



# REGIONAL RESOURCE

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## Recent Developments in State Retirement Systems in the Southern Legislative Conference (SLC) States

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### Introduction

Few other topics generate more spirited discourse and disagreement among policymakers than a comprehensive retirement system to account for the huge number of “baby boomers” scheduled to retire in the next few years.<sup>1</sup> The primary goal of this retirement system would be to sustain participants with adequate benefits for the duration of their retirement years. A discussion of a comprehensive retirement system inevitably brings up the issue of restoring the long-term solvency of the Social Security Trust Fund, particularly in the context of the growing importance of Social Security payments to retirees.<sup>2</sup> For some years now, analysts have stressed that policymakers need to initiate concrete steps to prepare for the “graying” of America and the increased number of retirees. Consequently, a great deal of attention has been directed towards revamping the Social Security Trust Fund, which, since its inception in 1935, has become the country’s largest income-maintenance program. Social Security payments remain essential for most retirees; in fact, three out of five beneficiaries aged 65 or older rely on these payments for at least half their annual income.<sup>3</sup> Further roiling this scenario of an aging population and an increasing reliance on Social Security payments are the following factors:

- the percentage of the U.S. population aged 65 and older has steadily increased from about 7 percent in 1950, to about 12 percent in 1990, and is expected to reach 20 percent by 2030;
- the average years of life remaining for a person aged 65 has grown sharply from 15 years for women and 13 years for men in 1950, to 19 years for women and 14 years for men in 1990, with an estimated 21 years for women and 17 years for men by 2030;
- the number of workers in the workforce supporting the retired has been declining from about five workers per beneficiary in 1960, to about 3.5 workers per beneficiary in 2000 to an estimated two workers per beneficiary in 2030;
- the portion of the nation’s gross domestic budget snared by Social Security has expanded from about 4 percent in 1997 to an estimated 5 percent in 2010 and about 7 percent in 2040; and
- the serious implications of the actuarial insolvency of the Social Security Trust Fund unless remedial action is initiated to resuscitate the program. Presently, inflows to the Social Security system exceed benefits paid out even though experts estimate that by 2015, the system will begin paying out more in benefits than it collects in payroll taxes. In fact, the latest estimates maintain that if no corrective action is taken now, the Fund will be entirely depleted by 2037. Similarly, the Medicare Trust Fund, another government program of critical importance to senior Americans, faces actuarial insolvency even though the actual Fund exhaustion date has been pushed back eight years to 2023 due to the ongoing robust expansion of the U.S. economy.<sup>4</sup>

Despite the prominence of Social Security payments in retirement incomes, financial planners often recommend the “three-legged stool” concept in planning for retirement. Each leg of the stool is supposed to represent a source of income in retirement, and the goal is to cumulatively attain a standard of living comparable to the one experienced prior to retirement. In this analysis, if the first leg of the stool is Social Security income, the other two legs of the stool refer to personal savings and retirement/pension system income. Unfortunately, a close review of financial and demographic trends reveals that two of the stool’s three legs remain unsteady, a development that could jeopardize the retirement plans of a majority of Americans.

While the problems confronting the Social Security Trust Fund were alluded to earlier, it is becoming increasingly clear that relying on personal savings to bolster retirement income is not a realistic option for most Americans. For instance, the personal savings rate has plummeted in the last seven years from 8.7 percent of disposable income in 1992, to 2.4 percent in 1999, an alarming drop indeed. Similarly, the Federal Reserve Board reported in 1998 that 12.7 percent of families—up from 10.5 percent three years earlier—were carrying debt payments of more than 40 percent of income, a traditional benchmark of imprudent borrowing.<sup>5</sup> Economic analysts often cite this alarmingly low personal rate of savings against the strikingly vibrant economic growth sweeping across the country as one of the great dichotomies of the contemporary U.S. economy.

An April 2000 study commissioned by the Consumer Federation of America (CFA) and DirectAdvice.com of Federal Reserve Bank data (conducted by Ohio State University economist Catherine P. Montalto) revealed that more than half of American households (56 percent) are behind where

they should be in saving for a comfortable retirement.<sup>6</sup> This study revealed that three important factors explained the major differences in household retirement savings—the level of household income, the development of a financial plan, and participation in an employment-related retirement program.

However, the retirement scenario for the nation as a whole is not entirely dominated by gloom-and-doom. The stellar performance of the U.S. economy in the last seven years—in February 2000, the U.S. economy enjoyed its 107<sup>th</sup> month of successive growth, the longest expansion in the history of the nation—with real economic growth averaging around 3.3 percent per year during the entire eight-year expansion, and actually accelerating to about 4 percent over the last three years, remains an interesting twist. Furthermore, new jobs have been created even faster than the labor force has grown, depressing the unemployment rate to a paltry 4 percent, its lowest level since 1969.<sup>7</sup>

The blistering pace of the economy has been accompanied by an equally buoyant stock market in the last several years, with the added characteristic of a rising number of families across the country delving into the surging stock market. Specifically, the proportion of households that own stock directly or indirectly (through mutual funds and retirement plans) rose dramatically to 48.8 percent in 1998, from 40.4 percent in 1995, and 31.6 percent in 1989. In fact, about half the U.S. population is covered in pension plans of one sort or another with 401(k) retirement plans bounding in popularity across the country. Similarly, the net worth of the median family rose to \$71,600 in 1998, from \$60,900 in 1995, an impressive 17.6 percent increase.<sup>8</sup> The Federal Reserve Bank also reported that in 1999, Americans held \$13.3 trillion in stocks, nearly 32 percent of household

wealth, 10 percentage points higher than in 1995.<sup>9</sup> Hence, it is important to view these positive trends against the more lugubrious reports of low personal savings rate.

Nevertheless, in the context of the aforementioned brittleness in two of the “retirement” stool’s three legs, there has been a growing level of interest and scrutiny directed towards the remaining leg, the portfolios and administration of state and local government employee retirement systems.<sup>10</sup> (It is important to note that the information and analysis contained in this *Regional Resource* focuses only on the retirement systems of state and local governments; the paper does not refer to the sizable portfolios contained in private retirement systems and pension plans.) The importance of payments to beneficiaries from these state and local government retirement systems is amplified considerably as this is the only leg of the stool with a reasonable degree of solvency and financial health. Notwithstanding the \$1.7 trillion in cash and security holdings in these retirement systems, 13 million active members and payments to over 5.1 million beneficiaries in 1998,<sup>11</sup> there is considerable interest in ensuring that this component of the U.S. retirement system remains on firm financial ground and continues to flourish in coming years.

State and local government employee pension plans and retirement systems cover the entire swath of public sector employees, from uniformed workers to teachers to members of the judiciary to legions of administrative and managerial positions. Even though there is a great deal of variety in their benefits packages, investment policy and administration, given their divergent histories and constituencies, these public sector plans are driven by similar core values and challenges. In essence, the administrators of all these plans seek to ensure the financial stability of the

plans, in both the short and long terms, and to provide retirees with stipulated benefits by managing the plans’ assets efficiently and effectively.

This *Regional Resource* reviews the relative position of the public retirement systems in the 16 SLC states by drawing on recent information released by the U.S. Department of Commerce.<sup>12</sup> Specifically, this report provides some history on the origins of public sector pension plans; describes the different types of state and local government retirement systems; highlights some of the general eligibility criteria and benefit provisions of the plans; details information on how public pension plans are financed; enumerates basic information on the board of trustees, or equivalent entity, administering these retirement plans; and presents a wealth of statistical data and analysis flowing from the latest (1998) figures on public sector pension funds.

### **History and Origins of Public Sector Retirement Systems**

The earliest public sector pension plan was established in New York City in 1857 to provide lump-sum benefits to policemen injured in the line of duty. This plan was amended in 1878 to offer the retirement payment of one-half of final pay to policemen completing 21 years of service. Even though a number of state and local entities followed New York City’s example and began providing retirement payments to their former employees, it was not until the passage of the Social Security Act in 1935 that the growth of public sector pension plans burgeoned across the country. The impetus for this growth was the fact that the Social Security Act intentionally excluded state and local government employees from coverage. This was on the constitutional basis that the federal government did not have the right to tax state and local governments. Hence, a number of state and local jurisdictions pursued retirement plans

as a means of covering their employees in the absence of Social Security payments to their retirees.

In tracing the growth of these plans, it is useful to divide their development into three distinct time frames.<sup>13</sup>

- 1930-1950: More than half of the nation's largest public sector pension plans were established during this period, providing two-part retirement payments. The first part was paid by the employer based on the employee's salary and years of service at retirement, and the second part was based on annuitizing the employee's accumulated retirement contributions.
- 1950-1980: In 1950, Congress amended the Social Security Act to allow states to voluntarily provide Social Security coverage for their employees after the state entered into an agreement with the Social Security Administration. (Later on, Congress mandated Medicare coverage for state and local employees hired after March 31, 1986, yet another measure intended to boost the retirement incomes of public employees.) Congress' decision to include states under the Social Security Act effected a number of changes in state and local government plan designs. For instance, for a number of years, many of the state and local plans joining Social Security offered a split-benefit formula, with a lower unit benefit percentage applying to the first \$4,200 of final average salary and a higher unit percentage applying to the amount over \$4,200. (\$4,200 represented the Social Security covered earnings ceiling at the time.) However, in the 1980s, many of these plans dropped this split-benefit approach and returned to a single-benefit approach. The 1960s and 1970s witnessed a growing consolidation among plans with the larger plans enveloping the

smaller ones to take advantage of economies of scale and improved technologies.

- 1980 to the Present: A major development during this period involved the increasingly significant role played by state legislatures in expanding the investment options for public sector pension plans. Beginning in the early 1980s, state legislatures cleared the way for pension plans to adopt "the general standard of prudence" to guide investment decisions in contrast to the severely restrictive "legal list" approach. In the former era, public pension plans could only invest in certain types of securities, investigated and approved by the state legislature. For instance, many legal lists limited the maximum percent of assets held in common stock to 30 percent or less. Conversely, of the \$1.7 trillion held in the portfolios of state and local government employee retirement systems in 1998, \$1.2 trillion, or about 71 percent, was held in non-government securities including corporate stocks (\$639 billion); corporate bonds (\$258 billion); foreign and international securities (\$195 billion); and mortgages and other securities (\$159 billion). Under the new prudence standard, the pension plans were free to invest a larger share of their assets in equities, most often domestic, a trend that enabled a vast majority of the pension plans to take full advantage of the tremendous surge in the stock market. The movement to the prudence standard has undoubtedly contributed to the solid financial footing of a majority of the state and local pension plans in existence today.

