

An Analysis of the Virginia
Unemployment Compensation System

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Table of Contents

	<u>Page</u>
Executive Summary	iv
Chapter 1. Introduction	1
Chapter 2. Unemployment Insurance Benefits in Virginia	3
A. Historical Overview	3
B. The Costs of Benefit Payments	12
C. Applications for UI and Entry into Benefit Status	19
D. The Level of Weekly Benefits	27
E. Unemployment Benefit Duration	36
F. Summary	43
Chapter 3. Analysis of UI Benefits Based on Micro Data	44
A. Details of the Sample	44
B. A Summary Breakdown	46
C. Entry Monetary Eligibility	47
D. A Comparison of Three Groups of Eligible Claimants	50
E. The Linkage Between Base Period Earnings and the Maximum Benefit Amount	52
F. Changing the Maximum Weekly Benefit	55
G. Eligible Nonbeneficiaries	58
H. Summary	60
Chapter 4. Substate Benefit Issues	63
A. Substate Differences in Unemployment, Wages, UI Reciprocity and Average Benefits	64
B. Other Transfer Programs with Substate Components	68
1. The Workforce Investment Act (WIA)	69
2. Temporary Assistance for Needy Families (TANF)	71
3. Medicaid	73
4. Three Program Summary	74
C. Issues in Program Administration	74
1. Substate Differentials in Potential Benefit Duration	75
2. Substate Differentials in Maximum Weekly Benefits	76
D. Summary	78
Chapter 5. Employer Taxes and Experience Rating	80
A. Experience Rating Systems	80
B. UI Tax Rates and Experience Rating in Virginia	84
C. Cost Experiences and Firm Size	92
D. Experience Rating and the Taxable Wage Base	98
E. Summary	98

Chapter 6. Program Financing and Trust Fund Adequacy	100
A. Taxable Wages	100
B. Average Tax Rates	104
C. Aggregate Revenues, Other Flows and the Trust Fund Balance	108
D. Trust Fund Adequacy	113
E. Is the Funding Mechanism Adequate?	116
F. A Simulation Model and Analysis of UI Funding in Virginia	117
G. Summary	122
Chapter 7. Legislative Charges, Summary and Recommendations	123
Topic 1. The current formula for determines the solvency of the Unemployment Trust Fund	123
Topic 2. Employee benefit eligibility criteria	126
Topic 3. The rationale for benefit levels	129
Topic 4. The propriety of regional or extended benefit triggers	130
Topic 5. The appropriateness and sufficiency of pool charges	131
Topic 6. The propriety of diversion of revenue to job training or economic development programs	132
Topic 7. The current tax schedules for employers	134
Topic 8. The means of calculating the weekly amount of unemployment compensation for displaced employees	135
References	138
Appendix A. Unemployment and UI Benefit Duration in Virginia	A-1
Appendix B. A Simulation Model of the Virginia UI Trust Fund	B-1
A. Description of the Model	B-1
B. Individual Modules	B-2
1. The Labor Market	B-2
2. UI Benefits	B-3
3. UI Taxes	B-5
4. Interest Income	B-7
5. The Trust Fund Identity	B-7
C. Summary	B-8
Appendix C. Virginia Model Equations	C-1

List of Tables

Table 2.1. Virginia Unemployment Insurance Benefit Reciprocity, 1967 to 2001	4
Table 2.2. Average Weekly Benefits and Replacement Rates, 1967 to 2001	7
Table 2.3. Factors Related to UI Benefit Reciprocity in Virginia, 1977 to 2000	18
Table 2.4. Entry Eligibility Factors, Virginia and the United States Average	21
Table 2.5. Factors Related to the First Payment Rate, Virginia and U.S. Average	25
Table 2.6. Aspects of Weekly Benefits, Virginia and the United States Average	28
Table 2.7. Regression Analysis of Replacement Rates, 1988 to 2001	34
Table 2.8. Unemployment and UI Benefit Duration, Virginia and U.S. Average	37
 Table 3.1. Eligibility and Payment Status of the Sample	 46
Table 3.2. Summary of Entitlements for Three Groups Monetarily Eligible	51
Table 3.3. Effects of Varying the Base Period Earnings (BPE)-MBA Linkage	54
Table 3.4. Effects of Alternative Weekly Benefit Maxima	57
 Table 4.1. Labor Market Indicators for Virginia Planning District Commission Areas, 2001	 65
Table 4.2. UI Benefit Indicators for Virginia Planning District Commission Areas, 2001	67
 Table 5.1. Aspects of Experience Rating in Virginia, Rate Years 1984 to 2002	 86
Table 5.2. Regression Analysis of Ineffectively Assigned Benefits	90
Table 5.3. Benefits, Contributions, Ineffective Charges and Firm Size for Employers Arrayed by Benefit Ratios	93
 Table 6.1. Employment, Wages and Taxable Wages in Virginia, 1967 to 2002	 101
Table 6.2. Employer Contributions to the UI Trust Fund, 1967 to 2002	105
Table 6.3. Trust Fund Flows, Balances and Benefit Ratios, 1967 to 2002	110
Table 6.4. Trust Fund Balances and Tax Rates Under Alternative Economic and Statutory Assumptions	119
 Table A.1. Indicators of UI Benefit Duration and Unemployment Duration In Virginia, 1950 to 2001	 A-3
Table A.2. Regressions Explaining UI Benefit Duration in Virginia	A-4
 Table B.1. The Virginia Simulation Model	 B-9

List of Charts

Chart 2.1. Maximum Weekly Benefits and Average Benefits, 1953 to 2001	9
Chart 5.1. Employer Relative Size by Benefit Ratio, Seven Benefit Ratio States, 2001 or 2002	95
Chart 6.1. Taxable Wage Proportion and (Tax Base/Avg. Earn) Ratio, 1967 to 2002	103
Chart 6.2. Selected Tax Rate Schedules	107
Chart 6.3. Relative Tax Rates and Relative Fund Balance Ratios	109

Executive Summary

House Joint Resolution (HJR) 611 of the Virginia General Assembly directed that a comprehensive review of the Virginia Unemployment Compensation system be undertaken. This report, prepared under a contract between the Virginia Employment Commission and the Urban Institute, is the response to the General Assembly's directive. The analysis was directed by Dr. Wayne Vroman, the principal investigator. Close cooperation and strong support was provided by the staff of the Virginia Employment Commission (VEC). The report undertakes a review of the important aspects of benefit payments, employer contributions and unemployment insurance (UI) trust fund solvency in Virginia. Chapters 2, 3 and 4 focus on benefit payments while chapters 5 and 6 examine contributions and trust fund adequacy. The final chapter, Chapter 7, speaks directly to each of eight topics specified in HJR 611 and gives recommendations related to each topic.

The Virginia economy has provided generally strong performance in recent years as indicated by the state's unemployment rate which has averaged about three quarters of the national average unemployment rate since 1967. Unemployment duration has also been measurably shorter in Virginia than nationwide. Wage growth has exceeded the national average for several decades, and Virginia's statewide average weekly wage now roughly matches the U.S. average.

At present there are short term uncertainties regarding Virginia's economy and its UI funding, largely associated with the slow pace of the national economic recovery observed during 2002 and economic prospects for 2003. There are other uncertainties related to temporary across-the-board benefit increases paid to all Virginia UI claimants since late 2001 and slated to remain operative throughout 2003. One certainty is that the state's UI trust fund balance at the end of 2002 will be more than \$300 million lower than at the end of 2001, even including the infusion of roughly \$200 million in March 2002 from a one-time Reed Act distribution. It is also certain that Virginia's employers will be paying higher UI contributions in 2003 and subsequent years due to the higher payouts of 2001 and 2002 even more if existing benefit statutes are altered in ways that increase benefit duration and/or benefit eligibility.

Benefit reciprocity and benefit levels

Virginia's UI program has traditionally operated with a low rate of benefit payouts, low employer taxes and a sizeable trust fund. Its annual benefit cost rate, i.e., benefit payments as percentage of covered payroll, has been among the very lowest during most of the past 50 years.

Benefit costs in any UI program are determined by three factors: the state's unemployment, its benefit reciprocity rate and the replacement rate (the ratio of weekly benefits to weekly wages). Since 1967 Virginia's unemployment has been about three fourths of the national average, benefit reciprocity has been about half of the national average and the replacement rate has been slightly less than the national average.

Chapter 2 documents developments of these benefit cost factors, providing summary information for Virginia and comparative information from other UI programs for the period 1967 to 2002. Part B presents an accounting framework for examining issues of costs and reciprocity and summarizes Virginia historical record. The next three parts (C, D and E) respectively examine the details of entry into benefit status, weekly benefits and benefit duration.

Following the onset of unemployment, a very low fraction of workers become UI beneficiaries. This is the result of both a low initial application rate and a low first payment rate among those who do apply. The initial application rate has averaged 0.43 since 1977, 17 percent below the national average of 0.52. The first payment rate for the same period in Virginia averaged 0.67, 10 percent below the national average. Compared to other states Virginia has traditionally operated with monetary eligibility requirements that are more difficult to satisfy than in most other states. While this differential has narrowed since 1997, it remains somewhat more difficult for claimants to satisfy monetary eligibility requirements than in other states. The nonmonetary aspects of UI program administration do not appear to be unusually stringent in Virginia. Determination rates and denial rates on separation issues, i.e., quits and misconduct, appear to be roughly in line with national averages. Misconduct determinations have increased somewhat faster than in the U.S. but voluntary quit issues occur at less than the national rate.

While the analysis could easily document the persistently low application rate and first payment rate it did not identify a clear explanation for these phenomena. Analysis of micro data undertaken in Chapter 3 added useful information about the low first payment rate, but it did not yield a convincing explanation. Among claimants who filed for benefits in the first six months of 2002, only 65 percent received a first payment. About 5 percent of the remaining 35 percent could be explained by monetary ineligibility and about 15 percent could be attributed to VEC administrative denials on the issues of voluntary quit, misconduct and the presence of disqualifying and/or deductible income. The remaining 15 percent, roughly 16,000 claimants, were monetarily eligible, were not disqualified but did not receive a first payment. While some may have returned to work, this factor seems unlikely to explain most of the 16,000.

Because no satisfactory explanation was apparent, it seemed this question should receive further attention by VEC. The report suggested two follow-up analyses: 1) a match with new hire data to determine how many secured new jobs immediately after filing for benefits and 2) a personal interview survey to find the explanation (or explanations) for not pursuing these claims.

The analysis of UI benefit levels and replacement rates identified three factors that determine the payment levels and how Virginia compares to other states. The three are: 1) the statutory replacement rate, 2) the procedure for computing the weekly benefit and 3) the ratio of the maximum weekly benefit to the weekly wage. For the first two, Virginia's determination of weekly benefits matches national practice, i.e., the statutory replacement rate of 52 percent equals the national average and use of two high quarter earnings yields intermediate benefit levels for a given statutory replacement rate. For the third, however, its maximum benefit relative to the average weekly wage has declined over the past 25 years. The current ratio is below 0.40 (based on the permanent maximum of \$268, not the temporary maximum of \$368 operative during 2002) while the national average is roughly 0.50. This downtrend is responsible for the decrease in the replacement rate (termed the Handbook replacement rate in Chapter 2). To restore the replacement rate to the nationwide average, a maximum of about \$360 (roughly half of the weekly wage in 2002) would be required. Even with a lower maximum, the state's replacement rate in recent years has been only modestly lower than the national average. In 2000, the last year of data unaffected by recent temporary benefit increases in Virginia, the Handbook replacement rate was 0.308 in Virginia versus 0.329 in the U.S., a downward deviation of 6 percent. Restoring the maximum weekly benefit to 50 percent of the weekly wage would move the replacement rate back to the national average.

The average duration of UI benefits in Virginia consistently falls below the national average. This reflects both the state's strong labor market where unemployment duration is short

and the statutory linkage between base period earnings and the maximum benefit amount (BPE-MBA). The BPE-MBA linkage in Virginia falls into the 0.24-0.26 range whereas the national average linkage is roughly 0.33. Because of this low ratio, new claimants on average are entitled to some 21-22 weeks of potential UI benefits while the average nationwide is 24-25 weeks.

Benefit reciprocity in Virginia is below-average due to three factors: 1) a low application rate, 2) a low first payment rate and 3) short benefit duration. Of these three factors, short benefit duration is probably the least troubling. Even with its short average potential duration, benefit exhaustion rates in Virginia have fallen consistently below the national average in recent years. Only about one in four exhaust their benefits compared to one in three nationwide. Nevertheless the low BPE-MBA linkage undoubtedly increases hardships for some UI beneficiaries because it shortens their potential benefit duration. Chapter 3 explored the consequences of changing this linkage and found that potential duration did increase to national-average levels (24-25 weeks) when the present 0.24-0.26 linkage was increased to ratios such as 0.30 or 0.33.

Chapter 3 explored ways to raise benefit reciprocity by changing monetary eligibility statutes. Three alternatives were explored: 1) changing the two high quarter earnings requirement from its present \$2,500, 2) allowing an alternative monetary eligibility calculation for those with less than \$2,500 in their two high quarters and 3) instituting an alternative base period (ABP). The latter was found to be most effective. Nearly half of those monetarily ineligible under the regular base period (the earliest four of the five past completed quarters) became eligible under an ABP that spanned the past four completed quarters. Because those newly eligible under the ABP were disproportionately low wage workers, the cost of instituting an ABP was estimated to be modest. Simulations suggested an added 2.5 percent would become monetarily eligible but the increment to costs would be less than 1.0 percent. Since having an ABP would probably increase applications for UI, costs would be higher, perhaps as much as a 2.0 percent increment over present costs.

Chapter 4 examined two substate benefit issues. Should there be differentials by geographic area in maximum weekly UI benefits? 2) Should maximum benefit duration be different in different areas of Virginia? The first question is most directly of concern to Northern Virginia where wage levels are nearly 40 percent higher than the statewide average. Except for Northern Virginia and areas along the Washington-Richmond corridor, average wages elsewhere in the state are typically some 20-35 percent below the statewide average. The second question is most pertinent to counties and cities along the Virginia's southern and southwestern borders. Unemployment in these areas has been from two to three times the statewide average. Thus it is easy to identify the distinct areas that would benefit from substate differentials in the maximum weekly benefit and/or unemployment rate-related potential benefit duration.

Chapter 4 argued against instituting substate differentials. Such differentials would add to UI benefit payouts and to administrative burdens on the VEC. Increments in benefit costs would arise from two sources. 1) Substate programs would likely be implemented with hold-harmless provisions, i.e., areas not favored by proposed differentials would likely not experience benefit reductions. 2) Behavioral responses could be expected. People would try to claim benefits from favored areas. Interstate claims against Virginia could be expected to increase. Benefit durations could be expected to increase among those receiving higher weekly benefits and those with longer potential benefit entitlements. If it were deemed desirable to increase the maximum benefit in some areas this could be done on a statewide basis while much of the increase in payouts would be concentrated in high wage Northern Virginia. In light of current funding problems, it was argued that decisions to institute substate programs should be deferred.

Benefit financing and trust fund solvency

Chapters 5 and 6 examined issues of UI program financing and trust fund solvency. Chapter 5 studies primarily the setting of tax rates for individual employers while Chapter 6 examines aggregates affecting the trust fund balance, e.g., benefits and employer contributions, and the question of trust fund adequacy.

Since 1982 Virginia has utilized benefit ratio experience rating. Tax rates for a given year are set using four year benefit ratios (the ratio of benefits charged to individual employers relative to their UI covered payroll) for the 48 months ending on June 30th of the preceding year. For a given benefit ratio, the exact tax rate applicable depends upon which of 15 statutory tax rate schedules is operative in the year. The designation of the tax rate schedule depends upon the UI trust fund balance as of the June 30th computation date. Higher fund balances trigger lower tax rate schedules.

The assignment of UI benefit charges to employers is imperfect as some benefits are not assigned to individual employer accounts (termed noncharged benefits) while other charges are not collectible either because the charges exceed the maximum tax rate (ineffective charges) or because the employer has ceased operations (charges against inactive accounts). In most years, Virginia covers these ineffectively assigned charges with interest earnings from its trust fund, but in some years (years of low trust fund balances) it uses a flat rate tax (termed a pool charge) to defray these benefit costs. Since 1988 Virginia has operated its benefit ratio experience rating with a comparatively low volume of ineffectively assigned benefit charges when compared to the average for other UI programs. Between 1988 and 1997, for example, Virginia effectively assigned 69 percent of benefit charges to individual employers whereas the corresponding national average was only 62 percent.

Virginia derives UI contributions from only a fraction of covered wages. Currently the tax base for employer contributions is \$8000, a level first effective in 1991. As in many other states, the UI tax base in Virginia has grown much more slowly than average wages. This has meant that the share of wages that are taxable has declined with the passage of time. Whereas the taxable share of covered wages averaged about 60 percent during the 1960s, the share was only about 0.24 in 2002. This low contribution base means UI taxes that are levied at a flat rate bear most heavily on low wage employers. The low tax base can also slow the speed of recovery of the UI trust fund following a recession.

In any given year, Virginia's tax statute authorizes VEC to levy a scheduled tax based on one of its fifteen tax rate schedules. Two flat rate taxes may also be operative: pool charge taxes are levied when the volume of ineffectively assigned benefit charges exceeds trust fund interest earnings and solvency taxes are operative when the trust fund balance falls below 50 percent of the level deemed adequate. The three taxes combined provide a wide range of potential tax rates so that tax revenues can respond strongly to recession-related trust fund drawdowns and restore the trust fund balance to the level deemed "adequate."

Virginia uses a variant of a high cost multiple to determine trust fund adequacy. The fund balance deemed adequate is determined using three factors: 1) total covered payrolls, 2) the average of the three highest cost years of the twenty years ending on preceding the June 30th computation date and 3) a multiplier of 1.38. Since the high cost average is now about 0.62 percent, the adequate balance is about 0.86 percent of covered payroll or roughly \$900 million.

Tax rates are set based on the ratio of the actual trust fund balance to the adequate balance. During 2003, for example, the tax schedule for the 80 percent fund balance adequacy

ratio will be operative. A pool charge tax rate of 0.16 percent will also be operative in 2003. Chapter 6 notes that Virginia's taxing mechanism has a wide range of potential tax rates achieved through taxing according to one of fifteen tax schedules and revenues that can be collected through pool charge taxes and the fund building tax. Their combined rates can reach 2.5 percent of taxable payroll.

Chapter 6 examined the Virginia's funding mechanism and found it adequate and not in need of fundamental changes. The analysis included simulations with a model developed for the project. The model indicated that following the current recession and using likely assumptions about future unemployment and wage growth, the trust fund balance will increase as unemployment decreases and higher tax rate schedules come into play starting in 2003.

The Chapter 6 analysis also examined some potential changes that would strengthen Virginia's funding mechanism. Under all simulations, the average tax rates to be paid by Virginia employers will increase sharply between 2003 and 2008 compared to 1998-2002. Simulations with an indexed taxable wage base indicated that the trust fund balance would recover more fully with even a low indexation percentage (21 percent of average annual earnings). Under a 21 percent ratio to average wages, the taxable wage base grows from \$8,000 in 2002 to \$9,733 in 2008 (or by 22 percent). Most important, the trust fund balance at the end of 2008 was at least \$100 million higher with indexation when compared with the balance that assumes continued reliance on the present tax base.

Recommendations

As noted, HJR 611 directed the report to examine eight specific topics. These are listed below in their order of appearance in HJR 611. The eight topics are examined in Chapter 7, and, based on the analysis of Chapters 2-6, a number of recommendations are made. Several recommendations are to leave Virginia's present statutory provisions unchanged. In fact, seven of the report's 16 recommendations are to leave present arrangements unchanged. The UI program as currently constituted has a number of sound features that do not need to be changed.

The set of recommendations pertaining to benefits would increase benefit availability both to current beneficiaries (through an increase the BPE-MBA ratio and by raising the maximum weekly benefit amount) and to those who do not receive benefits (through an ABP). Since the trust fund balance is going to be low for the next few years, the implementation of benefit increases should be deferred or implemented only selectively until the fund balance is restored to a level closer to an "adequate" level. The report recommends ending as soon as possible the temporary across-the-board benefit increases still slated to be operative during 2003.

There are also recommendations for further research in two areas: 1) the reason (or reasons) why such a high share of those monetarily eligible do not receive a benefit payment and 2) and possible need for and alternative ways to fund job training and economic development.

Two recommendations will affect employer UI taxes. The report recommends increasing the taxable wage base to \$12,000. While this would increase taxes in the short run and speed the recovery of the trust fund balance, it would improve the equity of UI taxes paid by low-wage employers vis-a-vis their high wage counterparts. Also recommended is an increase in the maximum solvency tax from its present 0.2 percent of taxable wages to 0.4 percent when the trust fund balance reaches very low levels. All eight topics and associated recommendations are listed below. As noted, Chapter 7 discusses each of the eight topics specified in HJR 611 and provides details behind the various recommendations that appear in the following lines.

Topic 1. The current formula for determining the solvency of the Unemployment Trust Fund

Recommendation 1. Retain current procedures for determining the level of the adequate trust fund balance.

Recommendation 2. Virginia should raise its taxable wage base to \$12,000.

Topic 2. Employee benefit eligibility criteria

Recommendation 3. Virginia should raise the BPE-MBA linkage from its present 0.24-0.26 range to a uniform ratio of 0.30.

Recommendation 4. VEC should undertake two separate new analyses of the low first payment rate that focus on persons monetarily eligible who did not receive a first payment.

Recommendation 5. Virginia should institute an alternative base period (ABP).

Topic 3. The rationale for benefit levels

Recommendation 6. Do not change the basis for computing weekly benefits

Topic 4. The propriety of regional or extended benefit features

Recommendation 7. Do not institute a substate differential in the maximum weekly benefit amount.

Recommendation 8. Do not institute a substate differential in the maximum duration of benefits.

Topic 5. The appropriateness and sufficiency of pool charges

Recommendation 9. Do not change the method for assigning pool charges.

Recommendation 10. Virginia should consider raising the maximum rate for fund building taxes.

Topic 6. The propriety of diversion of revenue to job training or economic development programs

Recommendation 11. A proposal to divert revenue to job training or economic development programs should be deferred.

Recommendation 12. At that future date there should be a careful analysis of alternative ways to fund training and/or economic development activities.

Topic 7. The current tax schedules for employers

Recommendation 13. Do not change the current tax schedules

Topic 8. The means of calculating the weekly amount of unemployment compensation benefits for displaced employees

Recommendation 14. End the temporary across-the-board increases in weekly benefits operative during 2002 and 2003 as soon as practicable.

Recommendation 15. Restore the maximum weekly benefit to a level that represents 50 percent of average weekly wages.

Recommendation 16. In the long run, Virginia should implement an indexed weekly benefit maximum.

Chapter 1. Introduction

This report was written in response to a legislative directive specified by the Virginia General Assembly in House Joint Resolution (HJR) 611 to undertake a comprehensive review of the state's unemployment compensation system. Enacted during Virginia's 2001 legislative session, HJR 611 identified eight topics to be studied covering aspects of Unemployment Insurance (UI) benefit payments, financing and trust fund solvency. The analysis was to be undertaken in close consultation with the Virginia Employment Commission. This final report, a revision of an earlier draft report, responds to the HJR 611 legislative directive.

The current economic environment and the recent performance of the UI program in Virginia make this analysis timely. At the same time, however, there are several uncertainties. It is clear that the UI trust fund has declined sharply from its level at the end of 2000. The loss of reserves in 2001 exceeded \$160 million and the loss this year is likely to exceed \$330 million. At present payout rates, total UI benefit payments during 2002 will likely be close to \$750 million while annual contributions from employers will be close to \$150 million. The gap between benefit outflows and contributions into the trust fund during 2002 was reduced by the \$214 million distribution from federal UI trust funds to Virginia under the Reed Act. This distribution, a one-time event and not to be repeated within the next few years, will raise the trust fund balance in 2002 and in later years by about \$200 million. Even with the Reed Act infusion, however, the trust fund balance at the end of 2002 will in all probability fall below \$600 million.

In assessing the near term prospects for the UI program in Virginia, three major uncertainties can be identified. First, the time path of state unemployment is highly uncertain. Second, benefit reciprocity reached historically high levels during the first ten months of 2002. It is unclear how long the high reciprocity will persist. Third, there are presently in place temporary benefit enhancements, enacted in late 2001 and slated to persist until the end of 2003. During 2002 all beneficiaries have received weekly benefit payments 37.3 percent higher specified by the underlying benefit statute, and this is slated to be an 18.65 percent increment during 2003. These temporary additions, while

providing important additional income support to claimants and their families, have at the same time added significantly to the trust fund outflow. Higher benefit payouts attributable to the 37.3 percent increase in benefits during 2002 will total about \$200 million. The combined effects of high unemployment in the future, a high reciprocity rate and a prolongation of temporary benefit increases would add to future benefit payments and create additional downward pressures on the UI trust fund balance.

The conjunction of recent trust fund declines with uncertainties about the state economy, UI reciprocity and temporary benefit measures ensures that concerns about trust fund solvency will figure prominently in UI program deliberations for the next few years. Yet the legislative charge of HJR 611 is to undertake a wide ranging review of major aspects of Virginia's UI program. This situation presents something of a dilemma for the present report. One cannot observe the recent time path of the trust fund balance and not be concerned with the size of the decline and the need to rebuild the balance. Yet, Virginia's UI program over the past three decades has been characterized by very low benefit reciprocity (among the very lowest in the nation) and below-average wage loss replacement rates. How can one propose changes that would increase benefit payments in the face of a sharply reduced trust fund balance? The tactic employed in the report's recommendations is to distinguish the short run from the long run. Recommendations for benefit enhancements are suggested as desirable in long run, but not necessarily appropriate for enactment during 2003 or 2004.

The report has five analytic chapters. Three (Chapters 2, 3 and 4) focus on aspects of benefit payments while two (Chapters 5 and 6) examine questions related to tax rates, revenues and trust fund adequacy. At the end of each chapter there is a summary of major findings. In the analysis of funding questions, a simulation model was developed, and it is utilized in Chapter 6 to make projections of future trust fund balances. Details of this model are provided in Appendices B and C. Each chapter has a summary. Finally, Chapter 7 deals explicitly with the 8 legislative charges specified in HJR 611. Chapter 7 draws heavily upon Chapters 2-6, and makes several recommendations. Many of the recommendations relate to benefits and are made with qualifications as to the timing of their implementation.

Chapter 2. Unemployment Insurance Benefits in Virginia

The cost of unemployment insurance (UI) in Virginia in the long run reflects payments made to unemployed workers. Historically, Virginia's UI program has had low benefit costs, due primarily to a low rate of benefit reciprocity. Using a standard benefit reciprocity measure, the ratio of weekly beneficiaries to weekly unemployment, Virginia has consistently exhibited a low ranking when compared to other states and with the national average. In contrast, average weekly UI benefits, a second key cost factor, have been close to the national average over the past 35 years, but somewhat below-average since the late 1980s. The state's unemployment rate, a third cost factor, has consistently fallen below the national average.

This chapter reviews major developments in Virginia's UI benefit costs. The analysis utilizes a historical perspective, tracing important developments from the mid 1960s to the present.¹ Attention is focused both on key UI statutes and performance measures, e.g., the reciprocity rate. Much of the analysis is comparative, placing Virginia into the broader context provided by the UI programs in the other states. The comparative analysis while interesting and important in its own right also provides background material for answering questions related to UI benefits posed by HJR 611. As noted, these questions are addressed in Chapter 7.

This chapter has six main parts. Part A gives an overview of trends in reciprocity and benefit payment levels. Part B introduces an accounting framework for examining issues of costs and reciprocity and summarizes Virginia historical record. The next three parts (C, D and E) respectively examine details of entry provisions, weekly benefits and benefit duration. The analysis utilizes a comparative perspective, placing Virginia within the wider context provided by other state UI programs. Finally, Part F summarizes the chapter's major findings.

A. Historical Overview

Table 2.1 summarizes the historical record on unemployment and UI benefit reciprocity over the 35 years from 1967 to 2001. The table identifies two factors that have

¹ Information from earlier years is also utilized where appropriate.

consistently contributed to low UI benefit costs in Virginia, the low unemployment rate and the low UI benefit reciprocity rate.

The state's unemployment rate (column [2]) has fallen below the national average (column [1]) during each of the years covered by Table 2.1. The average unemployment rate nationwide over this period was 6.1 percent but it was only 4.5 percent in Virginia. The highest state-to-national ratio during these years was 0.90 while the lowest was 0.55 (in 2000) and the 35 year average was 0.74. From this macro labor market indicator it is clear that Virginia has enjoyed consistently strong labor market performance throughout the 1967-2001 period.

The second factor contributing to low UI program costs has been the low reciprocity rate, column [6]. The UI beneficiary data shown in Table 2.1 refer to the so called "regular" UI program, the state-financed program that pays up to 26 weeks of benefits to eligible unemployed workers. Traditionally, there are two measures of UI reciprocity, insured unemployment and weekly beneficiaries, and they are shown in columns [4] and [5] respectively. Insured unemployment counts active claimants including those serving a waiting period and some serving fixed length benefit deferrals as well as actual regular UI beneficiaries. Weekly beneficiaries refer just to recipients of regular UI benefits. Between 1967 and 2001 the ratio of weekly beneficiaries to total unemployment (column [6]) averaged 0.168 in Virginia compared to a national average of 0.315 (column [7]).

