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Pension assets, which now total $2.9 trillion, are invested throughout the world economy. The way these assets are invested and how well the investments perform will affect the relative well-being of millions of present and future retirees.

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Diversity of Pension Investments

- Defined contribution plan assets and defined benefit plan assets are generally invested by sophisticated investment managers hired by plan sponsors. However, defined contribution plan participants generally determine the mix among equities, bonds, money market funds, etc. Institutions and individuals may differ in their tolerance of risk, experience with and knowledge of investment markets, time horizons, and the overall size of their investments.

- Tradeoffs between risk and return, which result in different investment mixes, will affect investment performance and, consequently, the benefits participants receive on leaving a job or at retirement.

- To obtain and maintain their tax-favored status, private pension plans must follow the guidelines of the Employee Retirement Income Security Act of 1974 (ERISA). Public plans are exempt from most ERISA provisions and must follow guidelines passed by the sponsoring government.

- A recent public policy issue concerns the takeover of the Executive Life Insurance Company by the California Insurance Commissioner. The guaranteed investment contracts (GICs) and annuities that pension plans purchased from this company may be worth only a fraction of their original value. Pending lawsuits in this case have raised the question of who should sustain the losses—the corporate plan sponsor or the individual participant.

- Pension investments are not limited to stocks and bonds. ERISA does not directly prohibit any investment for private pension funds except those deemed imprudent. Alternative investments include real estate, corporate private placements, international investments, securities lending, and derivatives such as commodity futures.

◆ Introduction

At the end of 1990, private and public pension fund assets totaled $2.9 trillion. Pension assets are invested by private plan sponsors; investment managers hired by plan sponsors; plan participants; insurance companies; and state, local, and federal governments. Depending on the type of plan—public or private, defined benefit or defined contribution—pension fund investors face different constraints in the kinds of investments they may choose and in the degree of responsibility they assume if investment performance is lower than anticipated.

Pensions are provided to 81 percent of private full-time workers in establishments with more than 100 employees and to 42 percent of those in establishments with fewer than 100 employees. Sponsoring a pension plan increases an employer's ability to attract and retain workers and strengthens workers' loyalty. Studies have shown that employees covered by pension plans have longer job tenure and lower turnover rates than those without pension coverage.[1] Pensions also help reduce private employers' tax liabilities. Employer contributions to a pension plan are tax deductible to the employer, and taxes on the funds' investment earnings are deferred.

In both defined contribution and defined benefit plans, the amount of the retirement benefit is determined in part by investment performance. In defined contribution plans, the investment return directly determines the retirement benefit. In defined benefit plans, the investment return influences the likelihood of postretirement benefit increases. High return investments produce higher income streams than low return investments, but they also carry a higher risk. Therefore, pension investments affect pension benefits, and pension investors (individuals and/or plan sponsors) must judge the tradeoff between high return/high risk and low return/low risk investments.

The selection of investments for pension fund assets reflects investors' choices between return and risk. Individual participants tend to make low-risk investment choices—short-term bonds, guaranteed investment contracts (GICs), and bank investment contracts (BICs)—in order to minimize risk. On the other hand, plan sponsors tend to seek higher risk investment vehicles to generate the highest return or a favorable cash flow. Furthermore, state and local governments may choose investment options that will achieve a high enough return to limit tax increases needed to pay benefits.

To obtain and maintain their tax-favored status, private plans must follow the guidelines of the Employee Retirement Income Security Act of 1974 (ERISA). Public plans are exempt from most ERISA provisions, including those covering funding, vesting, reporting, disclosure, minimum participation, plan termination insurance, and fiduciary responsibility. They must follow guidelines passed by the sponsoring government, which sometimes are similar to ERISA's.

With the growing amount of pension assets and the increasing complexity of financial instruments, pension fund investors are faced with not only more choices but more complex choices. This *Issue Brief* describes the relationships among pension investments, retirement income, and the investment risk taken by plan sponsors and participants. Pensions' current asset allocation and the size of these investments in the U.S. economy are also described. The *Issue Brief* also addresses public policy concerns about who should control pension investments, the security of annuity purchases by pensions, extent of guarantees through the Pension Benefit Guaranty Corporation (PBGC), use of GICs, and other issues. As the baby boom ages, more people participate in pension plans and the amount of assets grows; the growth and diversity of pension investments will continue to stimulate debate in Congress and in society about pension funds' investments. Finally, the report examines alternatives to stocks and bonds that are emerging as viable options for pension investment.

[1] See Ippolito, 1986, and Andrews, 1989.

◆ Pension Investments and Retirement Income

The investment of a pension plan's assets may affect the benefit received in retirement—directly in the case of defined contribution plans and indirectly in the case of defined benefit plans. A defined benefit plan is generally under no obligation to increase benefits in retirement, but higher returns make ad hoc benefit increases more likely (they may also decrease the amount of future contributions necessary from the employer).

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Defined benefit plan sponsors may have different investment goals, depending on many factors, including the participants' demographic composition and the firm's financial status.

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In a defined contribution plan, the employer makes specified contributions to an account established for each participating employee. The final retirement benefit reflects the total of employer contributions, any employee contributions, and investment gains or losses. The accumulated amount may also include employer contributions forfeited by employees who leave before they become fully vested, to the extent such contributions are reallocated to the accounts of employees who remain. In most cases, each participant allocates his or her account among various investment options and bears the investment risk.[2] If the participant is willing to assume higher investment risk during employment, the likelihood of higher performance increases, which leads to a larger retirement benefit. Lower investment returns lead to a smaller retirement benefit and a greater reliance on Social Security and personal savings.

In a defined benefit plan, each employee's future benefit is determined by a specific formula, and the plan provides a guaranteed level of benefits upon retirement. Usually, the promised benefit is tied to the employee's earnings, length of service, or both. The employer is responsible for deciding how to allocate the assets and must bear the risk of investment gains and losses. However, many employers hire investment managers to oversee their pension funds' investments. As fiduciaries,[3] these investment managers must act, according to ERISA, "with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent man acting in a like capacity and familiar with such matters would use. . . ." This standard is frequently referred to as ERISA's "prudent man rule" and often is interpreted as a prudent expert rule. The prudence standard is intended to ensure the security of the pension promise to the participants. ERISA does not specifically exclude any investment.