## **Public and Private Sector Pension Plans: Major Differences**

An overview of state and local government retirement plans requires a description *vis-a-vis* their private sector counterparts. Public sector plans across the United States tend to be of the Defined Benefit (DB) variety, i.e., retiring vested employees receive a specified retirement benefit, based on age, years of service and salary, throughout the duration of their retirement. In these public sector, or DB plans, required contributions are computed by actuarial evaluations while the plan's investments are managed by financial experts selected by the public sector entity's pension board or board of trustees.

On the other hand, in the private sector, a large number of employees are covered by Defined Contribution (DC) plans, in which the amount contributed to the plan is specified even though the benefit payout is not. Under this system, private sector plan participants maintain a great deal of leeway on where to direct their investments, within certain investment parameters, or options, preselected by the employer. Benefit payouts to private sector retirees flow from the contributions and investment income that accrue in participants' accounts. In the event that funds in these accounts are insufficient to pay benefits for the duration of retirement, private sector retirees have to rely on alternate income sources.

There also are major differences in public sector and private sector plans in the actual implementation, or logistical, stages. For instance, most public sector employees tend to be included in their pension plans at the point of employment while private sector employees must generally meet an age and/or length of service requirement in order to be eligible for coverage. It should also be noted that being legally eligible to receive retirement benefits only occurs after an employee, either private or public, is vested

in the retirement system. In general, public sector employees take longer to vest in their retirement systems (43 percent of public employees have to work 10 years before becoming legally entitled to a benefit) while private sector employees typically vest after five to seven years employment.

The federal Employee Retirement Income Security Act of 1974 (ERISA) requires private pension plans to provide plan members and the U.S. Department of Labor with periodic reports about plan performance and new developments. Even though the state and local government plans are not bound by these ERISA requirements, the plans' administrative entities seek to comply with the financial measurement and reporting mechanisms laid out by the Governmental Accounting and Standards Board (GASB). As a result, public sector plan participants and other interested parties/regulatory agencies can review the performance of these public sector plans against the relevant GASB standards.

Even though state and local government plans tend to be of the DB variety, there are several public sector plans that have adopted the DC variety. For instance, the State Employees Retirement System of Nebraska, the Teachers' Defined Contribution Plan of West Virginia, and Michigan's State Employee Plan (for workers hired after 1997) have opted for the DC variety. There has also been interest in adopting plans that have taken on characteristics of both the DB and DC plans. In sum, these efforts are a direct consequence of the changing economic and political environment in the country and reflect the desire of plan administrators to cultivate the most financially viable scenario for their participants.

## **Types of Public Sector Retirement Systems**

A review of the different public sector retirement systems quickly reveals the tremendous variations among the numerous plans, including the level of benefits provided, type of employees covered, structure of the entity administering the plan, number of contributing employees, size of the plan's portfolio and investment philosophy driving the plan. In addition, these variations contribute toward distinguishing the public sector plans from those adopted by the private sector. The following section highlights some of the features of the retirement plans of major public sector professions.

One of the more common variations among public sector plans involves the fact that they cover employees with radically different employment characteristics. For instance, the physically demanding and very often dangerous nature of law enforcement and fire fighting enables these employees to retire at an earlier age in comparison to other public sector employees. (These professions also seek a workforce with an average age that is younger than other public sector professions; hence, the higher number of retirees at an earlier age.) Consequently, the retirement benefits extended are very different from other public service positions. Typically, retirement benefit formulas for these professions are linked to the specific plan's vesting requirements. Most plans that require 20 years of service for vesting purposes operate on benefit formulas that specify a flat percent of final average salary, most often 50 percent, to be paid upon retirement. Plans that allow vesting after five or 10 years calculate benefits based on formulas derived from single-rate or variable-rate multipliers for each year of service. (As opposed to the single-rate approach by which the benefit percentage remains unchanged. In the variable-rate approach, a participant may accumulate a

retirement benefit of a certain percentage for the first five years of service and another percentage for the remaining years of service.)

In comparison, the retirement benefit formula for teachers' retirement plans usually involves a single-rate benefit calculation with the same benefit multiplier applying to all years of service under the plan. Many teachers' pension plans offer an early retirement option by which employees can retire, with unreduced benefits, before reaching the specified age and service requirements. Most often, this option is available after the employee puts in 20 years of service. Interestingly, a large number of the teacher pension plans add an automatic cost-of-living adjustment to their benefit payouts to ward off the negative effects of inflation.

With regard to the general employee retirement plans, age and service requirements are very similar to those extended to participants in the teachers' plans. Similar to the teachers' plans, single-rate benefit calculations are used with many systems offering unreduced retirement benefits at age 55, with 25 or 30 years of service. Like the teachers' plans, retirement payouts are computed using the final average salary, typically based on the highest three or five years of service.

Several interesting developments are apparent in recent times including the movement away from the integration of benefits with Social Security, a trend that is reflected in both the public and private sector plans. (The rationale for considering an employee's Social Security benefits in assessing retirement/pension plan payouts resulted in plans whose workers were not eligible for Social Security income in retirement receiving higher retirement benefits.) As a result, the U.S. Bureau of Labor Statistics notes that the proportion of public plans with a benefit formula linked

with Social Security benefits declined from 10 percent to 4 percent between 1992 and 1994; for private plans, the proportion declined from 63 percent to 51 percent between 1989 and 1995. A plausible explanation for this trend may be the perceived uncertainty regarding the solvency of the Social Security Trust Fund.

Another important development involves the evolution of Deferred Retirement Option Plans (DROP), a development traceable to certain demographic and economic pressures. In an attempt to retain experienced, long-term employees on staff, certain public institutions have modified their retirement process to enable these employees to continue beyond their normal retirement date. Under DROPs, employees who postpone their retirement are rewarded with a partial lump-sum distribution when they finally leave public service.

### **Administering Retirement Systems in the Public Sector**

Policymakers continue to play an important role in the administration of public sector retirement plans for the obvious reason that these funds involve substantial amounts of public money. In recent years, the enormous growth of these plans, both in terms of asset size and participants, has increased the level of scrutiny as well. In general, state and local retirement systems are managed by a retirement board or board of trustees that maintains responsibility for investment policy and asset allocation. These board members act as fiduciaries and are required to use their best judgment and prudence in investment decisions so that the financial viability of these plans is secured. A survey conducted by the Florida Retirement System in 1997 indicated that 93 percent of the retirement systems or funds across the country are governed by such a board. In addition, 67 percent of these boards retain authority over investment decisions, 62

percent have authority over benefits and 85 percent have authority over actuarial assumptions.<sup>14</sup>

According to the U.S. Department of Commerce, in 1998, there were 2,140 public employee retirement systems in the United States. Nationally, Illinois, with 374 systems, and Pennsylvania, with 343 systems, were the two states with the highest number of retirement plans or systems. While Florida, Massachusetts, Michigan and Minnesota all had more than 100 systems, 19 states had fewer than 10 systems, and Hawaii and Maine each had only one system.<sup>15</sup> It appears that in some states, local and state government employees are consolidated in a few plans while in other states, there are a large number of plans with a number of them serving local government entities.

As noted earlier, even though public sector plans are not subject to the standards of the federal ERISA law, a vast majority of these plans include language extracted from this federal law in their guidelines. For instance, public retirement funds are required to be invested using the “prudent person rule.” Specifically, the prudent person rule states that “fiduciaries discharge their investment duties with the same degree of diligence, care and skill which a prudent person would ordinarily exercise under similar circumstances in a like position.”<sup>16</sup> The daily administration of these plans often is the responsibility of the retirement system’s staff, or of the government controlling the system, operating under the supervision of an executive director, who, in turn, reports to the board of trustees.

The following information describes the composition of the board of trustees, or equivalent entity, in the SLC states in addition to detailing how these board’s members are appointed.



- **Alabama:** The State Employees' Retirement System was established in October 1945 by the Legislature to administer a retirement system for state employees, public and quasi-public agency employees. The system is administered by a board of control that consists of 13 trustees including the governor (ex officio, who shall be chairman); state treasurer (ex officio); state personnel director (ex officio); director of finance (ex officio); three members of the retirement system appointed by the governor; two members of the retirement system vested in the system and elected by a majority vote of the participating full-time state employees who are members of the retirement system; one member elected from the ranks of retired state employees; one member elected from the ranks of retired employees of a city, county, or a public agency; and, two members elected from the staff of an employer participating in the retirement system. The board of control, by a majority vote of all trustees, elects a secretary-treasurer who serves as the chief executive officer.<sup>17</sup>



- **Arkansas:** The Arkansas Public Employees' Retirement System was created by an act of the General Assembly in 1957. The system was originally established for retired state employees only, but in subsequent years the system has been expanded to include county, municipal, college and university, non-teaching public school employees and other non-state employees. The Public Employees' Retirement System's board of trustees consists of nine trustees including the state auditor (ex officio); state treasurer (ex officio); director of the department of finance and administration (ex officio); three members who are state employees appointed by the governor; and, three members who are non-state employees, also appointed by the governor. The board of trustees shall appoint an executive director who shall be the executive administrator of the retirement system.<sup>18</sup>



- **Florida:** In addition to a number of other investment responsibilities, the state board of administration is responsible for managing the assets of the Florida Retirement System. Within the state board of administration, the department of management services' division of retirement is specifically responsible for the day-to-day administration of all the funds in the Florida Retirement System. The board is governed by an investment board made up of the governor; insurance commissioner; and state comptroller, all ex officio positions. The board makes all the investment decisions regarding the system. The administrator of the Florida Retirement System is the secretary of the department of management services, who is appointed by the governor and confirmed by the senate.<sup>19</sup>