Columns [8] and [9] provide vivid summaries of low benefit reciprocity in Virginia. For each year between 1967 and 2001, the ratio of weekly beneficiaries to weekly unemployment was noted for each state and the District of Columbia.² State ratios were ranked from high to low, i.e., from 1 to 51. Virginia's rank appears in column [8]. For 23 of the 35 years Virginia ranked between 48th and 51st. The state's highest rank was 38 while only four ranks fell into the range from 38 to 44 and the remaining 30 were 45 or higher. Low benefit reciprocity has been a persistent feature of Virginia's UI program over the entire period for which it can be compared with other states.

² State estimates of total unemployment (or TU) are published by the Bureau of Labor Statistics (BLS) for every state starting in 1976. Between 1967 and 1975 BLS published estimates for large states and nine census regions. For Virginia BLS data extend from 1970. Earlier estimates of TU in Virginia were derived

Column [9] provides a second summary of the persistently low reciprocity rate. It shows the ratio of Virginia's reciprocity rate (column [6]) to the nationwide rate (column [7]). Between 1967 and 1974 this relative reciprocity measure averaged 0.334, i.e., about one third of the national average. Between 1975 and 2001 this ratio ranged between 0.490 (1996) and 0.712 (1980). For 23 of these 27 years this relative reciprocity ratio was between 0.500 and 0.699 and averaged 0.594. Thus after removing the eight years of lowest relative reciprocity, the average for the remaining 27 years fell below 0.600. Columns [8] and [9] provide vivid evidence of persistently low reciprocity in Virginia.³

Table 2.1 also illustrates two other aspects of benefit reciprocity in Virginia. Reciprocity is highly cyclical. Note how the level of weekly beneficiaries (column [5]) increased in 1970-1971, 1975, 1980-1983, 1991-1992 and in 2001. In all these periods the state's unemployment rate increased as did the national unemployment rate. Thus UI caseloads have been very responsive to overall state unemployment. The increase between 2000 and 2001 from 18,000 to 29,900 was not unusual in light of earlier recessionary periods. Caseloads exceeded 30,000 in seven earlier years (1975, 1980, 1981, 1982, 1983, 1991 and 1992). Table 2.1 also suggests an increase in reciprocity since 1998. During the most recent four years, the reciprocity ratios in column [6] averaged 0.209. Since 2001 was the only recession year of the four, this high average ratio seems to reflect other factors besides the recent economic downturn. In the years since 1997, the minimum base period earnings requirement was reduced from \$3250 (1997) to its present \$2500 (1999). This change would be expected to raise the proportion of claimants who satisfy monetary earnings requirements. Benefit reciprocity is examined in more detail later in the chapter.

Summary information on weekly benefits for the 1967-2001 period appears in Table 2.2. Columns [1] and [2] respectively show the minimum and maximum benefit while column [3] shows the maximum benefit as a ratio to the average weekly wage in

by the author. The procedure which relies heavily on UI claims and regional data published by BLS, is described in Vroman (1992).

³ It should be noted that a measurable segment of Virginia employment involves federal civilian and military workers not covered by the regular UI program. They have separate unemployment compensation programs. Between January 1999 and August 2002, however, weeks compensated in the federal programs (commonly termed UCFE and UCX) averaged 3.6 percent of weeks compensated in Virginia's regular UI program. Inclusion of federal UI program claimants would not materially raise the reciprocity rates displayed in Table 2.1.

covered employment.⁴ Compared to the weekly wage the maximum increased rapidly between 1967 and 1977 raising the column [3] ratio from 0.420 to 0.551. This ratio then gradually declined between 1978 and 1984 and again after 1991, reaching 0.342 in 2000. The increased ratio of 2001 reflects both an increase in the maximum to \$268 in January and the 37 percent increase to \$368 following September 11th. These increases raised the ratio of the maximum to the AWW to 0.481 or roughly to the ratio of 1982.

Columns [4]-[6] summarize information on average weekly UI benefits and average weekly wages. Their ratio, commonly termed the replacement rate, is an indicator of overall benefit generosity. Many factors influence the replacement rate in a given state such as the maximum benefit, the minimum benefit, the statutory replacement rate (the link between weekly benefits to prior earnings specified in the UI law) and the type of formula used to connect earlier earnings to the weekly benefit. To anticipate the discussion of Part D, however, Virginia's history in weekly benefit determination has had many elements of stability. Consequently there has been a close association between the maximum benefit (measured relative to the weekly wage) and the replacement rate.

Chart 2.1 provides a visual summary of this association for the years 1953 to 2001. During these 49 years the replacement rate varied between a maximum of 0.408 in 1978 to a minimum of 0.288 in 1956. However between 1953 and 1969 the replacement rate was remarkably stable with values falling into the range between 0.288 and 0.331. The replacement rate then increased between 1970 and 1978 reaching a maximum of 0.408 in the latter year. After 1978, the replacement rate gradually declined, reaching a low of 0.301 in 1999 and then increasing in 2001. The important point of Chart 2.1 is to document the close association between the replacement rate and the ratio of the maximum benefit to the average weekly wage. The pattern for the latter ratio is: relatively stable before 1970, increasing between 1970 and 1978, gradually decreasing between 1979 and 2000,⁵ and then higher in 2001 (due to the temporary benefit increase).

⁴ The minimum and maximum shown for each year is the average for January and July. The maximum for 2001 was derived by weighting \$268 and \$368 respectively by an estimate of weeks compensated before and after September 11, 2001.

⁵ Note that there is an increase in 1991 but then a resumption of the downward trend. Extending the chart to 2002 would show that both ratios increased sharply in 2002, a reflection of the 37 percent across-the-board temporary increase in weekly benefits that raised the maximum and all lower payment levels.

The close association between the two series in Chart 2.1 is illustrated by a simple regression where the maximum-benefit-to-average-wage ratio explained 88 percent of the variation in the replacement rate between 1953 and 2001. Most of the variation in the replacement rate over the past 50 years in Virginia has been associated with changes in the maximum weekly benefit. When the maximum has grown faster than the weekly wage, the replacement rate has increased, and vice-versa. The decrease in the replacement rate during the 1980s and 1990s was substantial in Virginia, a reduction of roughly ten percentage points. The main explanation for the decrease was the slow growth in the weekly benefit maximum.⁶

Measuring replacement rates is to some extent an art, and data in Table 2.2 help to illustrate this important point. The replacement rates shown in column [6] and in Chart 2.1 are the most common measures that have been used in UI programs. They suggest that in Virginia, on average, UI benefits have replaced some 0.30-0.35 of previous wages since about 1985. Estimated replacement rates measured as the ratio of average weekly benefits to average weekly wages extend back to 1940 for all states. These replacement rates will be referred to as Handbook replacement rates in the remainder of this report whenever there is possible ambiguity as to which replacement rates are being discussed.⁷ Note that Handbook replacement rates are derived from the ratio of two averages, the average weekly benefit and the average weekly wage.

One important limitation of handbook replacement rates should be emphasized. The average weekly wage used in the calculation refers to the weekly wage of employed wage and salary workers. Employed workers are known to receive wages that are some 10 to 20 percent higher than the wages of those who experience unemployment and collect UI benefits. Thus, handbook replacement rates are too low because the weekly wages used in the calculations are inappropriately high.

Since 1988 the UI programs in the individual states have been measuring weekly wages and weekly benefits of claimants in the Benefit Accuracy Measurement program

⁶ While it is theoretically possible for the minimum benefit to have an important association with the replacement rate, this is not the case in Virginia. There simply are not many beneficiaries paid the minimum benefit. During the first half of 2001 when the minimum was \$50, fewer than 0.1 percent of beneficiaries received the minimum and fewer than one percent received between \$50 and \$60.

(BAM, formerly the Benefits Quality Control program). Small samples of claimants are selected each month in every state and the accuracy of their benefit determinations is reviewed. The BAM samples can be used to measure replacement rates with the advantage that the weekly wages in BAM are specific to UI beneficiaries. In general, the weekly benefits in BAM data are quite similar to those in Handbook data but the weekly wages in BAM data are systematically lower than in Handbook data.

Columns [7] and [8] display two sets of replacement rates based on BAM data. The series termed BAM1 (column [7]) uses the same measurement as with Handbook data, i.e., the ratio of average weekly benefits to average weekly wages. In other words, the averaging of both weekly benefits and weekly wages takes place before the replacement calculation is made. The series termed BAM2 (column [8]) is derived by first calculating the ratio of weekly benefits to weekly wages for each beneficiary (the micro replacement rate) and then averaging the ratios.

If low wage and high wage beneficiaries experienced the same replacement rates, the two BAM replacement rates would on average yield similar estimates. However, some features of UI benefit calculations ensure that high wage workers have below-average replacement rates. i) Those paid the maximum weekly benefit experience lower replacement rates than others due to the constraint caused by the maximum. ii) The calculation of the minimum benefit may cause a low-wage worker at the minimum to experience higher wage loss replacement than other workers. iii) Finally, some states have a weighted benefit schedule which provides higher statutory replacement for low wage workers than for others. All of these factors operate to make BAM1 replacement rates lower than BAM2 replacement rates.

The three sets of replacement rates in columns [6], [7] and [8] display consistent patterns. In each of the 14 years, the Handbook replacement rate is the lowest of the three while the BAM2 replacement rate (the average of the micro replacement rates) is the highest. For the full 14 years, their averages were respectively 0.335, 0.401 and 0.459.

It should be stressed that no one of the three replacement rate estimates is “right.” What is true is that moving from Handbook to BAM1 and then to the BAM2 replacement

⁷ The term Handbook is used because these replacement rates are published by the national Office of Workforce Security (OWS), Employment and Training Administration, U.S. Department of Labor in its publication the “Unemployment Insurance Financial Handbook” (1995) and annual Handbook updates.

rate is a progression where the importance of high wage beneficiaries successively decreases while the importance of low wage beneficiaries increases.

All of the replacement rates displayed in Table 2.2 are measured on a “gross” basis. If the measures included the effects of income taxes and payroll taxes on weekly wages and weekly benefits, the replacement rates would be higher by some 10 to 20 percent, e.g., 0.390 rather than 0.340 for the Handbook replacement rate in 2001. This project did not attempt to measure replacement rates on a net basis.⁸

The replacement rates displayed in Table 2.2 for Virginia can be calculated for all states and nationwide. Between 1990 and 2001 the national averages of the Handbook, BAM1 and BAM2 replacement rates were 0.347, 0.410 and 0.457 respectively. The corresponding averages in Virginia were generally lower but by less than five percent (0.333, 0.398 and 0.458 respectively). When compared to the neighboring states immediately to north and south, i.e., Maryland and North Carolina, the three replacement rates were uniformly lowest in Virginia, but the differentials were much larger with North Carolina than with Maryland.⁹ The most vivid contrast in replacement rates was between Virginia and North Carolina where for each of the three measures the Virginia average was some 11 to 19 percent lower than the North Carolina average. In recent years (prior to 2002), replacement rates (all three measures) have been below-average in Virginia.

Having introduced and briefly reviewed key elements of UI costs in Virginia (the unemployment rate, the reciprocity rate and the replacement rate), Part B presents an accounting framework for examining the costs of UI benefit payments.

B. The Costs of Benefit Payments

The accounting framework for studying the costs of UI benefit payments has two main elements, a cost equation and a reciprocity rate equation. In Virginia as in nearly all states, UI benefit payments are financed by payroll taxes paid by employers into state trust fund accounts maintained at the United States Treasury. Withdrawals can be made

⁸ Among the existing literature, a survey paper by Decker (1997) is especially relevant. The rule of thumb he reports is that a ten percent increase in the replacement rate, say from 0.40 to 0.44, increases duration from 0.5 to 1.5 weeks. One discussion of the effects of taxes on computed UI replacement rates and the associated effects on claimant behavior is found in Parts III, IV and V of Anderson and Meyer (1997).

⁹ For Maryland the corresponding three averages were 0.340, 0.417 and 0.475 and for North Carolina the three averages were 0.391, 0.489 and 0.513.

from these accounts for only a single purpose: to pay UI benefits to eligible unemployed workers. Thus in the long run, the taxes paid by employers in a given state closely reflect the state's experiences with benefit payouts.

A useful UI cost equation can be derived starting with the observation that total annual benefit payouts equal the product weekly benefits times weekly beneficiaries times 52, i.e.,

$$(B.1) \text{ Ben} = \text{WBA} * \text{NBen} * 52 \text{ where,}$$

Ben = total annual benefit payments,

WBA = average weekly benefits,

NBen = the average weekly number of beneficiaries and 52 converts weekly benefit payments into an annual benefit flow.

The right hand terms in (B1) can be rewritten as:

$$(B.2) \text{ Ben} = (\text{RRate} * \text{AWW}) * ((\text{NBen} / \text{TU}) * (\text{LF} * \text{TUR})) * 52 \text{ where,}$$

AWW = the average weekly wage,

RRate = the replacement rate (average weekly benefits as a ratio to AWW),

TU = the average weekly number unemployed,

LF = the labor force and

TUR = the unemployment rate (unemployment as a fraction of the labor force).

Observe that the replacement rate in (B2) measures benefit payments relative to the statewide average weekly wage. This replacement rate is the Handbook replacement rate as the term was defined earlier in Part A. For present purposes the Handbook replacement rate is appropriate for examining the costs of UI benefits.

A convenient metric for examining the tax costs of UI benefits is annual wage and salary payments to workers in covered employment. This can be expressed as:

$$(B.3) \text{ Wages} = \text{Emp} * \text{AWW} * 52 \text{ where,}$$

Wages = total annual payroll or the annual wage bill in covered employment,

Emp = annual average weekly employment, and

AWW = the average weekly wage.

This expression for the total annual payroll can be rewritten as:

$$(B.4) \text{ Wages} = \text{LF} * (1 - \text{TUR}) * \text{AWW} * 52 \text{ where,}$$

all the terms on the right-hand side of (B.4) have already been defined.

Dividing (B.2) by (B.4) yields an expression for UI benefit costs measured as a fraction of total annual payroll in covered employment:

$$(B.5) \text{ Ben/Wages} = \text{RRate} * (\text{NBen/TU}) * (\text{TUR}/(1 - \text{TUR}))$$

The benefit cost rate (Ben/Wages) in expression (B.5) is a fraction that has three components: the replacement rate, the reciprocity rate and the unemployment rate. Note that the latter enters as $(\text{TUR}/(1 - \text{TUR}))$ since higher unemployment not only raises UI payouts but also lowers annual payroll through reductions in covered employment.

Virginia's benefit cost rate has been consistently low. For the 1967-2001 period its average cost rate was 0.44 percent of payroll, less than half of the national average of 0.98 percent for the same period. Its cost rate exceeded 60 percent of the national cost rate only twice during these 35 years. Low and consistently low are both fully appropriate for describing the costs of the UI program in Virginia.

When the individual components on the right-hand side of expression (B.5) are examined, the importance of low reciprocity in Virginia is apparent. The highest reciprocity rate (NBen/TU) for these years was 0.284 in 1975 and the reciprocity rate was less than 0.20 in all but seven of these 35 years. As noted previously, Virginia's reciprocity rate for the period averaged roughly half of the national reciprocity rate. In contrast, the state's unemployment rate averaged roughly three quarters of the national rate over the same period. Virginia's replacement rate has typically been close to the national average with the state-to-national ratio averaging 0.99. For fourteen of these years, the replacement rate in Virginia exceeded the national average. Overall, the most important factor in Virginia's low UI costs has been its low rate of benefit reciprocity.

The preceding conclusion can be stated in an alternative way that some readers may find to be both more subtle and more accurate. The low benefit cost rate of Virginia's UI program has only a minor association with the benefit replacement rate which has been only slightly lower than the national average in recent years. In contrast, the state's unemployment rate has averaged roughly 25 percent below the national average while the reciprocity rate has averages 40-50 percent below the national average. Thus while the overall unemployment and the reciprocity rate are important elements in the explanation for low UI costs in Virginia, the below-average reciprocity rate makes a larger contribution to this outcome than the below-average unemployment rate.

From the perspective of state public policy regarding the costs of UI benefits, there is a most important distinction among the three elements on the right hand side of expression (B.5). The unemployment rate in a state is governed by economic factors that are largely outside beyond a state's direct control, especially in the short run. While state tax policies and economic development policies can affect state economic performance, national and regional economic factors often dominate in the determination of state unemployment rates. Depending on the peculiarities of individual recessionary periods, a state may find its unemployment rate either above, equal to or below the national average unemployment rate. While Virginia did not ever have an above-average unemployment rate between 1967 and 2001, its unemployment rate as ratio the national average varied from 0.55 (2000) to 0.89 (1978) or by more than 30 percentage points.

In contrast to the unemployment rate, the reciprocity rate and the replacement rate are cost factors largely under state control. Through its statutes and administrative procedures a state can strongly influence both factors that are important in determining UI costs. In the years since 1967, the reciprocity rate in Virginia has been consistently low while the replacement rate during 1967-2001 roughly matched the national average.

Given the importance of the reciprocity rate as a determinant of benefit costs, an expression has been developed to decompose the reciprocity rate (the ratio of weekly beneficiaries or NBen to weekly unemployment or TU) into four constituent parts. This expression is derived in the following paragraphs.

The starting point is an expression that represents total unemployment as measured by the monthly labor force survey (the Current Population Survey or CPS).

(B.6) $TU = NU * AD / 52$ where,

NU = new spells of unemployment in a year (measured in the monthly labor force survey as 12 times the average monthly number unemployed less than 5 weeks), and

AD = the average duration of the new spells, (in weeks and measured as $52 * TU / NU$).

AD/52 in (B.6) is average duration per spell of unemployment expressed as a fraction of the year.

The following expression describes weekly beneficiaries.

(B.7) $NBen = IC * (NIC / IC) * (FP / NIC) * ADUI / 52$ where

IC = initial claims (new plus additional initial claims) for UI benefits,

NIC = new initial claims for UI benefits,

FP = first payments of UI benefits (payments that signal the start of a benefit year), and ADUI = average duration in benefit status (total weeks compensated as a ratio to first payments).

ADUI/52 in (B.7) is average duration per first payment, expressed as a fraction of the year.

Taking the ratio of (B.7) to (B.6) yields:

$$(B.8) \text{ NBen/TU} = (IC/NU) * (NIC/IC) * (FP/NIC) * (ADUI/AD)$$

The left-hand side of expression (B.8) has NBen/TU, the indicator of benefit reciprocity introduced previously in expression (B.5). To repeat, NBen/TU is the weekly number of UI beneficiaries expressed as a ratio to weekly unemployment as measured in the monthly labor force survey.

The right-hand side of expression (B.8) shows the four explicit ratios that combine to determine the NBen/TU ratio. For convenience, each will be referred to using capital letters but dropping the division symbols appearing in expression (B.8).

The first term, ICNU, is the take-up rate or application rate. It shows the number who file for benefits as a fraction of all new occurrences of unemployment. Historically, this has averaged about 0.50 nationwide but with considerable variation across individual states. Knowledge about people who do not file for benefits is limited, but so called “nonfilers” or “self denials,” i.e., people who do not file either because they believe they are ineligible or for other reasons, are thought to be an important phenomenon. Many people do not file when they perceive they are not eligible either due to monetary reasons (insufficient earnings in the base period) or nonmonetary reasons (e.g., voluntarily quitting the last job).¹⁰

The second right-hand term in (B.8), NICIC, shows the importance of additional claims relative to new initial claims. In 2000, new initial claims totaled about 9.3 million while additional initial claims totaled slightly more than 6.0 million. Thus, filing for benefits more than once a year is a major phenomenon in UI programs.

¹⁰ Information on reasons for not filing for UI benefits has been derived from special supplements to the CPS where unemployed persons were asked directly why they did not apply for benefits. Analysis of CPS data for 1989-1990 was undertaken by Vroman (1991) and analysis of 1993 data was done by Wandner and Stettner (2000). Unfortunately, the samples in these special supplements were too small for an analysis of individual states such as Virginia.

The third-right hand term, FPNIC, shows the fraction of new initial claims that result in a benefit payment. This first payment ratio is less than unity partly because some people find jobs while serving their waiting week and/or disqualification period. More important, however, are the disqualifications for both monetary and nonmonetary reasons. The national FPNIC ratio has varied between 0.73 and 0.78 in recent years, and it varies widely across states.

The final term in expression (B.8), ADUIAD, is the ratio of the two unemployment duration measures. Note that ADUI (UI benefit duration) appears in the numerator of this ratio. States that closely monitor continuing eligibility and/or states that have relatively less generous UI potential duration provisions could have low average UI duration even though duration from the CPS (AD) is not unusually low. One indication of less generous duration provisions is a low level of potential duration among those found to be monetarily eligible for benefits. State-level information on potential duration is available from ETA-218 reports (monetary eligibility reports) and from so-called Handbook data.¹¹ In Virginia actual UI benefit duration (ADUI) and potential benefit duration have been consistently lower than the national average. Part E and Appendix A examine unemployment duration and UI benefit duration in some detail.

All elements that enter expressions (B.6), (B.7) and (B.8) are measured at the state level in CPS data or in federally required reports submitted by the state UI programs to the National Office of Workforce Security (OWS). Thus, the four right hand ratios in equation (B.8) can be derived for each state and can be extended into the past for more than twenty years. An analysis of low UI benefit reciprocity, as signaled by a low NBentTU ratio, can thus decompose a low overall ratio into the product of its four constituent parts. A low (or high) WBTU ratio may arise from different combinations of the four factors shown on the right-hand side of expression (B.8).

Some additional comments about this reciprocity rate accounting framework should be made. First, there is an issue of data availability. State data on NBentTU as displayed in column [6] of Table 2.1 are available back to 1967. However, new spells of unemployment by state have been measured in the CPS only since 1977. Thus the right-

¹¹ See U.S. Department of Labor, Employment and Training Administration, "Unemployment Insurance Financial Data," ET Handbook 394, (Washington, D.C.: U.S. Department of Labor, 1995) and updates .

hand elements of equation (B.6), e.g., NU and AD extend back to 1977. Consequently, the ICNU and ADUIAD ratios in expression (B.8) are available only from 1977. Second, there is an issue of data reliability with respect to CPS data at the state level. The CPS state-level samples are quite small (less than 1000 households in several states) thus data from individual years have a measurable degree of noise arising from these small samples. To reduce problems posed by these small samples, users often average CPS state data across years. Statistical reliability problems are not present in the data from the UI programs which are universe counts. Thus in relationship (B.8) the NICIC and FPNIC ratios are more statistically reliable than the ICNU and ADUIAD ratios because the latter pair depend partly on state-level information from the CPS.

What insight does relationship (B.8) provide regarding low benefit reciprocity in Virginia? Table 2.3 displays average data for Virginia and the U.S. for each element of (B.8) measured over the 24 years from 1977 to 2000.

Table 2.3. Factors Related to UI Benefit Reciprocity in Virginia and the U.S., 1977 to 2000.

Element from relationship B.8	Virginia	United States	Virginia/ U.S.
NBenTU, reciprocity rate	0.178	0.300	0.593
ICNU, application rate	0.431	0.521	0.827
NICIC, repeat application rate	0.569	0.570	0.998
FPNIC, first payment rate	0.670	0.741	0.904
ADUIAD, relative unemploy. duration	1.111	1.372	0.810

Over the 24 years covered by Table 2.3 the average reciprocity rate in Virginia was 0.178 compared to the national average of 0.300. From the table, three factors can be seen to contribute to below-average reciprocity in Virginia. First, following new onsets of

unemployment, a below-average proportion file claims for UI benefits. Virginia's average ICNU ratio of 0.431 was about 17 percent below the national average of 0.521. Second, among those who filed new initial claims, the proportion who received a first payment in Virginia averaged 0.670 compared to the national average of 0.741, a differential of 10 percent. Third, relative UI benefit duration was short in Virginia when compared to the national average. Virginia's ADUIAD ratio of 1.111 was about 19 percent below the national average of 1.372.

The remaining right-hand factor in equation (B.8), the repeat application rate or NICIC, almost exactly matched the national average. The averages of 0.579-0.580 imply that for every ten new initial claims for benefits there were about 7 additional claims both in Virginia and nationwide. Second and later applications within established benefit years occurred in Virginia at a rate almost identical to the national rate between 1977 and 2000.

To summarize, low benefit reciprocity in Virginia as characterized by equation (B.8) has three contributing factors. A low initial application rate and short benefit duration are most important (and of roughly equal importance) while a low first payment rate also contributes to low reciprocity.

The following parts of this chapter examine individually specific aspects of initial applications, eligibility decisions, benefit payment levels and benefit duration.

C. Applications for UI and Entry into Benefit Status

To receive UI cash benefits the unemployed worker must satisfy specific program eligibility criteria set by the individual states. Claimants must have earned sufficient amounts in an earlier (base) period and the job separation must not be for a disqualifying reason. In the language of UI program administration, the claimant must satisfy both monetary criteria and nonmonetary separation criteria.

State entry eligibility factors are quite varied. Here, and in the two parts that follow, Virginia is examined using a time series comparative perspective. Statutory and other provisions are displayed for several years for Virginia along with comparable information for other state UI programs. As in Parts A and B, the analysis extends back to 1967. While there are 53 UI programs in the United States, the comparative data to be summarized are based on 51 programs (the 50 states plus the District of Columbia).

Table 2.4 shows data on entry eligibility for years between 1967 and 2002. This and several subsequent tables follow a common format with summary data for 51 UI programs displayed in the top panel and data from Virginia in the bottom panel. Column [1] shows base period earnings needed for minimum monetary eligibility. The U.S. data are simple averages across 51 programs. Observe that the absolute level of required earnings has been consistently quite modest and that the entry requirement for Virginia was above-average for all years.

State UI programs set minimum base period eligibility in different ways. Most commonly, states require minimum thresholds of earnings for the full base period and for the highest quarter within the base period. The base period usually is defined to be the earliest four of the past five fully completed quarters that precede filing a UI claim.

Prior to 1982, Virginia had base period and high quarter requirements like most states. Since 1982, Virginia's minimum requirement has been a two-high-quarter requirement. The claimant must have earnings in at least two base period quarters and earnings in the two highest quarters of the base period must equal or exceed the dollar thresholds shown in column [1], e.g., \$2200 in 1982. For most states the dollar amounts in column [1] refer to earnings requirements for the full base period. Only nine programs had a requirement that exceeded \$2500 in 2002. Virginia's requirement of \$2500 was the tenth highest across the 51 programs. In 1997, only two states had a base period requirement that exceeded Virginia's requirement of \$3250.

States differ widely in their average wage levels. Thus it is more meaningful to express the base period requirements relative to average wages in each state. Column [2] presents base period earnings requirements in terms of the implied number of weeks of earnings at the level of the statewide average weekly wage. The top panel again displays simple averages across all 51 programs. Note that Virginia was above-average using this measure for all years, and only in 1977 and 2002 was its requirement close to the national average. The changes in the base period requirement since 1997 have measurably narrowed the differential between Virginia and the national average. The requirement of \$2500 in 2002 represents 3.6 weeks of earnings at the statewide average wage compared to an average of 2.9 weeks nationwide.

One reason for having base period earning requirements is to ensure that claimants demonstrate a “substantial” past history of work before they can achieve monetary eligibility. In several states, a claimant deemed monetarily ineligible under the traditional base period requirements may obtain a second determination using one or more alternative requirements. In effect, the alternative requirement provides a second avenue for demonstrating a substantial past history of work. These alternative requirements refer to earnings during the standard base period but under different dollar thresholds or other requirements.

Column [3] shows that alternative earnings requirements have become more prevalent since 1967, increasing from five states in that year to 12 in 2002. The alternative requirements operative in 2002 are quite varied. Oklahoma and Texas confer monetary eligibility if base period earnings exceeds a rather high threshold regardless of the quarterly pattern. Oregon’s alternative requires base period hours above a minimum threshold of 500. Georgia uses a multiple of 40 times the WBA as an alternative to its standard two quarter earnings threshold.

Another approach for recognizing substantial past work attachment is for a state to make a monetary determination using an alternative base period (ABP). Under the ABP, those deemed monetarily ineligible using the regular base period may request a second monetary determination which recognizes more recent earnings. Most typically the ABP uses the most recent four completed quarters rather than the earliest four of past five completed quarters. The number of states that offer an ABP increased from 1 in 1987 to 12 at the start of 2002 (column [4]). Two more states (Georgia and Oklahoma) enacted ABP legislation in 2002.

Note in Table 2.4 that Virginia has never had an alternative earnings requirement or an ABP during the 1967-2002 period. While this makes it easier for VEC to administer monetary determinations, it also has the effect of restricting access among some low wage workers with a demonstrated history of covered employment. The financial implications of alternative earnings requirements and of the ABP for Virginia are examined in the next chapter.

Some states impose monetary requirements in addition to the standard base period and high quarter threshold earnings requirements. Indiana and Kentucky impose a

recency requirement. Earnings in the last two quarters of the base period must exceed a specific threshold. Iowa requires earnings in the second highest quarter to be at least half of high quarter earnings. Maine requires earnings in two separate quarters to exceed a specified threshold. In all these instances, the state imposes three requirements rather than two in order for the claimant to achieve monetary eligibility.

Column [5] shows that the prevalence of additional earnings requirements has not changed much since 1967. The five of 1967 increased to nine in 1992 but then decreased to seven at the start of 2002. Virginia has never had an additional earnings requirement.

