Some analysts believe that more pension fund managers will change their asset mix over the next few years.

Pension Investments and Financial Markets

Total assets of private and state and local government pension funds now exceed $2 trillion and provide a major source of income for approximately 15 million retired workers. Rapid and continuing changes in the investment environment directly affect pension investment practices—an area in which plan sponsors, participants, and federal regulatory agencies all have a substantial interest.

Although aggregate pension fund gains during the first three quarters of 1987 exceeded the losses incurred during the fourth quarter, the October stock market decline highlighted the risks associated with various pension fund investment strategies, such as portfolio insurance, and raised questions about the appropriate level of equity exposure for pension funds. There is also growing concern that the forthcoming Financial Accounting Standards Board (FASB) balance sheet disclosure requirements for retiree medical liabilities might depress corporate stock prices, adversely affecting pension portfolio values.

Other changes that could affect pension fund investment include the adoption of Financial Accounting Standard 87 (FAS 87), which requires that pension actuaries use a long-term market interest rate to determine the value of pension liabilities for disclosure on companies’ financial statements and include unfunded pension liabilities on corporate balance sheets. These provisions, together with new funding rules imposed by the Pension Protection Act (PPA) of 1987, provide incentives for plan sponsors to maintain asset/liability ratios between 100 and 150 percent, and could encourage plan sponsors to seek ways to stabilize funded ratios.

Greenwich Associates reports that in 1987, 19 percent of large corporate plan sponsors had responded to FAS 87 by changing their plan asset mix. Some analysts believe that—to reduce volatility—more pension fund managers will change their asset mix over the next few years, moving out of active equity portfolios and into index funds, fixed income funds, and dedicated and immunized bond portfolios.
Introduction

By the end of 1987, total assets of private and state and local government pension funds in the United States reached $2.1 trillion. These funds provide a major source of income for a growing population of retired workers, now numbering about 15 million. Plan sponsors, participants, and federal regulatory agencies all have an interest in how pension funds are invested. Better investment returns can reduce a firm’s pension costs and provide greater retirement income security for plan participants.

This Issue Brief documents the growth and performance of pension fund assets and discusses trends in pension asset mix. It includes information on private trusted pension funds, private insured pension reserves, and state and local government pensions.1

The stock market decline of October 1987 highlighted questions about the appropriate level of equity exposure for pension funds and the effectiveness of portfolio insurance.

The stock market decline of October 1987, which followed 5 years of bull markets, increased concern about the risks associated with various pension fund investment strategies. For example, the decline highlighted questions about the appropriate level of equity exposure for pension funds and the effectiveness of portfolio insurance. This Issue Brief estimates the effect of the market collapse on pension funds and on the behavior of funds during the fourth quarter of 1987.

Recent tightening of private pension funding laws and accounting standards is creating controversy and encouraging some reevaluation of appropriate investment strategies. This Issue Brief examines these regulatory changes and analyzes some of their implications. Future Issue Briefs will treat these subjects in detail.

Corporate, Participant, and Regulatory Interests

Both plan sponsors and plan participants have financial interests in the investment practices of pension funds. In a defined benefit plan, the company promises workers specific benefits on retirement. When the rate of return achieved by the pension fund is lower than expected, the company generally must meet its pension obligations by increasing its contributions. Conversely, higher returns can reduce pension expense.

Sponsors’ financial interests in the investment results of defined contribution plans are less direct. Under these plans, a company is obligated to provide specified contributions rather than specified benefits. Therefore, pension expense does not vary with investment results. However, the benefit level provided to plan participants does depend on investment returns, and participants may hold the employer morally responsible for fund performance. Plan sponsors hire money managers, and, in plans that allow participants to choose among alternative investments, sponsors determine what alternatives are available. If performance is poor, participants may ask for higher wages or larger employer pension contributions to compensate for perceived shortfalls in expected retirement benefits, and their morale may suffer. Retirees may seek increased benefits.

Favorable defined benefit plan investment returns may benefit plan participants. Low investment returns to plan funds can spur increased employer contributions, possibly at the expense of wage increases. In addition, defined benefit plans that do not tie benefits to final wages do not automatically protect active participants from inflation. Forty-three percent of all participants in medium size and large firms lacked this protection in 1986 (U.S. Department of Labor, 1987). To protect the value of these participants’ benefits, sponsors may

1 The discussion draws on a data base developed by the Employee Benefit Research Institute (EBRI) and the Federal Reserve Board (FRB), based on figures compiled by Wilshire Associates (Wilshire Associates, 1988); FRB’s flow of funds publications; and tabulations from the Life Insurance Factbook (American Council of Life Insurance, 1987). EBRI publishes detailed estimates of pension investments on a continuing basis in its Quarterly Pension Investment Report.
amend benefit formulas to compensate for inflation. It can be argued that fixed nominal benefit levels imply declining real pension costs in times of general inflation (rises in the output prices and of other production costs). The cost of inflation adjustments in benefit formulas, then, may be partially offset by other inflation effects. Nonetheless, employers may be more willing to grant such adjustments if favorable investment results reduce nominal pension costs. Similarly, most private pension plans do not have a formal policy of granting postretirement benefit adjustments. Instead, such adjustments are made on an ad hoc basis. These ad hoc increases may also depend on good investment results.

In the extreme case, both participants and the government may incur losses when a private defined benefit plan terminates without adequate funds to pay promised pension benefits. Under current law, such “underfunded” terminations are permitted only under “distress” conditions, such as bankruptcy. When a termination occurs, the Pension Benefit Guaranty Corporation (PBGC)\(^2\) takes over the fund and assumes its obligations. The company is then liable to PBGC and participants for certain unfunded obligations. But this amount may not be sufficient to pay all the promised benefits. PBGC must assume liability for any unpaid basic retirement benefits; any other unpaid benefits are forfeited by participants.\(^3\) Poor fund performance may contribute to underfunding and therefore to potential losses to PBGC and participants.

The interests of participants in defined contribution plan investments are direct because benefit levels under these plans vary directly with investment performance. Poorer investment returns imply smaller retirement benefits.

Because retirement income adequacy is a widely accepted public policy goal, the government also has an interest in pension fund investment. Since the passage of the Employee Retirement Income Security Act (ERISA) in 1974, the government has had an explicit role as monitor of private pension investment practice and enforcer of funding and investment standards.

**Investment of Pension Fund Assets**

Pension assets have grown rapidly over the last 40 years: almost twice as fast on average as the Gross National Product (GNP). The next section discusses some of the major trends in pension fund investments, focusing primarily on recent trends in private trusted pension fund growth, investment mix, and performance.

**Growth of Pension Assets**

By the end of 1987, the combined assets of private and public pension funds (excluding federal) reached $2.1 trillion. Between 1947 and 1987, these funds taken together grew at an average annual rate of 14.1 percent. On average, private trusted pension funds grew at an annual rate of 14.8 percent, doubling every five years (based on Federal Reserve Board [FRB] data), compared to average annual GNP growth of 7.6 percent (based on Department of Commerce data). At year-end 1987, private trusted pension assets totaled $1.1 trillion, compared to private insured pension reserves of $473 billion\(^4\) and state and local government pension assets of $521 billion (chart 1).

Early private pension asset growth is mostly attributable to increases in the number of employers sponsoring pension plans and the number of participating workers. More recent growth largely reflects increased contribution and funding levels (in response to ERISA), and the better-than-average investment returns enjoyed in stock and bond markets over the past five years. The number of private pension plan sponsors, participants, and beneficiaries continues to grow as well.

Although not regulated by ERISA, state and local government pension funds have grown rapidly during

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\(^2\) PBGC is a quasi-government agency established under the Employee Retirement Income Security Act (ERISA) to ensure payment of basic benefits following termination of underfunded pension plans. It is financed by mandatory premiums paid by all private defined benefit plan sponsors.