Defined benefit plan sponsors may have different investment goals, depending on many factors, including the participants' demographic composition and the firm's financial status. A sponsor's goals may strive for stable plan costs or assure a firm's financial flexibility, while accounting for tradeoffs between return and risk. The tradeoffs in turn affect the benefit retirees receive. For example, high investment returns, which incur more risk, may allow the sponsor to lower future plan contributions or increase the likelihood of postretirement benefit increases. With lower investment returns, which have less risk, an employer would

[2]However, this is generally not the case in employee stock ownership plans or profit-sharing plans.

[3]ERISA broadly defines fiduciaries as any persons who exercise control or discretion in managing plan assets, those who render investment advice to a plan for direct or indirect compensation or have authority to do so, or those who have discretionary authority in administering a plan. Fiduciaries must act in the exclusive interest of plan participants and beneficiaries.

have to make larger contributions in the future to secure benefits.

Defined contribution and defined benefit plans have grown in total asset size through the 1980s, making the investment decisions increasingly important for the plan sponsor and participants as well as for the economy.

◆ Total Pension Assets, Asset Allocation, and Investment Income

Total Pension Assets

At the end of 1990, public and private pension plans had more than $2.9 trillion in assets, an increase of nearly 140 percent from 1982 (table 1). **The percentage of U.S. equity owned by pension funds has increased steadily since 1950, although the level began to stabilize in the early 1980s. By the end of 1990, pension funds owned 28.2 percent of all equity in the economy.** Pension funds owned 3.2 percent of taxable bonds in 1950, which increased to 19.2 percent in 1981 and then decreased slowly to 13.9 percent in 1990 (chart 1).

Private trusteed pension funds (those with a trustee appointed by the private plan sponsor) at the end of 1990 totaled $1.3 trillion. Private insured pension funds (funds managed by insurance companies) totaled $580 billion in assets at year-end 1989 (the latest year for which data are available). State and local government funds totaled $756 billion, and the federal government pension fund had $251 billion in assets at year-end 1990.

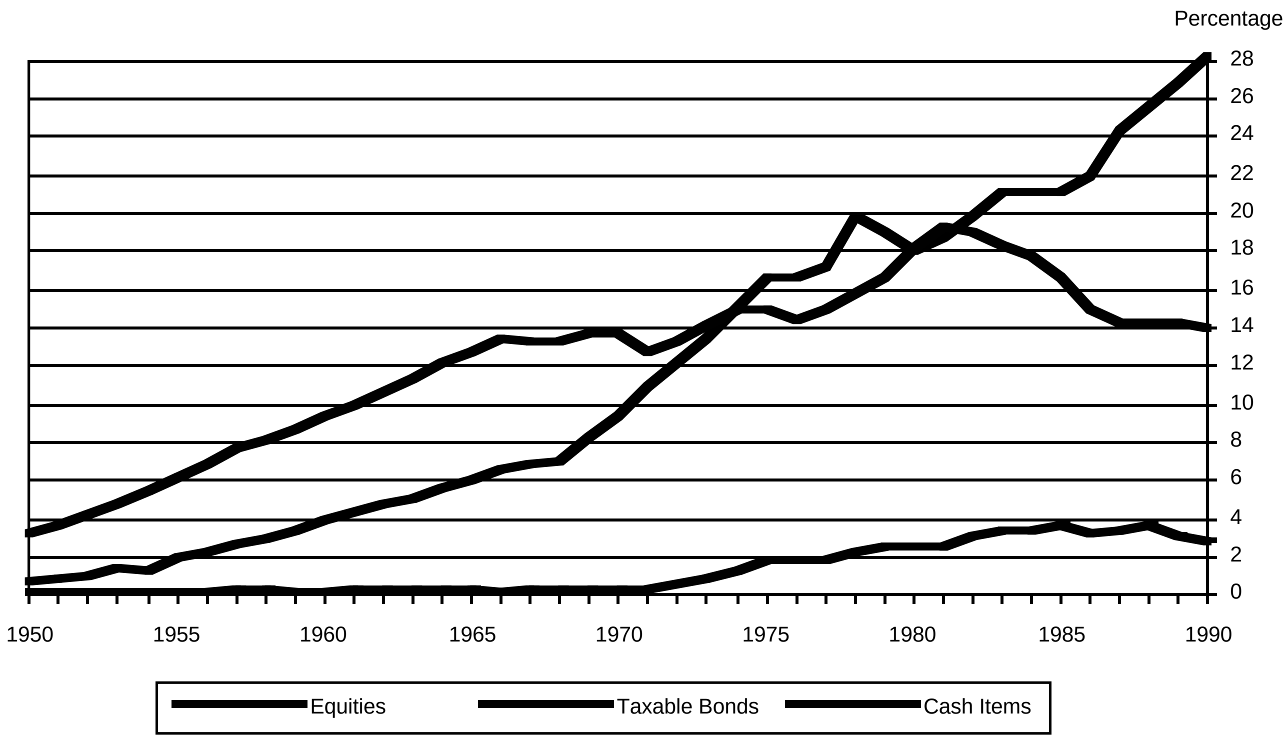
Data on private trusteed pension funds can be segregated by plan type. Single-employer defined benefit plans had $757 billion in assets at the end of 1990, while single-employer defined contribution plans had $437 billion, and multiemployer plan assets, which are mostly defined benefit, had $144 billion. Since 1982, multiemployer plan assets have grown as a proportion of private trusteed pension assets from 9.2 percent to 10.8 percent, and single-employer defined contribution

Table 1
Assets of Private and Public Pension Plans, 1982–1990

Pension Plan	1982	1983	1984	1985	1986	1987	1988	1989	1990
					$ billions				
Private Trusteed									
Single-employer defined benefit	$399	$449	$460	$545	$588	$598	$661	$765	$757
Single-employer defined contribution	196	239	256	325	359	386	422	466	437
Multiemployer	61	72	79	98	114	117	129	147	144
Private Insured	211	246	286	343	407	460	517	580	n/a
State and Local	263	311	357	405	469	517	606	735	756
Federal	97	127	163	149	170	188	208	229	251
Total	$1,227	$1,444	$1,601	$1,865	$2,107	$2,266	$2,543	$2,922	$2,925[a]

Source: Employee Benefit Research Institute, *Quarterly Pension Investment Report*, fourth quarter 1990 (Washington, DC: Employee Benefit Research Institute, 1991); U.S. Federal Reserve Board, Flow of Funds accounts; and EBRI tabulations based on American Council of Life Insurance data.
[a]Uses 1989 data for 1990 for private insured funds.