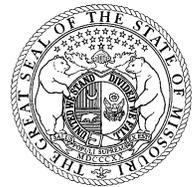


- **Georgia:** The Employees' Retirement System was established by an act of the General Assembly on February 3, 1949. The system's board consists of seven trustees including the state auditor; insurance commissioner; commissioner of the state merit system of personnel administration; one member appointed by the governor; two members who have each had at least five years creditable service with an agency included in this retirement system; and a member who has had at least 10 years of experience in the investment of monies. The board has the authority to employ a director and to engage such actuarial and other services to perform the business of the retirement system.<sup>20</sup>



- **Kentucky:** The Kentucky Employee Retirement System was created by the General Assembly in 1956 to supplement the benefits provided by Social Security to public employees. The Kentucky Retirement System's board consists of nine trustees including the secretary of personnel (ex officio); three members appointed by the governor; two members elected by the County Employees Retirement System; two members elected by the Kentucky Employees' Retirement System; and one member elected by the State Police Retirement System.<sup>21</sup>

- Louisiana:** The Louisiana State Employees' Retirement System (LASERS) was established by an act of the Legislature in 1946. The first members joined the system on July 1, 1947. A 12-member board of trustees oversees LASERS' operations and state law designates members of the board as follows: six elected trustees, who are active in the system; three elected trustees, who are retired members of the system; the chairman of the House Retirement Committee (ex officio); chairman of the Senate Retirement Committee (ex officio); and treasurer of the state of Louisiana (ex officio). The board appoints LASERS' executive director, the system's chief administrative officer, assistant director and chief investment officer.<sup>22</sup>
- Maryland:** The Maryland State Retirement and Pension System is a multi-employer defined benefit (DB) administering death, disability, and retirement benefits for a number of active and former public employees. The system's board consists of 16 trustees including the secretary of budget and management (ex officio); state comptroller (ex officio); state superintendent of schools (ex officio); state treasurer (ex officio); secretary of the state police (ex officio); nine trustees elected from the different professional plans that belong to the Maryland State Retirement and Pension System; and two trustees who represent the interests of the public, are not members of any of the systems and are knowledgeable about the administration and operation of pension funds.<sup>23</sup>
- Missouri:** The Missouri State Employees' Retirement System was established as a division of the department of revenue in 1957 under an act of the General Assembly. The system is administered by a 11-member board of trustees including two members of the Senate, appointed by the president pro tem of the Senate; two members of the House, appointed by the Speaker of the House; two members appointed by the governor; three members of the system, two active members elected by the active and terminated vested members and one retiree, elected by the retired members of the system; state treasurer (ex officio); and commissioner of administration (ex officio).<sup>24</sup>
- Mississippi:** Established by the Mississippi Legislature in 1952, the Public Employees' Retirement System of Mississippi is the retirement system for nearly all non-federal public employees in the state. The system's board of trustees consists of 10 members including the state treasurer (ex officio); one member appointed by the governor; two members elected by state employees; one member elected by county employees; one member elected by municipal employees; one member elected by retirees; one member elected by retirees; one member elected by public school and community college employees; and one member elected by higher learning employees.<sup>25</sup>
- North Carolina:** The retirement systems division of the department of the state treasurer administers the retirement and fringe benefits plans, as authorized by the General Assembly of North Carolina, for its state's public employees. Several retirement systems are administered by this division, including the Teachers' and State Employees' Retirement System, the Local Governmental Employees' Retirement System, the Consolidated Judicial Retirement System and the Legislative Retirement System. These different systems are governed by two boards of trustees with the state treasurer serving as ex-officio chairman of both boards. The first, consisting of 14 members, including actively working employees, retirees and public members, administers the Teachers' and State Employees's Retirement System; this board also administers the Consolidated Judicial Retirement System and the Legislative Retirement System. The second board, consisting of the first board and an additional three members representing local



governments, administers the Local Government Employees' Retirement System. The director of the retirement systems division and his/her immediate staff are responsible for the overall operation of the division, and carry out the policies and directives of the state treasurer and the governing boards.<sup>26</sup>



- **Oklahoma:** The Oklahoma Public Employees' Retirement System was established in 1964 to provide retirement and death benefits to state employees. The system has a 13-member board of trustees that maintains administrative responsibility including a member from the state tax commission; an appointee of the Oklahoma supreme court; two appointees of the president pro tem of the Senate; state insurance commissioner; director of the state office of finance; chairman of the corporation commission; two appointees of the speaker of the House of Representatives; the administrator of the office of personnel management; and three appointees of the governor.<sup>27</sup>



- **South Carolina:** The South Carolina Budget and Control board maintains administrative responsibility for the state's retirement system, the division of retirement. The board, which maintains jurisdiction over critical areas of operations, budget and analysis, retirement systems, and regional development, includes the following five members: governor; state treasurer; comptroller general; chairman of the Senate finance committee; and chairman of the House ways and means committee. An executive director serves as the chief administrative officer for the board and reports directly to members of the board. The South Carolina Retirement Systems is made up of four distinct retirement systems: the South Carolina Retirement System serving state employees, teachers, and other government employees; the Police Officers' Retirement System; the General Assembly Retirement System; and the Judges' and Solicitors' Retirement System.<sup>28</sup>



- **Tennessee:** The Tennessee Consolidated Retirement System's board of trustees includes the following ex-officio members: state treasurer; chairman of the council of pensions and insurance; secretary of state; administrative director of the courts; commissioner of the department of finance and administration; comptroller of the treasury; vice chairman of the council of pensions and insurance; and commissioner of the department of pensions. In addition, the board of trustees includes several employee representatives such as the three state employee representatives; three teacher representatives; one state retiree representative; and three political subdivision representatives from the state counties and cities.<sup>29</sup>



- **Texas:** The origins of the Employees Retirement System of Texas may be traced to the 1930s, even though it was only in June 1947 that the system was legislatively created. A six-member board of trustees oversees the retirement fund, state employee and retiree health insurance benefits, a deferred compensation plan and a flexible benefits plan. Three board members are appointed, one each by the governor, speaker of the House, and chief justice of the Texas Supreme Court, and the remaining three members are elected by the system's members and retirees.<sup>30</sup>



- **Virginia:** The Virginia Retirement System evolved from two previous retirement systems: the Retired Teachers' Fund, established in 1908, that provided benefits for public school teachers, and an expansion of this fund in 1942 to include teachers, school administrators and most state employees. The system, in its current form, was created in March 1952 as a supplement to Social Security. A nine-member board of trustees manages the system with five of these members, including the chairman, being appointed by the

governor and the remaining four members being appointed by the General Assembly. Currently, the board includes a faculty member of a state-supported educational institution; a state employee; an employee from a political subdivision (county or city employee); a public school teacher; an expert in employee benefit plans; and four investment experts. The system's board of trustees also administers the State Police Officers' Retirement System; the Judicial Retirement System; and the Federal-State Social Security Agreement.<sup>31</sup>

- **West Virginia:** The West Virginia Consolidated Public Retirement Board was created in 1990 to administer all public retirement systems in the state. Previously, the state had a number of separate retirement funds that were established as far back as 1941. Hence, the Consolidated Public Retirement board includes several systems such as the Teachers' Retirement System and the Public Employees Retirement System. The board's trustees comprises the following ex-officio members, (or their appointees): the governor; state auditor; state treasurer; and secretary of the department of administration. An additional 10 members are appointed by the governor with the advice and consent of the Senate. Of these 10 members, four are state residents who are not members, retirees, or beneficiaries of the system; one is a member or retiree of the Public Employees Retirement System; one is a member of the Public Employees Retirement System who is not or was not a public employee; one is a representative of the Deputy Sheriff's Retirement System; one is a member or retiree of the Teachers' Deferred Compensation plan; one is a member or retiree of the Teachers' Retirement System; and the remaining member is a representative of the Public Safety Retirement System.<sup>32</sup>



### Public Sector Retirement Plan Trends in the SLC States

The employee retirement systems of state and local governments remain a critical component of the country's government sector. Not only do these retirement systems cover tens of thousands of public sector employees and provide current and future income for these employees, they contain significant investment holdings as well. As cited above, cash and security holdings of state and local government employee retirement systems peaked at a record \$1.7 trillion in 1998, a \$238 billion increase over the previous year. Interestingly, more than \$1.2 trillion of this total portfolio was invested in non-government securities, more than 70 percent, while \$278 billion was invested in government securities and about \$91 billion was in cash and deposits.

Table 1 provides national data on state and local government employee retirement system finances for fiscal years 1997 and 1998 (the most recent review

period). As evident in Table 1, state and local government retirement systems experienced a \$238 billion increase in cash and investment holdings between 1997 and 1998. While there were marginal percentage increases in all categories of investments, the percentage of corporate stocks as a percentage of total investment holdings expanded slightly (from 35.7 percent to 37.2 percent) during the two years. This constituted the largest line item increase in the different investment categories and reflects a growing trend among investment/portfolio managers to take full advantage of the booming stock market. The largest line-item decline during the same two-year period was evident in the holding of United States Treasury securities, which declined from 13.5 percent of total investments to 11.7 percent.

Further review of these national numbers indicate interesting trends with regard to total receipts. While there is a slight increase in employee contributions in

<b>State and Local Government Retirement System Data for the United States (Thousands of dollars)</b>		
<b>Category</b>	<b>1997</b>	<b>1998</b>
<b>Receipts</b>		
• Employee Contributions	\$20,919,398	\$21,846,144
• State Government Contributions	\$20,611,048	\$18,903,094
• Local Government Contributions	\$24,373,014	\$23,463,840
• Earnings on Investments	\$161,602,073	\$199,183,102
Total	\$227,505,536	\$263,396,183
<b>Payments</b>		
• Benefits	\$69,372,635	\$76,489,443
• Withdrawals	\$3,467,388	\$3,974,963
• Other Payments	\$3,388,409	\$3,875,275
Total	\$76,228,432	\$84,339,681
<b>Cash and Investment Holdings</b>		
• Cash and Short Term Investments	\$74,820,216	\$90,536,753
• Government Securities	\$268,378,065	\$278,143,487
• Non-government Securities	\$1,047,835,990	\$1,249,825,368
• Other Investments	\$87,928,629	\$98,010,900
Total	\$1,478,962,901	\$1,716,516,505

Source: U.S. Department of Commerce

Note: Totals may not add up due to rounding-off.

dollar terms, government contributions, both state and local, actually declined between 1997 and 1998. On the other hand, earnings on investment rose impressively from \$161.6 billion to \$199.1 billion during this period, an increase of 23 percent. Once again, this surge in investment earnings may be linked to the roaring stock market. In terms of the relative importance of receipt sources, the changes remain minimal, with employee contributions declining from 9.2 percent of total receipts to 8.3 percent; state and local government contributions, as a percentage of total receipts, declining from 9.1 percent to 7.2 percent and 10.7 percent to 8.9 percent, respectively. In contrast, the percentage of investment earnings in total receipts expanded from 71 percent to 75.6 percent.

