerecession level of approximately $40.0 billion. However, since the covered payroll

Figure 4.4 Net UI Trust Fund Reserves, 2005Q4 to 2016Q2



SOURCE: Net reserve estimates made at the Urban Institute.

in 2016 was more than 20 percent greater than it was in 2007, net reserves should be roughly $48 billion to just match the reserve ratio at the end of 2007. Thus, while substantial trust fund building has occurred since the trough of the recession, the net balance would have to have been 24 percent higher than it was just to be equivalent to the balance at the end of 2007.

Although the aggregate net trust fund was about three-fourths of the way to matching the balance at the end of 2007, the situation in individual state programs remains highly varied. In 19 states, the reserve ratio (net reserves as a percent of total payroll) at the end of June 2016 matched or exceeded its level at the end of 2007. However, net reserves were still negative in 2 states (California and Pennsylvania) plus the Virgin Islands, and another 11 had reserve ratios of less than half of their 2007 reserve ratios. In short, reserves in individual states were highly varied at the end of June 2016, and many states still had very low or negative net reserves.

Even though substantial progress has been made in trust fund restoration, more fund building is needed to return to the reserve posi-

tion held just prior to the Great Recession. Given the inadequacy of reserves at the start of the Great Recession and the subsequent amount of state borrowing, prudent fund management requires continued trust fund building in the immediate future.

Compared to the years prior to the Great Recession, the benefit side of the state system of UI programs is now measurably smaller. The orders of magnitude presented here suggest that the recipiency rate is approximately 25 percent lower (0.268 compared to 0.356) than prior to the Great Recession, while the benefit replacement rate is about 7 percent lower (0.328 compared to 0.354). Combined, these two changes suggest the benefit side of the UI system is now only about 70 percent as generous as it was prior to the Great Recession. While benefit reductions have contributed to the recovery of state UI trust funds, they have also significantly reduced the generosity of the system of state UI programs. These reductions in benefit generosity will permanently weaken the performance of UI as an automatic stabilizer in future recessions.

Notes

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1. The RRM is the ratio of two ratios. The numerator is the reserve ratio, which is the end-of-year trust fund balance (net of UI debts) as a percentage of total covered payroll. The denominator is the highest past annual payout rate (benefits as a percentage of payroll for the high-payout period).
2. There are 53 UI programs, but the table does not include the programs in Puerto Rico and the Virgin Islands.
3. The five programs with debts to the Treasury in mid-April 2016 were California, Indiana, Kentucky, Ohio, and the Virgin Islands. The six states with debts in the municipal bond market were Colorado, Illinois, Michigan, Nevada, Pennsylvania, and Texas. Total indebtedness at the end of March 2016 was approximately $12.0 billion.

4. Annual data on FUTA credit reductions from 2010 to 2015 were provided by the actuarial staff of the Unemployment Insurance Service of the U.S. Department of Labor. Estimates for 2016 and later years were made by the author.
5. The change in the replacement rate would depend upon several factors, but the unchanged maximum and the share of beneficiaries at the maximum WBA are very important.
6. Most notably, North Carolina reduced its weekly maximum from $535 to $350 in July 2013.
7. The seven states are California, Georgia, Michigan, Missouri, New York, Tennessee, and Washington. All but Washington experienced prolonged periods with a constant maximum WBA.
8. The last state to offer fewer than 26 weeks prior to 2011 was South Carolina, with a 22-week maximum in 1969.
9. Missouri enacted a 20-week maximum in 2011 and a sliding scale of between 13 and 20 weeks in January 2016. The sliding scale was overturned by a court ruling in mid-2016, restoring the 20-week maximum. Arkansas enacted a 25-week maximum in 2011 and a 20-week maximum in October 2015. Florida enacted a 23-week maximum in 2012 and a sliding scale of between 12 and 20 weeks in 2014.
10. The only reductions before 2012 were to 25 weeks in Arkansas and 20 weeks in Missouri, both in July 2011.

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Appendix 4A
State-Level Recipiency Rate Regressions

Table 4A.1 displays state-level regressions that explain regular UI recipiency rates for the period from 1967 to 2007. The dependent variable is measured as the ratio of average number of weekly regular UI beneficiaries to average weekly unemployment (the WKTU ratio). The data period includes the years for which the BLS has published unemployment rate estimates for individual states.[1]

Each regression has two explanatory variables: TUR and TUR lagged one year. The two TUR variables reflect the common observation that the recipiency rate increases in the early stages of a recession as overall unemployment is increasing but then decreases in later periods due to increased benefit exhaustions by recipients. The expectation for these two variables is that TUR will have a positive regression coefficient and that lagged TUR will have a negative coefficient.