Chart 1
Pension Fund Holdings of Selected Financial Assets in the U.S. Economy, 1950–1990



Source: Employee Benefit Research Institute, *Quarterly Pension Investment Report*, fourth quarter 1990 (Washington, DC: Employee Benefit Research Institute, 1991).

plan assets have grown from 29.9 percent to 32.7 percent. Single-employer defined benefit plan assets have decreased from 60.9 percent to 56.6 percent of total private trusteed plan assets.

These pension asset figures show that defined benefit plans continue to be an important mechanism for retirement savings. Additionally, data on participants and number of plans indicate that the overall defined benefit system has remained strong, while the defined contribution system has grown. Among private plans, in 1975, 32 percent of the 340,171 plans (108,855 plans) and 71 percent of the 38 million participants (27 million) were defined benefit. In 1987, 27 percent of the 872,185 plans (235,490 plans) and 45 percent of the 64 million participants (29 million) were private defined benefit, according to unpublished data from the U.S. Department of Labor.

Asset Allocation

The asset allocation of pension plan funds differs by plan type. In aggregate, private trusteed pension plans have 37.4 percent of assets directly invested (not including those held through bank-pooled funds) in publicly traded equities. Single-employer defined benefit plans have 36.5 percent invested directly in equities, single-employer defined contribution plans (including profit-sharing and employee stock ownership plans) have 42.1 percent,[4] and multiemployer plans have 27.9 percent. Multiemployer plans have 42.6 percent of their assets invested in bonds, compared with 17.6 percent for single-employer defined benefit plans and 8.1 percent for single-employer defined contribution plans (Employee Benefit Research Institute, 1991).

Investment Income

During the past eight years, private trusteed single-employer defined benefit plans have generated an annual average of $40 billion in net capital gains on an average of $560 billion of assets, while private trusteed single-employer defined contribution plans have generated an annual average of $22 billion in net capital gains on an average of $342 billion of assets. In 1990, defined benefit plans experienced net capital losses of $10 billion on $765 billion in assets owned at the end of 1989; defined contribution plans experienced net capital losses of $12 billion on $466 billion in assets owned at the end of 1989.

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It is estimated that asset allocation decisions account for between 75 percent and 80 percent of the overall return on assets.

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Overall, single-employer defined benefit plans' capital gains are more volatile than those of single-employer defined contribution plans. In terms of dividend and interest income, single-employer defined benefit plans also have more volatile returns than defined contribution plans, but overall these earnings are more stable than capital gains earnings.

[4]Often the terms of defined contribution plans may require that a portion of the contribution be held in employer stock; this requirement tends to inflate the reported numbers for equity.

Asset Allocation Decisions by Plan Type

The plan sponsor bears the investment risk in a defined benefit plan and makes the asset allocation decisions—those decisions concerning how much of the portfolio to put in stock, bonds, or other assets. Analysts estimate that this decision has a much greater impact on portfolios' long-term return than decisions concerning which specific securities to buy or sell within each asset class. It is estimated that asset allocation decisions account for between 75 percent and 80 percent of the overall return on assets. Because the defined benefit plan pension promise is long term and complex, several different theories are considered in making investment decisions.[5]

One theory states that because the value of pension liabilities depends on current interest rates, a plan sponsor must protect against unexpected changes in interest rates. Using this logic, some experts conclude that the optimal investment strategy is to invest nearly all assets in bonds. This way, if interest rates decrease unexpectedly, thus increasing the present value of liabilities,[6] the value of a properly designed portfolio of bond holdings (plan assets) would increase, keeping asset growth consistent with the growth in liabilities. Any assets over the liabilities' value could be invested in other assets.

Another theory used by investment experts contends that pension funds' liabilities are difficult to accurately estimate. Future changes in the laws and regulations (or even accounting changes) could alter the environment

[5]Cash balance plans have similar considerations. A cash balance plan is a defined benefit plan that looks much like a money purchase defined contribution plan. Each participant has an account that is credited with a dollar amount resembling an employer contribution and with interest often based on an index. Each account expresses the current lump-sum value of the participant's accrued benefit, although it is merely a bookkeeping device. On termination of employment, the amount of the lump-sum distribution is equal to the participant's vested account balance.

[6]If post-retirement cost-of-living adjustments are included in this analysis, the impact of the change in interest rates on the present value of liabilities would be mitigated to some extent.

in which pension funds invest. Because of this uncertainty, a plan sponsor should work toward a diversified portfolio consistent with fiduciary responsibilities to achieve the highest return prudently possible. This method, some experts contend, would most likely provide the plan sponsor with sufficient assets to pay benefits when due.

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Total GIC assets in defined contribution pension plans are currently estimated at between $150 billion and $200 billion.

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Some plans may also view their work force demographics as the driving factor in structuring their investment portfolios. Employers who have a larger than average proportion of retirees to current workers, or expect such a situation soon, may be more likely to invest in lower risk, more liquid investments—often short-term bonds. This decision allows a plan sponsor to sell nonbond investments, locking in performance thus far achieved in other markets, and create a more predictable stream of income from which to pay benefits. On the other hand, employers with a larger than average proportion of current workers to retirees may invest in equities and other nonfixed income investments in an attempt to achieve the highest return possible over the longer investment time.

Finally, other plan sponsors look more toward the plan's funded status and goals. Using this basis, the plan sponsor can prepare for expected changes in accounting liabilities and select investments that would obtain and maintain the funded goals. Accounting liabilities are listed on a company's financial statements and differ from the financial liabilities that are reported to the federal government and on which PBGC bases premium payments.