To summarize, four comments are appropriate. 1) Virginia has traditionally had high monetary eligibility requirements. Its dollar thresholds have consistently exceeded the national average, and since 1982 the threshold is based on earnings in just two quarters not the full base period. These factors both operate to reduce monetary eligibility among claimants. 2) Virginia's monetary threshold has decreased since 1997 so that it is now easier to meet monetary requirements than during the early and middle years of the 1990s. 3) Virginia has never offered claimants alternative routes to achieve monetary eligibility either through an alternative earnings requirement or through an ABP. 4) Virginia has never imposed added earnings requirements beyond traditional base period earnings requirements.

The presence of high monetary requirements in Virginia may operate to inhibit applications for UI benefits. Note that in column [6] of Table 2.4, the state's application rate was consistently below the national application rate prior to 2000. The differential averaged roughly 19 percent between 1977 and 1996 (respective averages of 0.52 and 0.42) but only 8 percent between 1997 and 2000 (respective averages of 0.52 and 0.47). During this most recent period, the UI application rate increased in Virginia while the national average was practically unchanged. Observe in Table 2.4 that both application rates were 0.51 in the year 2000. If this recent increase in the application rate persists, it would have important implications for the future cost of the Virginia's UI program.

Among those who file UI claims there is low first payment rate (first payments as a ratio to new initial claims) in Virginia, as noted previously in Table 2.3. For the 34 year period from 1967 to 2000 the national first payment rate averaged 0.74 whereas the rate in Virginia averaged 0.67, an average differential of 10 percent. First payment rates for

selected years are displayed in column [8] of Table 2.5. For all but seven years between 1967 and 2000, the Virginia's first payment rate was below the national average.

Three statutory-administrative factors could be linked to the first payment rate: the monetary eligibility rate, nonmonetary determinations and the waiting period. Columns [1]-[7] of Table 2.5 displays summary data on each of these factors. The monetary eligibility rate in Virginia has been generally low, below the national average in 32 years between 1967 and 2001. During these 35 years the state and national averages were 0.81 and 0.86 respectively. As would be expected, the monetary eligibility rate in Virginia has moved closer to the national average in years since 1997 as the base period earnings requirement has decreased. Note in column [1] that the differential was 0.08 in 1997 (0.89 versus 0.81) but only 0.04 in 2001 (0.92 versus 0.88). This monetary eligibility differential may contribute to Virginia's below-average first payment rate.

Columns [2]-[5] of Table 2.5 display information on separation nonmonetary determination activity. The vast bulk of separation determinations involve two issues: voluntary quits and misconduct. Throughout the years since 1967, Virginia has imposed durational disqualifications for claims where VEC has adjudicated these separation issues and decided against the claimant.

Two aspects of VEC adjudicatory activities are important: the determination rate (determinations as a fraction of new spells of unemployment) and the disqualification rate (disqualifications per determination). Note in column [2] that the Virginia determination rate for voluntary quits has consistently fallen below the national average. For the 1971-2001 period the respective averages were 0.065 and 0.089 with Virginia's determination rate below-average in each of the 31 years. The determination rate for misconduct issues has displayed a different pattern. In every year between 1971 and 1991 Virginia's determination rate was below-average, but then it was above-average in every year between 1992 and 2001. Over the period from 1971 to 2001 determination rates for misconduct issues have been rising in UI programs throughout the U.S., but the increase in Virginia exceeded the national trend. During the five years 1971-1975 the Virginia and U.S. determination rates for misconduct averaged 0.053 and 0.064 respectively whereas their averages during 1997-2001 were 0.135 and 0.121 respectively. In recent years,

Virginia has adjudicated voluntary quit issues at a below-average rate but misconduct issues at an above-average rate.

When disqualification rates are examined, Virginia has exhibited an above-average rate on voluntary quit issues but a below-average rate on misconduct issues. However the departure of Virginia's disqualification rates from the national average have not been very large. The two averages for voluntary quit issues over the 1971-2001 period were 0.77 (Virginia) and 0.72 (U.S.). The corresponding averages for misconduct issues were 0.37 (Virginia) and 0.38 (U.S.).

Considering both determination rates and disqualification rates for separation issues, there is nothing particularly unusual in the Virginia experience relative to the national average. The overall rate at which these issues are adjudicated may be slightly below the national rate (for quits and misconduct combined), but the determination rates and disqualification rates are not radically different from the national average.

The final factor that may influence the first payment rate is the waiting period. Virginia has changed its the waiting period three times since 1967. Prior to 1974 the state operated with a one week waiting period. Between July 1974 and June 1981 it still had a one week wait, but claimants were reimbursed for that week if they collected benefits for four or more weeks. The waiting week was fully discontinued between July 1981 and 1990, but it was reimposed (without a retroactive feature) in 1991.

Columns [6] and [7] in Table 2.5 show that several states changed their treatment of the waiting period between 1967 and 2001. One week waiting periods without the possibility of a retroactive payment became much less prevalent between 1967 (48 - 8 or 40) and 1977 (39 - 11 or 28). States with retroactive payments then became less common after 1977 while the number with a one week waiting period stabilized at 39-40. Thus Virginia's period of retroactive payments for the waiting period coincided with similar treatment in several other states.

The first payment rate in column [8] of Table 2.5 is significantly associated with the treatment of the waiting week. A multiple regression explaining the first payment rate was fitted for the 1967-2000 period. It included as explanatory variables the unemployment rate, the monetary eligible proportion and a waiting week variable. The latter was measured as 1, 0 and 0.3 respectively for years with a one week wait (and no

retroactive payments), no wait and a one week wait coupled with retroactive payments. The most significant variable in the regression was the waiting week variable. The first payment rate was significantly higher in years with no waiting period. The estimated first payment rate was higher by 0.08 in these years when compared with years with a one week wait and no retroactive payments.

The preceding analysis has identified two factors that help explain variation in the Virginia's first payment rate. The below-average monetary eligibility proportion has contributed as has the presence of the one week waiting period in the years before 1974 and after 1991. Much of the explanation for the below-average first payment rate can be attributed to these two factors. Chapter 3 undertakes further analysis of the first payment rate using micro data on claims filed during the first half of 2001.

D. The Level of Weekly Benefits

As noted in Part A, Virginia's weekly benefits have roughly matched the national average when both are compared for the 35 years 1967 to 2001. Table 2.6 displays comparative data on weekly benefits for this period. Column [1] repeats information previously displayed in Chart 1 showing an increase in Virginia's Handbook replacement rate between 1967 and 1977 and then a gradual decrease through the remaining years.

The two factors most influential in determining actual replacement rates are the statutory replacement rate and the ratio of maximum benefits to the average weekly wage. During the years covered by Table 2.6 Virginia continuously had a statutory replacement rate of 0.52 both in years prior to 1982 when the state used a high quarter calculation to determine the weekly benefit and from 1982 to the present when the weekly benefit has been based on a two high quarter calculation.¹²

Note the stability in the average of the state statutory replacement rates in column [2]. For seven of the eight years displayed, the average was 0.53 and for the eighth (1967) it was 0.52. Virginia's statutory replacement rate has almost exactly matched the 51 program average over the 1967-2002 period.

¹² Operating with 1/50th of wages in the two high quarters or 1/25th of wages in the high quarter both imply a statutory replacement rate of 0.52, e.g., wages in 26 weeks divided by 50 or wages in 13 weeks divided by 25.

The maximum weekly benefit also is an important determinant of the level of weekly benefits. Column [3] shows how the maximum in Virginia increased relative to the average weekly wage between 1967 and 1977 and then increased more slowly than the weekly wage after 1977.¹³ The pattern in Virginia contrasts with the national average. The national ratio in column [3] did increase between 1967 and 1977 but relatively less than in Virginia. After 1977 the national ratio has been remarkably stable within the 0.47-0.49 range. Nationwide, the average maximum weekly benefit has increased at about the same pace as the weekly wage during the past 25 years.

Columns [4]-[6] document the changing frequency of three benefit features that also can affect payment levels for individual workers: indexation of the maximum benefit, the presence of a weighted benefit formula and payment of dependents' benefits. None of these features has been enacted in Virginia.

The prevalence of indexation increased throughout the 1960s and 1970s reaching a maximum of 36 programs (out of 51) during 1980-1983. Since 1983 its prevalence has declined with discontinuations in Delaware (1988), Wisconsin (1988), Michigan (1996) and Texas (2001) and just one addition, Nebraska (2001). Thus during recent decades about two thirds of the states have operated with an indexed maximum weekly benefit and the count in 2002 was 33.

Having indexed benefits helps provide stability in aggregate replacement rates through time and in the replacement rates for individuals. There is no need for periodic legislation to raise the maximum because increases occur automatically.

To document state experiences with benefit indexation, Handbook replacement rates were examined for the two years 1982 and 2002. Of the 37 states that had indexed maximum benefits in at least one of these two years, 32 had indexation in both years. Among these 32 states, nine raised the indexation percentage (the ratio of the maximum benefit to the average weekly wage) between 1982 and 2002 while ten reduced the percentage. The simple averages of the Handbook replacement rates for these 32 states were 0.392 in 1981 and 0.402 in 2001. During the same period, the simple average Handbook replacement rate for the 15 programs that were not indexed in both years were 0.314 in 1981 and 0.322 in 2001. Thus while there were no systematic differences in the

¹³ Recall Chart 2.1.

trendwise development of the average replacement rates in both groups of states between 1981 and 2001, there were systematic differences in the levels of the average replacement rates for the two groups. Average replacement rates were about 23 percent higher in both 1981 and 2001 in the states where the maximum weekly benefit was indexed.

Virginia has never had an indexed maximum weekly benefit as indicated in column [4] of Table 2.6. While its maximum benefit as a ratio to the average weekly wage has fallen below the national average in recent years (prior to the large increase of late 2001), its Handbook replacement rate (column [1] of Table 2.6) has been only somewhat lower than the national average. Virginia's replacement rate has been higher than the average for the 15 programs without indexation in both 1982 and 2002, e.g., an average of 0.340 in 2001 compared to an average of 0.322 for the 15 programs. The absence of indexation has not led to a large downward deviation of Virginia's Handbook replacement rate vis-à-vis the national average.

One argument against indexation is that it hinders a state's control of aggregate UI costs. During recessions when payouts increase, the size of the increase is augmented if the maximum payment automatically increases. Such automatic increments are avoided in states where legislation is required to increase the maximum benefit.

In recognition of this consideration, several states with indexation have enacted statutory provisions to either freeze or even reduce the maximum weekly benefit in years when the trust fund decreases or employers move to a higher tax rate schedule. These provisions were present in eleven states in 2002, an increase from six states in 1987. No state had such a provision in 1982. Typically states have enacted these provisions following a recession. Their purpose is to help maintain trust fund balances during future recessions. Of the eleven states with statutory freeze-reduction provisions, only three (Kentucky, Louisiana and Minnesota) had activated this feature at the start of 2002.

Weighted benefit formulas provide a higher rate of wage loss replacement for low wage workers than others. In California, for example, the statutory replacement rate is 0.565 for those with lowest weekly benefits while it is only 0.448 for those with highest weekly benefits. Weighted benefit formulas introduce an element of need in determining weekly UI benefits. The validity of this assumption of greater need among low wage workers can be questioned. Often a low wage worker is a secondary earner in a

household with high income. Partly in recognition of this, states have changed benefit formulas towards having a single statutory replacement apply to workers at all levels of base period wages. Table 2.6 demonstrates that weighted benefit formulas have become much less frequent, decreasing from 16 programs in 1967 to just six in 2002.

Dependents' benefits were present in 12 UI programs in 2002. Their provisions vary widely from state to state. Some states increase the maximum weekly benefit up to 50 percent when several dependents are present while other states do not change the maximum and pay dependents' benefits only to those receiving below-maximum amounts. Two states eliminated dependents' benefits during the 1990s; Indiana in 1995 and the District of Columbia in 1998. Previous state legislative actions were adoptions by New Jersey in 1985 and Iowa in 1980.

Dependents' benefits also are paid on the basis of presumed need. To administer these payments, the UI agency must gather information on the family living arrangements of unemployed claimants. There has not been a major recent analysis of dependents' benefits.¹⁴ In statistical data reported by the states to OWS, there are no standard series showing numbers or amounts paid for dependents' benefits. No additional attention to dependents' benefits will be given in this chapter.

All states calculate the weekly benefit amount (WBA) using the claimant's base period earnings. Individual states utilize one of four different methods to make these determinations. The largest number (28 in 2002) calculate the WBA using earnings from the highest quarter of the base period. Dividing high quarter earnings by 26, 25, 24 and 23 implies statutory replacement rates of 0.500, 0.520, 0.542 and 0.565 respectively. Most high quarter states use one of these four statutory replacement rates.

The second most prevalent method of calculation is to base the WBA on average earnings from the two quarters with highest earnings in the base period. Virginia changed from a high quarter to a two high quarter calculation of the WBA in 1982. In fact, Virginia was the second state (after Washington) to adopt this method of calculation. By 2002 this number had grown to 13, column [8] of Table 2.6.

¹⁴ For example, Chapter 5 by O'Leary (1997) in the comprehensive UI summary volume edited by O'Leary and Wandner examines the adequacy of the weekly benefit amount. The chapter devotes two pages to dependents' allowances and arguments for and against such allowances. The references to earlier work in these two pages were to two analyses completed in 1966 and 1980 respectively.

A third method is to use the all covered earnings of the base period. The WBA is linked to base period earnings by fractions like 0.009, 0.010 or 0.011, with implied replacement rates of 0.468, 0.520 and 0.572 respectively. Note in Table 2.6 that annual wage formulas were used by six programs in 2002, and that the number has been quite stable since the mid 1980s.

The fourth method is to set the WBA as a fraction of the worker's average weekly wage in the base period. This method requires more information than the other three since the UI agency needs to know how many weeks the claimant worked during the base period. In the past, the states have operated with varying definitions of what constitutes a week of countable employment. Note in column [10] that between 1967 and 1987 nine or ten states used this method. Since 1987 the number has decreased, reaching four in 2002. States that used the weekly wage to calculate the WBA often asked base period employers for information needed to calculate weeks of employment (so-called wage requests). The weekly wage was calculated by dividing base period earnings in countable weeks by weeks of qualified employment, and the WBA was then set as a proportion, e.g., 0.50 or 0.52, of this computed weekly wage. As quarterly wage reporting by employers has become universal, the number of states using weekly wage formulas has decreased. States use other methods to calculate the WBA without needing to know the number of weeks worked in the base period.

The preceding four methods yield a definite progression regarding the computed level of the WBA from a given pattern of base period earnings. For a stated statutory replacement rate, the high quarter method is most generous while the annual wage method is the least generous while the two high quarter and weekly wage method are intermediate. The ranking of the latter pair depends on the pattern of weeks worked during the base period. In 1982 Virginia changed from using the most generous method of WBA calculation to one of intermediate generosity.

The differences in the WBAs under the four methods of calculation for any individual claimant depend upon the variability of earnings during the base period. Someone who worked 52 weeks and all at the same weekly wage would receive the same WBA under all four methods (assuming a common statutory replacement rate). However,

as within-year earnings are more variable, the differential from using the high quarter method vis-a-vis the annual wage method becomes larger.

For claimants with varied patterns of base period earnings, how different are the WBAs under the different calculation formulas? The following paragraphs pursue this question using multiple regressions applied to aggregate data from the states. Chapter 3 examines the same question using a simulation methodology. A large sample of claims from Virginia was studied, and benefit calculations were made using the state's present two high quarter method and alternative methods.

A regression analysis of the four different benefit formulas (Table 2.7) applied a common equation specification to three different replacement rate measures. The replacement rates were the three introduced earlier: the ratio of statewide average weekly benefits to the statewide average weekly wage (the Handbook replacement rate), the ratio of average weekly benefits to the average weekly wage in BAM data (the BAM1 replacement rate) and the average of the replacement rates for individuals calculated from BAM micro data (the BAM2 replacement rate). The analysis utilized data from the fourteen years 1988 to 2001 when all three measures were available for 51 UI programs.

The regression specification used variables introduced earlier as important determinants of replacement rates. Two key variables are the ratio of the maximum weekly benefit to the average weekly wage and the statutory replacement rate. In states with weighted benefit formulas the replacement rate for high wage workers was used. The effects of the four different WBA calculation methods were estimated using dummy variables. These were 0-1 variables with 1's indicating the presence of a particular method. Since there are four methods, only three of these dummies were included in the regressions. The one high quarter method is known to be the most generous. Dummy variables were entered for the each of the other three methods of calculation. The coefficients on these dummies are of particular interest. They indicate the average difference (downward deviation) in the replacement rate for the identified method relative to the one high quarter method, holding other factors constant.

The appear in Table 2.7. The MaxWBA/AWW ratio and the statutory replacement rate both enter with the expected positive coefficients and both are highly

significant. Actual replacement rates are systematically higher in states with relatively high weekly benefit maximums and in states with high statutory replacement rates. Note also the progression of these two coefficients across the three dependent variables. The size and t ratio for the MaxWBA/AWW coefficient decreases in moving from the Handbook replacement to the BAM2 replacement rate while the opposite change is observed for the statutory replacement rate's coefficient. This pattern is exactly as expected in moving towards BAM2, the measure that gives greatest importance to low wage workers relative to other claimants. Because such workers are less affected by the maximum weekly benefit than others, the MaxWBA/AWW variable's importance declines while the statutory replacement rate becomes more important in moving from equation [1] to equation [3].

Key interest centers on the coefficients for the methods of calculating the WBA. Since the omitted method is the one high quarter method, the three included dummies show the average deviation of the identified method from the one high quarter method. All three dummy coefficients are negative and significant in each equation. However, the downward deviations of the two high quarter method and the average weekly wage method are much smaller than for the annual wage method. For the three coefficients in each line, the respective downward deviations averaged 0.016, 0.020 and 0.060. Holding constant the statutory replacement rate (and other factors), the downward deviation in the average replacement from the replacement rate calculated under the one high quarter method is 0.016 for the two high quarter method, 0.020 for the average weekly wage method, but 0.060 for the annual wage method.

The results presented in Table 2.7 were unchanged when other variables were added to the equations. In particular, the effects of dependents' allowances and weighted benefit formulas were tested using dummy variables. Neither was significant (singly and with both included) and all the coefficients shown in Table 2.7 retained significance.

Finally, observe the high R^2 s in the three equations, ranging from 0.687 to 0.763. Most of the variation in UI replacement rates across states during the 1988-2001 period was explained and all three explanatory factors present in the regressions were highly important: the maximum benefit relative to the weekly wage, the statutory replacement

rate and the method used to calculate the WBA. These three factors explained most of the interstate variation in replacement rates.

For two of these three important determinants of replacement rates, Virginia had statutory provisions that were close to national average during the 1988-2001 period. Virginia's statutory replacement rate of 0.520 was nearly identical to the fourteen-year national average of 0.525. The state's method of calculating the WBA from earnings in the two high quarters yields intermediate results compared to the one high quarter method and the annual wage method. However, the ratio of the maximum benefit to the average weekly wage averaged 0.409 in Virginia compared to the national average of 0.490. Over this period, the Handbook replacement rate averaged 0.335 in Virginia compared to the national average of 0.367. The fourteen predicted values based on the Table 2.7 regression were also below-average, averaging 0.324. The main explanation for Virginia's below-average Handbook replacement rate during the 1988-2001 period was the low level of its maximum benefit (and the associated MaxWBA/AWW ratio).

To summarize the preceding analysis of weekly benefits and the UI replacement rate in Virginia, four comments are appropriate 1) Over the 35 years from 1967 to 2001 the average Handbook replacement rate in Virginia almost the same as the national average. 2) Since 1988 the Handbook replacement rate has averaged about nine percent less than the average for 51 programs, 0.335 versus 0.367. 3) The principle reason for the low replacement rate in recent years has been the low level of the state's maximum weekly benefit relative to the average weekly wage. While the national ratio during 1988-2001 averaged 0.490, the ratio in Virginia averaged only 0.409. 4) The statutory replacement rate and the two high quarter method for computing the WBA were not important factors in the recent pattern of below-average replacement rates.

E. Unemployment Benefit Duration

The average duration of unemployment and UI benefit duration are both significantly shorter in Virginia than in most states and consistently less than the corresponding national averages. Table 2.8 displays summary data on duration for Virginia and the U.S. for selected years between 1967 and 2001. Average duration for both Virginia and the U.S. as measured in the household labor force survey (CPS) can be

compared for six years (column [1]), and Virginia's average was consistently below the U.S. average. For the 24 years that can be compared (1977 to 2000), the state's average of 11.8 weeks was 0.79 of the national average of 14.9 weeks. Much of the explanation for Virginia's below-average unemployment rate as discussed in Parts A and B of this chapter arises from the short duration of individual unemployment spells.¹⁵

UI benefit duration has also been consistently below-average in Virginia for as long as program data are available, i.e., for more than 50 years. For the 35 years covered by Table 2.8, benefit duration in Virginia and U.S. respectively averaged 10.1 and 14.2 weeks. For the eight individual years shown in the table, the smallest downward deviation of duration in Virginia from the national average was 2.2 weeks (1977). Short UI benefit duration has obvious implications for program costs and possibly for the adequacy of benefit payments to the unemployed.

Three factors contribute to below-average UI benefit duration in Virginia: the activities of VEC in monitoring continuing eligibility, short potential benefit duration and the below-average duration of unemployment as shown in column [1] of Table 2.8. While the three factors are interrelated, they can be examined separately. Unemployment duration as measured in the CPS has already been discussed, and it is clear that short unemployment duration is linked to short UI benefit duration. The linkage is examined in the regression analysis of Appendix A.

Although Virginia is planning to move to administering initial claims by telephone and also by internet, initial claims in 2002 continue to be filed in-person. At the time of filing, the claimant is informed of the requirements for initial eligibility and for continuing eligibility. The claimant must contact at least two employers every week and be able to document the contacts if requested by VEC. When requested, the claimant also has to appear in local offices to participate in periodic eligibility reviews and to satisfy VEC reporting requirements.

¹⁵ Unemployment duration in CPS data can be measured in more than a single way. The duration measures in Table 2.8 refer to the total duration of (so called) incomplete spells which in some instances have their origins in the year prior to the current year. Using the duration measure as introduced in Part B, the 24 year averages for Virginia and the U.S. were 9.5 and 10.7 weeks respectively for a Virginia-U.S. ratio of 0.89. Thus while duration in Virginia has been below-average under both measures, the size of the difference depends upon the particular measure being used to make comparisons.

While the reporting data on continued UI claims monitoring do not suggest an unusual level of these activities in Virginia, it is clear that claims monitoring has traditionally been more active than in many other states and that monitoring by VEC contributes to short benefit duration. Column [3] in Table 2.8 displays summary data on determination rates for nonseparation issues, i.e., UI administrative activities related to continuing eligibility. For three of seven years shown in the table, Virginia's determination rate exceeded the national average but it was the lower of the two in the other four years. The average determination rates for the 31 years of available data (1971 to 2001) were 0.27 for Virginia and 0.30 for the U.S.. Note how both the Virginia and the U.S. series trend downward but that Virginia has exhibited more year to year variability in its determination rate.

In activities of continuing claims administration, Virginia is unusual in its denial rate: a 31 year average of 0.78 compared to a national average of 0.50. The regression analysis of Appendix A examines the linkage between continuing claims administration and benefit duration, but (to anticipate) with generally insignificant findings.

Potential benefit duration in Virginia, as in most states, is positively associated with the level of base period earnings. For each person who satisfies the two high quarter earnings requirement for monetary eligibility, potential duration is determined from a matrix that links total earnings from the four quarters of the base period to the maximum benefit amount (MBA). When the MBA is divided by the WBA, the quotient shows weeks of potential benefit eligibility. In Virginia, potential duration for claimants ranges from 12 weeks to 26 weeks. In January 2001, for example, the WBA-MBA-duration matrix had 3285 cells, 219 rows (one for every WBA between \$50 and \$268) and 15 columns (potential durations from 12 to 26 weeks). Each cell specifies a range of base period earnings that entitles the person with a given WBA to the indicated potential weeks of benefits. Similar matrices have determined potential weeks since 1982.

For each level of WBA, twelve weeks of potential benefits implies a maximum benefit equal to 24 percent of base period earnings. At increasing levels of base period earnings (for a given WBA), the MBA increases on average by 0.28 of the increase in base period earnings. Because the marginal replacement of base period earnings (0.28) exceeds the initial replacement (0.24), the average replacement of base period earnings

increases with higher earnings until the average reaches 0.26 when the claimant is entitled to 26 weeks of potential UI benefits. For example, someone entitled to \$100 per week (two high quarter earnings of \$5000) with total base period earnings of only \$5000, would be potentially eligible for 12 weeks of benefits. As total base period earnings increase above this threshold, potential weeks increase, reaching 26 when base period earnings exceed \$10,000.¹⁶

Another way to characterize this matrix is to note that the person is entitled to 12 weeks when there are no earnings in the two low quarters of the base period, but as the earnings in the two low quarters approach earnings in the two high quarters, the number of potential weeks increases towards 26. This matrix confers more weeks of eligibility as the claimant's quarterly earnings stream during the base period is more stable.

Virginia's MBA-base period earnings (MBA/BPE) average replacement of 0.24-0.26 is low when compared to other states. This, in turn, implies shorter potential UI benefit duration compared with many other states. Columns [4], [5] and [6] of Table 2.8 present summary data that illustrate the contrast between Virginia and the national average. Nationwide, potential benefit duration in the regular UI program was remarkably stable between 1967 and 2001. The 35 year average was 24.0 weeks and note that the range appearing in Table 2.8 was less than one week from a minimum of 23.7 weeks to a maximum of 24.5 weeks. In Virginia, the corresponding 35 year average was 21.6 weeks. This pattern is repeated in duration data for benefit exhaustees shown in column [5], e.g., 35 year averages of 22.9 weeks nationwide and 20.2 weeks in Virginia. Eligible claimants in Virginia are systematically entitled to fewer weeks of potential benefits at the outset of their spells and exhaustion occurs sooner in their spells when compared to the national average.

The principal reason for these differences is the low ratio of the MBA to base period earnings present in Virginia. Since 1982 this ratio has been the current 0.24-0.26

¹⁶ The WBA-MBA-duration matrix specifies ranges of base period earnings within each cell not single dollar amounts. Thus for a WBA of \$100 (two high quarter earnings of \$5000-5050), base period earnings in the \$5000-5357 range entitled one to 12 weeks of potential benefits while earnings over \$10,000 (up to \$10,100) were needed to be eligible for 26 weeks.

whereas the national average (column [6]) ranged between 0.34 and 0.36.¹⁷ Among the 43 states with a variable potential duration in 2001, the range of MBA-base period earnings ratios was from 0.24 (Alaska) to 0.65 (Pennsylvania). Six states had ratios of 0.50 or higher and six (including Virginia) had ratios of from 0.24 to 0.26. The ratio linking the MBA to base period earnings (MBA/BPE) was among the lowest in Virginia.

To illustrate the link between the MBA/BPE ratio and potential benefit duration, averages for selected states during 1988-2001 were computed. As noted there were six states where the MBA/BPE ratio was in the 0.24-0.26 range in 2001. The 14 year averages of potential duration for the six states ranged from 20.8 weeks to 22.8 weeks with an overall average of 21.5 weeks. Virginia's average of 21.4 weeks was nearly identical to this overall average during these years. For the six states with MBA/BPE ratios of 0.50 and above, the corresponding 14 year averages for potential duration ranged from 23.0 weeks to 25.9 weeks with an overall average of 25.0 weeks. Eligible new claimants in the latter group had a potential benefit entitlement that was 3.5 weeks longer than for new claimants in the six states with MBA/BPE ratios of 0.24-0.26.

The linkage between the MBA/BPE ratio and potential benefit duration was also examined in a regression analysis. For the years 1988 to 2001, potential UI benefit duration was positively and significantly associated with the MBA/BPE ratio among the states with variable benefit durations. The positive slope coefficient in the regression could be used to examine the effects of raising the MBA/BPE ratio. If the ratio were raised by 10 percentage points (from 0.26 to 0.36) the regression suggested that potential duration in Virginia would be increased by slightly more than one week. Appendix A and Chapter 3 both examine this issue more closely. Appendix A displays the underlying data from Virginia and conducts regressions while Chapter 3 undertakes a simulation analysis of micro data.

Although Virginia's low MBA/BPE ratio contributes to a low level of potential benefit duration vis-a-vis other states, the state's benefit exhaustion rate is quite low. Virginia's exhaustion rate has been consistently below the national average as illustrated by data appearing in column [7] of Table 2.8. The 1967-2001 average for Virginia was

¹⁷ The ratio shown in column [5] refers to states with variable potential benefit durations, 43 of 51 programs in recent years. The comparison excludes the eight states with a uniform 26 weeks of potential benefits among eligible claimants.

24.2 percent compared to the national average of 33.4 percent for the same years. Nationwide, about one UI claimant in three exhausted benefits between 1967 and 2001 whereas in Virginia the ratio was roughly one in four.