Finally, Table 1 depicts some movement in total payments made by state and local government retirement systems. Payments, which include benefit payments

made to participants and withdrawals made by participants, increased from \$76.2 billion to \$84.3 billion. The proportion of benefit payments to total payments, the largest payment category, remained relatively unchanged at around 91 percent.

Another area of great interest in an analysis of state and local government retirement systems involves participant—both active and inactive—numbers and membership trends. Table 2 contains this information at the national level for fiscal year 1998. Accordingly, a majority of the participants in public retirement plans in 1998 belonged to state government plans (14.4 million participants) as opposed to local government plans (1.8 million). Specifically, local government plan participants amounted to about 11 percent of total (active and inactive) membership. As expected, there were more local government plans available (1,926) in contrast to the state government plans (214). Another

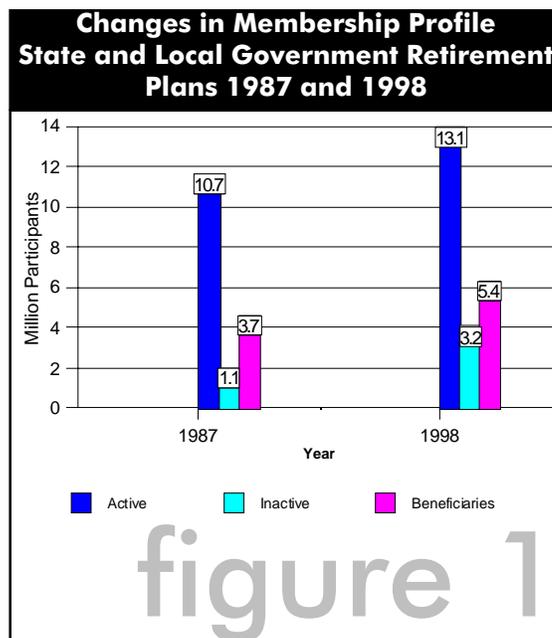
Number and Membership in State and Local Government Employee Plans for the U.S. 1998					
Type of Government	Number of Retirement Plans	Membership			Beneficiaries Receiving Periodic Payments
		Active	Inactive	Total	
Local Plans					
— County	147	457,441	37,966	495,407	205,556
— Municipality	1,565	1,033,889	43,033	1,076,922	669,703
— Township	146	85,602	2,136	87,738	17,933
— Special District	54	51,221	5,661	56,882	27,197
— School District	14	73,085	7,199	80,284	37,144
Total	1,926	1,701,238	95,995	1,797,233	957,533
State Plans	214	11,357,442	3,059,919	14,417,361	4,423,036
Total U.S. (State & Local)	2,140	13,058,680	3,155,914	16,214,594	5,380,569

Source: U.S. Department of Commerce

statistic of interest involves the proportion of beneficiaries receiving payments to total membership. In 1998, this percentage stood at 33 percent. Within the local government plans, more than two-thirds of the membership belonged to plans established by municipalities. County plans ranked next with township plans a distant third in this classification system.

An accurate profile of membership trends in the public retirement system may be gleaned by comparing 1998 data with 1987 data. Figure 1 facilitates this comparison and indicates that there has been an explosion in the number of participants in state and local government retirement plans between 1987 and 1998. Specifically, when one factors in the active, inactive and retirees/beneficiaries, the number of participants expanded from 15.5 million participants to 21.7 million participants, a 40 percent hike in an 11-year period. Another interesting development in comparing data for the two years emerges when one assesses the relative importance of active, inactive and retirees/beneficiaries to total participants. For instance, in 1987, active members comprised 69 percent of total participants; in 1998, the number had declined to 60 percent.

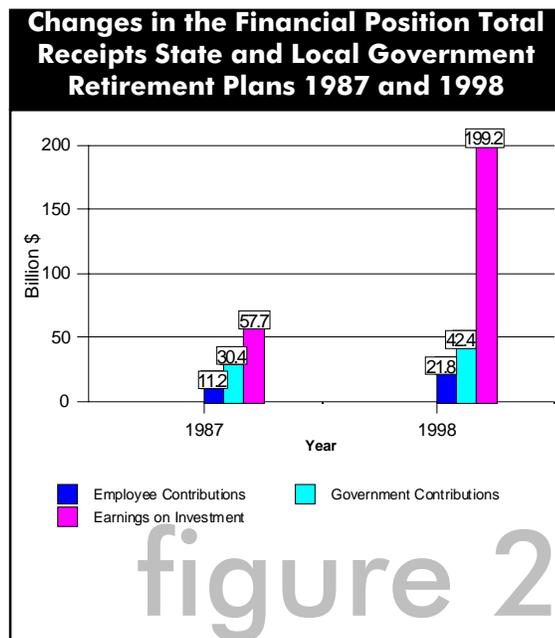
Similarly, in 1987, inactive members added up to 7 percent of total participants; in 1998, this number had increased to 15 percent. Finally, the number of retirees receiving periodic benefit payments expanded slightly, from 24 percent of total participants in 1987 to 25 percent in 1998. In sum, the most striking trend here is the fact that while the



Source: U.S. Department of Commerce  
 Note: The category "Beneficiaries" refers to retirees currently receiving periodic payments.

number of active participants has declined as a proportion of total participants, the number of inactive participants as a proportion of total participants has increased.

Another useful comparison in a review of public employee retirement plans involves financial positions between 1987 and 1998. Figure 2, in presenting data on employee contributions, government (both state and local) contributions and earnings on investment, documents these trends graphically.



Source: U.S. Department of Commerce

Figure 2 explains the significant increase in total receipts secured by these public sector retirement systems between 1987 and 1998; total receipts increased from \$99.3 billion in 1987 to an impressive \$263.4 billion in 1998, a 165 percent increase. Even in terms of the relative proportion of each contribution category, there were sizable changes with employee contributions declining from 11.3 percent of total receipts to 8.3 percent; government contributions dropping from 30.6 percent to 16.1 percent; and, most importantly, earnings on investment rising from 58.1 percent to 75.6 percent.

In reviewing the membership patterns of state and local government retirement plans in the SLC states, several interesting features quickly surface. Table 3 depicts some of these features and demonstrates that in 1998, retirement system participants in the SLC states amounted to about 34 percent of the total number of participants in public employee retirement plans across the United States. Several additional facts may be culled from Table 3. For instance, Texas remains the SLC state with the largest number of participants, with Florida, North Carolina and Georgia following in descending order. At the other end of the spectrum, West Virginia was the SLC state with the fewest participants; Arkansas, Oklahoma and Tennessee, also ranked low with respect to the number of retirement system participants. However, the marked differences in SLC state population levels should be considered in assessing retirement state participants. Inevitably, states with a large population will have a large number of retirement system participants. For instance, Texas has 19.8 million people, the highest among the SLC states, and had 1.5 million retirement system participants; West Virginia, on the other hand, has a population of 1.8 million people, the lowest in the SLC, and had approximately 122,000 retirement system participants. Hence, the state's population numbers remain an important variable in determining participant numbers.<sup>33</sup>

Another factor that deserves attention is the proportion of active members to total members in the state and local government retirement systems. In this connection, Tennessee ranks first in the SLC having 99.7 percent of its total membership as active members. In addition, Virginia with 98.5 percent, Arkansas with 96.1 percent, Florida with 93.9 percent and Louisiana with 91.0 percent rank high in this category among the SLC states. In contrast, the active employee to total participants

**Number and Membership in SLC-State Public Sector Employee Retirement Plans 1998**

State	Number of Plans	Membership					Beneficiaries
		Active	%	Inactive	%	Total	
Alabama	15	214,317	90.6	22,202	9.4	236,519	71,638
Arkansas	34	106,804	96.1	4,363	3.9	111,167	31,405
Florida	161	648,871	93.9	42,046	6.1	690,917	189,578
Georgia	32	338,787	71.9	132,398	28.1	471,185	88,684
Kentucky	19	182,267	80.6	43,984	19.4	226,251	72,931
Louisiana	37	231,000	91.0	22,827	9.0	253,827	103,712
Maryland	11	207,078	54.6	172,125	45.4	379,203	97,928
Mississippi	4	146,069	62.2	88,816	37.8	234,885	47,862
Missouri	41	247,074	88.2	33,105	11.8	280,179	90,989
North Carolina	10	405,720	90.7	41,600	9.3	447,320	127,485
Oklahoma	13	145,945	90.3	15,694	9.7	161,639	64,131
South Carolina	7	221,435	63.1	129,602	36.9	351,037	63,685
Tennessee	16	219,104	99.7	574	0.3	219,678	88,049
Texas	49	1,030,808	86.3	163,511	13.7	1,194,319	262,235
Virginia	14	335,203	98.5	5,105	1.5	340,308	107,920
West Virginia	41	66,090	82.0	14,492	18.0	80,582	41,376
SLC Total	504	4,746,572	83.6	932,444	16.4	5,679,016	1,549,608
U.S. Total	2,140	13,058,680	80.5	3,155,914	19.5	16,214,594	5,380,569

Source: U.S. Department of Commerce

Note: The category “Beneficiaries” refers to retirees currently receiving periodic payments.

ratio remains lower in other SLC states such as Maryland (the lowest in the SLC with only 54.6 percent of total participants belonging to the ranks of active employees); Mississippi (62.2 percent); South Carolina (63.1 percent); and Georgia (71.9 percent).