Table 4A.1 shows these expectations are generally met. For TUR, 48 of the 51 slope coefficients are positive, and 29 have *t* ratios of at least 2.0 (a common indicator of significance). For lagged TUR, 48 coefficients are negative, and 38 have *t* ratios of 2.0 or larger. Although the slope coefficients generally have the expected signs, the regression fits are modest. The average adjusted R^2 is only 0.245, and only 16 exceed 0.30.

Two factors undoubtedly account for the low R^2 values. First, there is considerable noise in state-level estimates of annual unemployment (the denominator of the recipiency rate variables) due to the limited size of Current Population Survey samples in individual states. Second, several other factors influence unemployment and UI recipiency at the state level, and those factors are not controlled for in the regressions.

After the regressions were fitted, the regression errors were noted for each year. Each equation then was used to project the recipiency rate in the postsample years 2008 to 2015. The residuals for the years 2000 to 2007 and the projection errors for the years 2008 to 2015 were then averaged by four-year period (see Table 4.4 in the text). The underlying projections for the individual years were saved and are available, but the text presents four-year average residuals for simplicity.

Table 4A.1 State-Level Regressions of the Regular UI Recipiency Rate, 1967 to 2007

State	Constant	*t*	TUR	*T*	TURlag	*T*	Adj. R^2	Std. Err.	D.W.	Mean
Alabama	0.287	13.6	−0.496	1.7	0.002	0.2	0.025	0.046	0.98	0.255
Alaska	0.684	5.6	1.133	0.5	−2.541	1.2	−0.008	0.143	0.42	0.564
Arizona	0.208	9.0	1.915	4.1	−1.954	4.1	0.312	0.036	1.45	0.205
Arkansas	**0.371**	**10.6**	**1.547**	**1.8**	**−2.816**	**3.2**	**0.210**	**0.049**	**0.49**	**0.289**
California	0.435	25.8	1.092	3.3	−2.085	6.2	0.507	0.021	1.05	0.365
Colorado	0.104	5.1	1.679	2.8	−0.105	0.2	0.288	0.032	0.67	0.182
Connecticut	0.574	12.4	2.233	1.7	−4.311	3.4	0.230	0.092	0.52	0.468
Delaware	0.488	14.3	0.534	0.5	−2.391	2.1	0.180	0.069	0.86	0.390
Dist. of Col.	0.352	8.1	1.658	1.6	−1.405	1.3	0.010	0.069	1.38	0.370
Florida	**0.183**	**8.7**	**1.008**	**1.9**	**−1.140**	**2.1**	**0.063**	**0.036**	**0.33**	**0.176**
Georgia	**0.138**	**4.6**	**4.230**	**5.1**	**−2.621**	**3.2**	**0.386**	**0.044**	**1.72**	**0.224**
Hawaii	0.377	17.7	3.299	3.8	−3.553	4.1	0.271	0.043	1.42	0.364
Idaho	0.349	9.6	0.480	0.5	−0.960	0.9	−0.024	0.050	0.35	0.320
Illinois	0.380	14.5	2.314	3.0	−3.021	4.0	0.267	0.051	0.63	0.338
Indiana	0.274	12.9	2.201	3.4	−2.828	4.5	0.317	0.047	0.67	0.240
Iowa	0.383	18.7	2.554	2.3	−3.787	3.6	0.281	0.048	0.67	0.334
Kansas	**0.269**	**9.1**	**5.758**	**5.5**	**−4.878**	**4.9**	**0.420**	**0.041**	**0.83**	**0.309**
Kentucky	0.328	11.7	1.862	2.4	−2.644	3.4	0.212	0.050	0.88	0.280
Louisiana	0.210	5.2	2.382	2.3	−1.900	1.8	0.081	0.065	1.02	0.245
Maine	0.394	12.3	2.302	2.4	−2.722	2.9	0.143	0.056	0.79	0.371

