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EVIDENCE OF MANAGEMENT OF CONTRIBUTIONS TO DEFINED-BENEFIT PENSION PLANS FROM ERISA DISCLOSURES AND MARKET RESPONSE TO THE DISCLOSURES

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EVIDENCE OF MANAGEMENT OF CONTRIBUTIONS TO DEFINED-BENEFIT PENSION PLANS FROM ERISA DISCLOSURES AND MARKET RESPONSE TO THE DISCLOSURES

by

SHARAD CHANDRA ASTHANA, B.Sc., B.Sc.(HON), M.Sc.

DISSERTATION

Presented to the Faculty of the Graduate School of

The University of Texas at Austin

in Partial Fulfillment

of the Requirements

for the Degree of

DOCTOR OF PHILOSOPHY

THE UNIVERSITY OF TEXAS AT AUSTIN

December 1995

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This dissertation is dedicated to my wife and children,

whose love and encouragement allowed me

to undertake the challenge.

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Publication No._________

Sharad Chandra Asthana, Ph. D.
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Supervisor: Robert N. Freeman

This dissertation represents the first attempt to examine empirically the management of contributions to defined-benefit pension plans with the help of a new data base, the ERISA tapes. The manager's incentive to manage pension funding, federal penalties and taxes is analyzed. The manager is shown to be better off by under-reporting the minimum statutory funding limit when the contribution is less than the limit and over-reporting the maximum statutory funding limit when the contribution is more than the limit. Federal revenue and employee welfare are adversely affected by such managements. Disclosures

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under ERISA on Form 5500 and Schedule B are used to empirically test the hypothesized management of pension contributions.

The results of the study confirm that managers use actuarial assumptions to manage pension contributions, federal penalties, and taxes. The empirical tools used in the paper provide a means to actuaries, auditors, employees, investors, and the IRS for identifying pension plans most likely to report funding limits based on unrealistic actuarial assumptions. The study also examines market response on disclosure of adjusted pension information. The study provides evidence of market inefficiency in detecting and correcting for the adjustments to the pension disclosures.

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CHAPTER 1

INTRODUCTION

" ...(Pension plans) substantially affect the revenues of the United States because they are afforded preferential Federal Tax treatment...it is therefore desirable in the interests of employees and their beneficiaries... (and) for the protection of the revenue of the United States...that minimum standards be provided..."

Findings and Declaration of Policy, ERISA [Section 2]

"...With all these assumptions, it is difficult to define very precisely the corporation's pension liability and its funding requirements. As a result, by changing the assumptions, actuaries have considerable latitude in determining the tax-deductible funding requirements of pension plan sponsors."

Scholes and Wolfson (1992)

The Employee Retirement Income Security Act of 1974 (ERISA) and the Internal Revenue Code (IRC) encourage as well as impose restrictions on the employers' contributions to defined-benefit pension funds. The *minimum required contribution* encourages employers to fund pension plans regularly so that pension

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benefits promised to the employees are paid at retirement and the default responsibilities of the Pension Benefit Guaranty Corporation (PBGC) are minimized. The *maximum tax-deductible contribution* discourages excessive contributions to pension funds. The law imposes penalties for funding below the minimum required contribution or over the maximum tax-deductible contribution. The cost of capital, penalties, tax incentives, fund availability, etc. affect managers' funding decisions. Prior research shows that managers manage accounting numbers, if the payoffs exceed the associated costs.[1] The complexity of the pension law and the actuarial assumptions necessary to determine minimum and maximum contributions provide opportunities for managers to report funding limits so that taxes and penalties are minimized. This paper provides evidence of the systematic selection of actuarial assumptions and cost methods to achieve this end.

At the time of enactment of ERISA, Congress was concerned about the welfare of employees and their dependents and the main objective of the Act was to remove the inadequacies in the then pension law. See *Findings and Declaration of Policy, ERISA* (section 2) for a detailed discussion. The results

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[1] For example, Beatty, Chamberlain, and Magliolo (1992), Beatty and Verrecchia (1989), DeAngelo (1986, 1988), Healy (1985), Holthausen, Larcker, and Sloan (1992), Jones (1988), Liberty and Zimmerman (1986), McNichols and Wilson (1988), Moyer (1989), Pourciau (1993), and Stinson (1991).

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in this paper show that ERISA did not achieve its objectives completely and that flexibility still remains in the current pension law, which managers utilize to their advantage.