\(^3\) Basic benefits generally include only regular retirement annuity payments, up to an indexed maximum monthly amount ($1,909.90 in 1988). Other benefits include, for example, retiree health benefits and special lump-sum benefits that are part of the plan.

\(^4\) Projected estimate based on American Council of Life Insurance and FRB data.
the years since ERISA’s passage. Between 1974 and 1987, total assets in these funds increased at an average annual rate of 14.7 percent. Private trusteed pension funds grew at an average annual rate of 15.5 percent during the same 13 years, while private insured pension reserves increased by 18.6 percent per year, on average (based on FRB data).

**Pension Ownership of Financial Markets**

Despite their rapid growth, pension funds own less than one-quarter of major financial markets. By 1987, pension funds held 23.2 percent of corporate equity outstanding (based on FRB data). This compares to 19.8 percent in 1982 and 16.6 percent in 1975. Most of the recent increase in pension funds’ share of total equity can be attributed to increased equity holdings of state and local government pension plans. Between 1982 and 1987, public funds’ share of total equity grew from 3.5 to 6.2 percent. Meanwhile, private trusteed funds’ share increased modestly from 15.2 to 15.8 percent; private insured pension reserves’ share grew from 1.1 percent to 1.3 percent. These changes in ownership reflect a gradual shift in the investment mix of state and local pension funds away from bonds and toward corporate equity (discussed below) (chart 2).

In contrast to the trend in pension ownership of corporate equity, the proportion of all taxable bonds outstanding that is held by pension funds has been decreasing since 1981. At the end of 1987, pension funds owned 14.9 percent of all taxable bonds, down from 19.2 percent in 1981. Private trusteed, private insured, and state and local government pension funds each owned a substantially smaller share of total taxable bonds in 1987 than they did in 1981. At the same time, taxable bond holdings decreased as a share of the total assets of each type of fund.
Trusteed versus Insured Private Pension Assets

A wide variety of investment choices is available to private pension plan sponsors. In the broadest sense, the plan sponsor can choose to invest pension money through a life insurance company or to place the money in a trust managed for the exclusive purpose of providing pension benefits. In addition, a plan sponsor may practice "split funding," that is, a combination of these two strategies.

If pension assets are invested through a life insurance company, the plan sponsor enters into a contractual agreement with the insurance company. The sponsor agrees to make certain contributions, or premium payments, to the insurer, which in turn promises certain benefit payments or certain interest payments. The plan sponsor may choose to transfer all investment decisions and risk to the insurer or to share in investment decisions and investment gains and losses. The pension commitments may be backed by the assets of the life insurance company's general accounts, which also back life insurance contracts and other commitments, or it may be backed by separate accounts invested exclusively for pension commitments.

Private trusteed, or "noninsured," pension funds are not invested through a life insurance company. Instead, the plan sponsor sets up a pension trust and appoints a trustee. The trustee is often a bank or trust company but may be an employee of the plan sponsor. Pension contributions are paid into the trust, where the money is held and invested. Under this type of arrangement, investment decisions are made by the plan sponsor or the trustee, or, in the case of self-directed defined contribution plans, by plan participants. Investment risk is borne by defined benefit plan sponsors and defined contribution plan participants.

By far the larger portion of private pension assets are in trusteed funds rather than in insured reserves. Trusteed funds accounted for 73 percent of all private pension assets at year-end 1986. Insured reserves, however, represent a growing portion of pension assets. At the end of 1982, insured reserves accounted for 24 percent of all private pension assets. By the end of 1986, this proportion reached 27 percent, and projected estimates suggest that it reached 30 percent by the end of 1987. Much of this growth may be attributable to increasing use of guaranteed interest contracts (GICs), i.e., insurance company contracts that guarantee repayment of principal and a compound interest return.

Trends in Investment Mix of Pension Assets

Private Trusteed Funds—On aggregate, as of year-end 1987 private trusteed pension funds invested 36 percent of their assets directly in corporate equity, 17 percent in bonds, 9 percent in cash or equivalent instruments, 19 percent in bank pooled funds, and 18 percent in other, miscellaneous assets (based on market value of securities). Generally, the investment mix of single-employer defined contribution funds was weighted more toward equity and miscellaneous assets, while the mix of single-employer defined benefit funds was more heavily weighted toward bank pooled fund shares and somewhat toward bonds. Bonds dominated the investment mix of multiemployer funds.

5 Cash or equivalent instruments include bonds with current date to maturity of less than one year. Other bonds are classified as bonds.
6 Bank pooled funds are commingled funds, similar to mutual funds, which may include assets from two or more pension plans.
According to FRB data, the investment mix of private trusted pension funds has changed dramatically since 1950. The proportion invested directly and indirectly in corporate equity increased nearly fourfold between 1950 and 1970, reaching a high of 60 percent in 1970. At the same time, the share invested in bonds decreased from 73 percent in 1950 to 29 percent in 1970.

In contrast, the aggregate investment mix of these funds has been remarkably stable over the past five years (1983-1987). Measured at each year-end, the proportion of assets invested directly in stock reached a low of 35.1 percent at the end of 1984 and a high of 37.4 percent at the end of 1986. For the most part, the ranges encompassing the respective lows and highs for other asset categories were similarly narrow. The only apparent trend is toward greater ownership of bank pooled funds. The proportion of total assets invested in these funds grew from 13.1 percent at the end of 1982 to 19.1 percent at the end of 1987 (Table 1).

Private Insured Pension Reserves—The larger portion of private insured pension reserves are backed by assets in life insurance companies’ general accounts. General

7 Because of definitional differences, longer-term FRB data are not entirely comparable with EBRI/FRB current pension asset estimates reported elsewhere in this report. These data are used here to show general historical trends.

Table 1
Total Assets of Private Trusted Pension Funds by Asset Type and Plan Type

<table>
<thead>
<tr>
<th>Year-End</th>
<th>Equity</th>
<th>Bonds</th>
<th>Cash</th>
<th>Other</th>
<th>Bank Pooled Funds</th>
<th>Total Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1982</td>
<td>$234</td>
<td>$131</td>
<td>$70</td>
<td>$134</td>
<td>$86</td>
<td>$655</td>
</tr>
<tr>
<td>1983</td>
<td>276</td>
<td>140</td>
<td>88</td>
<td>151</td>
<td>102</td>
<td>756</td>
</tr>
<tr>
<td>1984</td>
<td>278</td>
<td>152</td>
<td>89</td>
<td>160</td>
<td>112</td>
<td>792</td>
</tr>
<tr>
<td>1985</td>
<td>351</td>
<td>177</td>
<td>95</td>
<td>192</td>
<td>148</td>
<td>963</td>
</tr>
<tr>
<td>1986</td>
<td>404</td>
<td>198</td>
<td>91</td>
<td>207</td>
<td>182</td>
<td>1081</td>
</tr>
<tr>
<td>1987</td>
<td>410</td>
<td>191</td>
<td>104</td>
<td>206</td>
<td>214</td>
<td>1125</td>
</tr>
</tbody>
</table>

|          |        |       |      |       |                   |              |
| 1982     | 36%    | 20%   | 11%  | 20%   | 13%               | 100%         |
| 1983     | 36     | 18    | 12   | 20    | 13                | 100          |
| 1984     | 35     | 19    | 11   | 20    | 14                | 100          |
| 1985     | 36     | 18    | 10   | 20    | 15                | 100          |
| 1986     | 37     | 18    | 9    | 18    | 17                | 100          |
| 1987     | 36     | 17    | 9    | 18    | 19                | 100          |

<table>
<thead>
<tr>
<th>By Plan Type and Asset Type, Year-End 1987</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directly Held Assets</td>
</tr>
<tr>
<td>Single Employer Defined Benefit</td>
</tr>
<tr>
<td>Equity</td>
</tr>
<tr>
<td>Bonds</td>
</tr>
<tr>
<td>Cash</td>
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<tr>
<td>Other</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>


Includes bank pooled funds.
accounts are invested at the discretion of the insurance company, subject to regulation under state laws. Typically, general accounts are not permitted to invest more than 10 percent in common stock. In 1986, $320 billion of private insured pension reserves, or 79 percent of all such reserves, were backed by general accounts.