Maryland	0.304	14.3	2.993	4.1	−3.518	4.8	0.343	0.033	1.00	0.278
Massachusetts	0.676	28.3	0.764	1.1	−4.567	6.8	0.716	0.049	0.64	0.470
Michigan	**0.428**	**27.8**	**1.992**	**5.8**	**−3.270**	**9.8**	**0.738**	**0.034**	**1.30**	**0.335**
Minnesota	0.362	14.5	1.880	2.1	−2.306	2.6	0.111	0.041	1.14	0.344
Mississippi	0.199	10.5	2.473	4.5	−2.296	4.2	0.314	0.035	1.04	0.212
Missouri	**0.417**	**16.3**	**2.195**	**2.7**	**−4.208**	**5.3**	**0.479**	**0.044**	**1.47**	**0.311**
Montana	0.354	10.2	−1.305	1.2	0.292	0.3	0.045	0.045	0.55	0.294
Nebraska	0.241	11.5	1.525	1.7	−0.267	0.3	0.078	0.035	1.15	0.284
Nevada	0.410	10.7	1.729	1.8	−2.334	2.4	0.091	0.058	0.58	0.373
New Hampshire	0.257	6.3	4.984	3.2	−5.136	3.4	0.202	0.089	0.92	0.254
New Jersey	0.640	18.6	0.641	0.7	−3.397	3.6	0.405	0.062	0.44	0.477
New Mexico	0.275	10.7	1.076	1.7	−2.010	3.0	0.188	0.033	1.06	0.213
New York	0.534	13.8	1.432	1.4	−3.633	3.6	0.321	0.061	0.43	0.396
North Carolina	**0.222**	**8.4**	**3.278**	**5.2**	**−2.326**	**3.7**	**0.386**	**0.044**	**0.93**	**0.271**
North Dakota	0.213	4.4	1.732	0.9	0.586	0.3	0.050	0.060	0.35	0.308
Ohio	0.244	13.2	2.778	5.9	−2.580	5.6	0.463	0.037	0.92	0.258
Oklahoma	0.267	8.8	1.289	1.5	−2.333	2.8	0.138	0.049	0.92	0.215
Oregon	0.459	15.0	1.058	1.5	−2.369	3.5	0.266	0.046	0.77	0.369
Pennsylvania	0.480	16.5	2.645	3.0	−3.306	3.8	0.245	0.053	0.34	0.441
Rhode Island	0.665	16.2	−0.902	1.0	−1.755	1.9	0.261	0.081	0.48	0.510
South Carolina	**0.213**	**6.6**	**3.309**	**4.7**	**−2.745**	**3.9**	**0.338**	**0.048**	**1.51**	**0.247**
South Dakota	0.191	6.1	2.342	1.5	−2.874	1.9	0.036	0.043	0.40	0.173

(continued)

Table 4A.1 (continued)

State	Constant	*t*	TUR	*T*	TURlag	*T*	Adj. R^2	Std. Err.	D.W.	Mean
Tennessee	0.367	15.9	2.169	3.3	−3.414	5.3	0.427	0.045	1.20	0.296
Texas	0.105	5.0	2.287	3.6	−1.046	1.6	0.295	0.031	0.64	0.175
Utah	0.164	5.4	2.367	2.7	−0.719	0.8	0.204	0.047	0.47	0.247
Vermont	0.484	22.6	1.320	1.8	−2.226	3.0	0.184	0.040	0.86	0.441
Virginia	0.152	5.1	2.875	2.6	−2.275	2.0	0.103	0.048	0.53	0.178
Washington	0.440	11.7	1.768	2.2	−2.655	3.2	0.186	0.058	0.57	0.377
West Virginia	0.336	12.5	1.495	2.3	−2.240	3.4	0.229	0.055	0.35	0.273
Wisconsin	0.482	14.2	1.509	1.4	−3.035	2.8	0.179	0.067	0.42	0.405
Wyoming	0.180	5.2	4.940	4.1	−3.445	2.8	0.285	0.060	0.53	0.250
U.S. average	0.344	12.1	1.967	2.6	−2.452	3.1	0.245	0.051	0.80	0.313

The regressions generally have low Durbin Watson statistics, indicating a high degree of positive serial correlation in the residuals. The final column shows the mean WKTU ratio for each state. The average recipiency rate was 0.313, but it varied widely across the 51 programs. Eight means exceed 0.400, and five fall below 0.200.

Appendix Note

1. State level estimates of unemployment rates are incomplete from 1967 to 1975, particularly for 1967 to 1969. Estimates have more complete geographic coverage starting in 1970. For years prior to 1976, there are divisional estimates of unemployment, and these have been used to construct state-level estimates for states where there are no BLS estimates.

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