ERISA requires annual disclosures of detailed information on individual pension plans, including pension liabilities. Much of this information is not contained in the Financial Accounting Standards Board Statement Number 87 (FAS 87),"*Pension Accounting by Firms*," disclosures. Moreover, since ERISA disclosures are made approximately six months after FAS 87 disclosures, they should contain more accurate estimates of pension liabilities based on a larger and more recent information base. Since unfunded pension liabilities are value relevant [see, for example, Bodie and Papke (1992), Daley (1984), Feldstein and Morck (1983), and Landsman (1986)], the market should show predictable price adjustments around ERISA disclosures. Moreover, an efficient capital market should see through any adjustments of the statutory funding limits and pension liabilities and impound only unadjusted information into prices. Evidence of price reactions around ERISA disclosures and market inefficiency in correcting for the adjustments is presented in this paper.

A new data base (ERISA tapes), purchased from the Department of Labor (DOL), is used for the analysis. The tapes contain detailed information on approximately 150,000 pension funds sponsored by more than 50,000 firms.

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33,000 of these funds are defined-benefit plans. Cross-sectional ordinary least squares (OLS) and logit regressions are run to test for the hypothesized associations between plan contributions and the selection of actuarial assumptions and cost methods. Event-study methodology is used to test the incremental information content of ERISA disclosures and capital market efficiency in detecting the adjustments.

The issues addressed in this paper are important for the following reasons. There are, approximately, 150,000 defined-benefit pension plans in this country with total assets over $1.5 trillion. Employers contribute several billion dollars annually to these pension plans. A major portion of these contributions are tax-deductible under provisions of ERISA and the IRC. Law makers and law enforcers are interested in discovering and preventing adjustments to statutory funding limits that may result in the reduction of U.S. tax revenue. Employees are also interested in managerial decisions affecting their pension plans, since the plans are a major source of post-retirement income. According to Bulow, Scholes, and Menell (1983), the PBGC guarantees approximately 85% of the vested benefits of employees in covered plans that are terminated with deficits. Underfunding of a pension plan can, therefore, hurt employees if the plan is terminated, despite the insurance provided by PBGC. Finally, evidence of market inefficiency in impounding ERISA disclosures into stock prices helps investors

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make informed investment decisions.

The news media has also highlighted concerns recently about pension plan management. For example, "Retirees at Risk: Hopeful Assumptions Let Firms Minimize Pension Contributions" (*Wall Street Journal*, September 2, 1993, page A1) points out that "in the arcane world of pension accounting, holding down the amount of money a firm sets aside for retirees by betting that it can reap high rates of return on its pension investments is the equivalent of driving without a safety belt." "Harsh Medicine for Ailing Pension Plans" (*Business Week* September, 19, 1994) reports that the Clinton Administration is concerned with this problem and is considering legislation to standardize actuarial assumptions that companies use to calculate their pension contributions. Legislators and regulators are becoming worried too. "The ability of companies to manipulate their assumptions allows them to avoid properly funding pension plans which, in some cases, are already significantly underfunded," according to former Representative J.J. Pickle (*Wall Street Journal*, September 2, 1993, page A1).

This paper contributes to existing research literature on management of accounting numbers by introducing a new measure for the adjusted components based on ERISA disclosures.[2] The results in this paper also resolve some of the

---

[2] Earlier research uses different measures for the adjusted (discretionary) components of accounting numbers. For example, DeAngelo (1986) and Healy

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ambiguity in prior research [for example DeAngelo (1986), Holthausen, Larcker, and Sloan (1992), and Liberty and Zimmerman (1986) do not find evidence of management of accounting numbers, while others (see footnote 1) do].

The rest of the paper is organized as follows: The next chapter discusses the pension law in the United States, chapter 3 enunciates the theory and develops the hypotheses, chapter 4 presents the research methodology, chapter 5 discusses the data and explains the sample selection criteria, chapter 6 presents the results, and chapter 7 concludes.

(1985) use last years provisions as proxies for non-discretionary components of earnings, Holthausen, Larcker, and Sloan (1992) use time-series regression, Liberty and Zimmerman (1986) use unexpected earnings, McNichols and Wilson (1988) and Stinson (1991) use bad debt expense and write-offs.