Table 4 documents the cash and investment holdings of state and local government retirement plans in 1998. It should be noted that the cash and deposits category includes cash, demand, time and savings deposits, and non-federal short-term

investments; government securities includes United States treasury, other federal agency, and state and local government financial instruments; non-government securities includes corporate bonds, corporate stocks, mortgages, funds held in trust and other instruments; and other investments.

Table 4 provides very interesting data both from a national perspective and an SLC-state perspective. On an SLC level, the cash and investment holdings of the state and local government retirement plans in

<b>Cash and Investment Holdings in SLC State Public-Employee Retirement Plans 1998</b>					
<b>(in thousands of dollars)</b>					
<b>State</b>	<b>Cash and Deposits</b>	<b>Government Securities</b>	<b>Non-Government Securities</b>	<b>Other Investments</b>	<b>Total</b>
Alabama	\$2,187,757	\$2,199,451	\$15,369,671	\$826,580	\$20,583,459
Arkansas	\$683,757	\$1,698,533	\$7,213,320	\$65,448	\$9,661,058
Florida	\$4,026,213	\$8,271,465	\$53,307,937	\$3,798,231	\$69,403,846
Georgia	\$771,568	\$18,440,826	\$26,693,603	\$29,002	\$45,934,999
Kentucky	\$1,586,499	\$1,456,011	\$15,901,560	\$344,598	\$19,288,668
Louisiana	\$560,797	\$2,317,223	\$18,102,159	\$370,598	\$21,350,777
Maryland	\$2,032,858	\$4,243,435	\$30,525,841	\$719,784	\$37,521,918
Mississippi	\$1,052,481	\$3,264,640	\$7,832,614	\$4,878	\$12,154,613
Missouri	\$1,699,693	\$4,837,760	\$21,606,138	\$265,004	\$28,408,595
North Carolina	\$21,271,497	\$23,956	\$23,499,263	\$546,500	\$45,341,216
Oklahoma	\$632,024	\$2,258,505	\$9,389,479	\$897,530	\$13,177,538
South Carolina	\$1,979,979	\$5,981,791	\$10,137,001	0	\$18,098,771
Tennessee	\$1,228,416	\$8,032,690	\$16,384,046	\$432,746	\$26,077,898
Texas	\$5,569,024	\$24,604,283	\$78,092,779	\$880,679	\$109,146,765
Virginia	\$1,416,707	\$3,312,475	\$31,539,216	\$2,533,726	\$38,802,124
West Virginia	\$228,129	\$3,148,498	\$222,256	0	\$3,598,883
SLC Total	\$46,927,399	\$94,091,542	\$365,816,883	\$11,715,304	\$518,551,128
U.S. Total	\$90,536,753	\$278,143,487	\$1,249,825,368	\$98,010,900	\$1,716,516,505

Source: U.S. Department of Commerce

1998 amounted to 30 percent of the national total, approximately \$518.6 billion of a national figure of \$1.7 trillion. In this breakdown, cash and deposits held by the SLC state plans amounted to 52 percent of the cash and deposits held by the United States as a whole; government securities amounted to 34 percent of government securities held by the United States; non-government securities totaled 29 percent of non-government securities held by the U.S.; and, other investments held by the United States equaled 12 percent. In terms of comparing the relative importance of these portfolio items in the SLC state retirement plans to national trends, the following details may be extracted. While cash and deposits in the SLC plans amounted to 9 percent of the total SLC state portfolio, they totaled 5 percent nationally; government securities amounted to 18 percent in the SLC states and 16 percent for the United States as

a whole; non-government securities were 71 percent in the SLC states and 73 percent in the United States; finally, other investments added up to 2 percent of the SLC state total while contributing to 6 percent of the U.S. total. These 1998 figures enable us to reach the conclusion that the managers controlling the SLC state retirement systems were marginally more conservative in their investment strategies in comparison to the public sector retirement system managers in the U.S. as a whole.

In further probing the public sector retirement system portfolios of the SLC states, several features are apparent. In 1998, Texas remained the SLC state with the largest portfolio, approximately \$109.1 billion while Florida (\$69.4 billion), Georgia (\$45.9 billion) and North Carolina (\$45.3 billion) follow in descending order. Interestingly, Texas' mammoth public sector retirement portfolio totaled 21 percent

of the total SLC state portfolio and more than 6 percent of the entire U.S. portfolio. At the other end of the spectrum, West Virginia was the SLC state with the smallest portfolio, maintaining \$3.6 billion for the same period. Arkansas (\$9.7 billion), Mississippi (\$12.2 billion) and Oklahoma (\$13.2 billion) followed West Virginia in this category. (In reviewing portfolio sizes, once again, it is important to remember that the population numbers in the SLC states vary greatly, and this factor plays a major influence in the size of the state's retirement portfolio.)

Another appropriate level of analysis involves comparing the different investment strategies of the SLC state retirement systems by reviewing the relative importance of the investment categories. In general, a retirement system that places more of its assets in cash and deposits in

comparison to non-government securities (corporate bonds, corporate stocks, mortgages) could be termed one with a less aggressive investment philosophy. Similarly, a retirement system that values the importance of government securities (U.S. Treasury instruments, other federal agency instruments, state and local government notes) *vis-a-vis* non-government securities, could also be termed one with a risk-averse investment strategy. Myriad factors might account for these divergent investment strategies, including the active employee/beneficiaries ratio, the average age of the system's beneficiaries, statutory limits on investment decisions, etc.

Table 5 presents the percentage breakdown of the different investment categories in the SLC states for 1992 and 1998. In addition, Figure 3 graphically presents this same information for 1998.

<b>Breakdown of Investment Categories in SLC States 1992 and 1998 (by percent)</b>								
State	Cash and Deposits		Government Securities		Non-Government Securities		Other Investments	
	1992	1998	1992	1998	1992	1998	1992	1998
Alabama	11	11	5	11	84	75	1	4
Arkansas	6	7	26	18	68	75	0	1
Florida	5	6	26	12	69	77	0	5
Georgia	2	2	38	40	60	58	0	0
Kentucky	7	8	24	8	66	82	4	2
Louisiana	9	3	20	11	71	85	1	2
Maryland	1	5	2	11	15	81	82	2
Mississippi	15	9	43	27	42	64	0	0
Missouri	9	6	30	17	59	76	2	1
North Carolina	24	47	30	0	44	52	1	1
Oklahoma	6	5	30	17	61	71	2	7
South Carolina	12	11	68	33	20	56	0	0
Tennessee	6	5	25	31	69	63	0	2
Texas	2	5	36	23	29	72	33	1
Virginia	9	4	13	9	73	81	5	7
West Virginia	3	6	85	87	11	6	2	0
SLC Average	8	9	31	22	53	67	8	2
United States	5	5	22	16	64	73	9	6

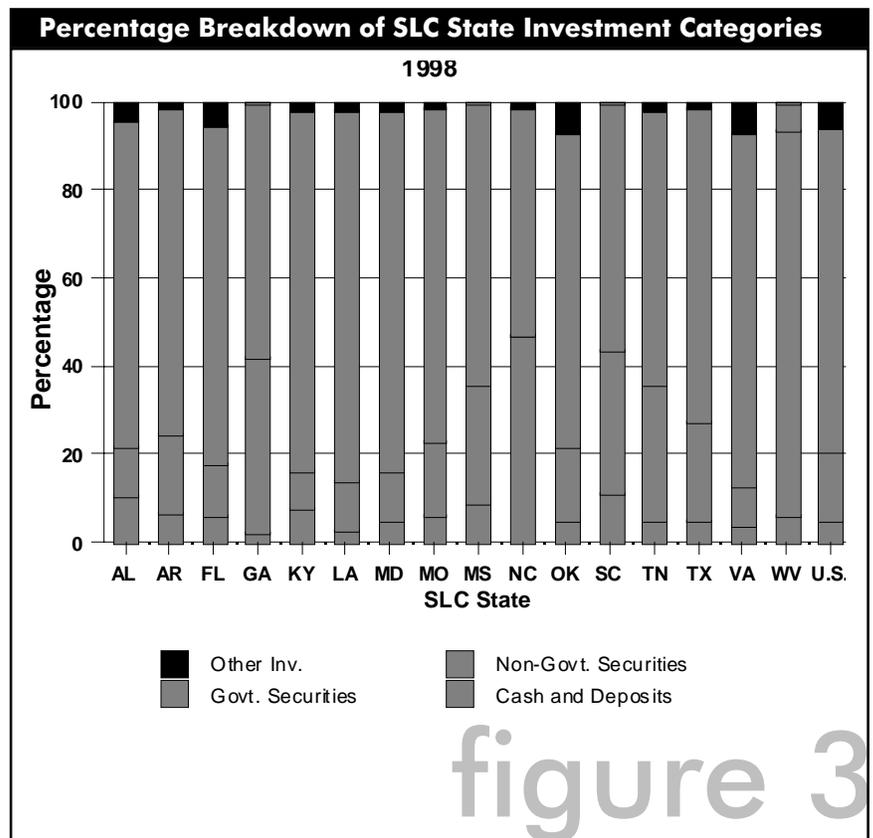
Source: U.S. Department of Commerce

Note: Totals may not add up to 100 percent due to rounding-off.

As depicted in Table 5, generally, the managers administering the state and local government retirement plans in the SLC states showed a strong preference for investing a larger share of their portfolios in non-government securities. For instance, on the average, between 1992 and 1998, these portfolio managers chose to increase their investments in non-government securities from 53 percent of total portfolio to 67 percent. (A similar trend was experienced for the United States as a whole, an increase from 64 percent to 73 percent.) Among the SLC states, only four states reduced their exposure in non-government securities between 1992 and 1998—Alabama (from 84 percent to 75 percent); Georgia (from 60 percent to 58 percent); Tennessee (from 69 percent to 63 percent); and West Virginia (from 11 percent to 6 percent). The remaining 12 SLC states opted to allocate an increased share of their total portfolio in non-government securities. Consequently, some of these retirement systems were able

to take advantage of the benefits of the escalating stock market of the last several years.