This contrast in average exhaustion rates is especially significant in light of the short average potential duration in Virginia. If claimants left the UI rolls at the same rate as the national average, the short potential duration would imply an above-average exhaustion rate. Instead, Virginia's exhaustion rate averaged 28 percent less than the national average during 1967-2001. During the most recent ten years, the Virginia-U.S. differential in the exhaustion rate has persisted.¹⁸

The low exhaustion rate in Virginia means that claimants exit benefit status at much faster rates than the national average. This high exit rate probably involves several factors including favorable labor market conditions and job availability and proactive UI program administration that encourages enhanced job seeking among claimants when compared to claimants in other states. The low exhaustion rate and short benefit duration in Virginia have the clear implication of contributing to low costs of UI benefit payments. Virginia's UI program has operated within a stable statutory framework that determines benefit duration. Since 1982 the MBA/BPE ratio has been 0.26 while the maximum duration of regular UI benefits has been 26 weeks since 1965. Over a longer time horizon, however, the MBA/BPE ratio and maximum weeks of benefits have exhibited a wider range of variation. Through the year 1956 maximum weeks of benefits were limited to 16 weeks. Between 1957 and 1964 this maximum increased in several steps and then reached its present 26 weeks in 1965. While the program in most years since 1950 has operated with a MBA/BPE ratio in the 0.25-0.27 range, the years 1973 to 1981 had a ratio of 0.33. This earlier variation provides useful information on how Virginia's benefit duration might vary under alternative future statutory regimes.

Appendix A undertakes a regression analysis of benefit duration in Virginia. The important findings of that analysis are the following. 1) There are large and significant effects of both the maximum weeks of benefits and the MBA/BPE ratio in influencing potential UI benefit duration. 2) The overall duration of unemployment in the Virginia

¹⁸ The average exhaustion rates during 1992-2001 were 36.0 percent nationwide and 26.2 percent in Virginia, a differential of 27 percent.

(from the household survey or CPS) has an important effect on UI benefit duration. 3) The activities of continuing claims administration, as reflected in the determination rate for nonseparation issues, did not show particularly large or significant effects on benefit duration. 4) More than half of the variation in UI benefit duration could not be explained.

F. Summary

This chapter investigated several aspects of unemployment and UI benefit payments in Virginia. The data were from three sources: state statutes, the federal-state UI program reporting system and labor market data collected by BLS through cooperative federal-state arrangements. All data were aggregative and the approach was comparative, comparing important aspects of benefit payments in Virginia with other states. The analysis emphasized statewide totals. The next two chapters report findings of two other analyses of UI benefits, respectively based on micro data and data from substate areas.

Several findings from this chapter were noteworthy. (1) Virginia has historically operated with low benefit reciprocity although this seems to have increased in very recent years, e.g., 1998-2001. (2) Low reciprocity has three distinct components: a low application rate, a low ratio of first payments to new claims and below-average benefit duration. (3) Certain statutory benefit features seem to be linked to low reciprocity such as above-average monetary eligibility requirements and a low ratio of the maximum potential entitlement relative to base period earnings. (4) Since the late 1970s the replacement rate has declined in Virginia, and the decline is closely linked to a decrease in the ratio of the maximum weekly benefit to the average weekly wage. (5) The short average UI benefit duration in Virginia has two causes: overall duration as measured in the household labor force survey is low and the linkage between the maximum benefit entitlement and base period earnings confers below average potential duration. Despite this, the benefit exhaustion rate is lower than in most other states.

Chapter 3. Analysis UI Benefits Based on Micro Data

To obtain additional information on benefit payments and the effects of specific benefit provisions, we examined micro data provided by VEC for new initial claims filed during the first six months of 2001. This period is reasonably recent, and the choice of period had two advantages. (1) The data refer to six months where original decisions about eligibility were not affected by the temporary changes in benefits enacted after the events of September 11, 2001. (2) For applicants deemed monetarily eligible, their full benefit years were completed before the data were extracted. Thus exhaustees could be distinguished from other beneficiaries.

To ensure the confidentiality of individual claimants, personal identifiers and information on personal characteristics, e.g., age and gender, were removed from the micro data. While this limits the scope of potential analysis, it does allow us to examine several important questions related to Virginia's benefit statutes.

Any analysis based on UI program data is necessarily limited in that only applicants appear in the data. Others who experienced unemployment during the first half of 2001 but did not file for benefits are excluded. Some who did not file may have been eligible but did not apply because of an incorrect understanding of eligibility criteria. This limitation must be kept in mind. These data cannot be used to directly address questions of application rates and why application rates in Virginia are below-average.

On the other hand, the data are invaluable for addressing certain counterfactual "what if" questions. In particular, they could be used to examine effects of alternative monetary eligibility criteria, alternative linkages between base period earnings and potential benefit entitlements and alternative maximum WBAs.

A. Details of the Sample

The analysis was conducted using a file which originally had 108,369 new claims, but reduced to 108,304 due to inconsistencies in a few records. All records had an initial monetary determination date between January 1, 2001 and June 30, 2001. However, the dating of the claim had a measurable effect on the number of included micro records.

About 15,000 claimants whose first day of unemployment occurred in December of 2000 filed their claims and had initial monetary determinations in 2001.

The sample had 4,400 fewer claimants than the number of monetary determinations for the same period as reported by VEC to OWS in ETA 218 (monetary eligibility) reports, part of the federal-state UI reporting system. More important than the differences in record counts were the disparities in numbers reported as monetarily ineligible. Of the 112,790 claims in Virginia's ETA 218 report, 12,464 or 11.1 percent were monetarily ineligible. In our micro data only 5,570 or 5.1 percent were monetarily ineligible. Much of the disparity reflects the effects of redeterminations made after the submission of the ETA 218 data to OWS. Through reterminations, a more complete representation of base period earnings is achieved, capturing situations such as initially omitted earnings from other states and errors in Social Security numbers which cause some earnings to be absent from the claims record. Redeterminations affected more than 4,000 claims, changing most from ineligible to eligible, thus accounting for most (but not all) of the difference in ineligibility rates between the micro data and the ETA 218 data.

There is an important analytic point here as well. The ETA 218 data overstate the scale of monetary ineligibility in Virginia because of the effects of redeterminations that take place subsequent to the reporting date. Thus even with comparatively high initial entry criteria (\$2500 in the two high quarters), only about 5 percent of claimants were monetarily ineligible during the first half of 2001.

The micro data had just a limited number of fields: the WBA, the MBA (maximum benefit amount), earnings in each of the five completed lagged quarters (the four base period quarters and the quarter immediately preceding the claim, the so called lag quarter) and the remaining balance (the MBA less benefits paid during the benefit year). Knowing the underlying earnings pattern allowed us to verify our understanding of monetary eligibility criteria, e.g., $1/50^{\text{th}}$ of earnings in the two high quarters was compared to the WBA, and the BPE (base period earnings)-MBA linkage was tested by comparing simulated and actual MBAs in micro data.

An initial analysis verified our understanding by generating exact matches between simulated values of the WBA, the MBA and potential benefit duration and their values as recorded in the micro data. Exhaustees were identified as persons where the

remaining balance was zero. Persons with a nonzero WBA but with MBAs equal to their remaining balances were monetarily eligible but did not receive any payment.

B. A Summary Breakdown

Table 3.1 summarizes the data with claimants classified into four categories: monetarily ineligible, monetarily eligible but no benefits paid, recipients who did not exhaust and recipients who did exhaust. As noted above, only 5,570 or 5.1 percent of the sample were monetarily ineligible. The most surprising aspect of the table is the number monetarily eligible who did not receive a payment, 32,023 or 29.6 percent of the sample.

Table 3.1. Eligibility and Payment Status of the Sample

Eligibility and Payment Status	Number	Percent
Monetarily Ineligible	5,570	5.1
Monetarily Eligible but No Benefits Paid	32,023	29.6
Recipients who did not Exhaust Benefits	54,862	50.7
Recipients who Exhausted Benefits	15,849	14.6
Total Sample	108,304	100.0

When the two groups of recipients are combined, the 70, 711 represent 65.3 percent of all claimants, a first payment rate (expressed as a percentage) similar to the long run average reported in Table 2.5 of Chapter 2. The exhaustion rate among those who received benefits was 22.4 percent, again in line with data reported in Table 2.8 of Chapter 2.

From the four way breakdown shown in Table 3.1, our understanding of the low first payment rate in Virginia is improved. Monetary ineligibility accounts for only about one in seven of claimants not receiving a first payment. Unfortunately that still leaves at

least three other potential reasons: 1) nonmonetary separation denials, 2) reemployment during the waiting period and 3) some combination of second thoughts and indecision among claimants, employer actions and/or unmeasured aspects of program administration. Denials on voluntary quit and misconduct issues were too low to be the sole factor at work here. During the first six months of 2001 there were 9,758 voluntary quit determinations with 7,630 associated denials and 19,616 misconduct determinations with 6,479 associated denials. It appears that denials on separation issues accounted for less than half of the claims where monetary eligibility was established but with no subsequent first payment (14,109 of 32,023). No reliable data exist for the second and third explanations in the preceding list. Thus, a big question remains even after obtaining micro data. On the other hand, the summary data in Table 3.1 suggest the explanation for the low first payment rate in Virginia resides in factors other than a high rate of monetary ineligibility. In part G we briefly return to this question.

C. Entry Monetary Eligibility

Since 1999 the requirement for monetary eligibility has been that earnings in the two high quarters of the base period must equal or exceed \$2,500. Over the three prior years, the requirement had decreased cumulatively by \$750 with reductions of \$250 each year. The base period requirement of \$3,250 in 1997 represented 5.9 weeks of earnings when measured at the statewide average weekly wage (AWW). The \$2,500 requirement in 2001 represented only 3.6 weeks of earnings at the statewide AWW (Table 2.4).

Chapter 2 discussed three different aspects of entry eligibility: 1) the level of the base period earnings requirement, 2) offering an alternative earnings requirement for those ineligible under the standard requirement (but still using earnings from the regular base period) and 3) computing eligibility under an alternative base period (ABP). Each could be explored in these micro data. Because only about five percent of the sample were monetarily ineligible, however, the numbers affected by each of the three types of potential changes were comparatively small.

The first analysis of entry earnings requirements using the micro data simply raised the two-quarter requirement of \$2,500 in \$250 increments back to \$3,250 and noted the change in monetary eligibility. The effects were quite modest. Under a

requirement of \$3,250, only 7,213 claimants were ineligible, an increase of 1,643 or 29 percent higher than the number ineligible as shown in Table 3.1. Based on these data, the percent monetarily ineligible under a two quarter requirement of \$3,250 would have been 6.6 percent of all claimants as opposed to the 5.1 percent of Table 3.1. The change in the aggregate MBA due to the higher monetary requirement was even more modest. The total MBA of all those no longer eligible was only \$1.5 million or 0.3 percent of the aggregate MBA of those eligible under the benefit provisions operative during January-June 2001.

A similar analysis extended the \$2,500 requirement down in four changes of \$250. With a requirement of \$2,000 the number ineligible decreased to 4,957 and further to 4,476 with a requirement of \$1,500. The increases in the numbers eligible represented 11.0 percent and 19.6 percent of the 5,570 originally ineligible. Relative to the numbers monetarily eligible in the full sample (102,734), these were increases of only 0.6 percent and 1.1 percent respectively. Again, the changes (increases) in the MBA (relative to the initial aggregate) were even more modest. The aggregate MBA for all persons monetarily eligible increased by 0.07 percent and 0.12 percent with these lower entry requirements.

The conclusion from both analyses is that entry eligibility did not change much when the requirements were changed moderately upward and downward from the requirement of \$2,500. As already noted, however, only 5.1 percent of the sample were monetarily ineligible under the criteria applicable during the first half of 2001.

We then examined the effects of having an alternative earnings requirement. The specific alternative was a variant of the high quarter-base period dual requirement, the most prevalent form of monetary requirement as shown earlier in Table 2.6. The claimant needed \$1,250 in the high quarter and \$3,500 in the base period. This was selected so that the WBA and MBA calculations would be similar to current ones (the WBA equal to $1/25^{\text{th}}$ of high quarter earnings, hence a minimum WBA of \$50, and the MBA calculated as in the current base period earnings-MBA table). Also, to achieve eligibility under this alternative earnings requirement, the claimant would need to have more earnings (\$3,500) than those who achieved minimum eligibility under Virginia's two quarter requirement (\$2,500). For the 5,570 ineligible under the standard requirement only 528 or 9.5 percent achieved eligibility using this alternative requirement. Their

WBA was somewhat below-average and most (447) of those newly entitled were eligible for less than 15 weeks of potential benefits.

Simulating the effects of an alternative base period (ABP) yielded more substantial changes in monetary eligibility. Using the \$2,500 requirement operative in 2001 but applied to earnings from the most recent four quarters caused an added 2,532 to become eligible. This represented an increase in eligibility of 45 percent of the 5,570 originally monetarily ineligible and an increase of 2.5 percent over the 102,734 originally monetarily eligible.

As would be expected, the majority of those made monetarily eligible by the ABP were low wage workers. About half had a WBA below \$100 (recall the averages in Table 3.2) while 90 percent were entitled to only 12-14 weeks of benefits. Thus while the number monetarily eligible rose by 2.5 percent, the aggregate MBA among all eligibles increased by only 0.8 percent. Changing entry eligibility had a much larger impact on numbers of recipients than on the financial obligations of the UI program.

Although the increments to eligibility and potential benefits suggested by these simulations were all modest, two other considerations must also be noted, considerations that operate in opposite directions. 1) Due to nonmonetary determinations and other factors that also affect the first payment rate, the actual increases in numbers of beneficiaries and associated benefit payments would be expected to be smaller than suggested by the simulations. 2) A countervailing consideration is the response of persons who did not apply under current requirements but who would apply under eased monetary requirements. These data pertain only to those who actually filed for benefits.

An instructive example is provided by earlier personal research on the effects of the alternative base period. Actual experiences through 1998 in seven states suggested average increments in beneficiaries of some 5-8 percent and increased benefit payments in the 3-5 percent range. In contrast, an analysis of earnings data from Indiana (a state without an ABP) suggested the increments in numbers eligible and associated benefit payments would be close to 1.0 percent.¹⁹ In the former situation (states with functioning ABP programs) costs and participation were much higher than in Indiana where the

¹⁹ Two citations for states with functioning ABP programs are Vroman (1995, pp. 13-21) and Vroman (1998, Volume IV). The Indiana results are reported in Vroman (1996, Chapter III).

analysis used base period earnings data from claimants in a state without an ABP program. The analysis of this chapter is similar to the earlier analysis in Indiana, i.e., using data from actual claimants to estimate ABP costs prospectively.

The principal conclusion from the analysis of entry eligibility is that instituting an ABP would have more effect in increasing eligibility than either lowering the two high quarter requirement or instituting an alternative earnings requirement. Because all three types of potential changes affect principally low wage workers, the cost implications for Virginia's UI program were small under all simulations.

Of the alternatives examined here, the area with greatest activity in recent years has been the adoption of an ABP by several states, including Georgia and Oklahoma in 2002. Adopting an ABP in Virginia would entail administrative considerations as well as added benefit costs. One useful analysis of the added administrative costs caused by the ABP was undertaken by Planmatics, Inc. (1998, Volume II). Their analysis of ABP administrative costs in New Jersey and Ohio concluded that the added costs while measurable were not so large as to prevent adoption of the ABP. This report also recommended ways to reduce reporting burdens on employers due to the ABP.

D. A Comparison of the Three Groups of Eligible Claimants

Table 3.2 summarizes data on monetary eligibility for the three eligible groups identified in Table 3.1. The table focuses on three benefit indicators: the average WBA, the average MBA and average potential benefit duration. Information on base period earnings is also included in the table. The bottom line displays summary data for the three groups of eligibles combined.

All three benefit indicators provide an internally consistent picture. While each of the WBA, the MBA and potential duration exhibited a wide range of variation within each group, their averages across the three groups exhibit a consistent ranking. Compared to the combined average, those monetarily eligible who did not receive benefits had consistently the lowest averages while those who collected benefits but did not exhaust had the highest averages. The average WBAs for the two groups were 8.0 percent below-average and 4.7 percent above-average respectively (column [2]). The disparities in average MBAs (column [4]) were wider, 10.8 percent below-average for the

non-beneficiaries and 7.2 percent above-average for beneficiaries who did not exhaust. Of the three groups, those who received and exhausted benefits had averages consistently closest to the overall average for the entire monetarily eligible group of 102,734.

Table 3.2 also helps to illustrate an important feature of Virginia's statute that links base period earnings (BPE) to the MBA. Of the three groups, those who did not collect benefits had, on average, the lowest base period earnings. In these data their mean base period earnings were \$23,095 or 12.7 percent less than the overall average of \$26,455 (column [8]). Recall that the BPE-MBA table starts with an initial replacement ratio of 0.24 and then has marginal BPE-MBA linkage of 0.28 for those eligible for more than the minimum 12 weeks of potential benefits. This feature causes the average BPE-MBA ratio to rise gradually from 0.24 for someone entitled to 12 weeks to 0.26 for someone entitled to 26 weeks of potential benefits. The statutory BPE-MBA linkage provides the lowest return on base period wages to those with low and irregular earnings. In these data, the mean MBA for the eligible non-beneficiary group (\$4345) was 10.8 percent below the overall average (\$4873) while their mean base period earnings was 12.7 percent below-average.

Because low-wage workers with irregular earnings patterns have somewhat lower initial returns (in terms of the MBA/BPE ratio), their potential benefit duration is shorter and they are more likely to exhaust their benefit. Note in Table 3.2 that the potential duration of the exhaustees was 1.5 weeks shorter than for those who received benefits but did not exhaust, i.e., 21.2 versus 22.7 weeks. This disparity can be attributed to two factors: lower average earnings vis-a-vis nonexhaustees (column [8]) and a somewhat lower BPE-MBA linkage (initially 0.24) for those with low and irregular earnings.

E. The Linkage Between Base Period Earnings and the Maximum Benefit Amount

To examine the importance of the existing BPE-MBA linkage, we undertook a series counterfactual simulations where the linkage was changed, to a constant 0.26 for all monetarily eligible workers and then to ratios that exceeded 0.26. Recall from Chapter 2 that a linkage in the 0.24-0.26 range is among the lowest across all UI programs. We examined the effects of raising the ratio in steps to 0.33, roughly the average across all programs with variable benefit durations, and then even higher ratios.

Changing the BPE-MBA linkage would have implications for both program costs and minimum potential benefit duration. At present, minimum potential duration is 12 weeks. Under a uniform BPE-MBA linkage of 0.26, the minimum would increase to 13 weeks and then to 14 and 15 weeks under ratios of 0.28 and 0.30. For the highest ratio explored here (0.40), minimum potential weeks would be 20 weeks.

The results of the simulation analysis appear in Table 3.3. The data in the table have been arranged into three groups according to beneficiary and exhaustion status exactly as in Table 3.2. A summary for the three groups combined appears in the bottom panel. Because the computation of the WBA was unchanged, the table focuses just on the MBA and potential benefit duration. The mean and percent at the maximum are shown.

Moving to a uniform 0.26 has results as expected. This change would not affect those previously entitled to the maximum MBA (\$6968). Hence the entries in columns [1] and [2] are unchanged from current law, e.g., 39.0 percent eligible for the maximum MBA among beneficiaries who did not exhaust and 32.8 percent among exhaustees. Because this change assists workers with irregular earnings patterns, however, average potential duration and the percent eligible for 26 weeks increase for all three groups.

The consequences of further increasing the BPE-MBA linkage to 0.28 and higher levels are as expected. Average potential duration and the percentage eligible for the maximum MBA increase for all groups because a given amount of earnings now yields a higher MBA (for a given WBA). Among exhaustees, for example, potential duration at a uniform ratio of 0.33 increases by 3.0 weeks, to 24.2 from 21.2 weeks under current law. This is germane because 0.33 is close to the overall average across all UI programs with variable potential durations. Note that 45.1 percent in this group would be eligible for 26 weeks compared to 32.8 percent under current law. This percentage increases further to 56.5 under an MBA/BPE ratio of 0.40, a ratio among the highest across all UI programs.

The simulated changes in the BPE-MBA linkage have cost implications. Moving to a uniform BPE-MBA ratio of 0.26 increased the aggregate MBA for all beneficiaries by 2.1 percent. The increased MBAs were concentrated among those with the shortest potential benefit durations. The increases to uniform BPE-MBA ratios of 0.28, 0.30 and 0.33 caused the aggregate MBAs to increase by 5.6 percent, 8.8 percent and 12.9 percent

respectively. For the highest ratio examined here, (0.40) the aggregate MBA among beneficiaries increased by 19.8 percent when compared to the actual MBAs of 2001.

The simulations summarized in Table 3.3 illustrate that the current law governing the BPE-MBA relationship has a measurable effect on potential benefits in Virginia. A wide range of uniform ratios from 0.26 to 0.40 was explored, and it was apparent that the MBA and potential benefit duration could be higher than at present even with no change in the maximum WBA and no change in the method used to compute the WBA.

Probably the most important point here is that Virginia's procedures for jointly determining the WBA and the MBA work to the disadvantage of low wage workers with irregular patterns of base period earnings. Their potential benefit duration falls increasingly below 26 weeks directly in response to the disparity between earnings in the two high earning quarters versus the two low earnings quarters of the base period. In the limit, someone with earnings in just two quarters with a two quarter total below \$13,400 would be entitled to just 12 weeks of potential benefits. Among the groups disadvantaged by this arrangement are those working in seasonal industries and those with seasonal patterns of labor force participation.²⁰

F. Changing the Maximum Weekly Benefit

Chapter 2 noted the history of the maximum weekly benefit in Virginia, and Chart 2.1 displayed the maximum as a ratio to the average weekly wage in annual data back to 1953. It was also noted that the average ratio for the U.S. has fallen into the 0.48-0.49 range in recent years (column [3] of Table 2.6) while Virginia's maximum WBA/AWW ratio has been generally closer to 0.40. During the first six months of 2001, the maximum of \$268 represented 0.38 of the statewide average weekly wage.²¹

The micro data from January-June 2001 were examined to explore the effects of changes in the maximum weekly benefit. Simulations were undertaken where the maximum was increased while other aspects of benefit eligibility were unchanged, e.g.,

²⁰ The point to emphasize here is that low wages and irregular work yield short potential benefit duration. In the first six months of 2001 someone with earnings in the two high quarters of at least \$26,800 would have been entitled to 26 weeks of potential benefits even with no earnings in the other two base period quarters.

²¹ The entry for 2001 shown in Table 2.6 averages the maximums of \$268 and \$368 with the latter operative during the final months of 2001 under a temporary executive order.

the simulations computed the WBA as $1/50^{\text{th}}$ of earnings in the two high quarters and the current BPE-MBA table was operative. Thus the simulations changed the maximum WBA and the maximum MBA (26 times the maximum WBA) but left other aspects of potential benefit calculations unchanged.

The effects of six higher maximums were explored. In increasing order these were \$282, \$300, \$320, \$340, \$353 and the \$368 operative between late 2001 and December 31, 2002. Respectively these maximums represent 0.40, 0.425, 0.45, 0.48, 0.50 and 0.52 of the statewide AWW of \$706 in 2001. Each simulation noted effects on the WBA, the MBA and potential duration for the three groups studied previously who were monetarily eligible. For each maximum WBA and each claimant group, we also noted the percentage of workers eligible for the maximum as in Tables 3.2 and 3.3.

Table 3.4 summarizes the results. Because there were only small effects on average potential duration (decreasing less than one week for each claimant group over the full range from the lowest maximum WBA of \$268 and to the highest of \$368), the table displays just information on the average WBA and the average MBA.

The progressions in Table 3.4 are exactly as would be expected. Successively higher maximum WBAs raise the mean WBA (column [1]) and reduce the percentage eligible for the new, higher maximum (column [2]). Similar patterns are observed for the MBAs (columns [3] and [4]). Over the full \$100 range of the simulated changes in the maximum WBA, the response of the actual WBA was an increase of \$37 (\$261 less \$224) or 17.0 percent for nonexhaustees and \$33 (\$248 less \$214) or 15.9 percent for exhaustees. The corresponding changes in the mean MBAs for the full \$100 increase in the maximum WBA were increases of \$697 (or 13.3 percent) for nonexhaustees and \$597 (or 12.6 percent) for exhaustees.

The entries displayed in Table 3.4 provide a schedule of possible consequences associated with raising the maximum WBA. The maximum of \$320 is roughly midway between the two extremes of \$268 and \$368.

The simulated increases displayed in Table 3.4 help to provide some insight into the consequences of the increases in benefits enacted following the events of September 11, 2001. All weekly benefits were increased by 37.3 percent through the end of December 2002, and they are scheduled to be higher by 18.65 percent throughout

calendar year 2003. Applying the 37.3 across-the board increases to these micro data would have raised the average WBA and average MBA among beneficiaries by 37.3 percent. If just the maximum WBA had been increased, however, the corresponding percentage increases among the two groups of beneficiaries combined would have been 16.7 percent for the mean WBA and 13.2 percent for the mean MBA. Using the average MBA as a measure of increased exposure of the trust fund to claims for benefits, the form of increase was roughly three times more expensive than under the more common change of increasing just the maximum WBA, i.e., 37.3 percent versus 13.2 percent.

The same logic will continue to apply during 2003. The actual increase in the average MBA will be 18.65 percent (compared to the MBAs in the BPE-MBA table) whereas the simulated increase based on micro data would have been 7.9 percent.²² Virginia has chosen a very expensive form of benefit increase (across-the-board), and the increases will cause added drawdowns of the trust fund in 2003 as well as 2002. Adding to the drawdowns in 2002 and 2003 will be the response of beneficiaries in prolonging their spells in benefit status in response to higher weekly benefits.

G. Eligible Nonbeneficiaries

A puzzle presented by the microdata is the explanation for the large number of persons who filed a claim, were deemed monetarily eligible but did not receive any UI benefits. These 32,023 persons accounted for 29.6 percent of the full sample and were nearly six times more numerous than the 5,570 who were monetarily ineligible.

In seeking to understand the explanation for the large number of eligible nonbeneficiaries, we explored three avenues. First we reviewed data on nonmonetary determinations for the same time period. Here we had some hard data. As noted in Part B, there were 14,109 denials on separation issues (quits and misconduct) during the first six months of 2001. Virginia imposes durational disqualifications for both separation issues. Additionally, there were 3,846 denials during the same period for claimants having disqualifying and/or deductible income. Typically the income is either pension benefits or severance pay, but the two are not explicitly identified in the ETA 207 reports on

²² This statement is based on simulation where the maximum WBA is \$320, roughly midway between the former mamimum of \$268 and the present maximum of \$368.

nonmonetary determinations. In the case of severance pay, there could be an initial deferral of UI payments followed by receipt of benefits after the weeks of implied severance have been paid. The fact of a denial does not necessarily mean the person is totally precluded from receiving benefits over the full spell of unemployment.²³ Thus it appears that about half of the total of eligible nonbeneficiaries can be explained by separation and nonseparation nonmonetary determinations and associated denials.

Explaining the other half is more difficult. Undoubtedly some workers found other jobs, either during the waiting period or shortly thereafter, and did not pursue their claims. For the present report, the quantitative importance of this explanation cannot be assessed. Conversations with VEC staff yielded an impression that the volume of return-to-work cases is modest, but this is an empirical question.

Two kinds of earnings data might be examined to pursue the return-to-work explanation. 1) Quarterly earnings records from the UI program could be examined, but they have limitations. Earnings from the first two quarters of 2001 could be studied and the identity of employers ascertained. There are timing problems since the earnings data refer to the full quarter, but the employment indicator for the week of the 12th of each month might be helpful. 2) New hire data might be examined. All new hires are reported to assist in child support enforcement, a joint responsibility of the Office of Child Support of the U.S. Department of Health and Human Services and appropriate state agencies. Perhaps an interagency arrangement could be developed by VEC to obtain access to new hire information, e.g., establish the link using social security numbers and compare of the date of the new hire with the date of the UI claim. Since Virginia has close economic ties with both the District of Columbia and Maryland, it would be useful to extend the scope of the analysis to new hire data from these adjacent jurisdictions. While this might prove to be highly informative, pursuing this line of research lies beyond the scope of the present investigation.

Another potential explanations may point to employer actions to discourage reciprocity. After a claim has been filed and monetary eligibility has been established, VEC contacts the employer and requests information on earnings and the reason for the

²³ There are many different situations to consider involving: the form of severance payment (lump sum or weekly installments), pay before or after the job termination and the claimant maintaining claims status.

separation (to compare the former with their automated earnings records and to compare the latter with the claimant's explanation for the separation).²⁴ Being informed of the claim by VEC, the employer could pursue several lines to discourage the claim, e.g., tell the person he or she will not be rehired in the future if benefits are paid or inform the worker that the separation was for a disqualifying reason. Any of these actions would be possible and could discourage pursuit of the claim. The point here is that the interaction between claimant and the employer is not observed by VEC. All VEC would observe (and what would be observed in the microdata) would be that the claimant did not follow-up on the initial application.

As noted in Part B, there could also be factors that reflect purely personal considerations on the part of the claimant. These could be termed second thoughts, but again their importance is not known.

To resolve the question, one possible approach would be to conduct a sample survey of monetarily eligible persons who did not pursue their initial applications for benefits. Again, this potentially informative line of research lies beyond the resources available for the present report.

VEC should pursue the eligible nonbeneficiary question by supporting some form of sample survey. Survey data could yield valuable insights into the explanation for the low rate of first payments among new claims for benefits. It could help to identify the relative importance of the individual factors discussed above.