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CHAPTER 2

PENSION LAW IN THE UNITED STATES

2.1 History of Pension Law[3]

Before the enactment of ERISA, private pension plans were regulated under the IRC. For income tax purposes, employers were permitted to deduct from gross income their payments to employees for pensions or their direct contributions to a pension trust. The Internal Revenue Service (IRS) would grant a pension plan "tax-qualified" status if payments to the plan were reasonable in amount and were intended to provide pensions for at least some employees. The Revenue Acts of 1921 and 1926 granted further tax breaks for tax-qualified plans. The income earned by stock bonus and profit-sharing plans and pension trusts was also exempted from taxation.

The Revenue Act of 1942 broadened coverage of employees under tax-qualified pension plans. However, the management and administration of pension

[3] The factual details in this section are taken from Coleman (1993).

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plans were still not regulated. During and after World War II several wartime factors such as wage controls, tax changes, excess-profit taxes and inflation resulted in the rapid increase of private pension plans. The Korean War further stimulated the growth of private pension plans, as employers used pension plans to provide non-taxable fringe benefits to attract workers. As more employers established pension plans, Congress began taking a closer look at the tax breaks such plans were receiving.

Congressional investigations uncovered several cases of corrupt and inefficient management of pension plans. This resulted in the enactment of Welfare and Pension Plans Disclosure Act of 1958. The new law required employers to provide employees with more information about the pension plans. Despite an amendment in 1962, the law was weak and problems of inadequate funding for the plans still existed. The problems came into public notice dramatically with the Studebaker case. In 1963 when Studebaker stopped production and closed down, more than 4,000 of its employees with vested pension rights lost a large portion of their pensions. In 1967 Senator Jacob Javits introduced the pension reform bill that eventually resulted in the enactment of ERISA on September 2, 1974. In the twenty years following its initial enactment

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ERISA has been amended several times.[4] The primary objectives of these updates were to restrict actions by employers who operate defined-benefit pension plans, to protect the interests of employees, and to insure the tax revenue of the United States.

2.2 *The Provisions of ERISA and the IRC*

ERISA deals with two types of employee benefit plans: welfare plans and pension plans. Welfare plans provide a wide variety of benefits like medical and hospital care, accident, death, disability, and unemployment benefits. Pension plans provide retirement income to employees. ERISA specifies standards that must be met by all employee benefit plans to be eligible for favorable tax treatment and to avoid civil and criminal penalties. Failure to conform to the standards can lead to disqualification and even an excise tax. The funding

[4] The updates to ERISA include: Tax Reduction Act of 1975; Tax Reform Act of 1976; The Revenue Act of 1978; Multiemployer Pension Plan Amendments Act of 1980; Economic Recovery Act of 1981; Tax Equity and Fiscal Responsibility Act of 1982; Deficit Reduction Act of 1984; Retirement Equity Act of 1984; Consolidated Omnibus Budget Reconciliation Act of 1985; Tax Reform Act of 1986; Omnibus Budget Reconciliation Act of 1986; Omnibus Budget Reconciliation Act of 1987; Technical and Miscellaneous Revenue Act of 1988; Retiree Benefits Bankruptcy Protection Act of 1988; Omnibus Budget Reconciliation Act of 1989; Americans with Disabilities Act 1989; Omnibus Budget Reconciliation Act of 1990.

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provisions of ERISA apply only to pension plans. These provisions are discussed in greater detail later in the chapter.

Pension plans are classified into two types: defined-contribution and defined-benefit.[5] In a defined-contribution plan the contributions are determined by a formula. Each employee has an account into which the employer and the employee make periodic contributions. Contributions are tax-deductible and investment income is tax deferred. At retirement, the employee gets a taxable benefit whose size depends on the value of the funds. The employee bears all the investment risk, and the firm has no obligation beyond the periodic contributions. Profit-sharing, savings or thrift, stock bonus, and employee stock ownership plans are also included under defined-contribution plans.

In a defined-benefit plan a formula determines the benefits. Years of service, wages and salary are usually taken into account. The employer guarantees the benefits and bears the investment risk. The PBGC, a federal government agency, backs the employer's guarantee of pension benefits up to a specified limit, for an annual premium. The defined-benefit plans are attractive for many employees since they offer more reliable retirement income insurance.[6]

---

[5] See Bodie and Papke (1992) for a detailed discussion.