Figure 3 graphically documents the investment allocation by retirement system managers in 1998 in the SLC states and illustrates their investment philosophies. Also included in Figure 3 is data for the United States as a whole. For instance, managers running the retirement systems in certain SLC states maintained a greater degree of exposure in non-government securities, a practice that enabled them to take advantage of the soaring stock market. However, it should be mentioned that greater exposure to the stock market makes these retirement systems more susceptible to losses too. Specifically, Louisiana, with 85 percent of its entire portfolio invested in non-government securities, Kentucky with 82 percent, Maryland and Virginia, both with 81 percent, and Florida with 77 percent, maintained fairly aggressive investment



Source: U.S. Department of Commerce

strategies. In fact, these percentages ranked even higher than the 73 percent average secured for the U.S. public sector retirement systems as a whole. In contrast, West Virginia with a low 6 percent of its total portfolio in non-government securities, North Carolina with 52 percent, South Carolina with 56 percent and Georgia with 58 percent, operated less aggressive and more risk-averse investment strategies.

Similarly, Figure 3 also identifies the SLC states with a preference for investing in government securities. West Virginia ranked the highest in this connection with 87 percent of its total portfolio in government securities. Georgia (40 percent), South Carolina (33 percent) and Tennessee (31 percent) also maintained strong exposure in government securities. It should be noted that the U.S. average in this category stood at 16 percent. In contrast, certain SLC states maintained no exposure or minimal exposure in this category. North Carolina's public retirement plans, for example, have negligible exposure to government securities while Kentucky (8 percent), Virginia (9 percent) and Alabama (11 percent), also have limited exposure in this category. Interestingly, in 1998, North Carolina's retirement systems carried 47 percent of its total portfolio in cash and short-term deposits while all the other SLC states maintained between 2 percent and 11 percent of their total portfolio in this category. It should be noted that the U.S. average was 5 percent.

Table 6 provides data on cash and investment holdings in the SLC state retirement systems and the growth rates between 1992, 1997 and 1998. In the context of the discussion of particular investment strategies employed by state retirement systems, it is relevant to compare, historically, the relative performance, or growth rates, in state retirement systems in the light of these investment strategies.

Table 6 documents the growth rate in SLC state public-employee retirement systems for the span between 1992 and 1998. Perhaps the most significant trend is that collectively, the SLC states enjoyed a 19 percent growth rate per year during this seven-year period, surpassing even the U.S. average of 14 percent. Specifically, total portfolio holdings in the SLC states grew from \$223.6 billion in 1992 to \$518.6 billion in 1998, a 132 percent increase. For the period between 1992 and 1997, Maryland (128 percent), Texas (126 percent) and Florida (114 percent) displayed the highest growth rates. Conversely, South Carolina (26 percent), West Virginia (61 percent) and North Carolina (67 percent) experienced the least growth among the SLC states during this span. Cumulatively, the SLC states attained a growth rate of 95 percent during this six-year period, an annual rate of 16 percent. (The cumulative U.S. rate for the same six-year period was 72 percent at an annual rate of 12 percent).

With regard to the 1997 to 1998 period, North Carolina (48 percent), Georgia (47 percent) and Kentucky (23 percent) were the high-flying SLC states while growth rates in Maryland (3 percent), Alabama (11 percent) and Texas (12 percent) were considerably lower. While the SLC average during this period was 19 percent, the U.S. average was 16 percent. In the 1992-98 period, a majority of the SLC states (12 out of 16) achieved triple-digit growth rates, an impressive feat indeed. Georgia (160 percent), Florida (159 percent) and Tennessee (152 percent) were the leaders, with South Carolina (42 percent), West Virginia (89 percent) and Alabama (93 percent) not faring as well as the other SLC states. While the SLC state cumulative growth rate between 1992 and 1998 stood at 132 percent, the U.S. growth rate was 100 percent. Also, of note is the fact that 13 of the 16 SLC states exceeded the U.S. average growth rate for

<b>SLC State Cash and Investment Growth Rates 1992, 1997 and 1998</b> (in thousands of dollars)						
<b>State</b>	<b>1992 Cash and Investment Total</b>	<b>1997 Cash and Investment Total</b>	<b>Growth Rate (1992-97)</b>	<b>1998 Cash and Investment Total</b>	<b>Growth Rate (1997-98)</b>	<b>Growth Rate (1992-98)</b>
Alabama	\$10,638,355	\$18,473,492	74%	\$20,583,459	11%	93%
Arkansas	\$4,740,651	\$8,301,991	75%	\$9,661,058	16%	104%
Florida	\$26,777,263	\$57,372,183	114%	\$69,403,846	21%	159%
Georgia	\$17,669,609	\$31,225,572	77%	\$45,934,999	47%	160%
Kentucky	\$7,963,741	\$15,692,822	97%	\$19,288,668	23%	142%
Louisiana	\$10,864,232	\$18,751,039	73%	\$21,350,777	14%	97%
Maryland	\$15,879,166	\$36,259,631	128%	\$37,521,918	3%	136%
Mississippi	\$5,182,662	\$10,557,953	104%	\$12,154,613	15%	135%
Missouri	\$13,819,415	\$24,705,881	79%	\$28,408,595	15%	106%
North Carolina	\$18,382,895	\$30,623,504	67%	\$45,341,216	48%	147%
Oklahoma	\$5,692,574	\$10,880,824	91%	\$13,177,538	21%	131%
South Carolina	\$12,711,340	\$15,962,950	26%	\$18,098,771	13%	42%
Tennessee	\$12,279,498	\$22,955,712	87%	\$26,077,898	14%	112%
Texas	\$43,252,264	\$97,866,318	126%	\$109,146,765	12%	152%
Virginia	\$15,828,508	\$33,642,465	113%	\$38,802,124	15%	145%
West Virginia	\$1,905,052	\$3,063,254	61%	\$3,598,883	17%	89%
SLC Total	\$223,587,225	\$436,335,591	95%	\$518,551,128	19%	132%
U.S. Total	\$859,031,935	\$1,478,962,901	72%	\$1,716,516,505	16%	100%

Source: U.S. Department of Commerce

the 1992-98 period, once again, an outstanding achievement.

In assessing the growth rates of the different SLC state retirement funds, a review of the proportion of assets invested in non-government securities serves to highlight several interesting trends. In general, greater exposure to non-government securities entails a greater degree of volatility for an investment portfolio, with greater gains and/or steeper losses being real possibilities. Hence, the analysis based on Table 7 will enable a determination of whether a pension fund manager's decision to maintain greater exposure in non-government securities brought about a higher growth rate for the overall portfolio as opposed to a fund manager who pursues a more risk-averse or

conservative strategy. Table 7 performs this task by combining previously presented elements from Table 5 and Table 6.

Based on the information in Table 7, several aspects are quickly apparent. For instance, the proportional allocation of non-government securities in the total retirement fund portfolios of four of the 16 SLC states actually declined between 1992 and 1998. Specifically, even though Alabama experienced an 11 percent decline, Alabama's total retirement fund portfolio actually grew by 93 percent during this same period. However, it should be noted that Alabama's 93 percent growth rate in the 1992-98 period was the third smallest among the SLC states. Similarly, West Virginia experienced a 45 percent decline in non-government securi-

<b>Portfolio Growth Rate vs. Proportion of Portfolio in Non-Government Securities 1992 and 1998</b>					
State	Total Portfolio Growth Rate (1992-1998)	Total Portfolio Growth Rate (1997-1998)	Percent of Non-Government Securities in Total Portfolio		
			1992	1998	% Difference
Alabama	93%	11%	84	75	-11%
Arkansas	104%	16%	68	75	10%
Florida	159%	21%	69	77	12%
Georgia	160%	47%	60	58	-3%
Kentucky	142%	23%	66	82	24%
Louisiana	97%	14%	71	85	20%
Maryland	136%	3%	15	81	440%
Mississippi	135%	15%	42	64	52%
Missouri	106%	15%	59	76	29%
North Carolina	147%	48%	44	52	18%
Oklahoma	131%	21%	61	71	16%
South Carolina	42%	13%	20	56	180%
Tennessee	112%	14%	69	63	-9%
Texas	152%	12%	29	72	148%
Virginia	145%	15%	73	81	11%
West Virginia	89%	17%	11	6	-45%

Source: U.S. Department of Commerce

ties even though the state's overall portfolio expanded by 89 percent, the second smallest growth rate in the SLC states. Finally, Georgia and Tennessee also lowered their proportion of non-government securities as a percentage of total portfolio by 3 percent and 9 percent respectively during this period. Nevertheless, the overall retirement funds in these two states grew by an impressive 160 percent (the highest growth rate in the SLC) and 112 percent between 1992 and 1998.

Furthermore, the three SLC states that effected the largest increase in the proportion of non-government securities to total portfolios did not necessarily experience the largest increase in overall growth during the 1992 to 1998 period. Maryland's

total portfolio, while increasing its allocation of non-government securities by 440 percent, grew by 136 percent; South Carolina increased its allocation by 180 percent but grew by only 42 percent, the smallest increase among the SLC states; and Texas increased its allocation by 148 percent and expanded by 152 percent.

Similarly, a review of the SLC states with the highest percentage of portfolio allocated to non-government securities in 1998 did not necessarily produce the highest overall growth rate between 1997 and 1998. For instance, in 1998, Louisiana devoted 85 percent of its total portfolio to non-government securities and attained a growth rate of 14 percent, a rate that did not even exceed the SLC state average of 19 percent.

Kentucky allocated 82 percent of its portfolio to non-government securities in 1998 and secured an overall growth rate of 23 percent, the third highest growth rate among the SLC states. Finally, Maryland and Virginia, both invested 81 percent of their total portfolio in non-government securities and secured overall growth rates of 3 percent and 15 percent. These growth rates were not only lower than the SLC state average but Maryland's rate was the lowest among the SLC states.

In stark contrast, North Carolina and Georgia, two SLC states that devoted relatively smaller proportions of total

portfolio to non-government securities (58 percent and 52 percent, respectively), garnered high growth rates between 1997 and 1998. Georgia's overall portfolio growth rate was 47 percent and North Carolina's was 48 percent, the highest and second highest growth rates among the SLC states between 1997 and 1998.