H. Summary

This chapter utilized microdata on new initial claims filed during the first six months of 2001 to examine several benefit payment issues. It described the sample with data arranged into four groups: monetarily ineligible, monetarily eligible nonbeneficiaries, beneficiaries who did not exhaust and beneficiaries who exhausted benefits. Simulations were undertaken to examine the effects of key benefit provisions and the effects of alternative provisions. Specifically, the chapter explored the effects of: 1) changing entry eligibility requirements, 2) changing the BPE-MBA linkage, and 3)

²⁴ Employers are requested to respond on Form B-10S, Employer Report of Separation and Wage Information.

changing the maximum WBA. Attention focused on numbers affected and cost implications as proxied by changes in the aggregate MBA of UI beneficiaries. Among those monetarily eligible, we examined three groups: eligible nonbeneficiaries, beneficiaries who did not exhaust and beneficiaries who exhausted benefits.

It should be stressed that using the aggregate MBA to make inferences about cost changes may entail errors since the MBA was fully utilized by less than one fourth of beneficiaries. Also, increases in the MBA that affected (increased) weeks of potential benefits could increase actual benefit duration. Our analysis made no attempt to model the response of actual benefit duration to increases in potential duration. This could be important. The economics literature suggests each added week of potential duration induces an increase in actual duration in the 0.1-0.2 week range (Decker, 1997), (Woodbury and Vroman, 1996).

The actual cost changes due to changes in benefit statutes could also be affected by changes in participation in UI among the unemployed, i.e., an increase in the proportion who file claims. We examined micro records of those who filed for benefits under the provisions operative in the first half of 2001. With eased entry requirements and/or higher MBAs, there could have been an increase in the total number who filed for benefits during this period. Both of the preceding considerations would make cost increases larger than would be inferred from these simulations based on historic data.

Regarding entry eligibility, we found that only about 5 percent of applicants did not meet base period earnings requirements. Three methods for increasing eligibility were explored: lowering the two high quarter earnings requirement, instituting an alternative earnings requirement for those ineligible under the standard base period requirement and instituting an alternative base period (ABP, with the standard two quarter monetary requirement of \$2,500). The largest change (increase) in eligibility occurred under the ABP. Nearly half of those originally ineligible became eligible under the ABP. If Virginia wanted to ease entry eligibility, instituting an ABP would be the most effective means of the three examined here. Because the ABP disproportionately assists low wage workers, the costs of instituting an ABP would be low. Order-of-magnitude estimates based on these data suggest a 2.5 increase in the percent of claimants monetarily eligible and a 0.8-1.2 percent increase potential payouts as proxied by the aggregate MBA.

Changes in the BPE-MBA relationship had expected effects. We explored several alternatives to the current BPE-MBA table with its average BPE/MBA ratio that ranges from 0.24 to 0.26 and potential duration that ranges from 12 to 26 weeks. Substituting constant ratios of 0.26, 0.28, 0.30 and higher (up to 0.40) would increase the MBAs and minimum potential duration. Costs would rise both because the MBA would be higher and because the longer potential duration would induce some increase in actual benefit duration among some beneficiaries.

Chapter 2 showed that the ratio of the maximum WBA to the statewide average weekly wage (AWW) has fallen from 0.50 and above in the mid 1970s to recent levels close to 0.40 while the national average for the past 25 years has remained close to 0.50. Our simulations with the alternative (higher) maximums suggested higher costs but also improved replacement rates for high wage workers. To prevent future erosion of the average replacement rate, Virginia should consider both raising the maximum WBA and linking it to the AWW. Arguments that indexation would tie the state to unsustainable cost increases during recessions could be addressed by having an automatic freeze built into the statutory language that specifies the details of the indexation arrangement.

The largest puzzle to emerge from the analysis of these data is the unexplained numbers monetarily eligible who do not collect benefits. Of the 32,023 cases in the sample, about half were persons who were disqualified (mainly for quits and misconduct). The explanation for the other cases remains uncertain. To pursue the question, some lines of possible future research were identified, e.g., analysis of new hire data and a survey of monetarily eligible nonbeneficiaries. In our opinion, this phenomenon is of enough importance to warrant new research.

Chapter 4. Substate Benefit Issues

The analysis of the two preceding chapters focused on statewide aspects of UI benefits and the labor market in Virginia. This chapter examines two substate issues. 1) Should there be differentials by geographic area in maximum weekly UI benefits? 2) Should maximum benefit duration be different in different areas? The first question is most directly of concern to northern Virginia where wage levels are measurably higher than elsewhere in the state. The second question is most pertinent to counties and cities along the Virginia's southern and southwestern borders.

The chapter has four parts. Part A documents differences in unemployment, wages and UI benefit payments for substate areas. Part B examines the treatment of substate questions in some other transfer payment and labor market programs. This discussion focuses on the experiences of other programs administered in Virginia. Part C discusses issues of UI program administration raised by possible substate differences in benefit levels or maximum potential duration. Part D draws conclusions as to the advisability and the timing for instituting substate differentials in Virginia's UI program.

An analysis of substate issues would benefit from knowledge of the experiences of other states. However, attempts to identify such examples were not successful. While states may have contemplated similar initiatives in the past, no current UI program in any state offers differential weekly benefit maximums or differential potential durations in designated substate areas. We did not even succeed in identifying states that have entertained serious substate proposals in recent years. In conversations with staff at the OWS national office, we were informed that such initiatives had been attempted in the past, but the identity of the state (or states) could not be recalled.

On the other hand, staff at the OWS national office did indicate that instituting substate provisions would not per-se violate conformity requirements. Thus Virginia could potentially craft and enact a substate proposal that met conformity requirements.

If a substate initiative were to go forward, one requirement would be to specify the number of substate areas. Presumably the designation of the areas would be based on an analysis the Virginia labor market. It also seems obvious that administrative problems for VEC would increase directly with the number of areas to be used.

A. Substate Differences in Unemployment, Wages, UI Reciprocity and Average Benefits

Table 4.1 displays selected labor market data for one exhaustive breakdown of all geographic areas within Virginia, the 21 Planning District Commissions (PDCs). Each of the 21 areas comprises from two to seven counties and usually one or more (up to ten) independent cities.²⁵ While there are 21 PDC areas, note the dominance of three (Northern Virginia, Richmond Regional and Hampton Roads, PDCs 8, 15 and 23 respectively in column [1]). Combined, they accounted for 62 percent of the state's labor force (column [2]) and 56 percent of statewide unemployment (column [3]) in 2001.

During 2001 most PDCs had unemployment rates at or below the statewide average of 3.5 percent. High unemployment rates were concentrated in the southern and southwestern areas. Of the seven PDCs with unemployment rates above 5.0 percent (column [4]), six were located either in the state's southwest corner (PDCs 1, 2, 3 and 4) or along its southern border (PDCs 12 and 13).²⁶ Unemployment in three areas exceeded 7.5 percent. The six southern and southwestern areas accounted for 11 percent of the labor force but 24 percent of statewide unemployment in 2001. In 2000 their share of statewide unemployment was 26 percent. A proposal to extend maximum benefit duration would have its largest effects in these PDC areas.

Average weekly wages for the 21 areas are displayed in column [8] of Table 4.1. While the statewide average weekly wage was \$706 in 2001, only one area (PDC 8, Northern Virginia) had an above-average weekly wage. Its average of \$976 was 38 percent above-average. Just one area (PDC 15, Richmond Regional) was at the statewide average while the weekly wage in 19 areas was less than 90 percent of the statewide average. Average weekly wages in 15 areas fell below 80 percent of the statewide average. It is clear from these data that instituting a differential in the maximum weekly benefit (tied to differences in average wages) would concentrate the added payments in Northern Virginia and (using the 21 PDCs to designate substate areas) nothing elsewhere.

Of the two indicators displayed in Table 4.1, regional unemployment exhibits more volatility in the short run while regional weekly wages exhibit strong year to year

²⁵ The state's 17 Workforce Investment Areas (WIAs) provide an alternative geographic breakdown. The analysis of these 17 areas yielded similar findings. Use of the 21 PDCs (or the 17 WIAs) is meant to be illustrative of substate differentials, not an endorsement of the PDCs as appropriate for a substate program.

²⁶ The seventh area (PDC 17, the Northern Neck) is located on the eastern side of the state.

stability. Illustrative of this contrast is the correlation between 2000 and 2001 data on relative unemployment and relative AWWs. The two unemployment series in columns [5] and [7] of Table 4.1 had a correlation of 0.914. The corresponding correlation between the relative AWWs of 2000 (not shown) and 2001 (column [9]) was 0.999.

Both contemplated changes in benefits have obvious implications for substate areas. If some form of substate differential in the maximum weekly benefit were to be instituted, it would concentrate added payments in Northern Virginia and do it in all years. If an increase in the maximum potential benefit duration were instituted, it would confer the added payments mainly in the six areas southern and southwestern areas previously identified. Because regional unemployment is a more volatile series than regional weekly wages, however, the extensions of maximum benefit duration triggered by high unemployment could have a wider range of utilization across the individual geographic areas if such an extension became a permanent feature of Virginia's program. In the current situation, however, the southern and southwestern areas would derive the bulk of the added benefit payments if potential duration exceeded 26 weeks in regions of high unemployment.

The increase in benefit payments instituted after the events of September 11, 2001 may seem unusual in light of Table 4.1 and the way benefit increases are typically instituted in UI programs. A common form of benefit increase is to raise the maximum WBA while leaving intact the method for calculating the WBA, e.g., Virginia's two high quarter method. Had Virginia done this last year, much (most) of the increments in benefit payouts would have been concentrated in Northern Virginia. With the 37 percent increase applied to all recipients the effect was to spread the increases more evenly across the state's various geographic areas. All recipients experienced the increase, not just those paid the previous maximum of \$268.

Table 4.2 displays geographic detail on reciprocity rates, weekly benefits and replacement rates. Unlike the labor force and unemployment data, total weeks compensated and benefit payments for the 21 PDCs do not sum to the statewide totals. Both benefit variables capture about 7/8ths of the statewide totals for 2001.

Column [4] displays reciprocity rates (weeks compensated divided by (52 times unemployment)), and the statewide average for 2001 was 0.235. There was a measurable

degree of variation in reciprocity across the 21 PDCs in 2001 with three below 0.20 and three of 0.30 or higher. The reciprocity rates were below-average in each of the three largest PDCs (numbers 8, 15 and 23). There was a positive association between the unemployment rate and the reciprocity rate in 2001 but the association was quite weak.²⁷

As would be expected, there was a negative association between the replacement rate (column [9]) and the average weekly wage (column [8]). In low wage PDCs fewer claimants are eligible for the maximum weekly benefit, hence the low replacement rates experienced by workers at the weekly benefit maximum have a smaller influence in reducing the average replacement rate. Note in Table 4.2 that only one replacement rate falls below 0.35 and that is for the high wage Northern Virginia area.²⁸

Based on an analysis of data from 2001, it is clear that the UI program does have different outcomes in different parts of the state. The reciprocity rate across the 21 PDCs varied from less than 0.20 to more than 0.30, but reciprocity was only weakly linked to local area unemployment rates. The replacement rate also differed by area with the rate noticeably lowest in Northern Virginia which has the highest wages of the 21 PDCs. Very similar patterns were also found in data from 2000.

B. Other Transfer Programs with Substate Components

Other programs that provide cash and/or in-kind benefits to Virginia residents operate with a degree of local variability across substate geographic areas. This section describes substate aspects of program administration in three programs: labor market programs covered by the Workforce Investment Act (WIA), Temporary Assistance for Needy Families (TANF) and Medicaid. Four topics are addressed: the geographic designation of substate areas, decision making undertaken in the substate areas, the assignment of claimants by area and (if relevant) financing issues. The purpose of the descriptions is to characterize the substate component in the administrative activities of these programs.

²⁷ The regression was based on 21 observations: column [4] of Table 4.2 regressed on column [4] of Table 4.1. The slope was positive with a t ratio of 2.0 but only 14 percent of the variation in the reciprocity rate was explained. Qualitatively similar results were obtained in data from 2000.

²⁸ A regression of the replacement rate on the average wage (column [9] on column [8] of Table 4.2) had a highly significant negative coefficient (t ratio of 4.5), and it explained about half of the variation in the

1. Workforce Investment Act (WIA)

The Virginia Employment Commission (VEC) is the lead administrative agency for WIA operations in Virginia. VEC oversees the WIA One-Stop workforce development service delivery system (known as Virginia Workforce Network or just Workforce Network). It has the lead responsibility for implementing policies to secure speedy and effective reemployment of workers through services such as job matching, counseling and training. VEC also administers the Wagner-Peyser Act (the job service), Unemployment Insurance, Veteran's Employment and Training Programs and Trade Adjustment Assistance. VEC has a Central Office in Richmond, 4 regional offices, and 39 local field offices.

In each state, WIA has one primary responsible administrative entity, the State Workforce Investment Board. The Virginia Workforce Council acts as the State Workforce Investment Board and is responsible for coordinating policy planning and accountability for the state's workforce development system.

There are 17 Local Workforce Investment Boards (LWIBs), one for each of the designated Local Workforce Investment Areas. The Local Boards and the service delivery areas they represent were formed as part of WIA's initial implementation. Combined, the 17 WIA areas extend to all parts of Virginia. Although there are 17 separate WIA areas, their boundaries exhibit a reasonably close correspondence to the boundaries of the PDCs identified previously in Tables 4.1 and 4.2.

Each WIA area has a one-stop system operator, chosen by the local board, responsible for administering the one-stop system within that area. There were, as of December 2001, 65 comprehensive and satellite one-stop centers (Virginia Workforce Centers) providing employment and training services under the purview of the local boards. Almost all of the VEC local field offices are certified comprehensive centers but other organizational entities can also be designated full-service centers.

The state, as specified in the Workforce Investment Act, requires three tiers of WIA services. 1) Core services are accessible to individuals through full-service service delivery sites and do not require participant registration or prioritization for service. 2)

replacement rate. A similar negative association was found for 2000, and the regression explained about two thirds of variation in the replacement rate.

Intensive services are provided for those determined through an initial assessment as unable to obtain/retain employment through core services. Intensive services are provided in accordance with LWIB-established policies for prioritization for service. 3) Training services are provided when it is determined that an individual is unable to obtain/retain employment through intensive services.

Beyond these broad parameters, however, the WIA administrative, fiscal, and service delivery structure is designed to allow for local flexibility. Therefore WIA program administration is marked by considerable variation across the local workforce investment areas.

WIA participants are not assigned to any particular WIA-certified provider and/or one-stop center. This is consistent with the strong emphasis WIA places on individual empowerment and consumer choice (e.g., hence, for example, the use of training vouchers or “Individual Training Accounts”).

Virginia uses a federal formula to determine WIA Title I adult and youth funding allocations to local workforce board areas. 70 percent of the allocation is based on three factors: unemployment rates, excess unemployment rates and poverty rates with each weighted equally. The state has more latitude to determine how to allocate the remaining “30% Discretionary Formula” portion of its WIA allocation. The two principal factors used in Virginia are local unemployment rates and poverty rates. For the dislocated worker component of WIA, the formula used to make substate allocations considers data on insured unemployment and unemployment concentrations, plant closings and mass layoff data, declining industries data, farmer-ranching economic hardship data and long-term unemployment data.

The Local Investment Boards have the flexibility to determine the appropriate mix of core, intensive, and training services for their respective areas so long as they ensure that all three tiers are available. In addition, the Local Boards can pool and leverage their funding allocations with resources from partner agencies. This further contributes to potential for variation in the type, intensity and availability of services.

To summarize, WIA operates with 17 substate areas. There is a wide degree of local autonomy in decision making in providing reemployment and other services, but subject to the requirement that three levels of services be offered. WIA monies for local

areas are derived by formulas from a federal allocation to the state. Individuals seeking services can choose the geographic area for receiving services.

2. Temporary Assistance for Needy Families (TANF)

The Department of Social Services (DSS) is the single state agency responsible for supervising the TANF program at the state level in Virginia. TANF is administered at the local level by 120 local social service departments, under state DSS supervision. Caseworkers in DSS local offices are responsible for determining eligibility for Medicaid, TANF, Food Stamps and other state assistance programs. DSS also administers the welfare-to-work component of its TANF program, termed the Virginia Initiative for Employment Not Welfare (VIEW).

The overall administration of cash assistance benefits is uniform across Virginia, although there is some regional variation in benefit levels (described below). There is also variation in the administration of the VIEW program in terms of staffing and service mix, but all local offices must implement a basic set of program components and features.

Clients are assigned to the TANF program on the basis of their county/city of residence. Unlike some other income-conditioned (welfare) programs like Medicaid, TANF applications and redeterminations require in-person office visits.

Virginia has established standards of assistance, based on the size of the assistance unit, to be used in all TANF cash payments. Three schedules of standards have been established for different regions within the state. These schedules reflect variation in the local cost of living index across three metropolitan statistical areas (MSAs). Localities outside the MSAs are assigned to one of the three groups, based on their geographical proximity. The monthly maximums for TANF payment as of October 2001 for the three groupings were \$443, \$479 and \$570.

Columns [10] and [11] of Table 4.1 provide an indication of the variation of these maximum payments across the state's 21 PDC areas. The underlying counties and cities were weighted by their respective labor forces to arrive at these averages. The overall statewide average was \$494 and 19 of 21 PDCs had averages less than the statewide average. Note that nine areas have averages of \$443, meaning all constituent counties and cities had maximums of \$443, the lowest of the maximums. One area (Northern Virginia) had an average maximum of \$562, the highest of the three maximums. The other eleven

PDC areas had two or three maximums, typically with a higher maximum operative in one or more of the cities.

When the relative variability of the TANF payment maximums (column [11]) is compared to the variability of average weekly wages (column [9]), it is clear that the TANF maximums are less variable across the 21 areas. Whereas the low wage areas have relative AWW ratios mainly in the 0.65-0.80 range, the corresponding TANF relative maximum payments fall mainly in the 0.90-0.92 range. At the opposite extreme, the relative AWW for Northern Virginia is 1.38 compared to the relative maximum payment of 1.14. In sum, the TANF payment maximums are less variable across these areas than is variation in weekly wages.

In several PDCs, the existence of different (higher) payment maximums in urban areas provides an incentive for TANF recipients to appear to be urban residents for purposes of benefit receipt. While there is a legitimate justification for higher payments based on cost of living differentials, the possibility of misrepresenting residential location must be acknowledged. One practical consideration probably limits the importance of this problem. The differential between the two lower maximums is small, \$479 versus \$443 or eight percent.

The allocation of monies for family support is a state function in TANF. Total state support for TANF is derived from a block grant from the U.S. Department of Health and Human Services to DSS. Cash payments are made directly by DSS to families with no local participation. The one exception to this is the block grant allocations by DSS to the local offices in the VIEW program. These monies support both JOBS/VIEW services (case management, transportation reimbursement and work activities) and child care expenses for JOBS/VIEW participants.

In sum, TANF operates in Virginia with some 120 local areas but mainly with uniform administration specified by DSS. Financial matters are also a state function. Benefit payment levels are different in individual local areas with three levels of support. Above-average benefit payments are mainly confined to Northern Virginia and the differential is roughly 14 percent above the statewide average. County of residence is the basis of benefit receipt.

3. Medicaid

The Department of Medical Assistance (DMAS) is the single state agency responsible for administering Medicaid in Virginia. DMAS is responsible for developing and disseminating Medicaid policy, manual instructions, and procedures to the Department of Social Services (DSS), the agency that administers TANF. DMAS contracts with the DSS to determine Medicaid eligibility.

DMAS and DSS Central offices are located in Richmond. DSS has five regional offices and some 120 local offices throughout Virginia. The regional offices provide policy guidance but program administration is carried out by local DSS offices.

Medicaid is administered in a uniform fashion across the state. For example, eligibility standards are uniform and co-payments vary by type of service, but not by area. Variation is most likely to occur as a result of the differences in the supply of providers accepting Medicaid payments in any given area, rather than in the way in which the program itself is administered.

Clients are assigned to the Medicaid program according to the county/city where they live. Individuals applying for Medicaid-only may mail-in applications and conduct redeterminations through the mail as well (thereby making the actual location of the office less important). Most Medicaid recipients can receive medical services from any medical provider that accepts Medicaid payment, and thus most clients are not tied to a particular county with respect to the receipt of services.²⁹

Medicaid allocations are not made on a sub-state basis. Medicaid is financed through an open-ended federal-state match. The federal share, known as the Federal Medical Assistance Percentage (FMAP), is determined annually by a formula that compares the State's average per capita income level with the national average. There is no local match.

To summarize, Medicaid is administered uniformly across Virginia by DMAS but in close conjunction with DSS. Program financing is a statewide function with no local participation. Clients are assigned on the basis of city/county of residence but this is of

²⁹ Medicaid can determine that some people require special case management of their doctor and pharmacy use, and these clients can receive care only from a designated provider unless that provider refers them to another provider.

limited importance since most of program administration is conducted by mail and clients choose their service providers.

4. Three Program Summary

Considering all three programs, three final summary comments can be offered. 1) The WIA program has the widest degree of latitude for local decisions. While local authorities must offer three levels of services to clients (core, intensive and training), they control the relative emphasis placed on the three as well as their content. 2) Across the three programs, local authorities have practically no role in program financing and little or no control over the allocations made to their local areas. 3) There is geographic variability in TANF cash payment levels. This variability across the 21 PDC areas is much smaller than the variability in weekly wages across the same areas. Thus the Northern Virginia PDC had weekly wages 38 percent above the statewide average in 2001 but maximum monthly TANF support was only 14 percent above-average.

C. Issues of Program Administration

If substate differentials were to be implemented in the UI maximum weekly benefit or maximum potential benefit duration, a series of administrative questions and problems would need to be addressed. Some of the problems that can be anticipated will be discussed in the ensuing paragraphs. One problem common to both can be termed the “border” problem. If added benefits are made available to people in one or more geographic areas, claimants will want to be considered as residents of those areas to secure access to the added benefits. To restrict eligibility to those legitimately entitled to the added benefits, VEC will have to devote added resources to verification of claimant eligibility. The cost of these activities can be expected to increase as the entitlement differential is larger and as the border for the high eligibility area is more extensive.

The data reviewed in Table 4.1 suggested that the areas of high wages and high unemployment have been highly contiguous. To the extent this persists in the future, it would make it easier to administer a higher maximum benefit amount and/or a longer maximum potential duration. Especially in reference to unemployment, however, there is no assurance that high unemployment in the future will be as geographically concentrated as during the most recent years.

1. Substate Differentials in Potential Benefit Duration

Of the two possible types of substate differentials, it seems that conferring extra weeks of potential benefits raises more problems of program administration. Fortunately research completed in the late 1980s has already addressed some of the issues.

An analysis of regional benefit extensions in substate areas was conducted by Mathematica Policy Research (MPR), Inc.(1989). Field work for the project was conducted in Florida and Ohio. Of the important findings reported by MPR, two are particularly noteworthy. 1) Operating a substate program would add to UI administrative costs. Costs would increase due to administrative activities such as tracking “on” and “off” indicators for each substate area, added costs of verifying addresses of claimants and likelihood of increased overpayments associated with changes in “on” and “off” status of individual areas. 2) Disputes within a state could increase. Similarly positioned workers (in terms of work history, reason for job separation and other factors) would receive different treatment by UI due to perceived accidents of residence. The overall tone of the findings from the MPR analysis was quite negative.

If a substate program were to be implemented in Virginia, it could use as unemployment rates either rates based on UI claims (so called IURs for insured unemployment rates) or data from the Local Area Unemployment Statistics (LAUS) program of the U.S. Department of Labor’s Bureau of Labor Statistics. The LAUS program makes estimates of unemployment rates for the total labor force (so called TURs for total unemployment rates) for detailed geographic areas throughout the country. These data underlie the unemployment rates for the 21 PDCs shown in Table 4.1. Data on substate IURs would rely on data from VEC, similar to data in column [3] of Table 4.2.

Besides selecting the appropriate unemployment rate to be used in the trigger mechanism, the substate program would also have to decide on the number of geographic areas to use. The LAUS program identifies 28 labor market areas in Virginia (6 metro areas and 22 other labor market areas). It was previously noted that Virginia has 17 WIA areas and 21 planning districts. For ease of administration, it would seem that fewer than 28 (or 21 or 17) areas would be desirable. Finally, there would be questions about the details of trigger calculation used to designate areas of high unemployment. In short,

several questions would have to be addressed and several administrative procedures devised to operate such a program.

Two other considerations seem pertinent. First, a substate program with added benefit entitlements in some geographic areas would have to be fully state financed. In the present fiscal environment, this would likely dampen the enthusiasm for such a program. Second, there would be questions of how to coordinate the state-financed substate program with federally financed extended benefits like the TEUC benefits available between March and December 2002. The procedure followed in the early 1990s and again in the present recession is to permit states to move immediately to paying the federally financed extended benefits and stop paying benefits from the Federal-State Extended Benefits program. Virginia would presumably want to have immediate access to emergency federal benefits to offset costs arising from its own extended benefits paid to selected substate areas. For both, the potential costs of a substate program would need to be carefully considered in crafting the language authorizing such a program.

2. Substate Differentials in Maximum Weekly Benefits

From the average weekly wage data of Table 4.1, it is clear that paying a substate differential in the maximum weekly benefit would affect claimants from Northern Virginia. Average wages in this area exceeded the statewide average by 38 percent in 2001 while the second highest PDC average, for the Richmond Region, just matched the statewide average. Thus the added benefits arising from a higher maximum would be concentrated in just one area, Northern Virginia.

How large should the differential be? It would not necessarily have to be 38 percent higher than in other areas. In Part B we observed that the TANF maximum for Northern Virginia was 14 percent above the statewide average and the calculation was based on cost-of-living comparisons. Thus a wide range from 14 to 38 percent might be considered in selecting the differential.

Any increase in the maximum for Northern Virginia would increase UI benefit costs. In recent years, this area has accounted for about one-sixth of total weeks compensated and one fifth of benefit costs (columns [3] and [5] of Table 4.2). Four considerations would affect the size of the cost increase associated with a higher maximum in Northern Virginia. First, and most obviously, the size of the increase would

be important. Second, the increase in the maximum could induce some claimants to increase their benefit duration, i.e., the standard labor supply response to a higher payment level. Third, the response of net interstate claims would be important. With a higher maximum in Northern Virginia, more persons with base period earnings in Northern Virginia and either Maryland or the District of Columbia (more accurately in Northern Virginia and at least one other state) would now find it advantageous to file for benefits in Virginia. The calculations made by individual claimants would involve interstate comparisons of weekly maximums and of weeks of potential benefits in light of their particular pattern of base period earnings. The net result would be cost increases for Virginia and cost reductions for adjacent jurisdictions. Fourth, there would be more claims in Northern Virginia vis-à-vis other areas of the state. Probably this would be the smallest factor in causing higher costs, but it could be measurable, particularly in the construction industry. In short, there could be important cost increases associated with creating a substate differential in the maximum weekly benefit.

Since the revenues that support the UI program are derived from employer payroll taxes, employers from Northern Virginia would experience tax increases. This could add opposition to any such proposal.

The weekly wage data in Table 4.1 shows that Virginia is unusual in the geographic concentration of its high wage area. This fact makes it possible to consider raising the maximum without at the same time creating a substate differential maximum.³⁰ An increase in the statewide benefit maximum will confer a large share of the new, higher benefits on claimants from Northern Virginia simply because so many high wage workers reside in this area.

When benefit data for the full year 2002 become available it will be possible to calculate the effect on Northern Virginia of the temporary increase in the maximum benefit to \$368 effective during the full year 2002. Furthermore, benefit data from 2002 could be examined to note how many at the \$368 maximum were from this single area. This calculation could be done by VEC and provide policy makers with information on the consequences for Northern Virginia vis-à-vis the rest of the state of raising the benefit maximum by a substantial amount. If there were a desire to assist those in Northern

³⁰ This was pointed out by James Wilson of VEC in a conversation.

Virginia to experience a replacement rate more similar to the rest of Virginia (Recall column [9] of Table 4.2) it might rather easily accomplished by simply raising the overall statewide maximum, taking advantage of the concentration of high wage employment in this one geographic area.

D. Summary

Data assembled for Virginia's 21 planning districts and displayed in Table 4.1 of Part A vividly illustrated wide differentials across geographic areas in both the level of average weekly wages and unemployment rates. The geographic locus of high wages and high unemployment was both obvious and distinct. High wages are concentrated in Northern Virginia while high unemployment is located disproportionately in areas along the southern and southwestern borders of Virginia.

Any remedy to either of the associated problems will undoubtedly involve cost increases for the UI program.³¹ Direct cost increases will follow from increases in the maximum weekly benefit and/or from an increase in potential benefit duration. Additionally, there will be further cost increases arising from behavioral responses of beneficiaries' increasing their duration in benefit status in response to higher weekly benefits and/or longer weeks of potential duration.

In the current fiscal environment, it seems prudent to defer enactment of any contemplated changes until the trust fund has recovered from the current drawdown and has returned to, say, the levels of the late 1990s. Further, the fact that other State UI programs do not have these features, either a differential weekly benefit maximum or a differential maximum potential duration, should give pause to policymakers in Virginia.

One specific approach for increasing the maximum weekly benefit was identified as promising. Rather than legislate a differential for Northern Virginia, simply raise the statewide maximum. Given the distribution of actual weekly wages by geographic area, much of the gain from the increase would be realized by claimants from Northern Virginia. Information that would help in assessing the consequences of such a change will become available after benefit payments for 2002 have been completed. The total

³¹ Theoretically, there could be a zero net cost solution that reduced benefits elsewhere while increasing benefits to the area deemed in need of increased benefits. This kind of solution seems unlikely to occur.

number of beneficiaries at the maximum of \$368, and the share from Northern Virginia can be determined by VEC from micro records on claims. This information, akin to the information examined in Chapter 3, would provide a sound basis for documenting the effects of the 37.3 percent across-the-board benefit increase of 2002 and for estimating effects of raising the statewide maximum at some future date.