Asset allocation decisions for defined contribution plans are often made by plan participants. When given the choice, defined contribution plan participants generally choose the more conservative of available investments. GICs and BICs are fairly popular investment choices. These provide a fixed return on investments through insurance companies (GICs) or banks (BICs). The return on GICs, and perhaps the principal as well, may not be received if the insurance company fails, depending on the state's insurance laws; BICs are currently backed by the Federal Deposit Insurance Corporation (FDIC).

The asset allocation of participant-directed 401(k) plans demonstrates the conservative investment nature of defined contribution plan participants. **Currently, GICs command 65 percent of the average asset allocation, and bonds account for nearly 45 percent**[7] (Buck Consultants, 1990 and Massachusetts Mutual Life Insurance Company, 1990). Total GIC assets in defined contribution pension plans are currently estimated at between $150 billion and $200 billion. Currently, BIC assets with 401(k) plans are estimated at $30 billion.

Differences and Preferences—Differences in the asset allocation of defined benefit and defined contribution plans may occur because defined contribution plan assets are generally allocated by individuals and defined benefit plan assets are generally allocated by sophisticated investment managers hired by plan sponsors. Individuals and investment managers may differ in their tolerance of risk, experience with and knowledge of

[7]Average asset allocation can exceed 100 percent because it is figured by averaging the allocation of each participant (in all plans surveyed) to each investment option that is offered. Therefore, if there were two participants and two investment options (a and b) in one plan, the allocation for each participant could be 60/40 and 80/20. In a separate plan, a participant may have two investment options (a and c) with allocation of 70/30. This leads to the average allocation to option "a" being 70 percent ((60+80+70)/3) and the average allocation to option "b" being 30 percent ((40+20)/2) and to option "c" being 30 percent (30/1) where 70 + 30 + 30 is 130 percent.

investment markets, and the overall size of their investments. A time element also influences investment decisions for defined contribution plans—participants may invest their money differently (more conservatively) if the time they have left before retiring or terminating employment is relatively short.

Respondents to an EBRI/Gallup public opinion survey conducted in April 1990 expressed a preference for making their own investment decisions and said they were more inclined to choose low risk/low return investments (Employee Benefit Research Institute/The Gallup Organization, 1990). Fifty-eight percent of the respondents said they would prefer to make their own investment decisions regarding their retirement plan, while 35 percent said they would rather let the employer make such decisions. If participants were given the choice in investment decisions and the return would directly affect the amount of their retirement benefits (as in a defined contribution plan), 70 percent said they preferred low risk/low return investments, while 17 percent said they preferred high risk/high return (12 percent did not know, and 1 percent did not answer). Respondents with annual incomes of $75,000 or more and those aged 18–34 were more likely to prefer high risk/high return investments.

However, if the employer absorbed any investment gains or losses from investments and the amount of retirement benefits were not affected (as in a defined benefit plan), 47 percent of the survey respondents said that the investment choice would not matter to them; 28 percent still preferred low risk/low return investments; and 18 percent preferred high risk/high return investments. The remaining portion said they didn't know what type of investment they would prefer or didn't answer.

By changing the way pensions operate, legislation may affect the risk/return tradeoffs investors are willing to take and the final benefit retirees receive. While the federal government has a long-standing interest in pension issues, its interest in pension investment issues has increased as pension assets have grown and subsequently expanded their role in the U.S. economy.

◆ Public Policy Environment

ERISA (for private plans) and standards set by governments for public pension funds are intended to ensure that workers receive their promised pension benefits in retirement. The federal government maintains its own pension plan for federal employees that includes a defined benefit and defined contribution plan. State and local governments also generally provide pensions (mostly defined benefit plans) and are largely responsible for pension fund investment.

Public policy involvement in private pension fund investment has evolved from relatively few regulations before the enactment of ERISA to many regulations today. Additionally, some government officials encourage the use of pension funds for social improvements in the community or state in which the plan participants work and/or live.

ERISA guidelines include a requirement that private pension plan sponsors make a minimum contribution to the plan to retain the tax deductibility of the contributions. The minimum contribution for a private defined benefit plan is determined according to the benefits earned by the participants in a given year; in a private defined contribution plan, the minimum contribution is whatever amount the plan specifies for that year.

While various public policy issues relate more specifically to either defined benefit or defined contribution plans, ERISA's prudence standard is an important issue for all private pension plans.

Prudence

The interpretation of prudence in ERISA's definition of fiduciary responsibility warrants examination. If a pension fund's investment goal is the least risk (least volatility of returns), the portfolio should consist totally of short-term U.S. government securities. However, if some level of risk can be undertaken in pursuit of higher returns, other factors must come into consideration. **Modern portfolio theory holds that for every group of assets and level of risk there is an expected maximum return. According to this theory, a portfolio manager should invest in a combination of assets to achieve the maximum expected return for a given level of risk.**

Depending on the types of securities considered, a plan sponsor or investment manager may judge some assets as inappropriate. When this happens, the plan sponsor or investment manager is judging the risk level and expected return of a single security as opposed to the risk/return tradeoff of the whole portfolio, as recommended by modern portfolio theory. For example, junk bonds are viewed as having a very high potential return for a particularly high risk level that results from a relatively high risk that the issuing company may go bankrupt. These bonds are issued by newer companies or by those with questionable credit strength and are not traded on the major exchanges. Some investors argue that any junk security may have too high a risk level for pension investment despite the potential return.

The prudence standard in pension investments differs for defined contribution and defined benefit plans. In defined contribution plans, with individuals making the investment decisions, the prudence standard relates to the choices plan participants are given. In defined benefit plans, in which the plan sponsor or investment manager makes the investment decisions, there are several considerations involving public policy issues, some of which are discussed here. (The ERISA prudence standard does not apply to public plans, controlled by the sponsoring government, because they have their own standards for investments.)

Private Defined Contribution Plans

According to ERISA, defined contribution plan participants should have a wide range of investment choices. The U.S. Department of Labor (DOL) has released proposed regulations for pension plans in which participants direct investment decisions under ERISA. The proposed regulations "outline the conditions that must be met for plan fiduciaries to be relieved of liability for investment decisions made by participants." The regulations, however, do not provide black and white tests because they allow for alternative interpretations. Therefore, even a full attempt to comply will not provide guaranteed protection against participant law suits.