The larger portion of private insured pension reserves are backed by assets in life insurance companies' general accounts.

Private insured pension reserves can also be backed by separate accounts, which are dedicated to pension obligations and exempt from state regulations that restrict general accounts' investment. In 1986, reserves backed by separate accounts totaled $87 billion, or 21 percent of all private insured pension reserves. The assets of these separate accounts were invested 43 percent in corporate equity and 39 percent in bonds.

State and Local Government Retirement Funds—At the end of 1987, state and local government pension assets were invested 34 percent in corporate equity, 58 percent in bonds, 4 percent in cash, and 3 percent in other miscellaneous assets.10 Like private pension funds, these public funds increased their holdings of stock relative to bonds between 1950 and 1970. Shortly thereafter, the investment mix of these funds stabilized. The share invested in corporate equity remained between 21 and 25 percent from 1975 to 1982. Unlike private pension funds, however, these funds have shown a pronounced shift from bond investment to equity investment over the past five years. Since 1982, the proportion invested directly or indirectly in corporate equity has increased, reaching 34 percent by the end of 1987, as the share invested in bonds decreased.

Trends in Contributions

Private Trusted Pension Funds—Over the past few years, the asset growth of private pension funds has resulted primarily from a strong financial market. On aggregate, withdrawals from private trusted pension funds have exceeded contributions to those funds in each of the last four years.11 However, positive earnings realized each of those years more than offset net withdrawals, for an overall net inflow to the funds. On net, private trusted pension funds sold corporate equity and bonds during each of the past five years. Money was withdrawn on net for three out of the five years from both cash items and other miscellaneous assets. In contrast, positive net contributions were made to bank pooled funds shares each year. On a cumulative basis, private trusted pension funds withdrew a net $85 billion from equity, $37 billion from bonds, $7 billion from cash, and $9 billion from other miscellaneous assets, and contributed a net $50 billion to bank pooled funds, for an overall 5-year net withdrawal of $36 billion (calculated from table 2). Among plan types, single employer defined benefit plans accounted for most of the cash outflow. Over the last 5 years, on net these plans withdrew $106 billion, while single-employer defined contribution plans contributed $14 billion, and multiemployer plans contributed $6 billion. Even these latter two plan types exhibited net withdrawals for some years.

Several economic and demographic factors could have contributed to the large net withdrawals. Fundamental changes have taken place in the pension system as a result of demographic and economic trends. The nation's overall work force is aging. This means that more workers are retired and drawing pension checks. And many workers are retiring earlier, in part due to the increased availability of pension benefits. Furthermore, an increasing number of retirees are opting for lump-sum payments rather than monthly pension checks, causing more rapid withdrawals from pension funds. And more plans, both defined benefit and defined contribution, are offering lump-sum payments to departing employees of all ages, partly in order to minimize future plan administration costs.

9 Cash includes demand deposits, certificates of deposit, and open market paper. Long- and short-term bonds are classified as bonds.
10 These estimates value nonequity securities at cost rather than market value.
11 No current aggregate data are available on total contributions to and withdrawals from private trusted pension funds. However, other available data permit estimation of net contributions to these funds.
In addition, over the past few years some employers terminated their defined benefit plans to capture "surplus" pension fund assets. Most of these terminated plans were replaced by new plans; nevertheless, sponsors have recaptured a total of $18 billion since 1980 (PBGC, 1988). These "asset reversions" represent withdrawals from pension funds.

Net withdrawals from defined benefit plans may also occur when plan sponsors take a "contribution holiday" in response to better than expected investment returns. Such "actuarial gains" are amortized, reducing future contributions. In addition, some plan sponsors may have changed their actuarial assumptions to reflect higher future interest rates, further lowering the contribution rate. Greenwich Associates reports that between 1977 and 1981 rate of return expectations of corporate executives increased significantly for all types of investments. Since 1981, however, rate of return expectations have declined slightly (Greenwich Associates, 1977-1988a). New pension funding rules require the use of market interest rates to determine minimum contributions (as discussed below). If interest rates fall, future plan contributions could be forced up.

**Private Insured Pension Reserves**—Contributions to private insured pension reserves exceeded benefit payments from these reserves during each of the five years ending December 31, 1986. On a cumulative basis, payments of $155 billion into plans and benefit payments of $45 billion resulted in net contributions of $109 billion over the period. Because payments into these funds are specified by contract, they are generally made on a more regular basis than payments into trusted funds.

**State and Local Government Retirement Funds**—Payments into state and local government retirement funds exceeded payments out during each of the five fiscal years ending fiscal year 1985-1986. During that time, net contributions of $216 billion represented $329 billion in payments into funds and $113 billion in payments out (U.S. Department of Commerce, 1987).

**Pension Fund Performance**

In general, long-term investment returns to private trusted pension funds closely resemble returns to financial markets overall. For the five years ending December 31, 1987, the average annual return to corporate equity held directly by private trusted pension funds was 17.0 percent, compared to 16.4 percent for the Standard and Poor's 500 stock index. The average return to direct bond holdings of trusted pension funds was 12.5 percent annually, compared to 12.2 percent for the Shearson Lehman Government/
Corporate Bond Index. Overall, trusted pension funds realized a 13.5 percent average annual return, well in excess of the 3.2 percent average inflation rate. This implies a real, inflation-adjusted return of 10.0 percent per year on average.

Shorter term private trusted pension fund stock performance has generally outpaced market indicators. For example, for the year ending December 31, 1987, the return to equity held directly by these funds was 9.2 percent, compared to 5.2 percent for the S&P 500 index. Bond performance closely resembled the market, as trusted funds experienced bond returns of 2.5 percent, compared to Shearson Lehman Government/Corporate Bond Index returns of 2.3 percent. Overall, trusted funds earned 6.2 percent during a period when inflation was 3.7 percent, for a real, inflation-adjusted return of 2.4 percent (table 3).

Pension investment returns have not always exceeded inflation. The SEI Funds Evaluation Service reported that in the 1970s and early 1980s the median fund in its sample achieved an average return of 6.9 percent per year, while the average annual rate of inflation was 7.2 percent (Employee Benefit Research Institute, 1985).

While EBRI/FRB data suggest that returns to private trusted pension funds have generally matched or exceeded returns to the market overall, other data sources suggest that most pension fund managers have not performed as well in relation to overall markets. According to Wilshire Associates, the return to most actively managed equity portfolios12 fell short of the S&P 500 index return during each of the past five years (1983-1987). This includes the actively managed equity portfolios of all single-employer defined benefit, single-employer defined contribution, and multiemployer private trusted pension funds included in the Trust Universe Comparison Service. In contrast, the median annual return to these funds’ managed fixed income portfolios sometimes lagged, and sometimes exceeded, the return to the Shearson Lehman Government/Corporate Bond Index over the past five years (Wilshire Associates, 1988). This pattern is generally confirmed by a recent survey, which found that in 1987 most private pension equity managers’ performance lagged the S&P 500 index, while most private pension bond managers achieved returns in excess of the Shearson Lehman Corporate/Government bond index. In the longer term, over 5 or 10 years, the median equity and bond managers were each outperformed by the respective market indices (Mercer-Meidinger-Hansen, 1988).

This seeming contradiction between favorable overall fund performance and less favorable performance by most managed portfolios raises some questions regarding pension sponsors’ investment decisions. Should passive investment strategies be substituted more for active management? Are new investment management incentives and strategies called for? What is the appropriate investment mix? Could emphasis on more specialized investments improve performance? Trends in these areas are addressed later in this Issue Brief.