Chapter 5. Employer Taxes and Experience Rating

Virginia employers are assessed UI taxes under a system of benefit ratio experience rating. For those with sufficient experience to qualify for experience rating, tax rates are determined using the past four years of experiences with benefit charges.³² Tax rates for individual experience-rated employers are set using a tax rate table with fifteen different tax rates schedules. Each schedule links employer benefit ratios (defined below) with tax rates. The present framework for setting employer UI taxes has been operative in Virginia since 1982.

The current chapter and Chapter 6 focus on issues in UI program financing. This chapter emphasizes the establishment of tax rates for employers and the assignment of benefit charges while Chapter 6 deals more with program aggregates and questions of trust fund adequacy. Because the two topics are intimately connected, there will of necessity be some overlap. Generally this chapter focuses on issues of rate setting for individual employers while Chapter 6 places primary emphasis on macro aggregates such as total revenues, tax receipts and the UI trust fund balance.

A. Experiencing Rating Systems

In the United States, charges associated with the payment of UI benefits are assigned to employers through experience rating. Employers who initiate more job separations that are followed by an above-average volume of benefit payments pay higher UI taxes than employers who initiate fewer separations.

The UI programs in the U.S. use two primary methods for measuring employer experiences. Stock-based experience rating systems take account of all past taxes and benefits and their cumulative net difference as reflected in individual employer account balances in the trust fund. The statewide trust fund balance on a specific computation date (often June 30th and measured as a percent of taxable or total covered wages, i.e., as a reserve ratio) partially determines the tax rate to be paid during the next tax year. Reserve ratio experience rating is used in 33 UI programs.

³² New employers pay UI taxes at a uniform 2.5 percent rate on taxable wages.

Flow-based experience rating uses a measure benefit payments (either benefits or a close proxy such as benefit wages, i.e., the base period wages of claimants) over a specified period as the indicator of experience. The most common flow-based system uses three year benefit ratios, i.e., benefit payments relative to taxable or total covered wages over the past three years, as a main determinant of individual employer tax rates. There are 20 flow-based experience rating systems.³³ In these systems there is no need (or attempt) to track the time path of account balances for individual employers.

Since 1982 Virginia has utilized benefit ratio experience rating. Tax rates for a given year are set using four year benefit ratios for the period ending on June 30th of the preceding year. The benefit ratios are measured relative to total covered wages with wages also measured for the four years ending on June 30th of the preceding year. Prior to 1982 Virginia used benefit-wage ratios to set employer taxes.

Both stock-based and flow-based experience rating systems utilize tax schedules that specify a minimum, a maximum and a set of intermediate tax rates that link employer experience indicators to their tax liabilities. Moving across the experience distribution, employers with increasingly more favorable experience indicators (higher reserve ratios, lower benefit ratios) are taxed at progressively lower rates until the minimum tax rate is reached. Most state UI tax statutes have several tax rate schedules, not a single schedule, potentially applicable in a given year. Successively higher tax rate schedules are activated as the aggregate trust fund balance declines to successively lower levels. Thus, employer tax rates increase following an economic downturn both because many individual employers exhibit worse experience (lower reserve ratios, higher benefit ratios) and because higher tax rate schedules are activated.

All states constrain potential employer UI tax liabilities by specifying minimum and maximum tax rates for a given year. The presence of minimums and maximums also limits the degree of experience rating. Full experience rating would be present if one extra one dollar of benefit payments eventually caused the employer's UI tax to increase

³³ Seventeen states use benefit ratios while two (Delaware and Oklahoma) use benefit wage ratios and one (Alaska) uses payroll declines as flow-based measures of experience. The payroll decline system uses the decrease in covered payrolls as a proxy for the covered wages of workers on layoff. Benefit ratios are measured for four year periods in three states (including Virginia) and for five year periods in three states. Included among the seventeen benefit ratio states are Michigan and Pennsylvania which use both benefit

by one dollar.³⁴ The actual response UI tax systems typically is less than a dollar per dollar response. Part B discusses the measurement of the degree of experience rating.

In practice, the contrast between stock-based and flow-based experience rating systems is smaller than suggested by the preceding description. Most of the flow-based systems have several tax schedules, and the trust fund balance on the computation date determines which schedule is used during the next tax year. Thus flow-based experience systems utilize a stock measure (the state's trust fund balance on the computation date, perhaps expressed as a reserve ratio) as well as a flow measures of experience in determining the next year's tax rates for individual employers.

The actual operation of experience rating in the U.S. is most accurately described as partial experience rating because a large share of benefit charges are not effectively assigned back to the employers where the job separations occurred. In other words, the costs of a large share of UI benefit payments are socialized, i.e., all employers pay collectively for benefit payments not effectively assigned to individual active employers. Three types of benefit payments fall outside the scope of experience rating: noncharged benefits, ineffectively charged benefits and benefits charged to inactive employer accounts. Each of the three will be briefly described.

Noncharged benefits originate from payments to former workers in cases where the employer did not cause the job termination or where the state has decided not to assign the benefit charges to the base period employer. For example, suppose a worker quits a job to take what is believed to be a better job, but then is laid off by the new employer. Following the separation from the second job, the person may file a successful claim for benefits. A substantial fraction of the worker's base period work history would have arisen with the prior employer (where the worker had quit).³⁵ However, because the prior employer did not initiate the earlier job termination, there would be no charging to that employer's account. Noncharged benefits become the general responsibility of the state's UI tax system, not of specific employers. Individual states have widely varying

ratios and reserve ratios to set employer tax rates. Thus the counts of stock-based versus flow-based systems could be either 33-20 or 35-18 depending upon the classification of Michigan and Pennsylvania.³⁴ The concepts of full experience rating and perfect experience rating are discussed in Vroman (1999). For present purposes, it is sufficient to think of full experience rating as one dollar of added benefits causes one dollar of subsequent UI taxes.

policies and practices regarding noncharging, and noncharges are of widely differing importance across the states.

Ineffectively charged benefits arise when the tax payments associated with the employer's experience measure (either a reserve ratio or a benefit ratio) does not generate revenues equal to the benefit charges assigned to that employer. The employer may be taxed at the maximum tax rate, but benefit charges may be substantially larger. Although an ineffective charge for the current year could be recovered in a later year, in practice many ineffective charges are never recovered. Certain employers taxed at the maximum rate incur benefit charges far in excess of their tax.³⁶ Raising the maximum tax rate reduces the volume of ineffective charges. In contrast to noncharges, ineffective charges can be assigned to individual employer accounts, but the assignment is ineffective because taxes paid are insufficient, often because the employers are already taxed at the maximum tax rate.

In the actual measurement of ineffective charges, measurement occurs at the level of the benefit ratio (or reserve ratio). Taxes paid by all employers at a given benefit ratio are compared with the sum of all charged benefits. When charged benefits exceed taxes, ineffective charges are measured as the difference between benefits and taxes.

A separate category of ineffective charges are charges to inactive employer accounts. Although the employer is no longer active, benefits continue to be paid to former employees. Inactive employers may pay some taxes in the current year and may also initially have a reserve balance (in reserve ratio states) to defray some of these charges, but typically these amounts are much smaller than the associated benefit charges. The excess charges against inactive employer accounts become a socialized liability of the UI program.

The sum of noncharges, ineffective charges and charges against inactive accounts represents a substantial fraction of total UI benefits in most states. Since 1988 the Office

³⁵ In Virginia charges are assigned to the last employer where the person worked for at least 30 days or for 240 hours.

³⁶ The computations leading to ineffective charges differ in stock-based and flow-based experience rating systems. They are simpler in flow-based systems because of their shorter memory. Because stock-based systems can retain information on ineffective charges for longer periods, there is more potential for recovery from the employer at a later date. However, allowing employers to "write off" ineffective charges when computed reserve ratios reach very large negative levels, limits the ability to recover ineffective charges in reserve ratio states.

of Workforce Security (OWS, formerly the Unemployment Insurance Service) of the U.S. Department of Labor has required states to report benefit payment summaries that separately identify these three types of charges and their combined sum measured as a fraction of total benefit payments. A summary statistic based on these reports is termed the Experience Rating Index (ERI). The ERI is computed as a ratio whose numerator is total benefits less each of the three types of ineffectively assigned charges and whose denominator is simply total benefits. By construction, the ERI is a proportion that can range from zero to unity with higher values indicating a higher degree of experience rating. It is the most widely utilized measure for studying changes in experience rating through time and for making comparisons across states. In OWS publications the ERI is shown as a percentage that can vary between zero and 100.

B. UI Tax Rates and Experience Rating in Virginia

For covered employers with sufficient years of experience, VEC sets UI tax rates using four year benefit ratios. Charged benefits for the four years ending the previous June 30th (the computation date) are measured as a percentage of covered wages for the same period and rounded to the nearest one tenth of a percent.³⁷ This benefit ratio is then translated into a tax rate using the tax rate schedule operative for the year. Virginia's statute has fifteen tax rate schedules with increasingly higher rates (at a given benefit ratio) in effect as the UI trust fund balance on the computation date falls increasingly below a level deemed adequate for program funding. The fifteen schedules cover the range of fund balance ratios (the ratio of the actual balance to the balance deemed to be an adequate balance, expressed as a percentage) from 50 percent to 120 percent in five percent increments. During 2002, tax rates were assigned from the schedule where the fund balance ratio was 100 percent. Because of the recent increases in benefit payments and the associated trust fund drawdown, the tax rate schedule to be operative 2003 will be based on a fund balance ratio of 80 percent.³⁸

Two other elements may be included in the total tax rate paid by individual employers. There may be a funding building tax of 0.2 percent of taxable wages which is

³⁷ For employers with fewer than four years of experience (but at least two full years), VEC will measure the benefit ratio using experience data from available historic period.

³⁸ Chapter 6 will discuss this in more detail.

imposed when the fund balance ratio on the computation date falls below 50.0 percent.³⁹ Also there can be pool charges to cover the costs of ineffectively assigned benefit charges. Between 1982 and 2002 the fund building tax was operative in four years and a pool charge tax was levied in eight years. Both are assessed at a single rate for all employers in a given year. Thus for 13 of the 21 years between 1982 and 2002 employer taxes were taken directly from the tax rate table. Additionally, fund building taxes and pool charge taxes were both imposed in all four years between 1982 and 1985 and pool charge taxes were levied again between 1993 and 1996.

Table 5.1 displays summary information relevant for assessing experience rating in Virginia for the nineteen rate years between 1984 and 2002. Note that rate year data refer to benefit experiences for the twelve month period from July 1st to June 30th ending six months before the indicated year. Thus the data refer information used in setting tax rates for the years indicated in the left hand columns of the table. Columns [1]-[6] respectively show total benefits and the three kinds of charges that were not effectively assigned to individual employer accounts, namely ineffective charges, inactive account charges and noncharged benefits. Information for the latter pair extend back to 1984, but estimates of ineffective charges are available only from 1987 and 1988.

Three columns display information on ineffective charges. The total in column [2] is separated into two parts in columns [3] and [4], respectively charges against employers taxed at the maximum rate and charges against employers taxed at lower rates. The distinction is important because only the charges against maximum rated employers are used in establishing tax rates in Virginia.

Because earlier data on total ineffective charges are not available, estimates of the experience rating index (ERI, column [12]) can only be made starting in 1988. The ERI is measured as 1 less the sum of columns [7], [10] and [11] and expressed as a percentage. As indicated above, ERIs closer to 100 indicate a higher degree of experience rating because they mean that the sum of ineffective charges plus inactive account charges plus noncharges are comparatively small relative to total benefit payments. During these 15 years, the ERI in Virginia averaged 66.8 meaning that about two thirds of benefits were

³⁹ The tax rate schedule for the 50 percent fund balance ratio operates when the ratio falls below 55.0 percent. All the other rate schedules operate for the stated ratios, say 70 percent, and up to 4.99 percentage points higher. However to activate the fund building tax the fund balance ratio must fall below 50 percent.

effectively charged to the accounts of individual employers. For nine of the fifteen years, the ERI fell into the range between 60 and 75 with lower values in 1992, 1998 and 2002 and higher values in 1994, 1995 and 1996. ERIs tend to be lower at the start of recessions, due to higher ineffective charges, and this is observed in 1992 and 2002.

The three bottom rows of Table 5.1 help in assessing the volatility of the data in the individual columns. There are three summary statistics for each series for the years from 1988 to 2002: the fifteen year average (or mean), the standard deviation (a measure of the average distance from the mean) and the coefficient of variation (the ratio of the standard deviation to the mean). The latter measures the relative volatility of each series. For the aggregate data in columns [1]-[6], ineffective charges (columns [2]-[4]) exhibit greatest relative variability. For the ratio data in columns [7]-[11], again note that the greatest volatility is indicated for ineffective charges with the coefficient of variation of 0.58 for total charges and 0.86 for employers taxed below the maximum tax rate. The third largest of the coefficients of variation in columns [7]-[11] is for ineffective charges against maximum rated employers. In contrast, when inactive charges and noncharges are measured relative to total benefits, the proportions are much more stable with coefficients of variation of 0.15 and 0.16 respectively. A major determinant of the year-to-year variability of these latter two charges is the total volume of benefit payments.

Because ineffective charges are so volatile, they strongly influence the estimated ERIs. Note that years when the ERI decreased, e.g., 1991, 1992, 1998 and 2002, were all years when the ineffective charge proportion increased sharply. Conversely, in years when the ineffective charge proportion decreased such as 1993, 1994 and 2001 the ERI increased. Thus the measured degree of experience rating in Virginia has been most strongly influenced by the changes in the volume of ineffective benefit charges.

Since 1988 the information used to compute the ERI has been reported by the states to the national office of OWS. For the ten years 1988 to 1997 this reporting was quite complete and ERIs (with supporting detail as in Table 5.1) were reported by nearly all states. This information was summarized in annual ERI report issued by OWS (formerly the Unemployment Insurance Service).⁴⁰ In more recent years, however,

⁴⁰ For example, see U.S. Department of Labor (1996). The underlying data are reported by the states in ETA 204 Experience Rating Reports.

reporting procedures were modified and several states have yet to report complete information. Consequently summary data on experience rating across all states are not readily available, although information is available for many individual states.

For the ten years 1988-1997 the ERI averaged 62 across all states, i.e., on average 62 percent of benefits were effectively assigned to individual employers while 38 percent of benefits were socialized.⁴¹ Fourteen of the fifteen benefit ratio systems (all but Maryland) reported for nearly every year during this period. The average ERI during 1988-1997 for the fourteen was 60.6, only slightly lower than the average of 62.8 for the 33 reserve ratio systems. One inference from this comparison is that the two major systems of experience rating yielded similar averages as to the overall degree of experience rating during these ten years.

Compared to the national averages, Virginia's ERI has been above-average in most years when comparisons can be made. The average during 1988-1997 was 69.2 compared to the national average of 62 and the average for 14 benefit ratio systems of 60.6. Unfortunately, the absence of comprehensive ERI data since 1997 makes it impossible to compare Virginia to these averages for more recent years. When the three reasons for ineffective benefit charges were examined Virginia's ineffective charge proportion during 1988-1997 fell slightly below the average of the state averages (0.143 versus 0.158). Virginia's proportion for inactive account charges was also below-average (0.66 versus 0.87), and its noncharge proportion was below-average by a wider margin (0.099 versus 0.132) during the ten years 1988-1997.⁴² As shown in the averages displayed in columns [5]-[7] of Table 5.1, ineffective charges are the biggest single factor operative in Virginia that reduce the state's estimated degree of experience rating.

The project examined the three types of ineffectively charged benefits individually. Multiple regressions were fitted to annual data where each of the three ineffectively assigned benefit charges were dependent variables, i.e., the series displayed

⁴¹ The 62 is the ten year average of the simple average of the ERIs computed for individual states. Typically 46-49 states (out of a possible 50) reported ERIs during these years. An ERI cannot be computed for Alaska (because it uses the payroll decline method of experience rating). Puerto Rico utilized flat rate UI taxes during most of these years while the Virgin Islands has never reported ERI data.

⁴² The overall ERIs and components by state for the 1988-1997 period are displayed in Tables A1-A4 in Appendix A of Vroman (1999). The national averages are shown two ways the aggregate and the average of state data. The comparisons noted in the text use the state averages. Use of national aggregates would not alter the direction of the Virginia-U.S contrasts noted in the text.

in columns [5], [6], and [7] in Table 5.1. Since there were very few time series data points, the analysis utilized parsimonious specifications with just a few explanatory variables. Primary emphasis was placed on the cyclical behavior ineffectively assigned benefits with individual attention on all three.

Table 5.2 displays regression results. Three regressions focus on ineffective charges while single regressions are shown for both charges against inactive employers and noncharged benefits. Four of the five regressions explain from half to two thirds of the variation in the dependent variable (column [6]), but only about 30 percent of the variation is explained in equation 3. Perhaps the most important statistics in Table 5.2 are the standard errors of the regressions in column [7]. Although roughly half of the variation in the total ineffective charge proportion was explained in equations 1 and 2 note that both standard errors exceed 0.060. This stands in contrast to the much smaller standard errors in equations 3, 4 and 5, 0.0151, 0.0074 and 0.0112 respectively. The earlier observation regarding the high volatility of ineffective charges holds even after fitting regressions that explain roughly half of the time series variation in the ineffective charge proportion. Among other things, this indicates that forecasting ineffective charges in future years (and the hence the likelihood and size of pool charges) would have a high degree of uncertainty.

Equation 1 uses the unemployment rate lagged one and two years along with a minimum tax variable to explain the ineffective charge proportion. Unemployment lagged one year enters both equations with a significantly positive effect. In equation 1 its t ratio is 3.6. Unemployment lagged two years has a negative effect which is not quite significant in equation 1, i.e., the t ratio of 1.8 falls just below 2.0, the rule-of-thumb threshold for statistical significance. In equation 2 the lagged unemployment rate enters in change form which constrains the two unemployment rate effects to be of equal size but opposite in sign. The interpretation of these unemployment effects is that higher unemployment at first increases the ineffective charge proportion but then reduces it one year later. The negative impact may reflect the effect of movement to a higher tax rate schedule following a large increase in benefit payouts.

The minimum tax variable has as its numerator the product of the minimum tax rate times the taxable wage base, i.e., minimum taxes expressed as dollars per year, and

its denominator is weekly wages in taxable covered employment. It should be viewed as a proxy for low tax rates including the rates paid by employers in the 0.1-1.0 benefit ratio category that are quantitatively very important in Virginia.⁴³ Both equations show a negative association between the minimum tax variable and the ineffective charge proportion. The coefficient is so large that it must be capturing effects from employers taxed above the minimum rate as well as those strictly at the minimum tax rate.

In setting employer UI tax rates, Virginia calculates what are termed pool charges that need be financed. Total pool charges are calculated as the sum of noncharged benefits, charges against inactive employers and ineffective charges against employers taxed at the maximum tax rate. These charges have accounted for less than half of all ineffective charges. Equation 3 in Table 5.2 shows that the unemployment rate lagged one and two years is significantly linked to these charges. The one year lag has a positive effect while the two year lag enters negatively. Because variation in this component of ineffective charges is less than for charges against below-maximum rated employers, the standard error from equation 3 is much smaller than in equations 1 and 2 despite the lower adjusted R^2 in equation 3.

Inactive account charges are statistically linked to unemployment lagged two years, presumably a reflection of increased business failures that occur somewhat after the onset of a recession. A one year lag on the unemployment rate did not have significant effects and is not included in equation 3. The positive trend in equation 3 is the only example of a significant trend encountered in this analysis. Its coefficient suggests the inactive charge proportion increases by 1.5 percentage points per decade.

Noncharged benefits were linked only to the lagged unemployment rate. The negative coefficient indicates that this proportion declines when unemployment increases, i.e., noncharged benefits are less cyclically responsive than the overall level of benefit payments. The linkage with unemployment is strong with the t ratio of 6.0 being the largest t ratio included in the table.

Thus the regression analysis did establish statistically significant linkages to each of the three factors reflecting the ineffective assignment of benefit charges. However, very large errors remained in the regressions explaining the ineffective charge proportion.

⁴³ See Table 5.3 and the associated discussion of the Part C below.

This proportion had the largest amount of underlying variation (recall the summaries at the bottom of Table 5.1), and the standard errors from the regressions were much larger than for the inactive account proportion and the noncharge proportion. Fortunately ineffective charges against employers at the maximum rate is much less volatile than total ineffective charges. Note across equations 3, 4 and 5 in Table 5.2, however, that the largest standard error is present in equation 3. This greater volatility of ineffective charges direct implications for modeling future costs and employer tax rates in Virginia's UI program. We will return to this topic in Chapter 6.

C. Cost Experiences and Firm Size

In Virginia as in most other states, there is a clear association between firm size and experiences in paying UI benefits, hence employer tax rates. The association has been present in all years since 1984. Firms at the bottom and top of the distribution of benefit ratios (and tax rates) are smaller than average while large firms are concentrated to an unusual extent just above the very lowest benefit ratios.

Table 5.3 displays relevant information for rate year 2002. The four year benefit ratios used to set tax rates have been grouped into ten ranges in column [1], ranging from zero to 8.1 percent and above. Their average tax rates then appear in column [2].

The first noteworthy point in Table 5.3 is the concentration of employers in the bottom category, the zero tax rate category, 107,495 of 138,271 experience rated employers or 77.7 percent of the total. The second noteworthy point is the small average size of the employers in the bottom rate category. Columns [10] and [11] display average firm size measures based on total payroll per employer. The overall average in Virginia was \$719,000 in these data, but for the bottom category the average was \$249,000 or about one third of the overall average. Because so many employers are concentrated in this single category, however, their total wages were 27 percent of the wages of all experience rated employers despite their small average size. Their share of taxable wages was even higher, 34 percent.

The pattern of average firm size displayed in columns [10] and [11] is common to nearly all states. Note in Table 5.3 that employers in the top tax category are also below-average in size. Small firms have unusual concentrations at the top and bottom of

experience rating distributions.⁴⁴ The explanation is straightforward. Employers with small workforces and a low rate of unemployment occurrences (more accurately, chargeable claims for benefits) would mostly have an experience indicator of zero in a benefit ratio state, but even a single paid claim would be large when measured against total payroll. A single claim against such an employer with no previous claims would move the benefit ratio from zero to a high level. Thus small firms dominate in the tails of the benefit ratio distribution.

The frequency of this phenomenon appears to be higher under benefit ratio experience rating than under reserve ratio experience rating. The explanation here is that reserve ratio experience rating has a longer memory than benefit ratio experience rating. Small firms with many years of operation will accumulate more actuarial exposure through their several years of experience. A benefit ratio system like Virginia's retains the employer's benefit payment history for only four years. Hence the experience indicator used to set tax rates (the benefit ratio) is more volatile in a benefit ratio system of experience rating than under a reserve ratio system.

Another noteworthy feature of Table 5.3 is the high concentration of large firms towards the bottom of the benefit ratio distribution. The 19,299 represented only 14 percent of all employers but they accounted for 64 percent of total wages and 58 percent of taxable wages. Their average payroll was \$3,315,000 and their relative size was 4.61 times the statewide overall average.

The association between the benefit ratio and average firm size observed in Table 5.3 is common to states that use benefit ratio experience rating. Chart 5.1 displays relative size indicators in seven benefit ratio states using the most recent year of available data from ETA 204 reports. For each state the size indicators are measured as in column [11] of Table 5.3, i.e., relative to the statewide average indexed at 1.00. Across all states the largest average size is for firms with benefit ratios in the 0.1-1.0 percent range. For five, the size indicator in this interval falls into the 3.9-4.9 range while for the other two (Oregon and Washington) the relative size indicator is roughly 2.5. Note that in the

⁴⁴ For example see Tables 8 and 9 in Vroman (1999) which display relative firm sizes for employers in the bottom and top tax rate categories across 50 state UI programs during rate year 1997.

bottom category and top category all relative size indicators are below 1.0. The patterns observed in Virginia are repeated in the other benefit ratio jurisdictions.

The benefit ratio-firm size association observed in Virginia in Table 5.3 and in the other states in Chart 5.1 is stable phenomenon. To a large extent it reflects the outcome of personnel practices in large firms where average job tenure is long and layoffs are less common than in other firms. This leads to low claims for benefits and low benefit ratios.

However in the period from July 2000 to June 2001 there was a measurable increase in the volume of chargeable claims, increasing from \$129.3 million in rate year 2001 to \$187.8 million in rate year 2002. Note that in column [7] the statewide benefit ratio was 0.70 percent, and that it was 0.48 percent for firms in the 0.1-1.0 benefit ratio category. As a result, there were ineffective charges of \$18.8 million for these employers. All ten categories of employers classified by benefit ratios in Table 5.3 had ineffective charges for rate year 2002 (column [9]).

While ineffective charges are traditionally described as a phenomenon of employers at the maximum tax rate, they were present in all groups in Table 5.3. In fact ineffective charges for Virginia employers at the maximum tax rate (the three top benefit ratio categories in Table 5.3) totaled \$18.5 million or \$0.3 million less than for employers in the 0.1-1.0 benefit ratio group. Even though their claims costs were below those for groups with higher benefit ratios, their sheer importance in the state in terms of total wages and charged benefits (and undoubtedly in terms of employment) meant that they accounted for more than one fourth of statewide ineffective charges for rate year 2002.

Two aspects of Virginia's tax structure probably make it more subject to larger changes in ineffective charges than most other states. It taxes most employers at low rates (more than 90 percent at a rate of less than 1.0 percent of taxable wages in 2002), and it collects taxes using a low taxable wage base (\$8,000 per employee since 1991). The combined effects of these two factors means that the minimum annual contribution per employee is very low. Consequently an increase in benefit payouts as in rate year 2002 leads to widespread ineffective charges. The underlying table of tax collections and charged benefits for rate year 2002 had 95 individual benefit ratio categories (intervals of 0.1 percent up to 8.0 percent and then intervals of 0.5 percent up to 15.0 percent). Of the 95 categories, 93 had ineffective charges, i.e., charged benefits exceeded tax collections.

In many states, ineffective charges are concentrated in the higher benefit ratio categories. This reflects the combined effects of having a minimum tax rate above 0.0 percent and having a tax base that ensures a large share of wages are taxable. In a benefit ratio state like Washington where the minimum rate has been usually 0.40 percent or higher and the tax base is now exceeds \$28,000, ineffective charges are much more concentrated in the higher benefit ratio categories. For rate year 2002, for example, 55 percent of Washington's ineffective charges were found in the top category (benefit ratios above 8.0 percent), and no ineffective charges were found in benefit ratio categories below 3.0 percent. The concentration in this top category in Washington has consistently been very high and has included 100 percent of ineffective charges in several years since experience rating was reintroduced in 1985 .

In Table 5.3, in contrast, 52 percent of ineffective charges are concentrated among Virginia employers with benefit ratios of 3.0 percent or lower while only 17 percent of ineffective charges were generated by employers with benefit ratios above 8.0 percent. The three top categories in Table 5.3 accounted for just 27 percent of ineffective charges. Similar patterns were observed in three other years when ineffective charges increased sharply from the preceding year, namely 1991, 1992 and 1998. Roughly half of all ineffective charges were incurred by employers with benefit ratios of 3.0 percent or lower while about one third were incurred by employers with benefit ratios of 6.1 percent and higher. During such years ineffective charges were heavily concentrated towards the bottom of the benefit ratio distribution. This point is reinforced by the data in columns [3] and [4] in Table 5.1. For rate year data between 1988 and 2002 ineffective charges against maximum rated employers averaged \$13.3 million compared to an average of \$18.4 million for those taxed below the maximum tax rate.

We also examined the volatility of ineffective charges in two other states that traditionally have low employer taxes and that utilize benefit ratio experience rating: Florida and Texas. In both states, the most volatile element in the ineffective assignment of benefit charges to experience rated employers was ineffective charges. The coefficients of variation, computed for the years 1988 to 2002 and in the same manner as in column [5] of Table 5.1, were 0.34 in Texas and 0.55 in Florida. Thus there appears to be a broad pattern that low minimum tax rates coupled with low tax bases result in highly

volatile ineffective charges, with sharp increases occurring in years when recession-related benefit payouts increase.

D. Experience Rating and the Taxable Wage Base

Virginia has traditionally operated its UI program with a reasonably low taxable wage base per worker. For years up to 1990 its tax base was equal to the tax base for the federal unemployment tax, the minimum allowable tax base for a state UI program. In 1991 the tax base was raised to \$8,000 and it remained at \$8,000 in subsequent years, \$1000 above the federal tax base of \$7,000. During the 15 years for which the ERI can be computed, taxable wages as a share of total covered wages declined substantially as the low tax base constrained the growth in taxable wages. The taxable wage proportion decreased 0.378 in 1987 to 0.252 in 2001.

While part of the volatility of ineffective charges arises from having a low tax base, there does not appear to be a long run effect of a low tax base on the overall level of experience rating in Virginia. This was tested with a regression covering the 15 years 1988 to 2002 for which the ERI could be computed. The ERI was regressed on the unemployment rate (to control for cyclical factors) and the ratio of the taxable wage base to average covered wages. Both explanatory variables were lagged one year to reflect the timing of the benefit data that enter the ERI. The regressions did not yield evidence suggesting the decrease in the taxable wage base relative to average wages had a discernable adverse long run effect on the degree of experience rating in Virginia. In all regressions, the tax base variable had an insignificant slope coefficient.