In sum, even though the performance of the stock market has been red-hot in the past several years, with the Standard and Poor's 500-stock index rising 480 percent in the past decade, its best 10-year return in four decades, and the technology-laden NASDAQ composite index zooming

<b>State and Local Government Employee Retirement System Revenues 1998</b> (in thousands of dollars)							
State	Employee Contributions		Government Contributions		Earnings on Investment		Total
	Amount	%	Amount	%	Amount	%	
Alabama	\$333,459	13%	\$555,763	21%	\$1,773,274	67%	\$2,662,496
Arkansas	\$58,887	3%	\$292,172	17%	\$1,355,088	79%	\$1,706,147
Florida	\$138,875	1%	\$3,473,104	21%	\$13,009,349	78%	\$16,621,328
Georgia	\$406,651	10%	\$1,176,785	29%	\$2,416,714	60%	\$4,000,150
Kentucky	\$386,557	12%	\$633,506	20%	\$2,085,665	67%	\$3,105,728
Louisiana	\$457,733	10%	\$847,398	19%	\$3,275,034	72%	\$4,580,165
Maryland	\$119,720	2%	\$871,869	14%	\$5,186,936	84%	\$6,178,525
Mississippi	\$266,495	13%	\$362,496	17%	\$1,454,347	70%	\$2,083,338
Missouri	\$365,834	8%	\$752,896	16%	\$3,612,303	76%	\$4,731,033
North Carolina	\$657,327	7%	\$791,103	8%	\$8,259,250	85%	\$9,707,680
Oklahoma	\$252,929	9%	\$538,459	19%	\$2,071,994	72%	\$2,863,382
South Carolina	\$380,655	13%	\$465,523	16%	\$2,116,273	71%	\$2,962,451
Tennessee	\$187,158	6%	\$382,359	13%	\$2,466,499	81%	\$3,036,016
Texas	\$1,843,813	16%	\$1,989,386	17%	\$7,673,594	67%	\$11,506,793
Virginia	\$137,466	2%	\$1,271,557	17%	\$6,157,791	81%	\$7,566,814
West Virginia	\$114,715	13%	\$354,317	40%	\$408,147	47%	\$877,179
SLC Total	\$6,108,274	7%	\$14,758,693	18%	\$63,322,258	75%	\$84,189,225
U.S. Total	\$21,846,144	8%	\$42,366,937	16%	\$199,183,102	76%	\$263,396,183

Source: U.S. Department of Commerce

Note: Totals may not add up to 100 percent due to rounding-off.

1,035 percent in 10 years, this is still not a guarantee of triple-digit growth rates in state and local government retirement funds.<sup>34</sup> (The forces behind the tremendous gains shown by the stock market in recent years, particularly the current zeal for Internet and other technology stocks, have elicited assorted explanations and theories from economists and casual market observers alike. One of the more cogent explanations comes from Dr. Franco Modigliani, the 1985 Nobel Memorial Prize Winner in Economics<sup>35</sup>). A better guarantee of substantial growth in investment portfolios is wise use of the particular mix of investments pursued by fund managers and their ability to skillfully navigate the turbulent investment opportunities available in the economy.

In discussing state and local government employee retirement finances, two other factors remain important: revenues and expenditures. Table 8 provides information on the revenue sources of state and local government employee retirement systems in 1998.

According to trends extrapolated from Table 8, revenue streams in the SLC public sector retirement systems accounted for 32 percent of total revenue generated in similar retirement systems in the United States. Interestingly, among the SLC states, Florida's state and local retirement funds generated the most revenue in 1998, surpassing even Texas, a state with considerably more members. In terms of the relative significance of the three main revenue streams, 'earnings on investment' remains the most critical measure for all the SLC states. Of course, certain SLC states were more successful than others in raising revenue from their investments in the period under review, exceeding even the SLC state average of 75 percent. Specifically, North Carolina generated 85 percent of its revenue from investment earnings, Maryland (84 percent), Tennessee and Virginia (81

percent) and Arkansas (79 percent) ranked high in this connection. On the other hand, West Virginia secured 47 percent of its 1998 revenue from investment earnings, Georgia (60 percent), Alabama, Kentucky and Texas (all at 67 percent), were some of the SLC states that relied less on revenue from investment earnings.

Among the remaining two revenue sources, government contributions were more important to West Virginia (40 percent of total revenue), Georgia (29 percent), Alabama and Florida (both at 21 percent) and Oklahoma (19 percent) than the remaining SLC states. (The SLC state average here was 18 percent). Similarly, employee contributions, the least important revenue source for all the SLC states, stood at 16 percent of total revenue in Texas, 13 percent of total revenue in Alabama, Mississippi, South Carolina and West Virginia and 12 percent of total revenue in Kentucky. (The SLC state average in this instance was 7 percent.)

In discussing SLC state and local government employee retirement system finances, expenditures remain important. In this connection, it appears that benefits, withdrawals and other payments in the SLC states were strikingly close to the national average in 1998. Table 9 enumerates the dollar value and the percentage breakdown for expenditures.

As noted earlier, in 1998 the state and local government retirement system expenditures in the individual SLC states did not deviate too far from the U.S. average. As expected, benefit payments constituted the largest component of expenditures with West Virginia (94 percent of all expenditures) leading the SLC states. Maryland's benefit expenditures were the least in the SLC, adding up to 84 percent of total expenditures. In terms of withdrawals, Mississippi ranked the highest in the SLC with 10 percent of its total expenditures

<b>State and Local Government Employee Retirement System Expenditures 1998 (in thousands of dollars)</b>							
<b>State</b>	<b>Benefits</b>		<b>Withdrawals</b>		<b>Other Payments</b>		<b>Total</b>
	<b>Amount</b>	<b>%</b>	<b>Amount</b>	<b>%</b>	<b>Amount</b>	<b>%</b>	
Alabama	\$921,305	92%	\$63,337	6%	\$21,024	2%	\$1,005,666
Arkansas	\$354,875	89%	\$5,226	1%	\$38,726	10%	\$398,827
Florida	\$2,128,339	91%	\$25,660	1%	\$187,094	8%	\$2,341,093
Georgia	\$1,349,632	94%	\$62,114	4%	\$27,862	2%	\$1,439,608
Kentucky	\$873,610	89%	\$29,170	3%	\$79,529	8%	\$982,309
Louisiana	\$1,386,558	85%	\$84,484	5%	\$152,891	9%	\$1,623,933
Maryland	\$1,396,093	84%	\$25,074	2%	\$233,981	14%	\$1,655,148
Mississippi	\$530,217	86%	\$60,843	10%	\$27,205	4%	\$618,265
Missouri	\$1,014,461	89%	\$57,985	5%	\$67,176	6%	\$1,139,622
North Carolina	\$1,457,772	92%	\$120,993	8%	\$8,463	1%	\$1,587,228
Oklahoma	\$779,595	90%	\$52,460	6%	\$34,460	4%	\$866,515
South Carolina	\$753,234	90%	\$70,280	8%	\$12,120	1%	\$835,634
Tennessee	\$829,301	93%	\$29,735	3%	\$33,967	4%	\$893,003
Texas	\$3,862,151	88%	\$403,617	9%	\$123,640	3%	\$4,389,408
Virginia	\$1,268,825	90%	\$94,221	7%	\$48,800	3%	\$1,411,846
West Virginia	\$352,649	94%	\$16,818	5%	\$3,965	1%	\$373,432
SLC Total	\$19,258,617	89%	\$1,202,017	6%	\$1,100,903	5%	\$21,561,537
U.S. Total	\$76,489,443	91%	\$3,974,963	5%	\$3,875,275	5%	\$84,339,681

Source: U.S. Department of Commerce

being allocated towards this category. Conversely, Arkansas and Florida were the SLC states with the lowest expenditure in this category, both at 1 percent. Finally, other payments ranked the highest in Maryland among the SLC states in 1998, totaling 14 percent of total expenditures. North Carolina, South Carolina and West Virginia were the lowest in the SLC in this expense category, all at 1 percent.

### Conclusion

The record number of baby-boomers scheduled to retire in the next few years has precipitated a great deal of interest in retirement planning. In this connection, state and local government employee retirement plans remain important. Further compounding this interest is the fact that serious doubts have surfaced about the solvency of the

Social Security Trust Fund beyond 2037 and the fact that personal savings rates among Americans have recently tumbled to all-time lows. Even though state and local government retirement systems appear to be in sound financial shape with \$1.7 trillion in cash and security holdings and 13 million active members in 1998, continually reviewing the performance of these systems remains an important exercise.

From an 1857 retirement plan established in New York City to assist policemen injured in the line of duty, by 1998, the number of state and local government pension plans across the nation had mushroomed to 2,140, serving every stratum of state and local government. Even though a majority of these public sector plans are of the defined benefit (DB) variety

(where vested employees receive a specified benefit payment throughout their retirement years), some public sector entities have incorporated elements of the defined contribution (DC) variety, most popular in the private sector. (Under the latter scheme, the amount contributed to the plan is specified, the benefit payout to the employee is not.)

State legislatures play a critical role in the administration of these retirement plans given the fact that they are responsible for some of the appointments to the boards of trustees, most often the administrative entity charged with the responsibility of managing and planning investments and benefit payouts. Hence, these trustees play a pivotal role in ensuring the continued growth of the retirement system funds, taking into consideration a number of factors, such as the active-to-inactive member ratio, active participants to number of retirees receiving payments ratio, the overall investment climate (national and international) and ways to tweak an investment portfolio to diminish negative economic trends.

In evaluating the retirement systems in the specific SLC states in 1998, several facets leap to the surface. For instance, total participants in the SLC states amounted to about 35 percent of all participants in the United States. As expected, Texas had the largest number of participants among the SLC states. In terms of cash and investment holdings, the public sector plans in the SLC states amounted to 30 percent of the national total, approximately \$518.6 billion of a national figure of \$1.7 trillion. In terms of investment preferences, generally, portfolio managers in the SLC states showed a marked inclination towards investing a larger component of their assets in non-government securities. Between 1992 and 1998, SLC state managers increased their non-government securities from 53 percent

of total portfolio to 67 percent. However, as extensively documented in the body of this paper, greater exposure to non-government securities did not necessarily guarantee stellar performance growth rates in these portfolios. A better guarantee of sustained growth involved the particular skill with which a portfolio manager reacted to certain market and economic developments in adjusting a retirement system's asset mix.