These proposed regulations (referred to as 404(c) for the section of ERISA they address) require that participants be offered a "broad range of investments."[8] They state that participants should be offered the opportunity to materially affect their accounts' potential return and degree of investment risk. Also, participants should be able to choose from at least three investment categories and diversify their accounts to minimize the risk of large losses (considering the nature of the investment options offered and the accounts' size). According to the proposed regulations, participants should also be allowed to make transfers among investment options at least once in each three-month period.[9]

GICs and BICs —**GICs and BICs are increasingly popular among defined contribution plan participants, probably because of the perception of the guarantees to principal and return, which appeal to these participants' conservative natures.**

Insurance companies use funds placed in GICs to make other investments, and these investments may decline in value. The security of GICs has recently been questioned amid the publicity surrounding the Executive Life Insurance Company. The company's GICs

[8]Investment options or combinations of investment options other than those specified in the proposed regulations can be offered and may still prove to relieve the plan sponsor of fiduciary liability for investment losses.
[9]Transfers may need to be allowed more frequently, depending on the volatility of the investments.

were largely backed by junk bonds. When the company was taken over by the California Insurance Commissioner, partly because of the fall in the junk bond market, the value of the GICs was equal to the value of the assets including junk bonds—which was little.[10] Several companies whose pension funds purchased GICs from Executive Life, such as Georgia-Pacific Corporation, have expressed a willingness to purchase Executive Life GICs from their own plans to prevent losses or delays in benefit payments. An employer's purchase of a GIC from its own plan requires DOL approval because ERISA prohibits sales transactions between plans and certain related persons, including sponsoring employers. DOL has said it will expedite its consideration of individual exemption requests to permit such transactions.

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Under ERISA, not more than 10 percent of private defined benefit plan assets can be invested in a plan sponsor's securities.

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BICs have recently received attention as part of the Bush administration's proposal to reform the banking industry. Because BICs are insured through the FDIC on a "pass-through" basis, each individual participant in a pension and profit-sharing plan has up to $100,000 of coverage. The Bush administration's proposal would have eliminated coverage for "window" BICs, where a window period is provided during which deposits may be made at a contractually guaranteed interest rate. At publication time, the legislation had been amended to totally eliminate pass-through coverage for BICs. The bill must still overcome major hurdles before it is passed, but FDIC coverage of BICs is certain to be widely debated.

Private Defined Benefit Plans

Under ERISA, not more than 10 percent of private defined benefit plan assets can be invested in a plan sponsor's securities. Because the participant's current income is fully dependent on a company's vitality, it was thought that future pension income should not also be overly dependent on the company's fortunes. This restriction does not apply to employee stock ownership plans (ESOPs), in which nearly all of the plan's investments are in employer stock. ESOPs are intended to focus employees' efforts on a firm's performance and have been shown to increase worker productivity and motivation (U.S. General Accounting Office, 1986, and The ESOP Association, 1989). However, the inherent dependence of the participants' future income on a single company may expose them to greater risk.

Another issue is joint trusteeship—allowing pension plan participants to have a voice in investment decisions. Public policy questions focus on whether participants should have such a say and to what extent. Other recent issues center on investment in firms undergoing mergers and acquisitions, the voting of proxies on stock owned by the pension plan, and how much insurance the federal government should provide for defined benefit pension plans.

Joint Trusteeship —**Currently, most multiemployer pension plan and public plan investments are controlled by a board of representatives from the sponsoring companies and union or plan participants.** In 1988, Rep. Peter Visclosky (D-IN) introduced legislation that would have required all private pension funds to implement such an investment decision-making process.

Visclosky's initiative did not pass, although it did spark an intense debate on the control and ownership of pension assets. Critics of the proposal pointed to the risk-averse posture of many multiemployer funds, which typically leads to lower investment returns (with a

[10] The parent company, First Executive Corporation, filed Chapter 11 bankruptcy.

higher percentage of assets invested in bonds, as discussed earlier), and also to the fact that the liabilities were solely the responsibility of the defined benefit plan sponsor. Supporters of the proposal said participants should have a say in how their pension money is invested and contend that plan sponsors may be making overly risky investments.

Mergers and Acquisitions—Those making pension investment decisions need to determine the plan's involvement in many types of investments, including investments in firms involved in mergers and acquisitions. Pension involvement in mergers and acquisitions has created concern about the use of debt for these restructurings and the extent of pension exposure to this debt. **In the 1980s, certain non-ERISA regulated public plans invested up to 10 percent of their money in leveraged buyouts (Bartlett, 1991). ERISA-regulated private pensions apparently invested much less in this type of debt.**

Corporate Governance—The increased ownership of the equity market by institutional investors, including pensions, has enlarged the role of these investors in proxy voting. Corporate governance relates to the proxy votes on shareholder proposals of the stock owned by the pension. **As more stock is owned by pension plans, the plans' potential for control over company management increases.**

Often the fiduciary named in the pension plan documents votes the proxies or designates someone else, such as an investment manager, to do so. In pension plans, the participants' future income is partially, although indirectly, dependent on stocks. The question then becomes, how much control over these stocks should participants have? In other words, because the pension is maintained for the participants' benefit and the pension trust owns stocks, to what extent should the participants have a say in how the proxies of these stocks are voted or on the management of the companies whose stock the pension owns? Under joint trusteeship, participants would have a direct influence on proxy voting.

Some pensions—mostly non-ERISA regulated public pension plans—are becoming directly involved in corporate governance issues. These plans have recently challenged corporate managements on issues related to executive compensation, poor performance, and board appointments. For example, California Public Employees' Retirement System (CalPERS) has recently been working to place independent members on the boards of directors of the companies in which they have a large stake. CalPERS asserts that its holdings are too large to simply sell stocks that are underperforming. Earlier this year, CalPERS reached an agreement with General Motors Corporation (GM) whereby GM will change its bylaws to mandate that a majority of the board be independent of the company, although currently about two-thirds of GM's board is independent.

However, the operation of CalPERS itself has recently been brought into question. Governor Pete Wilson of California has proposed legislation that would reduce the current 13 member CalPERS board to 9 members, with 5 positions to be appointed by the governor, up from the current 4. This action is being watched nationwide as an indicator of future public pension plan activity.