Pension Funds and the October 1987 Stock Market Decline

On Monday October 19, 1987, the Dow Jones industrial average dropped a record 508 points, or 23 percent, causing great concern throughout financial markets. Private trusted pension funds, with direct and indirect stock holdings totaling $590 billion (45 percent of total fund assets) as of September 30, suffered large losses. State and local government pension funds, which held

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12 *Actively managed* equity portfolios are distinct from those that are passively managed, as defined later in this Issue Brief.
$226 billion in stock (40 percent of total assets) on September 30, were also adversely affected.

Private Trusteed Pension Funds—Findings from the EBRI/FRB pension investment database study shed some light on the impact of the market decline on private trusteed pension funds and on the behavior of these pension funds in stock markets during the fourth quarter of 1987. The study reveals that these funds did not react to the decline by fleeing the market. And, though fourth quarter investment losses were large, they were offset by gains realized during the first three quarters of the year.

On net, private trusteed pension funds neither bought nor sold stock during the fourth quarter of 1987 (that is, stock sales were offset by stock purchases of equal value).

On net, private trusteed pension funds neither bought nor sold stock during the fourth quarter of 1987 (that is, stock sales were offset by stock purchases of equal value). This compares with a net sale of $14 billion in stock during the prior quarter and $35 billion during the first three quarters of the year.

Overall, private trusteed pension funds suffered net losses of $135 billion, or 10.4 percent of total assets, during the fourth quarter of 1987. This is the largest loss recorded during the last five years. Net capital losses of $152 billion were partially offset by dividend payments and interest income of $18 billion. Among plan types, fourth quarter 1987 losses relative to total assets increased with the proportion of total assets invested in stock. Single-employer defined contribution funds, with 42 percent of total assets invested directly in stock on September 30, lost $55 billion, or 12.0 percent of total assets. Single-employer defined benefit funds (40 percent in stock) lost $71 billion (10.1 percent of total assets); multiemployer plans (29 percent in stock) lost $8.1 billion (6.3 percent of total assets).

The gains made during the first three quarters of 1987 combined to offset fourth quarter losses, for total 1987 earnings of $69 billion, or 6.1 percent. Even direct stock holdings of private trusteed funds, which were responsible for most of the fourth quarter loss, showed a positive return for the year. Furthermore, total 1987 returns were positive for all plan types. Single-employer defined benefit and defined contribution funds realized returns of 6.4 percent and 6.6 percent respectively, while multiemployer funds realized a 3.6 percent return.

Although private trusteed pension funds generally did not sell their stock during the fourth quarter, the overall investment mix of these funds did change. Direct holdings of corporate equity fell from 40 percent of their total assets to 36 percent, due to the decline in value of stock holdings.

Defined benefit plan participants generally are not adversely affected by a stock market decline, because benefit levels under these plans do not depend on investment returns. However, when unfavorable investment results reduce plan assets relative to accrued liabilities, employers may be less likely to grant ad hoc inflation adjustments. Further, plans may become less secure, increasing risk to the PBGC and participants. The Department of Labor (DOL) estimates that, on aggregate, assets of single-employer defined benefit plans exceeded currently accrued liabilities by $177 billion immediately following the October 19 market decline (Schmitt, 1987). And, as noted above, fourth quarter losses did not exceed gains realized earlier in the year. This suggests that most defined benefit plans remain secure.

In contrast, defined contribution plan benefit levels depend on investment results. When defined contribution funds suffer investment losses, participants’ individual account balances fall. Thus, many participants, particularly those whose account balances were heavily invested in stock, suffered substantial short-term losses during the fourth quarter of 1987. But again, on aggregate, these losses did not exceed gains realized earlier in the year.

Finally, total fourth-quarter losses to all private trusteed funds were mitigated by the aggregate investment-mix emphasis on less risky nonequity investments.
These are all aggregate figures: individual funds may have fared much differently. Some funds took more active roles, making larger changes in investment mix. But overall, the longer term effects of the October 1987 stock market decline on private trusted pension funds will probably be minimal.

Private Insured Pension Reserves—No data are currently available on the effect of the October 1987 stock market decline on private insured pension reserves. Presumably, any effect on the 79 percent of insured reserves that are backed by general accounts was limited by state regulations restricting common stock investments of these accounts. In addition, in 1986 total assets of U.S. life insurance companies exceeded total obligations (including pension obligations) by $61 billion. Corporate stock holdings of life insurance companies totaled $91 billion, or just 9.7 percent of total assets (American Council of Life Insurance, 1987). It is therefore unlikely that the stock market decline seriously threatened the security of insured pension reserves backed by general accounts.

Some private insured pension reserves invested in separate accounts may have been more adversely affected. Separate accounts were invested 43 percent in corporate equity in 1986, and a given separate account may be 100 percent invested in stock. However, equity investments in separate accounts accounted for just 9.1 percent of all private insured pension reserves in 1986. Therefore, while some private pension funds invested through life insurance companies may have suffered substantial losses due to the stock market decline (at least in the short run), most probably did not.

State and Local Government Retirement Funds—State and local government retirement funds, which held total assets of $561 billion on September 30, 1987, suffered capital losses of $54 billion on their corporate equity holdings during the fourth quarter. Capital gains and losses on other investments of these funds cannot be estimated because FRB data (on which these estimates are based) value nonequity assets at cost rather than at market value. These funds realized interest income and dividend payments of more than $10 billion during the fourth quarter (U.S. Department of Commerce, 1988).

Causes of the Stock Market Decline—The U.S. Senate Committee on Banking, Housing, and Urban Affairs held hearings in February on the causes of the October 19 stock market decline. The hearings focused on studies conducted by five separate groups: a Presidential Task Force, the General Accounting Office (GAO), the Securities and Exchange Commission (SEC), the Commodities Futures Trading Commission (CFTC), and the New York Stock Exchange (NYSE). The Presidential Task Force on Market Mechanisms, also known as the Brady Commission, blamed the market drop mainly on a small number of major investors using computer assisted trading techniques such as portfolio insurance and index arbitrage. This study urges greater coordination among stocks and futures exchanges under one regulatory authority, possibly the Federal Reserve Board. It also suggests requiring comparable margin (or down payment) standards for futures, options, and stocks. The SEC report also indicates that computer aided trading techniques caused the October price swings in stock prices. The SEC is calling for curbs on speculation in stock index futures and greater disclosure of the identity of big buyers and sellers. The NYSE report blames the crash on speculation in stock index futures and recommends restraints on such trading. It also urges a contingency plan for shutting down exchanges in emergencies. The GAO’s report blames repeated breakdowns of the computer systems on the NYSE for the crisis. It also faults federal regulators for inadequate contingency planning. The CFTC report said “unprecedented” change in investor psychology was the main cause of the crash, not trading in stock index futures.

Senator William Proxmire, chairman of the Senate Banking Committee, has submitted a bill (S. 2256) that would create one regulatory committee, comprised of the chairmen of the FRB, SEC, and CFTC, to oversee all financial markets. The committee, with a majority voting structure, would be directed to enact a number of market reforms and act as an emergency management center in the event of another market crisis. The bill is opposed by many groups because of the potential for two regulators to overrule the third, despite the wishes of the dissenting regulator’s agency.

The three chairmen comprising Proxmire’s proposed committee, along with the Treasury Undersecretary George Gould, currently form the President’s Working Group on Financial Markets, which opposes Proxmire’s
bill. Their interim report, released on May 16, 1988, recommends coordinated halting of major securities markets for one hour when the Dow Jones Industrial Average (DJIA) drops 250 points from the previous day’s close and for two hours if the DJIA drops 400 points from the previous day’s close. The report determined that margin requirements are adequate. David Ruder, chairman of the SEC, in a departure from the group’s recommendations, suggested that margins be raised to reduce liquidity and lower volatility in the market and that equity and futures markets be linked by extending oversight to FRB. Wendy Gramm, chairman of the CFTC, expressed opposition to any legislation that would change the present system in which futures margins are set by self-regulating organizations with emergency authority residing in the CFTC to a system that would give the CFTC oversight of all futures margins.