E. Summary

Virginia uses four year benefit ratios to assess experience and assign tax rates to individual employers. (1) Overall, the degree of experience rating in Virginia as reflected in the ERI has exceeded the national average for years when comparisons can be made. Between 1988 and 1997 the national average experience rating index (ERI) was 62 compared to 69.2 for Virginia. Over the slightly longer 1988-2002 period, Virginia's ERI averaged 66.8. Roughly two thirds of benefits have been effectively assigned to individual employers over these years. (2) Virginia has experienced high volatility in the

volume of ineffectively charged benefits. The coefficient of variation in ineffective charges as a proportion of all benefits was 0.58, much higher than for charges against inactive accounts and noncharged benefits. These patterns are observed in other benefit ratio states as well, e.g., Florida and Texas. The volatility of ineffective charges is especially large for charged against employers taxed below the maximum tax rate.

(3) The combination of a low minimum tax rate and a low taxable wage base are important factors that lead to the high volatility of ineffective charges. In years when benefit charges increase, e.g., rate year 2002, ineffective charges arise at all levels of the benefit ratios (the experience indicator used to set rates for individual employers), not just for employers paying the maximum tax rate. If Virginia wanted to reduce the volatility of ineffective charges, this could be accomplished by raising the minimum tax rate and/or increasing the taxable wage base. (4) While the taxable wage base has increased much more slowly than average wages, this does not seem to have had a statistically significant effect in reducing the effectiveness of experience rating in Virginia, at least as reflected in the behavior of its ERI since 1988.

Chapter 6. Program Financing and Trust Fund Adequacy

While benefit payments are paid from Virginia's UI trust fund maintained at the U.S. Treasury, the source of most monies to pay benefits is employer contributions into the trust fund. This chapter examines two closely related topics: UI contributions and trust fund adequacy. Although it is somewhat arbitrary, initial attention will be devoted to contributions, the product of taxable wages and the average tax rate.

A. Taxable Wages

Table 6.1 displays economic times series related to taxable wages that span the years 1967 to 2002. During this period covered employment (column [1]) roughly tripled, a growth rate considerably above the national average, e.g., 202 percent growth from 1967 to 2001 while national employment growth was 113 percent. Average covered earnings (column [4]) also increased faster than the national average, moving from 16 percent below the national average in 1967 to 1 percent above-average in 2001. In 2001 average earnings in Virginia exceeded \$36,000, more than seven times its level in 1967.

Like all UI programs, Virginia's secures contributions from only a part covered wages. Annual wages for individual workers are taxable for UI purposes only up to a limit defined by the taxable wage base. Currently the tax base for contributions into the state's trust fund is \$8000, a level first effective in 1991 (column [5]). In fact, over the entire history of Virginia's UI program there have been only five different tax bases. The base was \$3000 through 1971, \$4200 from 1972 to 1977, \$6000 from 1978 to 1982 and \$7000 from 1983 through 1990. Except for the increase to \$8000 in 1991, the other increases all followed federal legislation that effectively required states to increase their tax bases to the levels shown in column [5].

As in many other states the UI tax base in Virginia has grown much more slowly than average wages. This has meant that the share of wages that are taxable has declined with the passage of time. Column [7] displays the ratio of the tax base to average wages. In the late 1960s this ratio exceeded 0.50 but by 2001 and 2002 it fell below 0.22. Column [8] traces the evolution of the taxable wage proportion, the share of covered wages that are taxable. Note that the increases in the proportion associated with the tax

base increases of 1972 and 1978 restored the proportion to the 0.50-0.55 range but the two later tax base increases had much smaller effects. The secular decline in the taxable wage proportion has proceeded to the point that with the \$8000 tax base, only 0.252 of wages were taxable in 2001 and the estimate for 2002 in Table 6.1 is only 0.238. This year the UI program in Virginia will secure revenues from a taxable wages that represent less than one quarter of the total wages of taxable covered employers. Comparing columns [7] and [8] it is obvious that the ratio of the tax base to average wages moves very closely with the taxable wage proportion. For the 36 years covered by Table 6.1 their simple correlation exceeded 0.99.

Chart 6.1 traces the evolution of the series in columns [7] and [8] for the years 1967 to 2002. The chart provides vivid evidence of the close association between the tax-base-to-average-earnings ratio and the taxable wage proportion (TWP). As noted above, large increases in both ratios occurred in 1972 and 1978 and smaller increases occurred in 1983 and 1991. For other years, both ratios trend inexorably downward.

When the tax base is fixed, taxable wages grow much more slowly than total wages. To illustrate, average earnings per employee grew from \$22,924 in 1991 to an estimated \$37,641 in 2002 or by 64 percent. Over the same period the average taxable earnings only increased from \$8,196 to \$8,961 or by 9 percent. During these twelve years, the average taxable earnings grew about one seventh as much as the overall average earnings. Growth in covered employment during these same eleven years was 29 percent. Thus about three fourths of the growth in taxable wages (column [3]) between 1991 and 2002 was due to employment increases while only about one fourth was due to increases in average taxable earnings per covered worker.

The low tax base in Virginia has implications for both employers and workers in low-wage employment. To the extent that employers are subject to UI taxes levied at a flat rate, e.g., fund building taxes and pool charges. These would fall more heavily on low wage employment because a larger share of wages are taxable. While these taxes have not been important in Virginia since the years 1982-1985, they are likely to be more important in the near future when tax rates are set for years like 2004 and 2005.

The low tax base also has implications for the variability of employer tax rates. In a situation where increased revenues are needed, the increase can be accomplished by

various combinations of higher taxable wages (responding to a higher tax base) and higher tax rates. To the extent that the tax base is constant, this revenue enhancement will have to rely relatively more on tax rate increases because taxable wages will be comparatively stable.

Having a fixed (or unresponsive) tax base does not have important implications for aggregate revenue responsiveness in Virginia. The statutory arrangements that set tax rates have procedures for automatically recouping ineffectively assigned benefit charges without an upper limit on the pool charge tax rate. This will be reviewed in Part B.

A priori one would expect effects of a fixed tax base on ineffective benefit charges. Less total revenue will be collected from an employer taxed at the maximum rate when the tax base is low. Some support for this idea is provided by a comparison of ineffective charges in Washington and Virginia, i.e., the ineffective charge proportion is lower in Washington. However, as reported in Part D of Chapter 5, no evidence supporting this was found in a regression analysis of the ERI. There was no significant negative trend in Virginia's ERI nor a significant upward trend in the ineffective charge proportion. Given the limited number of years available for testing these hypotheses, however, it is probably best to observe that while statistical tests were inconclusive this might be overturned with more adequate data.

To conclude, it seems that raising the tax base in Virginia, either through one-time increments or through tying the tax base to average wages (indexation), can be justified on grounds of equity. It is less obvious that the low tax base limits Virginia's ability to increase tax revenues for purposes of restoring a trust fund balance depleted by recession.

B. Average Tax Rates

Table 6.2 shows summary data on average UI contribution (tax) rates for the same 1967-2002 period. Columns [1] and [2] trace developments in aggregate contributions and the average tax rate. Note how both increased during 1976-1977, 1981-1983 and again during 1992-1994. The latter two episodes are particularly relevant since the increases occurred under the taxing arrangements initially established in 1982 and operative down to the present.

As noted in Chapter 5, Virginia establishes employer tax rates as the sum of three taxes, the tax rate from the rate table which applies to experience rated employers, the fund building rate and the pool charge rate. The three rates applicable to experience rated employers appear in columns [3]-[5] and their sum appears in column [6] of Table 6.2. For the years starting in 1984 the average tax rate for all employers and for experience-rated employers can be compared (columns [6] and [2]). Note that the all employer rate is consistently the higher of the two. This reflects the effects of taxes paid by nonrated employers: new employers, other employers ineligible for experience rating and those eligible for experience rating but taxed under special (usually penalty) arrangements. All three groups pay at higher rates than experienced rated employers. In addition to fund building taxes and pool cost taxes new employers pay a rate of 2.5 percent of taxable wages. Other ineligibles and specially taxed employers pay a basic rate of 6.2 percent plus fund building taxes and pool cost taxes.

These three employer groups combined represent a small share of taxable wages, averaging 3.3 percent of taxable wages between rate years 1991 and 1996 but only 2.0 percent between rate years 1997 and 2002. Legislation effective in rate year 1996 shortened the time period needed to become a rated employer, and the average number of new employers dropped from about 23,000 to about 18,000.

Since 1982 experience rated employers have paid taxes under one of several tax rate schedules: originally 11 schedules, but fifteen since 1988. Each employer's benefit ratio (usually based on the latest four years) is computed and rounded to the nearest one tenth of one percent between 0.0 and 6.2. Each of the fifteen tax schedules then associates the benefit ratio with a tax rate. Chart 6.2 displays four schedules. These four span the range from the highest fund situation (a fund balance ratio of 120 percent) to the lowest fund situation (a fund balance ratio of 50 percent). As noted earlier, a schedule exists for each fund balance ratio between 50 percent and 120 percent with 5 percentage point intervals. When the fund balance ratio equals 50 percent all employers with benefit ratios of 4.2 percent and higher pay at a maximum rate scheduled rate of 6.2 percent. At the opposite extreme, under the schedule for a fund balance ratio of 120 percent only one benefit ratio category pays a rate above 5.0 percent (5.4 percent for those with a benefit ratios of 6.2 percent and above). As indicated in Chart 6.2 the benefit ratio-tax rate

association is linear over most of the range of benefit ratios except at the top tax rates on the highest tax schedules.

The average scheduled tax rate for rated employers in column [5] of Table 6.2 closely reflects the tax schedule operative for each year as shown in column [7]. For rate years 1984 to 2002, the simple correlation between these two series was -0.96. The close association between columns [5] and [7] from Table 6.2 is vividly illustrated in Chart 6.3. It measures the two series relative to their respective averages (0.92 percent for the tax rate and 84 for the fund balance ratio) during the 1984-2001 period. By construction, both series in Chart 6.3 average 1.00. For these 18 years there were but two years (1987 and 1992) when the two relative ratios were on the same side of 1.0. The two series are close to mirror images. High average scheduled tax rates occur when a low fund balance ratios are operative and vice versa, just as the schedules were designed.

Note the wide range of average scheduled contribution rates in column [5] of Table 6.2, from a maximum of 1.48 percent (1984 and 1985) to a minimum of 0.51 percent (1999 and 2000). Considering just the scheduled rates, moving from the top to the bottom tax schedule yields a full percentage point of variation in the average tax rate. The potential variation is even wider when fund building taxes (0.2 percent) and pool charge taxes (not limited, but highest to date at 0.7 percent in 1984) are also considered.

Perhaps it would be useful to emphasize this point in a second way. The combined tax rate for experience rated employers can easily vary between 0.5 percent and 2.5 percent of taxable wages. The latter could be achieved by a 1.5 percent average tax rate from the rate schedule for fund balance factor of 50, a 0.2 percent fund building tax and a 0.8 percent pool charge tax. With taxable wages of \$25 billion (column [3] in Table 6.1), there is the potential to collect over \$600 million in contributions in a single year. This potential must be kept in mind in any discussion of the power of the current tax statute to restore the fund balance following a recession.

C. Aggregate Revenues, Other Flows and the Trust Fund Balance

Table 6.3 summarizes the history of trust fund flows (taxes, interest earnings and benefit payments) and the end-of-year trust fund balance from 1967. To help understand the pattern of benefit payments in column [3], the state's unemployment rate is displayed

in column [5]. The time series patterns present no surprises. Increases in unemployment in 1970-1971, 1974-1975, 1981-1982, 1991-1992 and 2001-2002 all were accompanied by large increases in benefit payments. Increased benefit outflows reduced the trust fund balance (column [4]) causing subsequent increases in UI taxes (column [1]).

One other feature of benefit financing in Virginia has been the consistent importance of interest income as a source for financing a significant part of benefit payments. During the first ten years covered by Table 6.3, contributions averaged \$20.4 million per year while interest income averaged \$9.8 million or 32 percent of trust fund revenues. For the most recent ten years, the corresponding averages were \$196.2 million and \$56.7, i.e., interest income averaged 22 percent of trust fund revenues. Maintaining a high trust fund has enabled VEC to utilize interest earnings to a significant degree in financing benefit payments.

The final two columns in Table 6.3 display two funding ratios frequently used in assessing a state's trust fund situation. The reserve ratio in Virginia (reserves as a percent of covered wages, column [7]) was nearly 4.0 percent in 1967, but it descended to much lower levels during the early to mid 1970s. It averaged 1.0 percent between 1975 and 2002 with averages of about 1.5 percent during the late 1980s and 1.3 percent during the late 1990s.

Total reserves and the reserve ratio descended to very low levels in the early 1980s, reaching their lowest level at the end of 1982. The associated funding crisis provoked a major study of all aspects of Virginia's UI program (Virginia Employment Commission (1981)) and several important changes were instituted. Many have continued to be operative down to the present day. Among the changes in benefit payments was a change to the present use of two high quarter earnings for determining monetary eligibility and the weekly benefit level. Even more far reaching changes were instituted in the revenue statutes with the adoption of benefit ratio experience rating, first effective in tax year 1982. Although some important aspects of tax rate determination were modified in mid-1997, the present structure of VEC's UI taxes dates from 1982. Most significantly, the state has maintained the three separate components in determining total tax rates and has continued to use the set of fifteen tax rate schedules, features discussed earlier in Part B.

Virginia selects the operative tax rate schedule for the upcoming year based on a comparison of the trust fund balance on June 30th (the computation date) with a balance deemed “adequate.” In setting the level of the adequate balance, three factors are considered: 1) total covered wages for the year ending on the computation date, 2) average costs for three (nonoverlapping) high-cost twelve month periods extending back over the twenty years that precede the computation date and 3) an adequacy multiplier (currently 1.38) to determine how many years of benefits should be in the trust fund to cover costs equal to the earlier high cost average. The latter two factors are discussed further in Part D.

The factor that drives the calculation of the adequate balance is the high cost average. Column [8] in Table 6.3 shows benefit ratios based on annual benefits for the years since 1967. Note that the table also displays an estimate of the benefit ratio for 2002, i.e., 0.70 percent.

If the estimated 0.70 percent cost rate for 2002 turns out to be correct, it would be the sixth highest of the 36 cost rates shown in column [8] of Table 6.3. Note that cost rates of 0.50 percent or higher were experienced in every year between 1975 and 1983. After 1983, however, cost rates of 0.50 percent or higher were experienced in just three years 1991, 1992 and 2002. Due to the prolonged economic expansions of the 1980s and 1990s, there have been just two recent recessionary periods, the early 1990s and the recession of 2001.

The cyclical performance of the U.S. economy appears to have changed in recent decades with recessions becoming much less frequent. For example in the 20 years before 1967 the economy experienced four recessions: 1949, 1954, 1958 and 1960-1961. During the 20 years from 1947 to 1966, the annual benefit ratio in Virginia (computed as in column [8] of Table 6.3) equaled or exceeded 0.50 percent of covered earnings in nine separate years, and the twenty year average was 0.55 percent. The corresponding average for the most recent 20 years (1983-2002) was 0.39 percent. Of late, the annual cost rate has averaged about 70 percent of the cost rate experienced during the 1947-1966 period. Recent years have been characterized by less frequent recessions and lower average benefit costs.

Even with increased cyclical stability, a state's trust fund balance can change rapidly in the short run. Observe in Table 6.3 that Virginia's balance decreased by \$160 million during 2001 and is simulated to lose an additional \$330 million in 2002. The simulated end-of-year balance for 2002 is \$575 million, including nearly \$195 million from the Reed Act distribution of March 2002.

D. Trust Fund Adequacy

Unlike some states, Virginia's UI statute has an explicit procedure for determining trust fund adequacy. When the trust fund balance falls below the level deemed adequate, the law provides for an automatic response of tax revenues to raise the fund balance back to the adequate level. The procedures for determining taxes and the level of the adequate balance have been in place since 1982.

There is a large literature on trust fund adequacy. Three discussions with reviews of literature can be found in Chapter VII of Virginia Employment Commission (1981), Chapter 2 in Vroman (1990) and Chapter 7 in Advisory Council on Unemployment Compensation (ACUC, 1994). Rather than recapitulate the earlier literature, this section will move directly to a discussion of the high cost (or reserve ratio) multiple approach for assessing fund adequacy. The justification for this shortcut is that the high cost multiple approach is the most common approach cited in the literature, and a variant has been utilized in Virginia since 1982.

An early summary of the high cost multiple approach is found in the deliberations and report of a benefit financing committee of the Interstate Conference of Employment Security Agencies or ICESA (1959) (now the National Association of State Workforce Agencies or NASWA). This, in turn, built directly upon unpublished work done at the U.S. Department of Labor.

The high cost multiple is a quotient that is computed from two ratios. The denominator is UI benefit payments measured as a percent of covered payrolls, both measured for the same time period, analogous to the entries in column [8] of Table 6.3. The original period selected by the ICESA committee was the highest cost twelve-month period (not necessarily a calendar year) ever experienced by the UI program. The numerator of the high cost multiple is total net reserves at the end of the calendar year

expressed as a percent of total payroll for the year. The numerator is commonly termed the reserve ratio and recent values for Virginia appear in column [7] of Table 6.3. If, for example, a state's highest cost rate was 1.0 percent of payrolls and current payrolls were \$100 billion, it could expect to pay out \$1.0 billion if it experienced a recession with a cost rate equal to that of the highest past cost rate. The ICESA committee recommended that a high cost multiple of from 1.5 to 3.0 was needed for trust fund adequacy.

The 1.5 high cost multiple is a conservative standard (and 3.0 an even more conservative standard). Few states have maintained reserves at the levels suggested by this standard. However, the idea of comparing the reserve ratio (the numerator of the high cost multiple) with a cost rate based on past experience is common among UI programs.

Three issues have arisen in calculation of adequate reserves and the cost rate. 1) What is the appropriate reserve ratio multiple? States have operated successfully with multiples below 1.5 and not experienced problems of solvency. The ACUC (1994) recommended a multiple of 1.0 rather than 1.5, i.e., a fund equal to 12 months of benefits rather than 18 months. 2) Why use just the single highest cost year? An average of high cost years might be appropriate in planning for a future recession. The ACUC recommended states use a three year average. 3) How much weight should be given to cost experiences further in the past? The ACUC recommended using just the past 20 years in computing the three year high cost average.

Addressing the third question is the most problematical. On the one hand, old experiences may no longer be relevant. The economy is evolving and macro performance seems to be characterized by less frequent and less severe recessions.⁴⁵ However, use of a short retrospective period yields but a few "high cost" periods in the past 20. If a recent recession happens to be mild, the average cost rate may be lower than appropriate in planning for future recessions. Thus there is a dilemma in choosing the appropriate "look-back" period for assessing past high cost experiences.

Virginia's fund solvency procedures implemented in 1982 made the following decisions. 1) The total payroll was for the twelve months ending on the computation date. 2) The look-back period was the 25 years up to the computation date, i.e., it extended

⁴⁵ See, for example, Blanchard and Simon (2001) and McConnell and Perez-Quiros (2000).

back to 1957 for the June 30, 1981 computation date used to set rates for 1982. 3) The initial multiple was 1.5, the same as the earlier ICESA committee recommendation.

The initial high cost average was 1.02 percent. This was the average for the twelve month periods ending in the fourth quarter of 1975 (1.24 percent), the fourth quarter of 1958 (0.98 percent) and the first quarter of 1981 (0.85 percent). Note that the 1958 experience soon rotated out of the calculations, but the cost experiences of the early 1980s provided replacement years with slightly higher costs than 1958. Thus adequate reserves in 1982 were calculated as \$322 million, the product of \$20.8 billion in payrolls, an average high cost rate of 1.02 percent and the multiplier of 1.5.

For many years in the 1980s and the 1990s (up to 1997) the three year high cost average was stable at 1.03 percent. This was the average of costs for the twelve month periods ending in December 1975 (1.24 percent), March 1981 (0.85 percent) and December 1982 (1.01 percent). Note that two of these years were the same as the years used in June 1981 computation. With no changes, this high cost rate of 1.03 percent would have persisted until 2000 when the 1975 experiences would have rotated out of the 25 year look-back period.

Modifications in the fund adequacy calculation were introduced in mid 1997. Starting in that year the look-back was reduced from 25 to 20 years and the multiple was reduced from 1.5 to 1.38. This change meant that henceforth “adequate reserves” would be lower both because the multiplier was lower and because the mid 1970s cost experiences would rotate out of the look-back period more quickly. In fact, for the ensuing three rate years starting in 1998, the three year high cost average was 0.84 percent. Adequate reserves were thus \$806 million for 1998 rather than the \$1077 million implied by the previous procedures.⁴⁶

The change meant that the actual trust fund on June 30, 1997 of \$990 million represented 122.9 percent of the new “adequate” balance. Employers were thus taxed in 1998 under the schedule that applied when the fund balance ratio was 120 percent, the schedule with the lowest tax rates. Note in column [5] of Table 6.2 that the average contribution rate decreased from 0.84 percent in 1997 to 0.53 percent in 1998.

⁴⁶ Total wages were \$69.47 billion. The new multiplier was only 1.16 percent (0.84 percent cost rate times 1.38), yielding an adequate balance of \$806 million, whereas the earlier multiplier was 1.55 percent (1.03 percent cost rate times 1.50) would have yielded \$1077 million.

The use of the twenty year look-back has continued to affect the average high cost rate in the most recent years. The calculation of June 2001 used to set rates for 2002 had an average cost rate of 0.76 percent and two of the included years were from the early 1980s (calendar year 1982 and calendar year 1983). In setting rates for 2003, one year of the early 1980s experience entered the average of 0.71 percent.⁴⁷

For rate year 2004, the average cost rate is most likely to be 0.62 percent, the average for the periods ending December 1991 (0.62 percent), December 1992 (0.53 percent) and December 2002 (expected to be 0.70 percent). Since all three of these years fall well within the twenty year look-back period, it is most likely that the average cost rate used in the fund adequacy calculations will be 0.62 percent for several future years. One additional consideration, however, is that if costs during calendar year 2003 are very high and the cost rate exceeds 0.53 percent, 2003 would replace 1992 in the average used to compute an adequate balance for 2005 and later rate years.⁴⁸

E. Is the Funding Mechanism Adequate?

Yes, because it is well designed. However, the funding mechanism could be strengthened.

Four considerations support this overall assessment. First, the calculation used to project the adequate trust fund balance automatically incorporates the effects of economic growth, causing the adequate balance to grow with the state's economy. Total payrolls of taxable covered employers grow in response to both employment growth and changes in average weekly wages.

Second, average effective tax rates present in the fifteen tax rate schedules provide a strong response of experience-rated tax rates to shortfalls in the actual trust fund balance below the "adequate" balance. The association is clear in comparing columns [5] and [7] in Table 6.2 and is vividly obvious in Chart 6.3. Average rates from the schedule for a fund balance ratio of 50 were 1.48 percent in both 1984 and 1985

⁴⁷ The period was the earliest year of the previous 20, the twelve months ending in June 1983.

⁴⁸ Recall that the same period cannot enter two years used in the computing the three year average. Costs during calendar 2001 were well below 0.53 percent so that only experiences in 2003 or later can displace 1992's cost rate of 0.53 percent in the average cost calculations.

compared to those from the highest schedules operative since 1998 which have averaged 0.52 percent.

Third, potential revenues from the fund building tax and pool cost charges are also large. Their combined rates were in the 0.70-0.90 percent range for the three consecutive years 1982-1984. They could return to this range or be even higher should Virginia sustain a multi-year high cost period in the future.

At this point it is important to repeat a point made at the end of Part B. Heavy reliance on flat rate taxes would raise legitimate concerns about tax equity. High total benefit payments would likely be accompanied by a large volume of ineffective charges against maximum rated employers. By financing these ineffective charges through a pool tax, the burden would be shifted to employers with lower tax rates. Such an outcome would be inappropriate. The size of the ineffective charges could be reduced if the tax base were raised from its present \$8,000 per employee. However, note that the preceding is an equity argument. As noted at the end of Part B, Virginia has the potential to raise more than \$600 million in tax revenues annually using its present tax provisions.

Fourth, simulation analysis with a spreadsheet model indicates that the present funding mechanism is adequate within the likely range of future costs. The model and simulation results are summarized in the next section.

F. A Simulation Model and Analysis of UI Funding in Virginia

A simulation model was developed to help assess the adequacy of Virginia's UI funding arrangements. The model is a spreadsheet capable of examining effects of alternative economic factors and alternative UI statutory arrangements. Details of the model are provided in Appendix B. The model has 130 equations, and Appendix C provides an equation by equation description of the model. The simulation analysis to be described here utilized projections carried through the year 2008.

The simulated output of any model depends strongly upon assumptions. Three assumptions about Virginia's labor market are that: future labor force growth will average 2 percent per year, future wage growth will average 4 percent per year and that interest rates on trust fund balances will average 6 percent per year. As this report is being finished, ten full months of program experiences from 2002 are known. The state's

unemployment rate through September averaged 4.1 percent of the labor force and weekly UI benefits averaged just less than \$312. It also is apparent that the reciprocity rate has been unusually high in 2002. The model uses this information in estimating annual benefit payments and the trust fund balance on December 31, 2002.

Current statutes governing benefits and taxes were incorporated in the model, including the maximum weekly benefit, the waiting period, the taxable wage base and key provisions of the tax statute, i.e., the fifteen schedules of tax rates, fund building taxes and pool charges. Alternative values for certain statutory variables were examined, in particular the maximum weekly benefit and the taxable wage base.

Because the model is reasonably large, there are simply too many details of its output to fit easily into a succinct summary. A full display of model output for all variables from 1988 to 2008 appears in Table B.1 of Appendix B. The display in Table B.1 refers to simulation 2 to be examined below. This discussion will focus on just a few key variables that relate to the fund balance and tax rates.

The analysis to be reported here emphasizes three factors that will influence the future course of UI benefits, taxes and the trust fund balance: 1) the unemployment rate, 2) the maximum weekly benefit and 3) the taxable wage base. Each is varied within the model and the consequences are documented.

It should be emphasized that several uncertainties surround the future course of the trust fund balance and other UI program variables in Virginia. Uncertainty about future unemployment rates is always present. There are also questions about variables related to the UI program, e.g., the benefit reciprocity rate among the unemployed, the time path of the maximum weekly benefit and the final disposition of the Reed Act monies. Thus the reader is strongly reminded that the simulated outcomes to be presented here are much less certain than suggested by summary statistics to be presented.

Table 6.4 displays selected results from nine separate simulations. They are arranged into three groups of three. Panel A explores the effects of alternative future unemployment rates. Panel B explores the effects of differing treatments of the temporary benefit increases slated to be in effect during 2003 as well as during 2002. Panel C examines the consequences of having an indexed taxable wage base.

Outcomes from three future time paths of unemployment are quite varied. As noted, the annual unemployment rate (TUR) for 2002 will be 4.1 percent if the average for the first eight months holds for the full year. This coupled with this year's the high reciprocity rate (roughly 0.30) and high weekly benefits (from the across-the-board benefit increase of 37 percent) implies that total benefit payments will exceed \$700 million for the year. This volume of payments is nearly four times the payment level of calendar year 2000. Since taxes in 2002 are levied from the same tax schedule as for 2001, total annual contributions are will be close to \$150 million. Even with Reed Act monies, the state will most likely end 2002 with a trust fund balance of less than \$600 million. The implied reserve ratio of 0.55 percent (column [7] of Table 6.3) will be Virginia's lowest since December 31, 1983.

Panel A of Table 6.4 traces the consequences of alternative future unemployment rates. In simulation 1 the unemployment rate is assumed to decrease to 3.5 percent in 2003 and then to 3.0 percent in 2004 and later years. Note in columns [1]-[3] that the trust fund stages a strong recovery and reaches \$1.119 billion by the end of 2008. Higher tax rate schedules are activated starting in 2003. As the balance recovers, lower-rated tax schedules are activated. Thus the 55 percent fund balance ratio governs tax rates in 2004 but the 80 percent ratio governs tax rates in 2006. By 2008 employers are taxed under the schedule for the 95 percent fund balance ratio (not shown). Note in columns [8] and [9] that flat rate taxes (fund building and pool charges) also contribute to the response of contributions to the trust fund drawdown.

Simulations 2 and 3 demonstrate that higher future unemployment significantly retards the recovery of the fund balance. With post-2002 unemployment rates of 3.5 percent, the fund balance recovers only to \$931 million by the end of 2008 and to only \$829 million under a series of 4.0 percent future unemployment rates. In the latter simulation, benefit payouts during 2004-2008 average almost \$380 million per year, roughly the same level as experienced during 2001 and twice the average level during 1997-2000 (note line 33 in Table B1 of Appendix B). These high annual payout rates hamper the ability of the fund to recover to its level of the late 1990s. Note also in simulation 3 that the contribution rate for flat rate taxes in 2004 is 0.56 percent as both funding building taxes and pool charges are levied.

Panel B examines the effects of the large across-the-board benefit increases initiated in late 2001 and presently slated to be effective through the end of December 2003. To hold constant the effects of unemployment, simulations 4, 5 and 6 all assume the unemployment rate for 2003 and later years is 3.5 percent. Simulation 5 assumes the across-the-board increase for 2003 of 18.65 percent is operative (including a weekly benefit maximum of \$318). From 2003 onward, the benefit provisions of 2001 (including the weekly maximum of \$268) are assumed to operate. This can be described as a “do nothing” simulation. It assumes no change from benefit provisions as presently enacted.