Most private plan sponsors have not felt it appropriate under ERISA for their investment managers to become this involved in corporate management. They have generally limited their corporate governance role to voting proxies or "voting with their feet" by selling the securities, rarely initiating shareholder proposals or asking for a seat on the board of directors.

There are two theories concerning why private pensions don't become involved in these issues: the private pension system is closed or this is proper adherence to ERISA. Some consider this lack of strong shareholder action to be the result of a type of closed system among private pensions. In other words, company A's private pension plan may become involved in the management of another company whose stock company A's plan owns. This could cause the latter company's pension plan to in turn become involved in company A's management. If other investors own either company's stock, more shareholder issues may be proposed and both companies may operate more efficiently. Thus, relative inaction on shareholder initiatives may lead to more inefficient companies.

Others interpret the lack of strong shareholder action as appropriate adherence to ERISA. ERISA's requirements that a plan be operated in the best interests of the beneficiaries and participants is difficult to interpret in terms of shareholder issues. Therefore, these people think it is more appropriate to sell the stock.

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According to the U.S. General Accounting Office, 3 to 4 million retirees and surviving dependents of retirees currently receive annuities purchased by their defined benefit pension plans. However, millions more current participants will receive annuities in the future—as a result of purchases by their defined benefit pension plans.

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PBGC—The control of pension plan investments will ultimately be reflected in a plan's overall earnings and benefits paid. However, even with good pension plan investment performance, companies may face overall financial distress and be forced to go out of business, automatically terminating the plan. To avoid having unfulfilled pension promises, the federal government established the PBGC through ERISA, which ensures that pension participants receive benefits (subject to PBGC benefit payment caps) from terminated defined benefit plans that do not have sufficient funds to pay promised benefits.

PBGC is funded through premiums from private defined benefit plans. The premium for single-employer plans includes a flat rate of $19 per participant plus an additional variable premium of $9 per $1,000 of unfunded vested benefits, up to a maximum variable premium of $53 per participant. The maximum total premium (flat fee plus variable fee) is $72 per participant.

The PBGC's exposure is determined by a plan's financial status, which reflects the plan sponsor's contributions and the plan's investment performance. The better the performance of a plan's investments, the lower the amount PBGC will have to contribute to cover a shortfall in case of plan termination.

As part of the plan termination process, a defined benefit plan administrator is required to purchase irrevocable annuity contracts from an insurance company for all plan participants and beneficiaries except for those who elect a lump-sum distribution. However, the PBGC has stated that it does not guarantee these annuity contracts. Its guarantee applies only to pension plan terminations, not to other events such as the failure of an insurance company from which a pension plan purchased annuities. PBGC does not collect premiums from insurance companies. Consequently, if an insurance company defaults on its annuities because of a business failure, pension recipients holding that company's annuities may depend solely on state insurance guarantee laws to receive their benefits.

According to the U.S. General Accounting Office, 3 to 4 million retirees and surviving dependents of retirees currently receive payments from annuities purchased by their defined benefit pension plans. However, millions more current participants will receive annuities in the future—as a result of purchases by their defined benefit pension plans. Currently two states—Louisiana and New Jersey—and the District of Columbia do not have provisions for guaranteeing insurance annuities. Even in those states with guarantee laws, the formulas for determining guarantees may produce lower payments than those used by the PBGC for pension plans.

The National Organization of Life and Health Insurance Guaranty Associations states that the number of insurance company failures increased during the second half of the 1980s. Most of these failures were small companies and involved comparatively small losses. However, the recent conservatorship of Executive Life Insurance Company in California has brought new attention to this issue because of the large number of beneficiaries who will be affected. According to the California Insurance Commissioner's Office annuitants are currently receiving 70 percent of the assigned value of their annuities. Exactly what portion of the GICs purchased from Executive Life will be paid has not yet been determined.

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In 1990, the top 200 defined benefit pension funds (private and public) allocated $50.1 billion to real estate equity (4.4 percent of total assets).

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The situation of Executive Life has raised many questions about fiduciary responsibilities associated with the purchase of annuity contracts. DOL filed an advance notice of proposed rulemaking June 19 concerning the purchase of annuities. The notice invites public comment on whether, and to what extent, it is appropriate for the federal government to establish minimum standards under ERISA. PBGC Executive Director Jim Lockhart said at a June 20 hearing before the Senate Labor and Human Resources Subcommittee on Labor that PBGC will issue a revised regulation on standard terminations that will require plan administrators to notify the PBGC and plan participants of the identity of the annuity company it proposes to use, prior to finalization of the purchase. Subcommittee Chairman Howard Metzenbaum (D-OH) asked PBGC to issue an "emergency regulation" that would also require plan sponsors to notify participants that these annuities would not be federally guaranteed.

Investment Control in Public Plans

Public plans are not subject to most of ERISA's requirements. Public pension fund investments are largely governed by the sponsoring government (local, state, or federal). The assets may change in the plan's portfolio with oversight primarily from the sponsoring government itself.

Some government plans have adopted a fiduciary standard similar to ERISA's, while others have approved lists of investment options and/or investment limitations and restrictions. A 1990 survey by the National Council of State Legislators covering 77 public pensions in 40 states and Puerto Rico found that 52 percent of these plans had state laws limiting equity investment to maximums varying from 0 percent to 75 percent. Forty percent of the plans restricted or prohibited investment in foreign securities (Snell and Wolfe, 1990).

Asset allocation decisions are not restricted to stocks and bonds. Other securities and asset classes have developed, and new ones are continually emerging, including the use of employer stocks in defined contribution plans. As mentioned above, ERISA guidelines do not directly prohibit any investment for private pension funds except those deemed imprudent (not in the best interest of participants and beneficiaries). Public plans, however, may have other restrictions.

◆ Alternative Investments and Products

Alternative investments include private placements, oil and gas, junk bonds, and commodities. These investments offer the buyers higher potential return with less resale ability (lower liquidity) and, consequently, more risk. These investments can be used by investors, depending on their objectives. Their use has led to the development of customized indices. Again, the risk and return tradeoff applies to each of these investments.