The SEC has proposed legislation on its own that would give it regulatory authority over stock index futures, authority to obtain information on any person affiliated with a broker-dealer, and authority to require any person to report securities transactions above a certain size within a certain time after transaction. Ruder also recommends that the SEC have centralized oversight of all trading of all equity and equity derivative instruments. The SEC also considered “rationing” the ability of large institutional investors to sell stock during a period of market turbulence but discarded the idea and will only reconsider it if the market has another collapse similar to the one last October.

Sen. Edward Markey (D-MA) plans to introduce legislation to transfer regulatory jurisdiction over stock index futures from the CFTC to the SEC, harmonize margins between the markets, and institute intermarket trading halts.

**Pension Fund Management and Investment Policies**

Pension fund investment decisions may be made by pension executives; delegated to investment managers; or, in the case of participant-directed defined contribution funds, passed on to plan participants. Plan sponsors, participants, and the government all have an interest in these investment decisions.

**Determinants of Investment Decisions**

Some observers have suggested that pension fund management is an integral part of corporate planning. They theorize that pension investment (and funding) decisions will be made to maximize one or another benefit to the plan sponsor.

Empirical studies generally refute such theories. According to a 1984 survey of 145 pension plan administrators, the most important factor affecting pension investment decisions is the tax-deferred status of pension earnings. Other important factors include the age of the work force and the interest of the employees. All other factors are ranked lower (Graham and Marshall, 1984). In a survey concerning investment decisions, a majority of pension executives stated that corporate taxes or profits did not influence their pension investment decisions, and few identified maximization of shareholders’ wealth as a factor in their decisions (Malley and Jayson, 1986). A 1986 study found that plan sponsors facing more overall financial risk tend to have less risky pension portfolios (Joanette, 1986). According to another survey, most pension plan executives spend one-half their time managing pension assets and the other half on corporate finance, corporate treasury, and other investment-related matters. However, pension executives rejected the idea that their corporate responsibilities interfere with their pension investment responsibilities (Buck Consultants, 1986).

In summary, empirical evidence fails to confirm a link between pension investment decisions and the self-interested goals of plan sponsors. Rather, pension administrators’ self-reported goals seem generally in line with the spirit of ERISA.

**Who Makes Investment Decisions**—Although plan sponsors hire pension executives, who in turn delegate some investment decisions to money managers, it is the sponsors who are primarily responsible for compliance with ERISA provisions in pension investment decisions.

Pension executives often set formal policies or establish guidelines to restrict money managers’ activity in many areas. A survey conducted in 1985 showed that a majority of large corporate plan sponsors did so in such areas as the amount invested in real estate, foreign securities, and private placements; the ability to write
call options; the stock/bond ratio; minimum quality ratings for bonds; and minimum total rate of return. In contrast, at least one-half of plan sponsors allowed managers full discretion in deciding average maturity for bond portfolios, rate of negotiated brokerage commissions, and volatility of equity portfolios (Greenwich Associates, 1977-1988a). In general, sponsors have taken an increasingly active role in investment decisions.

Another 1985 survey found that investment policy recommendations pertaining to overall asset mix were usually initiated by the pension fund officer and approved by the appointed fiduciary. Outcomes were then evaluated by the pension fund officer (Peat Marwick, 1985). A 1984 study found that chief financial officers had a much larger influence on investment decisions than plan trustees or independent accountants. Independent actuaries also played a major role (Graham and Marshall, 1984).

Defined contribution plan participants frequently have some control over the investment of their individual account balances. In 1986, 49 percent of savings and thrift plan participants in medium size and large firms could choose how to invest employer contributions; 89 percent could select employee contribution investments. More than one-third were provided four or more investment choices (DOL, 1987).

State and local government plan sponsors may regulate investment managers by statute, specific policies, or general guidelines. In 1987, the ability to write put and call options and the maximum investments allowed in specific types of securities were usually restricted by statute or formal policy. Minimum acceptable returns were most often specified under formal policies or general guidelines (Greenwich Associates, 1977-1988b).

**Investment Strategies and Instruments**

Pension plan sponsors continue to look for new investment approaches that might increase investment returns, insulate funds from large downside risks, reduce portfolio volatility, or lower transactions costs and management fee expenses. Trends in this area reflect responses to new government regulations and a changing financial market.

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**Passive versus Active Management**

The rationale for active management is that diligent investment managers can earn better-than-market returns by predicting market behavior or selecting superior investments.

Private pension executives are generally satisfied with their active managers' performance. In a survey of single-employer defined benefit plans (A.S. Hansen, Inc. 1986), nearly all of the pension executives questioned felt that their money managers had performed as well as or better than expected.

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In contrast, another study found that market timing and active securities selection actually reduced the annual rate of return by 1.1 percent, with 0.7 percent of this decline attributed to misjudgments in market timing and 0.4 percent to poor security selections (Brinson, Hood, and Beebower, 1986). Ippolito and Turner found that "pension plans that incurred relatively high fees and relatively high turnover did not perform worse (after netting out all expenses) than pension plans that followed essentially passive strategies." Stock trading, however, did adversely affect performance. They concluded that "superior performance (gross of expenses) in active (stock) portfolios is not high enough to offset the research costs incurred to achieve higher returns" (Ippolito and Turner, 1988). Arnott found that not many pension executives truly believed that beating the market is possible, nor did they believe that active management adds much value. These pension executives believed that long-term strategic planning of asset allocation has a greater potential for improving total fund returns (Arnott, 1985).
Some analysts recommend passive management using
index funds—bundles of stocks or bonds that mirror a
financial market index and earn market returns. Passive
investment costs are substantially less than active
investment costs. But opponents of this strategy caution
that broad use of index funds by the public or institu-
tional investors could lead to a sluggish market and
lower overall investment returns.

Passive investment strategies also include immunized
and dedicated bonds. An immunized bond portfolio is
composed of bonds of selected maturities, such that the
portfolio's sensitivity to changes in interest rates exactly
matches the interest rate sensitivity of the pension
fund's obligations. A dedicated bond portfolio is
composed of bonds that will reach maturity as obliga-
tions (in this case, pension obligations) come due.
Theoretically, this matches the cash-flow pattern of
portfolio assets to the cash-flow pattern of plan liabili-	ies. Both immunized and dedicated bond portfolios
generally seek to match pension assets to liabilities.

The use of index funds by pension plans is increasing.
Thirty-six percent of large corporate plan sponsors used
equity index funds in 1987, up from 13 percent in 1983.
The proportion using bond index funds increased from
11 percent in 1986 to 19 percent in 1987, while the
fraction using international index funds grew from 3
percent to 4 percent. In 1987, equity index funds
accounted for 12.5 percent of all large corporate defined
benefit plan assets, while bond index funds and inter-
national index funds accounted for 2.9 percent and 0.4
percent, respectively (Greenwich Associates, 1977-
1988a).

Twenty-eight percent of public pension funds used
equity index funds in 1987, while 13 percent used bond
index funds. On aggregate, these funds were invested
11.5 percent in equity index funds and 5.9 percent in

The use of immunized or dedicated bonds has been
more stable. In 1987, 24 percent of large corporate plan
sponsors used at least one of these strategies, compared
to 23 percent in 1984. By nature a tool primarily of
defined benefit plan funding, immunized or dedicated
bonds accounted for 4.8 percent of total defined benefit

Some have predicted that use of these strategies will
grow in response to new financial accounting standards
for corporations, as discussed later in this Issue Brief.

Eight percent of public pension funds used dedicated or
immunized bonds in 1987. These strategies accounted
for 1.2 percent of public fund assets (Greenwich Associ-
ates, 1988b).

Performance Fees—Performance-related fees are some-
times recommended as a strategy for improving
pension fund performance. Under such an arrange-
ment, managers beating the market would receive
bonuses. Managers might thus be encouraged to work
harder or to take appropriate risks that might lead to
higher returns.