[6] 56.8% of the pension assets of all firms reporting to the DOL on Form 5500 are in defined-benefit pension plans and only 39.6% are in defined-

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In a defined-contribution plan the value of the assets always equals that of the benefits. The plan is, therefore, always exactly fully funded. On the other hand, defined-benefit plans may be unfunded (no separate fund), underfunded (the market value of the assets of the separate fund is less than the present value of the benefits) or overfunded (the market value of the assets exceeds the present value of the plan's liabilities).

Several factors affect how fully firms fund their defined-benefit pension plans: for example, minimum funding standards imposed by the pension law, tax incentives, negative valuation of unfunded pension liabilities by the capital market [see, for example, Bodie and Papke (1992), Daley (1984), Feldstein and Morck (1983), and Landsman (1986)], and better relations with the employees and trade unions. The main aim of the minimum funding standards is to secure the pension benefits promised by the employer against the risk of default and to reduce the financial burden on PBGC. The tax incentives, on the other hand, are intended to motivate the employers to offer pension plans to employees.[7] This motivation, however, results in some employers overfunding their pension plans. The law,

---

contribution plans.

[7] Pension plans are also beneficial for most employees, if the tax rate at which contributions are made is higher than the tax rate applied to withdrawals. The tax rate typically declines at the time the employee retires, since retirement income is usually less than income just prior to retirements (Tepper 1981).

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therefore, also limits the maximum amount of tax-deductible contributions to pension funds. Bodie and Papke (1992), and Myers and Majluf (1984) point out that funding of pension plans also creates a financial slack. The pension funds can be used in case of financial difficulties in the future, because the law allows employers to draw upon excess pension assets or to terminate the plan if the firm is facing financial distress.[8] The firm can also draw upon such excess assets indirectly by reducing contributions or expanding pension benefits in the future. Thus the pension fund may serve as a tax-sheltered contingency fund for the firm.

2.2.1 Minimum Required and Maximum Tax-Deductible Contributions

ERISA (Section 302) and the IRC (Section 412) define the minimum required contributions, and the IRC (Section 404) defines the maximum contributions that are tax-deductible. The **minimum required contribution** includes (1) ***normal costs***, plus (2) ***supplemental costs***, less (3) the ***funding standard account*** balance from the prior year, plus (4) an ***additional funding charge***.

---

[8] The reversion of assets, however, is not costless. Recent amendments to the IRC (section 4980) impose up to 20% tax on plan assets reversions to employers.

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Normal costs are annual costs of administrative expenses and benefits accrued during that year. Actuaries make several assumptions and use one of several statutory costing methods to estimate the above costs and charges.

There are several reasons why plan assets may not equal plan liabilities: (1) *experience variations:* the experience of the plan may differ from the underlying actuarial assumptions resulting in actuarial gains and losses, (2) *assumption changes:* the actuarial assumptions may be changed from time to time, (3) *benefit changes:* the plan's benefit formula may be increased or decreased periodically by plan amendments, with the change frequently being retroactive, (4) *past service accruals:* the plan sponsor may grant benefit credits to years prior to the establishment of the plan, also referred to as the past service liability, and (5) *contribution variances:* the plan sponsor may contribute more or less than the normal cost. The difference that develops between the plan's assets and the liabilities, for the above five reasons, is called the plan's unfunded or overfunded liability. *Supplemental costs* are designed to amortize the plan's unfunded or overfunded liability.

The ***funding standard account*** is an account that every pension plan under ERISA must maintain to determine whether the plan is meeting the minimum funding standards imposed by the law. The liabilities charged to the account each year include: (1) normal costs, (2) the minimum amount required to continue

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amortizing past-service liabilities, (3) losses resulting from changes in actuarial assumptions, (4) losses resulting from plan amendments that increase liabilities, and (5) experience losses. Credits to the account include: (1) employer contributions for normal costs, (2) installment payments to continue amortizing past-service liabilities, (3) gains resulting from changes in actuarial assumptions, (4) gains resulting from amendments that reduce liabilities, and (5) experience gains.

The ***additional funding charge*** is designed to speed up the funding of underfunded plans by adding a "deficit reduction contribution" to the required minimum contribution.

The **maximum tax-deductible contribution** is defined as:

Max [Unfunded Current liability, Min {Max (Normal Cost plus ten years' supplemental costs, Minimum required contribution), Full Funding limit}]

It is possible that a plan's minimum required contribution could exceed its maximum tax-deductible contribution. Under these circumstances, the minimum would be deductible.

The ***full funding limit*** is equal to the present value of the plan liability less the market value of assets (excluding any contributions for the current year and less any credit balance in the funding standard account).