Real Estate

Real estate is a growing area for pension investments, largely as a means of diversification from stock and bond investments. In 1990, the top 200 defined benefit pension funds (private and public) allocated $50.1 billion to real estate equity (4.4 percent of total assets), a 15 percent increase from the previous year and a 42 percent increase from 1988. The top 200 defined contribution plans (private and public) allocated $5 billion to real estate equity (1.8 percent of total assets), an increase from $3.7 billion the previous year (Crain Communications, 1991). A Greenwich Associates survey of 1,453 corporate plans found that 43 percent of corporate funds used equity real estate in 1990, while an additional 3 percent plan to acquire real estate in the future. Among a survey of 375 public plans, 52 percent use equity real estate, and an additional 4 percent plan to use these investments in the future (Greenwich Associates, 1991).

Corporate Private Placements

A private placement is the direct offering of investment instruments to insurance companies or pension funds with limited use of the Securities and Exchange Commission (SEC) or the organized exchanges. Corporate private placements, which usually consist of fixed income securities, are becoming more popular with pension funds. In April 1990, the SEC issued rule 144A, which exempts institutions from registration requirements for the sale of stocks and bonds to an institution already holding at least $100 million in securities. Individual investors are categorically shut out of this market. Rule 144A thus allows for a more active and liquid market in private placements.

The value of private placement deals decreased from a high of $165 billion in 1989 to $120.6 billion in 1990 (about 5 percent of assets). Several factors are credited with contributing to this decline. The fall in the junk bond market was a major factor, causing a decrease in the assets of acquisition-related private placements. Between 1989 and 1990, these placements dropped from $23 billion to $13 billion. The market value of employee stock ownership-related private placements dropped $12 billion. Higher credit standards also contributed to the drop in the private placement market (Maher, 1991).

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Activity in international investments, including equities and bonds, is also increasing as pension plan sponsors begin to look for investment opportunities in markets outside the United States.

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Despite a decline in the size of the market, some pension funds continue to find what they consider good investments in private placements. CalPERS recently decided to allocate approximately $2 billion (about 4 percent) of its assets to private placements. Pension fund managers may see this as a good time to increase investments in private placements because insurance companies and other traditional funding providers are lowering their investments in these instruments. This retrenchment is seen as a reaction to the fall in the junk bond market and an attempt to back away from less traditional investments due to unpredictable markets (Bavaria, 1991).

International Investments

Activity in international investments, including equities and bonds, is also increasing as pension plan sponsors begin to look for investment opportunities in markets outside the United States. According to several surveys, international investments account for about 16 percent of defined benefit assets and 3 percent of defined contribution assets—about 6 percent of all pension assets. The total amount invested internationally is estimated to be approximately $50 billion (Price, 1991b; Greenwich Associates, 1991; Crain Communications, 1991). Pensions are also involved in global investments (using international and U.S. markets together to achieve the highest return), however, estimates of their use are not currently available.

Among the 200 largest defined benefit pension plans, $45.7 billion was allocated to international securities in 1990, about 4 percent of total assets. Seventy-six percent of these international securities were stocks ($34.7 billion), with the remaining 24 percent in fixed income and other securities. Defined benefit plans' allocation to international securities increased 16 percent from the previous year (Crain Communications, 1991).

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Derivatives include instruments such as futures and options. Pensions use derivatives to change or establish a market position more efficiently.

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The 200 largest defined contribution plans allocated $5.4 billion of assets (about 2 percent) to international securities, an increase from $2.4 billion in the previous year (Crain Communications, 1991).

This allocation is expected to increase. Two surveys of approximately 1,400 corporate funds show that the percentage of private plans indicating an interest in using international stocks increased from 10 percent in 1989 to 13 percent in 1990. Sixteen percent of public plans expect to start using international stocks in the future (Greenwich Associates, 1991).

In the first 11 months of 1990, institutional investors (including pensions, endowments, and foundations) committed $7.8 billion to international investments, a 23 percent increase over the 1989 total of $6.3 billion (Price, 1991a).

Derivatives

Derivatives include instruments such as futures and options. Pensions use derivatives to change or establish a market position[12] more efficiently, that is, with fewer administrative requirements, lower fees and margins, and in less time than they could do in the securities market.

Futures are an agreement to buy or sell a specific amount of a commodity or financial instrument at a particular price on a stipulated future date. Pension funds most often use these financial instruments to establish or offset (eliminate the risk of) a position previously established. Pensions invest less than $1 billion (less than one percent of assets) in futures.

Another type of derivative is an option—a right to buy or sell a specific amount of a commodity, financial instrument, or security at a particular price on a stipulated future date. Again, this type of financial instrument assists pension funds and other investors to establish a market position quickly and efficiently.

Commodity Futures

Commodity futures are a growing portion of pension investments. Some studies have shown that commodity futures are an effective hedge against inflation (reduce inflation risk) because their returns have negative correlation with inflation—as inflation increases, the commodity return decreases and the

[12]A market position is the amount of each type of security owned. In other words, to enter the stock market (buy stocks) is to establish a market position. To increase or decrease the total amount of stock one owns is to change one's market position.

effect of inflation on the portfolio is diminished. Studies also have shown a negative correlation between commodity futures and stocks as well as between commodity futures and bonds. This type of correlation could make commodity futures a good addition to many portfolios because of their diversification value. A diversified portfolio spreads risk among many investments and is not exposed to large risks in any one market or security. With a negative correlation, when stocks or bond returns decrease, it is likely that commodity returns would increase, offsetting some of the losses experienced in the other markets.

Securities Lending

Another area in which pension funds are showing interest is securities lending. A pension fund holding a security (such as a stock or bond) lends that security to another organization or institution. The borrowing organization may want the security to support derivative trading strategies, to offset short positions or to cover fails (securities transactions that cannot settle on the agreed upon settlement date). In a derivative trading strategy, the investor buys a derivative instrument and sells the underlying stock to take advantage of the spread between the two instruments or as a hedging strategy. The investor borrows the security needed to make delivery of the stock. For example, a trader may buy a convertible bond and sell the related stock, borrowing to make delivery of the stock sold. Then, on the date on which the bond can be converted to stock, the trader converts the bond and uses this stock to return the borrowed securities. If a pension fund has the security needed by the trader, the pension fund may find it advantageous to lend it and in this way receive a steady stream of income; the pension fund continues to earn all other income from holding the security. This type of program leads to a larger return on securities held, particularly for international stocks where demand exceeds supply.