Critics contend that performance fees could have two
undesirable consequences. Timid managers would
choose low-risk strategies, essentially mimicking the
market. As a result, pension funds would pay for active
management but get passive management results.
Conversely, the lure of high performance bonuses
might tempt other managers to take excessive risks,
particularly if the incentive system requires them to
assume only a relatively small portion of the downside
risk. Thus, money managers faced with incentive fees
might set goals that would compromise ERISA's
fiduciary responsibility provisions.

Proponents respond that an incentive system might
discourage money managers from choosing inappro-
priate investment strategies. And pension sponsors can
minimize risk by establishing investment guidelines
and monitoring investment manager performance.

Until recently, ERISA had generally been interpreted as
prohibiting incentive based fees. On September 2, 1986,
the DOL issued two opinion letters that permitted
certain types of performance based fee structures: (1) an
arrangement based on a percentage of capital apprecia-
tion in a client's account and (2) a "fulcrum fee" ar-
rangement in which fees vary in accordance with
performance relative to the Standard and Poors 500
index. DOL actions indicate that performance fee
arrangements are not a per se violation of fiduciary
obligations but should be examined to ensure that the
interests of the investment manager are so similar to
those of the plan as to preclude any conflict or self-dealing.

In 1987, just 6 percent of large corporate pension sponsors used performance fee arrangements. Thirty-two percent favored regulations explicitly permitting use of performance-related fees; and 35 percent opposed such regulations (Greenwich Associates, 1977-1988a). In January 1988, the first blue-chip corporation (GTE) adopted performance-based fees, and it is expected that other firms will follow. But it remains unclear whether private plans will embrace this new strategy in great numbers.

DOL actions indicate that performance fee arrangements are not a per se violation of fiduciary obligations.

Performance fee arrangements are more common among public pension plans. Sixteen percent used these arrangements in 1987, and another 15 percent expected to use them in the future (Greenwich Associates, 1977-1988b).

Option Writing—Use of stock options by pension funds has generally been limited to the writing of call options for stock already held in pension portfolios. The option buyer pays a premium to the fund in exchange for an option to buy certain stock at a specified price on or before some future date. For the fund, the premium serves as a cushion against downside risk. The call option itself, however, can limit upside gains and thus is a strategy for hedging risks that can narrow the range of probable portfolio performance.


Program Trading—Both portfolio insurance and index arbitrage are carried out through a mechanism called program trading. Program trading is carried out automatically by computers programmed to respond to certain relative price movements. It is sometimes characterized as “informationless” trading because no market research is involved. Rather, trade decisions are based on price movements alone.

Portfolio insurance is essentially a strategy that seeks to protect market gains by selling stock-index futures when the market declines. Alternatively, the fund can buy a stock-index put option. Either way, the insured assets are “protected” against depreciation below a certain floor level, at the sacrifice of some upside reward potential.

One survey showed that only 7.5 percent of pension funds had committed any of their assets to portfolio insurance before the October decline, although 15.7 percent were planning to use portfolio insurance (Institutional Investor Inc., 1986). Another survey, conducted during September and October of 1987, found that 7 percent of large corporate sponsors used portfolio insurance and another 6 percent planned to begin using it (Greenwich Associates, 1977-1988a). In 1987, 5 percent of public plan sponsors used portfolio insurance, while another 4 percent planned to begin using it (Greenwich Associates, 1977-1988b).

The use of portfolio insurance assumes high market liquidity. On October 19, 1987, excessive trading volume interfered with the completion of many desired transactions. Many believe that the events of October 19 have resulted in a decline in the use of this strategy. Since October, brokers estimate that only $30 billion to $45 billion worth of stock is now covered by portfolio insurance, down from $60 billion to $90 billion before the drop.

Index arbitrage, a more aggressive strategy for hedging risks, is essentially a process of buying and selling stock index fund shares and stock index futures when a price differential occurs between the two, in order to profit from that disparity, or “spread.” Because index arbitrage involves a large volume of trades, it is characterized by high transactions costs.

Some critics believe that program trading contributes to market volatility. Many believe that the strategy was
largely responsible for the severity of the October 19 stock market decline and recommend restricting its use. Others contend that program trading dampens market volatility by correcting disparities among financial markets.

In response to the October 19 stock market collapse, NYSE initiated a rule that will restrict program trading whenever the Dow Jones industrial average rises or falls more than 50 points. In addition, five major Wall Street brokerage houses recently opted to stop index arbitrage trades for their own accounts. However, four of the five firms will continue to use program trading for their clients.

The use of these and other investment strategies by public and corporate pension plans is summarized in Table 4.

◆ Regulation of Pension Investment

ERISA

Private pension investment practices are regulated under ERISA. The plan sponsor, as primary fiduciary of the plan, has certain statutory responsibilities. In general, a fiduciary must act in the exclusive interest of plan participants and beneficiaries and manage the plan’s assets to minimize the risk of large losses. In addition, a fiduciary must act “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.” It has been interpreted by DOL on a case-by-case basis.

In addition, ERISA expressly prohibits pension funds from entering into transactions with “parties in interest.” DOL can permit exemptions from this rule on a case-by-case basis.

ERISA extends fiduciary responsibility to anyone with control over a plan’s investments or administration and anyone providing investment advice. Fiduciaries who violate the standards can be held personally liable for resulting losses.

To help ensure payment of pension benefits promised, ERISA has also established minimum funding stan-

<table>
<thead>
<tr>
<th>Type of Investment</th>
<th>Large Corporate Percent using in 1987</th>
<th>Public Percent using in 1987</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Equity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conservative common stocks</td>
<td>69%</td>
<td>85%</td>
</tr>
<tr>
<td>Growth stocks</td>
<td>73%</td>
<td>75%</td>
</tr>
<tr>
<td>International stocks</td>
<td>32%</td>
<td>26%</td>
</tr>
<tr>
<td>Active Fixed Income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actively managed bonds</td>
<td>71%</td>
<td>84%</td>
</tr>
<tr>
<td>High-yield or &quot;junk&quot; bonds</td>
<td>6%</td>
<td>7%</td>
</tr>
<tr>
<td>Bonds of affiliated public agencies</td>
<td>n/a</td>
<td>17%</td>
</tr>
<tr>
<td>Passive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passive equities</td>
<td>36%</td>
<td>28%</td>
</tr>
<tr>
<td>Passive bonds</td>
<td>19%</td>
<td>13%</td>
</tr>
<tr>
<td>Immunized or dedicated bonds</td>
<td>24%</td>
<td>8%</td>
</tr>
<tr>
<td>Passive international</td>
<td>4%</td>
<td>n/a</td>
</tr>
<tr>
<td>Specialized</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Balanced account</td>
<td>n/a</td>
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</tr>
<tr>
<td>Equity real estate</td>
<td>42%</td>
<td>44%</td>
</tr>
<tr>
<td>Real estate mortgages</td>
<td>n/a</td>
<td>35%</td>
</tr>
<tr>
<td>Venture capital</td>
<td>19%</td>
<td>16%</td>
</tr>
<tr>
<td>Leveraged buy-out funds</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>Financial futures</td>
<td>16%</td>
<td>9%</td>
</tr>
<tr>
<td>Option writing</td>
<td>8%</td>
<td>16%</td>
</tr>
<tr>
<td>Portfolio insurance</td>
<td>7%</td>
<td>5%</td>
</tr>
</tbody>
</table>


dards for private employer-sponsored defined benefit plans. In general, plan sponsors must contribute enough money to cover benefit liabilities accrued each year as well as make payments toward past benefit liabilities. (The law also specifies maximum annual contributions.) In order to qualify for favorable tax treatment, private pension plans must adhere to these and other restrictions.

Proxy Voting

As major shareholders in corporate America, pension funds wield substantial voting power. Actions on such issues as corporate takeovers and takeover defense can significantly affect stock prices. Therefore, proxy voting by pension fiduciaries may affect the price of stocks held by pension funds. Under recent interpretations,
ERISA requires fiduciaries to vote all proxies in the sole interest of participants.