As elaborated upon earlier, the U.S. economy has been performing at a most impressive rate in the last several years, confounding even the most optimistic of economic prognosticators. Not only has the nation's economic performance been stronger than expected, this growth has been underpinned by a remarkable acceleration in productivity, a phenomenon that has kept inflation at bay. As Federal Reserve Board Chairman Alan Greenspan recently noted, "[N]ot only has the expansion achieved record length, but it has done so with far stronger growth than expected. A key factor behind this impressive performance has been the remarkable acceleration in labor productivity."<sup>36</sup> In these salubrious economic times, state and local government retirement system portfolios have flowered at an unprecedented rate, too. Yet, it is important that policymakers continue to monitor the performance of these portfolios in the context of possible negative economic times in the future. Also, in the context of the professed weaknesses in two of the three major sources of retirement revenues for Americans, Social Security and personal savings, it is imperative that deficiencies do not crop up in the remaining revenue source, retirement systems. 

## Endnotes

- <sup>1</sup>This *Regional Resource* uses the terms “retirement system” and “pension plan” interchangeably.
- <sup>2</sup>Interestingly Mr. Frank Bane, resigned from the post of executive director of the Social Security Board in 1938 to accept the position of the first executive director of the newly-founded Council of State Governments (CSG), the parent organization of the Southern Legislative Conference. Mr. Bane went onto serve at the helm of CSG for another 20 years, 1938-58.
- <sup>3</sup>“America’s Nest Egg,” *The New York Times*, February 16, 2000. The statistical information contained in the bullets all are extracted from this article.
- <sup>4</sup>The result of strong economic growth in the last several years has enabled the date when the Fund will be entirely depleted to be moved back several times. In early 1998, it was estimated that the Fund would be depleted by 2029; later on that year it was pushed back to 2032; in 1999, the date was changed to 2034; finally, in March 2000, the date was pushed further back to 2037, three years later than estimated just last year. (Also see “Outlook Better for Social Security and Medicare,” *The New York Times*, March 31, 2000, and “Treasury News: Treasury Secretary Lawrence H. Summer’s Remarks at the Medicare and Social Security Trustees Press Conference,” U.S. Department of the Treasury, March 30, 2000).
- <sup>5</sup>“America’s Nest Egg.”
- <sup>6</sup>“More than Half of Americans Behind in Saving for Retirement,” Press Release, Consumer Federation of America and DirectAdvice.com, April 26, 2000.
- <sup>7</sup>“An Outlook—And a Look Within,” Remarks by Jack Guynn, President and Chief Executive Officer, Federal Reserve Bank of Atlanta, March 3, 2000.
- <sup>8</sup>*Ibid.*
- <sup>9</sup>“American Households,” *The Economist*, March 17, 2000.
- <sup>10</sup>In the 2000 legislative sessions, a number of SLC states have grappled with aspects of state and local government retirement/pension funds. For instance, the Nashville, Tennessee-based Metro Employee Benefit Board’s revelation that its pension fund lost \$877,000 investing in a hedge fund that dissolved last month has raised scrutiny with legislative and law enforcement entities (see “Metro Pension Fund’s Loss Unresolved”, *The Tennessean*, April 13, 2000). In Georgia, the media raised the issue of conflict of interest when the House Retirement Committee considered writing new laws to govern the Employees Retirement System, the Legislative Retirement System and the Judicial Retirement (see “System Warps Ex-‘Outsiders’ Who Get Inside,” *The Atlanta Journal Constitution*, February 20, 2000). In Oklahoma, a state Senate publication reported on the importance of state and local government retirement systems in the nation’s government sector and talked specifically about Oklahoma’s public pension plans (see *Federal Action Monitor*, Vol. XX, No. 6, February 11, 2000). Finally, in Florida, Governor Jeb Bush indicated that he opposed legislation by the Florida Senate to use the state’s pension fund surplus to pay for higher employee benefits (see “Pension Changes in Doubt,” *The Tallahassee Democrat*, April 13, 2000).
- <sup>11</sup>“State and Local Government Employee Retirement Assets at All-Time High,” U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, February 3, 2000.
- <sup>12</sup>The 16 states in the SLC include Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia.
- <sup>13</sup>Information for the ensuing sections is extracted from Mitchell, Olivia S., McCarthy, David, Wisniewski, Stanley C. and Zorn, Paul in *Developments in State and Local Pension Plans* and Steffen, Karen, *State Employee Pension Plans*, both publications by the Pension Research Council, Wharton School, University of Pennsylvania, 1999.
- <sup>14</sup>Kelleher, Walter, Senior Benefits Analyst, Florida Retirement System, “Board of Trustees or Retirement Boards of State Retirement Systems,” 1997.
- <sup>15</sup>“State and Local Government . . .”
- <sup>16</sup>Kentucky Retirement System, [www.kyret.com](http://www.kyret.com).
- <sup>17</sup>West’s Alabama Code, Title 36, Chapter 27, Article 1.
- <sup>18</sup>Arkansas Code, [www.arkleg.state.ar.us](http://www.arkleg.state.ar.us), §24-4-104.
- <sup>19</sup>Florida Retirement System (FRS) website, [www.frs.state.fl.us](http://www.frs.state.fl.us) and [www.fsba.fl.us/](http://www.fsba.fl.us/) *BACK/ABOUT/AboutUs.htm*.
- <sup>20</sup>Georgia Secretary of State’s website, [www.sos.state.ga.us](http://www.sos.state.ga.us), Employees’ Retirement System.

<sup>21</sup>Kentucky Retirement Systems, [www.kyret.com](http://www.kyret.com).

<sup>22</sup>Louisiana State Employees' Retirement System (LASERS), [www.lasers.state.la.us](http://www.lasers.state.la.us).

<sup>23</sup>Maryland State Retirement and Pension System, [www.sra.state.md.us/syssynop.htm](http://www.sra.state.md.us/syssynop.htm).

<sup>24</sup>Missouri Administrative Mandate, [www.mosers.org/adman.html](http://www.mosers.org/adman.html).

<sup>25</sup>The Public Employees' Retirement System (PERS) of Mississippi, [www.pers.state.ms.us/whispers.html](http://www.pers.state.ms.us/whispers.html).

<sup>26</sup>North Carolina Retirement Systems Division, [www.treasurer.state.nc.us/retire/retire.htm](http://www.treasurer.state.nc.us/retire/retire.htm).

<sup>27</sup>Oklahoma Public Employees Retirement System (OPERS), [www.state.ok.us/~opers/geninfo.htm](http://www.state.ok.us/~opers/geninfo.htm).

<sup>28</sup>South Carolina Retirement Systems, [www.scrs.state.sc.us](http://www.scrs.state.sc.us).

<sup>29</sup>Tennessee Consolidated Retirement System, [www.treasury.state.tn.us/tcrs/ai1.htm](http://www.treasury.state.tn.us/tcrs/ai1.htm).

<sup>30</sup>Employees Retirement System of Texas, [www.ers.state.tx.us/1998/dbbio.html](http://www.ers.state.tx.us/1998/dbbio.html).

<sup>31</sup>Virginia Retirement System, [www.state.va.us/vrs/overview.htm](http://www.state.va.us/vrs/overview.htm).

<sup>32</sup>West Virginia Consolidated Public Retirement Board, [www.state.wv.us/admin/cprb/FUNCTION.htm](http://www.state.wv.us/admin/cprb/FUNCTION.htm).

<sup>33</sup>The following table provides the 1997/98 population figures for the SLC states:

SLC State	Population
Alabama	4,352,000
Arkansas	2,538,000
Florida	14,916,000
Georgia	7,642,000
Kentucky	3,936,000
Louisiana	4,369,000
Maryland	5,135,000
Mississippi	2,752,000
Missouri	5,439,000
North Carolina	7,546,000
Oklahoma	3,347,000
South Carolina	3,836,000
Tennessee	5,431,000
Texas	19,760,000
Virginia	6,791,000
West Virginia	1,811,000
SLC Total	99,601,000
U.S.	269,775,000

Source: U.S. Department of Commerce, Bureau of the Census

<sup>34</sup>"24 Mutual Funds Have Made 1,000% in 10 Years," *USA Today*, March 27, 2000.

<sup>35</sup>According to Dr. Modigliani, the current frenzy for Internet and other technology stocks is not irrational. He theorizes that there are two warranted prices for every stock: one, that is based on important fundamentals such as earnings and growth rates, which he prefers overwhelmingly in valuing a stock, and another based on the expectation of growth, or "bubble" value. While this expectation of growth actually produces the growth in the stock's price, in a self-perpetuating cycle, it also serves to affirm and re-affirm the expectation. This results in people purchasing more of these stocks every time its price goes up in an effort to reap the benefits of a rising stock value. However, this bubble price is naturally unstable and it will only rise as long as expectations about the stock keep rising. Therefore, when people are convinced that the stock will not grow anymore, a selling frenzy develops, as evidenced on April 4, 2000, when the technology-heavy NASDAQ market dropped 349 points, a decline of 7.6 percent, the fifth-worst day ever for the index. At this point, as Dr. Modigliani comments, everybody wants to sell the stock causing the stock to collapse, even beyond the price based on the company's fundamentals.

One of Dr. Modigliani's primary insights, originating back to the 1950s, was that the value of a company's securities, including stocks and bonds, should be dependent on expected future profits, discounted by an appropriate interest rate. Under this rationale, the immense price-earnings ratio (P/E ratio) discrepancies evident in the Internet and technology stocks fall solidly under Dr. Modigliani's "bubble" price theory and as he notes, the "bubbles will burst." (See "Modigliani's Message," *The New York Times*, March 31, 2000).

<sup>36</sup>"Greenspan Says Economy Stronger Than Expected," *The Washington Post*, March 22, 2000.

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