Simulations 4 and 6 examine the consequences of changing the across-the-board benefit provisions. In simulation 4, benefit provisions for 2003 revert to the provisions of 2001, i.e., no across-the-board increases in 2003. Note how the December 2004 fund balance is now higher (\$685 versus \$543 million) and tax schedules from higher fund balance ratios are operative during 2004 and 2006. Lower benefit payouts during 2003 have effects in reducing taxes in 2004 and later years.

Simulation 6 makes the opposite change in the across-the-board provisions, namely extending the increases of 2003 through 2008. This reduces the fund balance in 2004 and later years and causes employers to pay taxes under lower fund balance ratios in years after 2004. Note that both the experience-rated tax rate and the flat tax rate are higher in simulation 6 compared to simulation 5. Prolongation of the higher benefits leads to both higher future employer taxes and a lower fund balance. The message in the Panel B results is direct. For purposes of fostering a faster recovery of the fund balance, the sooner the across-the-board provisions are terminated the better.

Panel C explores the consequences of instituting indexation of the taxable wage base. The present base of \$8,000 per employee represented 21.5 percent of the average annual earnings in covered employment in 2001. These simulations all assume indexation is instituted in 2004 with each year's tax base set at 21.5 percent of the previous year's average annual earnings. The three simulations differ in the assumptions regarding the across-the-board benefit increases of 2003 and later years. The assumptions about benefits in simulations 7, 8 and 9 match those of simulations 4, 5 and 6 respectively.

Indexation has a measurable effect on the tax base. Between 2004 and 2008 the taxable wage base grows to \$9,733 or 22 percent above the present tax base of \$8,000.

The higher tax base adds to the capacity of the tax statute to generate revenues, and the fund balance grows more rapidly. Under all three simulations (7, 8 and 9) the fund balance at the end of 2008 is at least \$100 million higher than its counterpart simulation with a fixed tax base (simulations 4, 5 and 6 respectively).

The faster fund recovery under indexation is achieved through higher employer taxes. For example, employer contributions during 2004-2008 totaled \$1,893 million with the fixed \$8,000 base (simulation 5) but \$2,029 million under the indexed base (simulation 8). Nearly all of this differential in the two December 2008 balances is due to the higher level of employer contributions.

The results presented in Table 6.4 provide a suggestion of the kinds of analyses possible using the model developed for this project. Undoubtedly additional analyses would be needed as Virginia reviews and revises its benefit and tax statutes. Parallel analyses the the VEC trust fund model are also contemplated.

G. Summary

In summary, four observations based on the simulations can be offered. (1) In not one of the simulations examined in Table 6.4 did Virginia borrow from the U.S. Treasury in order to make benefit payments. This indicates that sensible procedures have been used to determine the level of an adequate fund balance. Virginia entered the current downturn with an actual balance closely approximating the size of the adequate balance. Thus when taxes responded (albeit with a lag) reserves were sufficient even in the face of a very large drawdown. (2) Virginia's tax features cause a large recovery of the trust fund, especially large in simulations with a lower future unemployment rate. (3) All simulations indicate employers will be paying UI taxes at much higher rates between 2003 the 2008 than in the years 1998-2002. The sum of the tax rates for 2004 and 2006 displayed in Table 6.4 uniformly fall into the 1.3-1.9 percent range. This is sharply higher than the rates near 0.5 percent that prevailed during 1998-2002. (4) Instituting tax base indexation would help the trust fund to recover more rapidly following a recession. Even under the low ratio of the tax base to average wages studied here (0.215) the trust fund increased noticeably more rapidly.

Chapter 7. Legislative Charges, Summary and Recommendations

This study was undertaken to address concerns about eight specific topics identified by House Joint Resolution (HJR) 611 enacted during Virginia's 2001 legislative session. This chapter addresses each of the eight topics in their order of appearance in HJR 611. For each of the eight, a brief summary of the relevant analysis from the earlier Chapters 2-6 will be provided before recommendations are offered. Some recommendations will address problems but with a suggested timing to defer immediate action. For some topics there will be recommendations to undertake further study since information available from the present reporting system was not sufficient to identify the cause (or causes) for observed patterns. In several instances, there will be recommendations for no change. Many features of Virginia's UI program as presently constituted are fully adequate to address problems caused by cyclical changes in benefit payments and the associated need to provide financing for these benefits.

Topic 1. The current formula for determining the solvency of the Unemployment Trust Fund

As described in Chapter 6 trust fund solvency is assessed by comparing the actual trust fund balance on the June 30th computation date with a balance deemed to be "adequate." The determination of the adequate balance recognizes three factors: total wages in the twelve month period preceding the computation date, the three year high cost average of benefit payments (expressed as a percent of total wages) and a multiplier of 1.38. For rate year 2003 and several years thereafter, the high cost average is likely to be close to 0.62 percent so that the adequate balance will be about 0.86 (0.62 times 1.38) percent of total covered wages.

The present computation of the adequate balance followed in Virginia is a specific variant of the high cost multiple procedure, widely recognized as a reliable procedure for determining a prudent level of State UI trust fund reserves. Virginia's computation allows for growth in the adequate balance in line with growth in the state's economy as proxied by total wages in UI covered employment. Furthermore, if important changes in benefit

availability and/or benefit generosity were to occur, these incremental costs would eventually be reflected in the annual cost rates that enter the computation of the adequate balance. Thus the computation of the adequate balance will change automatically as Virginia's economy grows and as future cost rates deviate from past cost rates.

As actual reserves on the computation date vary in relation to adequate reserves, variation in the associated fund balance ratio (the ratio of actual reserves to adequate reserves, expressed as a percentage) activates a strong response of UI taxes. The changes in taxes automatically move the actual fund balance towards the level of the adequate balance. The change in effective UI tax rates has three components: scheduled tax rates, fund building taxes and pool charge taxes. When reserves decline during a recession, all three taxes can potentially increase. For fund balance ratios below 50 percent, the three operate with their maximum effect. As noted in Chapter 6, their combined rate can reach 2.5 percent of taxable payrolls and generate more than \$600 million in annual revenues.

Recommendation 1. Retain current procedures for determining the level of the adequate trust fund balance.

With the current taxable wage base of \$8,000 per employee, Virginia now raises revenues from less than one fourth of taxable wages. The taxable wage proportion was 0.25 in 2001 (compared to a decade average of 0.60 during the 1960s), and it is estimated to be 0.24 in 2002. This ratio will continue to decline under the present tax base.

The low level of the tax base has implications for the mix of taxes in Virginia. With its present low base, total revenues collected from the fifteen schedules of experience rated taxes are constrained. The maximum collectable per employee from the maximum scheduled rate of 6.2 percent is \$496, an amount that represents less than two weeks of average benefit payments. This low limit makes it increasingly likely that flat rate taxes (fund building taxes and pool charges) will be activated in future years and become an increasingly important component of total UI tax revenues.

All states make decisions about the appropriate mix of taxes between effective charges (charges directly related to employer benefit payment experiences) and ineffectively assigned benefit charges. Chapter 5 showed that historically Virginia's

proportion of effectively charged benefits has exceeded both the national average and the average for other benefit ratio experience rating systems.

If the taxable wage base were increased it would change the mix of revenues towards an increased share from scheduled taxes and a reduced share from flat rate taxes (also termed socialized charges). Thus increasing the tax base would help to ensure that the high degree of effective benefit charging would continue into the future. Having a higher tax base would also prevent the burden of UI taxes on low wage employers from growing since their taxable wage proportions exceed the overall average proportion. Thus there are equity arguments for increasing the taxable wage base.

During 2002 Virginia's immediate neighboring states Maryland and North Carolina operated with taxable wage bases of \$8,500 and \$15,500 respectively. While any suggested specific level of a higher tax base would be arbitrary, an increase of the tax base to \$12,000 would place Virginia's tax base midway between the tax bases of these two states. If a \$12,000 tax base were operative in 2002, the higher tax base would represent 0.319 of average covered earnings for the year (rather than 0.213 as shown in column [7] of Table 6.1), and the taxable wage proportion would be roughly 0.33 rather than 0.24 (column [8] of Table 6.1).

With a higher tax base, there would be a short run effect of increasing revenues. While the higher tax base would increase the increment in employer UI taxes during the next few years, it would also speed the recovery of the UI trust fund. As the trust fund balance increases, an automatic movement to lower tax rate schedules would then take place. Thus the higher tax base could be implemented without the need to make any compensating adjustment to the existing set of tax rate schedules. In past years when the taxable wage proportion decreased due to the fixed tax base, there were no adjustments to the tax rate schedules, and there would be no need for adjustments in the schedules under a higher taxable wage base. Virginia's present funding arrangements would cause an automatic decrease in tax rates through movement to lower tax rate schedules as the trust fund balance is restored.

Recommendation 2. Virginia should raise its taxable wage base to \$12,000.

Topic 2. Employee benefit eligibility criteria

Benefit reciprocity has been consistently low in Virginia during all years for which reciprocity can be assessed, i.e., since the late 1960s. While the nationwide ratio of weekly beneficiaries to weekly unemployment averaged 0.315 between 1967 and 2001, the corresponding ratio for Virginia was 0.168. For 19 of these 36 years Virginia's reciprocity rate was one the three lowest across the UI programs in the 50 states plus the District of Columbia.

Chapter 2 demonstrated that low reciprocity in Virginia has three distinct components: 1) a low application rate among the newly unemployed, 2) a low rate of first payments among applicants and 3) short average duration among beneficiaries. Available information was not sufficient to pursue all the reasons for these low outcomes but some linkages with benefit provisions were established.

The short duration of benefits partly reflects Virginia's labor market where unemployment duration is less than the national average (Appendix A). However short duration is also partly a consequence of the statute that links base period earnings (BPE) to the maximum benefit amount (MBA, the potential benefit entitlement). Virginia provides a BPE-MBA linkage in the 0.24-0.26 range (potential benefits represent from 24 to 26 percent of base period earnings), one of the lowest nationwide, resulting in a consistently below-average potential benefit duration. The simulation analysis of Chapter 3 demonstrated that raising this linkage to a flat proportion in the 0.30- 0.33 range would increase potential duration to a level similar to the national average, i.e., to 24-25 weeks, from its present level of about 22 weeks. An increase in the BPE-MBA linkage would increase the costs of UI benefits in Virginia because it would increase actual benefit duration. A simulation analysis of Chapter 3 suggested the cost increase would fall into the 8.8-12.9 percent range. Thus the timing of any increase would have to be sensitive to the condition of the UI trust fund at the time of the changeover.

In Virginia the ratio of first payments to new initial claims has averaged about 0.66 since 1977 whereas the corresponding national average has been 0.74. Chapter 3 explored the reason for the low first payment rate but the results of the analysis were not conclusive. Historically monetary eligibility in Virginia has been more difficult to satisfy

than in most other states. Changes since 1997 have eased entry monetary requirements. In micro data for claims filed during the first half of 2001, however, we found that only about 5 percent of claimants (after monetary redeterminations) did not meet the entry earnings requirement of \$2,500 in the two high quarters of the base period. Furthermore, changes in this requirement spanning the range from \$1,500 to \$3,500 had but small effects on monetary eligibility. Present monetary eligibility requirements have only a small effect on Virginia's low first payment rate.

Additional analysis, however, was not conclusive. Nearly 30 percent of applicants during the first six months of 2001 (32 thousand persons) were monetarily eligible but did not receive a first payment. Roughly half were disqualified for reasons related to their separation (quit or misconduct or having disqualifying income). However for the other half, no suitable explanation was found.

This situation should be studied before drawing conclusions. Chapter 3 suggested two potential lines of research: 1) match information for eligible nonrecipients with new hire data to determine how many secured new jobs and 2) conduct an interview survey of these persons to determine why they did not pursue their claims to the point of receiving benefits. Findings from these two lines of inquiry would undoubtedly shed useful light on the explanation for Virginia's low first payment rate.

Chapter 3 also explored alternative ways to increase monetary eligibility. Three potential avenues were examined: changing the present monetary threshold of \$2,500, instituting an alternative monetary requirement based on high quarter and base period earnings (the most common arrangement in UI programs) and instituting an alternative base period (ABP). Of the three, the ABP was the most effective for increasing monetary eligibility. However, its effect was modest, conferring monetary eligibility on 45 percent of ineligible claimants but increasing the total population of those monetarily eligible by just 2.5 percent. Nevertheless, instituting an ABP in Virginia would assist low wage workers in gaining access to UI program benefits.

Recommendation 3. Virginia should raise the BPE-MBA linkage from its present 0.24-0.26 range to a uniform ratio of 0.30. Since this could increase costs by 8.8

percent (based on the analysis of Chapter 3), the change should occur only after the trust fund has been restored a more adequate level.

Recommendation 4. VEC should undertake two separate new analyses of the low first payment rate that focus on persons monetarily eligible who did not receive a first payment. Specifically, there should be an analysis of new hire data to determine how many secured new jobs and a personal interview survey to ask about the reasons why those who were monetarily eligible did not receive a first payment.

The low first payment rate in Virginia could be linked to the prevalence of part-time work. At present, a claimant must be available for full-time work to be eligible for UI benefits. Because this requirement is applied regardless of weekly hours worked in the base period, part-timers are automatically precluded from eligibility. Information from an interview survey could provide insight into the importance of the full-time availability requirement in explaining Virginia's low first payment rate.

Recommendation 5. Virginia should institute an alternative base period (ABP).

Instituting an ABP will assist low wage in securing eligibility for UI benefits. Instituting an ABP will also add to administrative burdens and costs for VEC and reporting burdens for employers. To minimize these burdens, the ABP program should have certain specific features. 1) Define the ABP to include earnings from the fully completed lag quarter but not from the quarter when the claim is filed. 2) Allow ABP determinations only for claimants monetarily ineligible under the regular base period. To be more specific, do not allow anyone already eligible under the regular base period to request a second monetary determination in the hope of obtaining a higher weekly benefit amount (as in Massachusetts). 3) Operate with just a single ABP determination not multiple ABP determinations (as in New Jersey). 4) Try to have the national office of OWS change its current policy to allow deferred eligibility determinations when lag quarter earnings are not present in VEC earnings files at the time of a new claim. Under current OWS guidelines, states must use either affidavits from claimants or wage requests to employers to obtain missing wage data for the lag quarter. These data will eventually appear through quarterly wage reporting by employers. At the time of the application, but

before the arrival of the missing wage data, inform the claimant of his or her potential eligibility. For those later deemed eligible, there can be a lump sum payment covering the period prior to the arrival of the missing wage data. Operating with deferred decisions (as Washington State did for several years in the 1990s) obviates the need for affidavits or wage requests from employers.

Instituting recommendations 3, 4 and 5 would result in increased benefit costs. Recommendation 3 would increase benefit duration for those already eligible while recommendation 5 and (likely) recommendation 4 would lead to changes that would increase the number of beneficiaries, most of whom would be low wage workers. For example, entry eligibility could be eased by instituting an ABP and allowing part-time workers to satisfy a modified able and available requirement. These changes would increase the number of recipients proportionately more than costs as indicated by the analysis of the ABP in Chapter 3. Instituting these two changes in entry eligibility would increase total benefit costs by perhaps 2.0-4.0 percent or by less than half of the increase caused by raising the BPE-MBA linkage to 0.30 from its present 0.24-0.26.

Topic 3. The rationale for benefit levels

The computation of the weekly benefit is strictly proportional in Virginia among those monetarily eligible but eligible for less than the maximum weekly benefit. The weekly benefit is $1/50^{\text{th}}$ of total earnings during the two highest quarters of the base period (the four earliest of the five completed quarters preceding the application). By providing a proportional linkage, there is a strict wage-loss insurance basis for the weekly benefit of each recipient. Weekly benefits depend only on the level of past earnings.

Details of the weekly benefit computation are examined in Topic 8 below. The later discussion assesses the statutory replacement rate, the use of the two high quarters in the weekly benefit calculation and the level of the maximum benefit. Attention here is focused just on the rationale for benefit levels.

As noted in Chapter 2 and the discussion surrounding Table 2.6, some states' benefit formulas provide different replacement rates for workers in different situations. In particular considerations of presumed need enter when a state pays benefits under a

weighted benefit formula and/or pays dependents' benefits. In both situations, there is a presumption of greater need for some claimants than for others, respectively due to low wages or having dependents. In reviewing the prevalence of these provisions, Chapter 2 documented that weighted benefit formulas have become less prevalent in recent years and the prevalence of dependents' benefits has not changed. Because neither of these provisions is very effective in identifying persons with greater need, the procedures followed in Virginia for setting the level of weekly benefits do not need to be changed.

Recommendation 6. Do not change the basis for computing weekly benefits

Topic 4. The propriety of regional or extended benefit features

Chapter 4 demonstrated that average weekly wages and unemployment rates vary widely across the different geographic areas of Virginia. High wages are concentrated in the areas across the Potomac River from Washington, D.C. where average weekly wages are 35-40 percent above the statewide average. Other areas of the state (outside the Washington-Richmond corridor) have weekly wages that range from 20 to 35 percent below the statewide average. High unemployment is concentrated predominantly in areas along the southern and southwestern borders of Virginia.

Like all other UI programs, VEC currently operates with one set of benefit statutes throughout the entire state, e.g., with one maximum weekly benefit and one maximum potential benefit duration. Chapter 4 identified several potential problems of program administration and economic disincentives that could arise if differing substate benefit provisions were to be implemented. Four among these should be highlighted. 1) With higher benefits in Northern Virginia localities, there would be an increased volume of UI claims against Virginia employers. Many workers with earnings in Virginia and either Maryland or the District of Columbia would now find it more advantageous to file for benefits in Virginia. 2) If a benefit differential applied just in Northern Virginia, there would strong incentives for workers to claim this as their home area for benefit payments even though they reside mainly in some other area of Virginia. 3) Operating with a substate differential for maximum benefit duration would have two effects on labor

market incentives. Some claimants in affected counties would prolong their spells of unemployment in response to the longer potential duration. Other claimants would file for benefits from the high unemployment areas in attempting to secure longer benefit entitlements. To offset these responses, VEC would have to devote added administrative resources to activities such as verifying the claimant's true or principal residence.

If there were a desire to increase the maximum weekly benefit in Northern Virginia it would not necessarily have to be done as a deviation from the maximum applicable elsewhere in the state. Instituting a higher statewide maximum would automatically raise benefits for many residents of Northern Virginia because of their greater likelihood of having the requisite higher amount of base period earnings. Stated somewhat differently, raising the maximum weekly benefit is of disproportionate interest to residents of Northern Virginia. Any statewide increase would confer a very large share of the added benefit payments on unemployed residents of this area of the state.

Recommendation 7. Do not institute a substate differential in the maximum weekly benefit amount. If it is decided to assist residents of the high wage Northern Virginia area, this can be accomplished by increasing the statewide maximum weekly benefit.

Recommendation 8. Do not institute a substate differential in the maximum duration of benefits.

Topic 5. The appropriateness and sufficiency of pool charges

Under Virginia's current tax statute pool charges were imposed for four consecutive years in the 1980s (1982 to 1985) and again for four years during the 1990s (1993 to 1996). The average tax rate was set in the 0.5-0.7 percent range during 1982-1984 when the trust fund balance was far below the estimated level of the adequate balance. Pool charges were much smaller during the 1993-1996 when the downward deviations of the actual balance from the adequate balance were proportionately smaller than during 1982-1984.

Pool charges along with fund building taxes play an important role in ensuring that the trust fund will be restored to high levels following a recession-related drawdown. Of the two, pool charges have been larger in the past and could be larger in the future as their maximum rate is open ended. This contrasts with fund building taxes which operate either at zero or at 0.2 percent of taxable wages.

The method for setting the rate for pool charges (positive charges in three prior years relative to taxable wages for those years) ensures that over a three year period the pool charges from one year will be fully recovered. Thus the present tax statute ensures that all benefit charges not effectively assigned to individual employers will be recovered through pool charges.

Recommendation 9. Do not change the method for assigning pool charges.

Recommendation 10. Virginia should consider raising the maximum rate for fund building taxes. Moving the current rate of 0.2 percent to a higher level such as 0.4 percent (or having a graduated structure with rates of both 0.2 and 0.4 percent) would ensure a faster recovery of the trust fund balance following a recession. Furthermore, with a graduated schedule the added infusion of revenues would be larger in response to a larger drawdown. One option would be to impose a 0.2 percent pool charge for a fund balance ratio between 30 percent and 50 percent but a 0.4 percent pool charge when the fund balance ratio falls below 30 percent.

At the current scale of Virginia's economy and with annual taxable wages of about \$25 billion, an increase from 0.2 to 0.4 percent would mean an annual increment of about \$100 million to the trust fund through the maximum fund building tax rather than the present maximum increment of \$50 million.

Topic 6. The propriety of diversion of revenue to job training or economic development programs

The objectives of job training and economic development programs are desirable, to enhance economic opportunities for workers in general and particularly for the

unemployed. Throughout advanced market economies there is an increasing emphasis on active labor market program measures like job training and economic development as opposed to passive measures like UI benefit payments as the preferred way to secure more rapid reemployment of the unemployed. Nevertheless, questions remain as to the effectiveness of job training and economic development programs in achieving this desired outcome.

Monies for job training are already available under the Workforce Investment Act (WIA). It was beyond the resources of this project to assess the adequacy of monies already used in Virginia for training under WIA and other training programs. The economic case for any diversion should explicitly demonstrate that the spending on training and/or economic development would save enough on UI benefit payments to have a positive overall effect on total expenditures intended to help the unemployed. It should also be noted that neither job training nor economic development can limit their client base to just the unemployed. Of necessity both also serve employed workers.

State UI trust funds were established for a single purpose, to pay cash benefits to eligible unemployed workers. Once monies have been deposited in state trust fund accounts, they can be withdrawn only for the purpose of paying benefits. This principle is written into the federal Social Security Act that created state UI programs. Since UI claims activity is highly variable, this principle acts as a safeguard to ensure that trust fund monies are not dissipated and are available for future recessions. Any diversion of monies slated for the UI trust fund to these other purposes would further erode the balance in the state's UI trust fund, a balance already reduced by the current economic downturn. Thus both short run and long run considerations argue against any diversion of monies from UI trust funds for other purposes or programs.

If it were decided that added monies were needed in Virginia for training and/or economic development, two alternatives to a diversion from the UI trust fund should also be noted. First, Virginia could institute a new payroll tax dedicated to financing job training and/or economic development. Several states already have payroll taxes collected through the existing UI collection apparatus and dedicated to training and/or economic development activities. Second, Virginia could consider establishing a state reserve fund such as the one in North Carolina. State reserve funds are created by a

temporary diversion of UI taxes into a state administered trust fund whose principal is dedicated to paying UI benefits but whose interest earnings can be used in ways deemed appropriate by the state. After the fund is filled (typically a five year process) the diversion is redirected back to the UI trust fund. At this point there are two funds dedicated to paying UI benefits, the state's UI trust fund account at the U.S. Treasury and the principal in the state reserve fund. However, the interest from state reserve fund assets could finance job training, economic development and/or UI and ES administration. One attractive feature of a reserve fund arrangement is that no explicit tax is needed to finance these preferred activities after the state reserve fund had been filled to its target level. Its principal generates interest income that can finance job training, economic development or other worthy state activities.

Recommendation 11. A proposal to divert revenue to job training or economic development programs should be deferred. Consideration of these measures should come after the UI trust fund balance has been restored to a level closer to the adequate level as specified by the current fund adequacy calculation.

Recommendation 12. At that future date there should be a careful analysis of alternative ways to fund training and/or economic development activities. Among the alternatives to be considered should be the creation of a state reserve fund.

Topic 7. The current tax schedules for employers

The fifteen tax schedules provide for a wide range of effective tax rates. In the historic data examined in Chapter 6 this range was one full percentage point from 0.5 percent under the schedule with a fund balance ratio of 120 to 1.5 percent under the schedule with a fund balance ratio of 50. This range of variation is not hypothetical but based on actual experiences during rate years 1984 through 2001. Given the current taxable wage base of \$8,000 and current scale of Virginia's economy, taxable wages are about \$25 billion. This means the swing in tax revenues in going from the lowest to the highest rate schedule is about \$250 million (1 percent of \$25 billion). The aggregate

response of total scheduled taxes would be even larger if the taxable wage base exceeded \$8,000.

Recommendation 13. Do not change the current tax schedules

As noted in Chapter 6, Virginia's set of 15 tax rate schedules provide a strong response of taxes when trust fund balances are reduced during recessions. This feature of the tax statute should be retained.

One small modification to recommendation 13 could be considered. For the top five schedules with fund balance factors of from 100 to 120, the minimum tax rate is 0.0 percent whereas the minimum rate is 0.1 percent for the remaining schedules. The minimum tax rate could be increased to 0.05 percent for these top schedules. While the revenue implications would be modest, this change would reinforce the principle that all employers participate in financing the UI program and all contribute regardless of their recent individual benefit experiences.

Topic 8. The means of calculating the weekly amount of unemployment compensation benefits for displaced employees

Since 1982 weekly benefits in Virginia have been computed as $1/50^{\text{th}}$ of earnings from the two high quarters of the base period, subject to a weekly benefit maximum. Chapter 2 examined replacement rates in some detail. In two important respects Virginia's computation procedures yield results that match the national average. The $1/50^{\text{th}}$ calculation implies a statutory replacement of 52 percent of two high quarter earnings. Virginia's two high quarter calculation yields a replacement rate close to the average across the four types that are used, lower than the replacement rate from a high quarter (the most common) WBA calculation but higher than the replacement rate from an annual wage calculation. In both of these respects, Virginia matches the national average and there is no need for change.

Virginia's maximum weekly benefit, however, failed to grow as rapidly as weekly wages between the mid 1970s and 2001. While the national average ratio of the maximum weekly benefit to the average weekly wage has been stable at about 0.50, the

ratio in Virginia descended from the 0.50-0.55 range of the mid 1970s to 0.38 during the first half of 2001. As a consequence of slow growth in the maximum weekly benefit, the overall replacement rate declined. This was confirmed by two regression analyses of the replacement rate: a pooled analysis of 51 UI programs from 1988 to 2001 and a time series analysis of Virginia's replacement rate spanning the years 1967 to 2001.

During 2002, the replacement rate in Virginia will be the highest ever in the history of the program. It is estimated that the replacement rate will be 0.44 (compared to 0.31 in 2000) whereas rates of 0.40 or higher occurred previously only in 1938 (0.40) and 1978 (0.41). The explanation for the increase was the 37.3 percent increase in all weekly benefits instituted in last months of 2001 and operative throughout 2002.

Virginia's maximum weekly benefit of \$368 in 2002 represents 52 percent of the average weekly wage. However, under legislation currently in force, the maximum is scheduled to revert to \$318 in 2003 and then to \$268 in 2004, its level prior to the recent increase. However, the across-the-board benefit increases (including higher weekly benefit maximums) of 2002 and 2003 are adding measurably to benefit outlays and to the size of the trust fund drawdowns in these two years.

It would be desirable to restore Virginia's weekly benefit maximum to 50 percent of weekly wages at some point in the future. The higher maximum would imply higher benefit payouts, but at the same time it would provide improved wage loss replacement for higher wage beneficiaries. To prevent erosion of the maximum relative to the average weekly wage, it would also be prudent to institute some form of indexation that would tie increases in the maximum to changes in average wages. Higher maximums would also imply a higher level of total payouts in any future economic downturn. Several states (Delaware, Kentucky, Ohio, Oklahoma and Pennsylvania to name five) have devised mechanisms to suspend indexed increases during recessions. This provides temporary relief from some benefit costs during recessions but does not reduce the maximum benefit or the replacement rate in the long run.

Recommendation 14. End the temporary across-the-board increases in weekly benefits operative during 2002 and slated to remain operative during 2003 as soon as practicable.

Recommendation 15. Restore the maximum weekly benefit to a level that represents 50 percent of average weekly wages. Implementation of this recommendation may depend upon the future solvency status of Virginia's UI trust fund.

Recommendations 14 and 15 might be coordinated. Presently the \$368 weekly benefit maximum represents roughly 50 percent of the statewide average weekly wage. The across-the-board temporary increases of 2002-2003 could be ended without at the same time having the maximum weekly benefit revert to its former level of \$268. Restoring the statutory replacement rate to the 1/50th of two high quarter wages could be accomplished while leaving the maximum at its present \$368 or at some intermediate level between \$268 and \$368. Such a change would accomplish major savings in benefit payments and at the same time leave the maximum benefit at a more adequate level.

Recommendation 16. In the long run, Virginia should implement an indexed weekly benefit maximum. A reasonable indexation percentage (ratio of the maximum benefit to the average weekly wage in covered employment) would be 50 percent, a percentage presently used by five states with indexed maximums. In 2002 the implied maximum under a 50 percent indexation percentage would be approximately \$360. This level is close to the actual level of the maximum operative in 2002 under the 37.3 across-the-board increase in benefits.

The language of the authorizing legislation could include a clause to "turn off" indexed increases under specific circumstances, e.g., if a higher tax schedule is to become operative in the upcoming rate year or if the trust fund balance ratio falls below a designated threshold, e.g., an 80 percent fund adequacy ratio or lower. After the freeze period has ended, the maximum should be restored to the level implied by the indexation percentage. The post-freeze restoration could be structured to occur in an orderly fashion over a time period that matches the length of the freeze, e.g., full restoration over two years if a freeze lasted for two years.

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