Thus, the voting of proxies demands careful attention by plan fiduciaries. Some observers fear that fulfillment of fiduciary responsibility thus defined may be impossible under some circumstances. For example, a fiduciary responsible for stock index fund investments would face the formidable task of researching the major corporate issues associated with every stock in the fund and then voting all proxies in the participants' interest.

In 1986, the Senate Subcommittee on Oversight of Government, Committee on Governmental Affairs, released a report, The Department of Labor's Enforcement of ERISA, which charged DOL with inadequate enforcement of pension laws. The subcommittee recommended: (1) that ERISA be amended to ensure that investment and voting decisions affecting pension assets be placed in the hands of independent fiduciaries to avoid conflicts of interest; (2) that since anti-takeover charter amendments are often contrary to shareholders' interests, they should be viewed skepticaly by pension plan fiduciaries; and (3) that DOL issue a policy statement on the obligations of pension plan fiduciaries in voting stock held in pension fund portfolios, responding to tender offers, and voting on anti-takeover charter amendments. The subcommittee also recommended that DOL conduct a survey of ERISA fiduciaries.

Recently, DOL has been aggressively urging plan sponsors to increase oversight of the proxy voting process. DOL issued its first official policy statement on this issue at the end of February 1988. In a letter to Avon Products, Inc., DOL stated: "In general, the fiduciary act of managing plan assets which are shares of corporate stock would include the voting of proxies appurtenant to those shares of stock" (Leibowitz, 1988). DOL warned that corporate management can only express its opinion on how proxy votes should be voted and that any pressure on an investment manager is improper.

On May 11, 1988, DOL announced the initiation of an enforcement effort concerned with proxy voting under ERISA. After reviewing recent major proxy issues, the department will contact investment managers responsible for plan portfolios containing significant stock in the companies involved, in order to determine how proxy voting was carried out and whether the proxies were voted in accordance with ERISA.

A survey conducted by EBRI in 1987 found that plan sponsors with internally managed funds usually vote proxies and commonly have written voting policies (EBRI, 1987). Many have guidelines for voting on particular takeover issues. These plan sponsors report experiencing relatively little financial pressure regarding their votes. Most plan sponsors have their funds managed externally, however, and commonly give their managers a large amount of discretion on voting matters. Most investment managers vote their proxies and many have internal written guidelines for voting. Many have guidelines for voting on particular takeover issues. However, some also report having experienced direct or indirect pressure intended to influence their proxy votes and have established written policies to deal with such pressure. The survey did not determine whether such pressure affected managers' votes.

EBRI's survey provided no findings as to whether the current practices of plan sponsors fulfill fiduciary responsibilities under ERISA.

Pension Protection Act of 1987

The laws regulating private defined benefit pension plans underwent substantial change in 1987. Early in the year, the Reagan administration proposed a comprehensive package of changes in PBGC premium levels and structure as well as in funding and termination rules for pension plans.

Funding issues gained additional momentum as PBGC's long-term financial condition deteriorated substantially when it assumed $2 billion in unfunded liabilities for pension plans sponsored by the financially troubled LTV Corporation. The four committees of jurisdiction in the House and Senate produced their own versions of the funding legislation, which, along

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13 PBGC restored the plans to LTV later in the year, a move that LTV challenged in federal district court. An intermediate ruling June 22, 1988, found that while PBGC is not precluded under bankruptcy law from restoring the plan, it had not yet proven that LTV abused the pension insurance system or that LTV could afford to fund the plans. Additional evidence will be considered in a full trial.
with the administration’s proposal, were ultimately reconciled in the Pension Protection Act of 1987 (PPA), enacted as part of the Omnibus Budget Reconciliation Act of 1987.

**PBGC Premiums**—PPA raised premiums for single-employer defined benefit plans substantially, effective January 1, 1988. It increased the base premium to $16 per participant (up from $8.50 in 1987) and added a variable-rate surcharge of $6 for each $1,000 of unfunded vested benefits, rising to a maximum additional premium of $34 (or a maximum total premium of $50) per participant. According to one estimate, a total premium of $25 per participant will not be uncommon (Kwasha Lipton, 1988). PBGC said the new premium will decrease the chances that well-funded plans will face premium hikes in the future.

**Plan Terminations**—PPA provides that, with certain exceptions, amendments to pension plans permitting reversions to employers may not be made effective until five years after they are adopted. In the case of plans that, as of December 17, 1987, had no provision relating to distribution of plan assets to the employer, this new rule will apply only to amendments adopted one year after the effective date of the law. Provisions adopted before December 17, 1987, that provide for distribution of plan assets to the employer are not affected.

PPA provides that, with certain exceptions, amendments to pension plans permitting reversions to employers may not be made effective until five years after they are adopted.

The law also includes a provision that would allocate excess plan assets between employer contributions and mandatory employee contributions on a pro rata basis, permitting less flexibility than prior regulations allowed. In some circumstances, this will increase the portion of the excess that must be distributed to employees.

The law also tightens the technical standards for distress terminations and makes certain other changes relating to plan terminations.

PPA did not include the Reagan administration’s asset reversion proposals that would have allowed transfers to retiree health plans and certain withdrawals from ongoing plans.

**Employer Contributions and Funding Levels**—Under PPA, “current liability” is generally defined as all current liabilities to employees and beneficiaries under the plan, with the exception of liability for particular benefits that are contingent on certain unpredictable events. Under the new law, current liability is used to calculate minimum contributions and to determine if a plan is at the full funding limit. The new law narrows the range of permissible interest rate assumptions for the calculation of current liability to not more than 10 percent above or below the average rate for 30-year Treasury bonds over the prior four years.

PPA tightened full funding limits. Under the new law, deductions are denied for contributions to plans with assets in excess of 150 percent of current liability or 100 percent of “accrued liability” (reflecting projected salary increases plus normal cost), whichever is lower. Under prior law, only the latter rule applied. The new provision is expected to produce three-year revenue savings of $3.2 billion and is intended to restrict the ability of companies to deliberately overfund plans to maximize tax benefits. The Treasury must issue regulations by August 15 that adjust the 150 percent figure “in a budget-neutral manner” to reflect plan participants’ ages and lengths of service.

Minimum funding requirements were also tightened. For example, PPA requires accelerated contributions to certain poorly funded plans with 100 or more participants and allows deductions for contributions to such plans up to the amount of unfunded current liability. It raises the excise tax imposed for failure to reach minimum funding standards from 5 percent to 10 percent.

The new law tightens rules relating to funding waivers, reducing the number allowed over 15 years from 5 to 3
and shortening the amortization period from 15 to 5 years. The periods for amortizing experience gains and losses and those gains and losses that result from changes in actuarial assumptions were shortened to 5 years and 10 years, respectively. The law also imposes certain security requirements on the adoption of plan amendments that would result in a funding ratio for current liabilities of less than 60 percent.

PPA applies the funding rules on a controlled-group basis (rather than plan-by-plan). In addition, it requires quarterly contributions of a designated portion of the plan's minimum funding requirement. It also requires contributions to most plans other than multimember plans to be made within two and one-half months after the close of the plan year.

Investments—PPA imposes new restrictions on investment in employer stock by plans other than eligible individual account plans. Under the new rules, employer stock will be considered a qualifying employer security, which may be purchased by a pension plan, only if (1) no more than 25 percent of the aggregate amount of stock of the same class issued and outstanding at the time of acquisition is held by the plan and (2) at least 50 percent of this aggregate amount is held by persons independent of the issuer. This new provision became effective December 17, 1987. Plans that already held noncomplying employer stock prior to December 17, 1987, or that acquired such stock after that date pursuant to a legally binding contract in effect on that date, have until January 1, 1993, to divest themselves of the stock.