As pensions enter these other markets and alternative investments, plan sponsors will want mechanisms to determine how well these investments perform. For investments in stocks, plan sponsors generally look at the Standard & Poor's 500 (S&P 500) to judge performance. This type of index is not appropriate for alternative investments. Consequently, some pension plan sponsors are interested in developing a customized index tailored to their use of these investments.

Customized Index

Customized index information is a performance measurement used by pensions and other portfolio investors. A customized index is one that is structured as closely as possible to the types of investments being made with the portfolio. A plan sponsor or investment manager would need to carefully assess the intention and direction of the planned investments, looking at the long term to extract the largest benefit from a customized index. If used only for the short term, the index is of limited value because there is no norm or long-term index average by which to judge the portfolio's performance.

A customized index may include securities such as stocks, bonds, commodities, futures, and other securities. Even within each of these categories there could be various combinations such as growth stocks or large capitalization stocks, long-term government bonds, or short-term corporate bonds. This type of index would help plan sponsors and investment managers judge how effectively investment policy's goals are being achieved and which mechanisms are most effective.

◆ Conclusion

Pension plans are invested differently, depending on their type, demographic considerations, and the individual or professional investor's risk aversion. Private defined benefit plan funds are allocated among investment alternatives by professional investment personnel; private defined contribution plans are allocated among equity, bonds, and other investments generally by individuals; public plans are allocated by a combination of both professional investors and individuals, although restrictions in overall investment choices may be imposed by the sponsoring government.

The passage of ERISA and the increasing diversity of the investment community have significantly changed the environment in which pension funds invest. Public policy issues may increase in complexity with the growth of new investment instruments and increased participation of pension funds in international markets. A continuing shift to defined contribution plans as supplements to and/or replacements for defined benefit plans would be expected to change pensions' overall investments. This shift also encourages the development of new investment products aimed more at the individual investor. Consequently, this shift alters public policy concerns and reignites discussions on the security of retirement income.

While Congress has heavily regulated private pension plans through the framework of ERISA, it has chosen to limit the regulation of public pension plans. In the past, public plans were often very conservative and sometimes viewed stocks as too risky for pension investment. However, in the 1980s, some public plans took more risks than some private pension plans.

Private pension funds are legally required to be invested prudently. Prudence may vary between private and public pensions and between defined benefit and defined contribution plans. The choices made between risk and return by plan sponsors and investment managers of defined benefit plans and by plan participants in defined contribution plans will affect benefits received in retirement.

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◆ References

Andrews, Emily S. *Pension Policy and Small Employers: At What Price Coverage?* Washington, DC: Employee Benefit Research Institute, 1989.

________. "Pension Portability and What It Can Do for Retirement Income: A Simulation Approach." *EBRI Issue Brief* no. 65 (Employee Benefit Research Institute, April 1987).

________. *Retirement Savings and Lump-Sum Distributions*. Working Paper P-53. Washington, DC: Employee Benefit Research Institute, 1990.

Atkins, G. Lawrence. *Spend It or Save It? Pension Lump-Sum Distribution and Tax Reform*. Washington, DC: Employee Benefit Research Institute, 1986.

Bartlett, Sarah. *The Money Machine: How KKR Manufactured Power and Profits*. New York: NY: Warner Books, 1991.

Bavaria, Steven. "Pension and Mutual Funds Enter the Private Market." *Investment Dealers' Digest* (22 April 1991): 24–26.

Buck Consultants. *Current 401(k) Plan Practices: A Survey Report*. Secaucus, NJ: Buck Consultants, 1990.

Crain Communications, Inc. *Pensions & Investments*. "Special Report: Top 1,000 Funds" (21 January 1991): 17–48.

Durgin, Hillary. "Participants May Sue Over GICs, Annuities." *Pensions & Investments* (29 April 1991): 1.

Employee Benefit Research Institute/The Gallup Organization. *Public Attitudes on Retirement Benefits 1990*. EBRI Report no. G-11. Washington, DC: Employee Benefit Research Institute, 1990.

________. *Quarterly Pension Investment Report*, fourth quarter 1990. Washington, DC: Employee Benefit Research Institute, 1991.

The ESOP Association. *ESOP Survey 1989*. Washington, DC: The ESOP Association, 1989.

Greenwich Associates. *Going Global, Good Going: Investment Management 1991 Survey*. Greenwich, CT: Greenwich Associates, 1991.

Ippolito, Richard A. *Pensions, Economics and Public Policy*. Homewood, IL: Dow Jones-Irwin, 1986.

Maher, Philip. "About Face: The Private Market Saw Its First Drop in Volume in a Decade Last Year, But It Is Surviving the Recession Well." *Investment Dealers' Digest* (11 March 1991): 16–23.

Massachusetts Mutual Life Insurance Company. *401(k) Survey Report 1990*. Springfield, MA: Massachusetts

Mutual Life Insurance Company, 1991.
McArdle, Frank. “The Tax Treatment of Pension and Capital Accumulation Plans.” *EBRI Issue Brief* no. 82 (Employee Benefit Research Institute, September 1988).
Piacentini, Joseph. “Preservation of Pension Benefits.” *EBRI Issue Brief* no. 98 (Employee Benefit Research Institute, January 1990).
Price, Margaret. “Funds Pour $7.8 Billion Overseas.” *Pensions & Investments* (7 January 1991a): 1, 23.
________. “Romance Continues with Foreign Markets.” *Pensions & Investments* (21 January 1991b): 17, 70.
Salisbury, Dallas L. “Individual Saving for Retirement—The 401(k) and IRA Experience.” *EBRI Issue Brief* no. 95 (Employee Benefit Research Institute, October 1989).
Snell, Ronald K., and Susan Wolfe. *Public Pension Funds' Investment Practices: Results of a Survey Conducted by the National Conference of State Legislatures and the National Association of Legislative Fiscal Officers*. Legislative Finance Paper #72. Denver, CO: National Conference of State Legislatures, 1990.
U.S. General Accounting Office. *Employee Stock Ownership Plans: Benefits and Costs of Tax Incentives for Broadening Stock Ownership*. Washington, DC: U.S. General Accounting Office, 1986.