Financial Accounting Standard 87

Financial Accounting Standard 87 (FAS 87), adopted by the Financial Accounting Standards Board (FASB) in December 1985, fundamentally changed the accounting standards for private defined benefit pension plans. FAS 87 requires pension actuaries to use a long-term market interest rate to determine the value of pension liabilities for disclosure on companies' financial statements. Prior practice allowed plan sponsors considerable leeway in choosing interest rate assumptions and thus permitted plan sponsors to report relatively stable funded ratios for their plans from year to year. As a result of FAS 87, the disclosed value of pension liabilities could become more volatile.

In addition, FAS 87 required the inclusion of pension assets and liabilities on corporate balance sheets beginning in 1989, rather than in a footnote as under prior standards. Thus, for disclosure purposes, an underfunded plan will become a corporate liability.


As a result of these two provisions, pension funding levels could have significant new effects on corporate stock prices. In an environment where market swings can change the value of pension assets, and interest rate changes can affect the present value of pension liabilities, future funded ratios (and therefore stock price changes) may become more difficult to predict. Some speculate that plan sponsors will respond to the new rules by seeking ways to stabilize funded ratios.

FASB Action of Retiree Health Benefit Accounting

New financial accounting standards being drafted by FASB would require employers sponsoring retiree health benefit plans to account for associated unfunded liabilities on their balance sheets and income statements. There is some some concern that the disclosure required by the new financial accounting standards could exert downward pressure on stock prices. Under such requirements, the annual expenses of corporations providing retiree health benefits could be two to eight times current expenditures. The median Fortune 500 company could suffer a reduction in net income of 30 to 60 percent (EBRI, 1987a). Because pension funds hold a large amount of stock in these companies, the value of pension portfolios could suffer.

FASB expects to come out with an exposure draft on employer accounting for retiree health liabilities this
summer. After the draft is released there will be a four-month comment period followed by a week of hearings, which will probably be held in January. Once a final statement is issued, employers would have two years in which to comply. FASB has tentatively decided that retiree health benefits are a form of deferred compensation that constitute a liability for which the employer is obligated. The board believes that retiree health benefit liabilities are measurable and is working to establish the assumptions employers should use in measuring their liabilities for the benefits.

**Social Investing and the Jackson Proposal**

ERISA generally prohibits active social investing by private pension funds. Private pension assets must be invested prudently, in the sole interest of participants. Broader social goals must only be considered where two investment alternatives equally satisfy these statutory requirements. Public pension investment practices, however, are not so constrained, and many public funds actively engage in social investing. In 1986, 10 percent of public pension funds underwent policy changes to make more socially desirable investments. Another 6 percent planned such a policy change in the future (Greenwich Associates, 1977-1987b).

In 1986, 10 percent of public pension funds underwent policy changes to make more socially desirable investments.

The Department of Housing and Urban Development (HUD) has recommended that unions consider investing their pension plans in projects to provide affordable moderate-income housing. At a April 12, 1988 investment workshop held in conjunction with a AFL-CIO conference, HUD officials stressed that in addition to being socially desirable, such investments can be designed to be secure for pension participants (Bureau of National Affairs, 1988). Some pension funds have already moved to invest in various community development projects, including pension funds associated with the International Bricklayers and Allied Craftsmen of Boston (Bureau of National Affairs, 1988), New York City civil servants, and the Massachusetts and Connecticut state retirement plans (Anders 1988).

Democratic presidential candidate Jesse Jackson has announced that, as president, he would establish a "national investment program" that would market two new types of securities to public pension funds in order to "rebuild America." The program would issue federally backed securities to finance "economically viable" projects such as small business loans, low-income housing, neighborhood revitalization, and infrastructure investment. The securities would resemble Fannie Mae and Ginnie Mae bonds. They would pay market returns and would be risk free. Jackson proposes that 10 percent of public pension plan assets be so invested.

The second part of Jackson’s program would be the establishment of an American Investment Bank—modeled after the World Bank—to fund large urban and rural development projects. States would contribute the initial capital which, backed by government pledges, would back the bank’s bonds; the bonds, in turn, would be marketed to pension funds. Jackson contends that “this would leverage pension fund capital at low enough cost to allow the bank to re-lend the funds at a low interest rate for development projects” (EBRI, 1988a).

**Conclusion**

Over the last few years, pension plan sponsors have witnessed rapid and substantial changes in the investment environment. Changes in financial markets resulting from the October 19 stock market decline could change the way pension fund portfolios are invested. Potential stock price effects of forthcoming FASB accounting standards for retiree health benefit liabilities could lead plan sponsors to revaluate the appropriate use of equity in their pension funds. New accounting standards required under FAS 87 could likewise increase the volatility of disclosed private pension liabilities. And, beginning in 1989, private plan sponsors must consider the balance sheet effects of
pension funding levels. Changes in funding laws enacted under PPA have implications for the investments of both overfunded and underfunded private defined benefit pension plans. These changes, taken in combination, represent new complications, and the potential for new conflicts of interest, for plan sponsors.

Both FAS 87 and PPA contain incentives for private plan sponsors to stabilize plan funded ratios. If balance sheet changes under FAS 87 alter investors’ perceptions, unstable funded ratios could destabilize corporate stock prices. Several provisions of PPA increased the penalties imposed on underfunded plans. And the new maximum funding limitation effectively reduces the reward for favorable portfolio performance if portfolio value exceeds 150 percent of current liability. In general, PPA contains incentives to maintain a funded ratio for current liabilities of between 100 and 150 percent. FAS 87 could motivate plan sponsors to try to maintain a stable plan surplus. The October 19 market decline demonstrated how riskier investments can lead to deviations from these new statutory “ideals.”

Some analysts have predicted that pension funds will radically change their investment practices over the next few years in response to these forces. For instance, it has been suggested that pension funds might pull $120 billion out of active equity portfolios over the next two years (Chernoff, 1988). Another estimate predicts that companies will move between 5 and 10 percent of pension assets into bonds, thus removing $50 billion to $100 billion from the stock market (Crossen, 1988). Many believe that there will be at least some movement out of actively managed stocks into index funds, fixed income, and other asset classes. Dedicated and immunized bond portfolios in particular could grow in popularity if plan sponsors move to stabilize funded ratios. Portfolio insurance, which has generally declined in popularity since the stock market collapse, could gain new attention if changes in the market structure increase market liquidity.

In 1987, 19 percent of large corporate plan sponsors responded to FAS 87 by changing their plan asset mix; 16 percent changed the mix specifically to reduce volatility. Another 17 percent planned future changes in asset mix, while 11 percent planned changes directed at reducing volatility. Three percent terminated defined benefit plans and replaced them with defined contribution plans because of FAS 87. Another 2 percent planned to do so (Greenwich Associates, 1977-1988a). Implementation of PPA provisions could spur more action along these lines.

Over the last few years, pension plan sponsors have witnessed rapid and substantial changes in the investment environment.

Such actions on the part of plan sponsors highlight questions of fiduciary responsibility. Neither PPA nor FAS 87 in any way alters the responsibility of plan sponsors and other plan fiduciaries to invest in the sole interest of plan participants. Do the incentives inherent in the new rules conflict with this standard? The new maximum funding limit in particular has been accused of direct conflict with the goal of benefit security. Will these incentives “creep into” the decisions of pension fiduciaries? Some think that these new requirements and potential conflicts will discourage companies from sponsoring defined benefit plans (e.g., Crain Communications, 1988).

However, proponents of PPA maintain that the new law represents much needed reform in the pension insurance system. In the future, it will be more difficult and costly for companies to make large pension promises that cannot be kept. And where underfunding does occur, PBGC will be more protected from large liabilities.

Defenders of FAS 87 characterize the measure as “just turning on the lights” to reveal the true financial status of companies that sponsor pension plans. They contend that future investment decisions will be driven by economic realities rather than accounting practice.

The broad overview presented in this Issue Brief highlights how rapidly the pension investment environment
has changed. The long-term effects are difficult to predict. Two future EBRI Issue Briefs will focus separately and in more depth on the implications of retiree health benefit disclosure provisions, FAS 87, and the funding provisions of PPA.

References


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