The *current liability* of a plan is a standard used to measure whether a

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pension plan is underfunded by calculating the plan's liability on the basis of the value of all accrued benefits, both vested and nonvested, as if the plan were terminating. The ***unfunded current liability*** is the current liability in excess of the plan's assets. If the assets exceed the current liabilities, the unfunded current liability is zero. The calculations of these ERISA variables are further illustrated in Appendix 1.

2.2.2 Penalties for Violation

ERISA and the IRC impose penalties for the violations of the minimum and maximum contributions discussed in Section 2.2.1. If the funding standard account shows a negative balance at the end of the year, the pension plan has an *accumulated funding deficiency*, and the following penalties are assessed: interest on the deficit at the rate used to determine pension plan costs and an excise tax of 10 percent on the deficit. The excise tax can be increased to 100 percent if the deficit is not removed within 90 days of notification by the Secretary of the Treasury. In addition to the interest and excise tax, the employer may be subject to civil action and the PBGC may impose a lien on the assets of the firm if an underfunded plan fails to make the required contributions within 60 days of the due date and the amount of the missed contribution exceeds $1 million. An

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employer facing financial problems can apply to the IRS for a temporary waiver from the minimum funding requirements. The IRS, however, grants such waivers very rarely.[9]

If the employer's contribution exceeds the maximum tax deductible contribution allowed under the IRC then a 10 percent excise tax is imposed on the contribution in excess of the maximum limit. Excess contributions may be deducted in future tax years (carry-over contributions), but are subject to the 10 percent excise tax for each year they remain nondeductible (IRC section 4972 and 4979).

Under the pension law any individual who willfully violates any provision of ERISA may be fined not more than $5,000 or imprisoned not more than 1 year, or both. A penalty of up to $10,000, 5 years' imprisonment, or both, may be imposed for making any false statement or representation of fact, knowing it to be false, or for knowingly concealing or not disclosing any fact required by ERISA.

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[9] Out of 9,126 defined-benefit pension plans, which reported to the DOL during 1990-92, only three plans reported such waivers.

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2.2.3 Reporting Requirements under ERISA

Sections 104 and 4065 of ERISA and sections 6039D, 6057(b), and 6058(a) of the IRC require all pension plans with 100 or more participants to file Form 5500 with the IRS within seven months after the end of the plan year.[10] The IRS provides a copy of the report to the DOL and a portion of the report to the PBGC. The report is open to public inspection in the Public Disclosure Division of the DOL.

Form 5500 includes information about the plan, the sponsoring firm, statistics on participants, a balance sheet, a statement of income and expense, a detailed schedule of all assets, and other information about the operation of the plan. The report must be examined by an independent certified public accountant. The accountant must give an opinion on whether the financial statement and supporting schedules are presented fairly in conformity with generally accepted accounting principles (GAAP) applied on a basis consistent with the preceding year. Such an opinion has to be based upon an examination carried out in accordance with generally accepted auditing standards (GAAS). Plans with less than 100 participants are not required to have audited financial statements.

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[10] Smaller plans complete the simpler Form 5500-C, Form 5500-R or Form 5500-EZ. Only pension plans filing Form 5500 are included in the sample.

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If the plan is subject to the funding requirements of ERISA, it must retain an enrolled actuary. The actuary must prepare an annual actuarial statement, Schedule B, which is attached to Form 5500. Schedule B includes the funding standard account, actuarial assumptions, actuarial methods used, and certain other information.[11]

[11] Facsimiles of Form 5500 and Schedule B are reproduced in Appendix 1.

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CHAPTER 3

THEORY AND HYPOTHESES DEVELOPMENT

3.1 The Funding Game

The incentive-penalty structure under the pension law provides motivation for corporate managers to manage contributions and statutory funding limits and thereby minimize federal penalties and maximize their payoffs. Consider the firm's funding scenario below:

Let **L** and **H** be the minimum required contribution under ERISA and the maximum tax-deductible contribution allowed by the IRC, respectively. The firm can contribute any amount **F** between 0 and F^M, the maximum funds available to the firm. If **F** < **L** (region **A**) or **F** > **H** (region **B**), ERISA and the IRC

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prescribe penalties which increase with the extent of deviation from the statutory limits. An employer facing financial problems can apply to the IRS for a temporary waiver from the minimum funding requirements. The IRS, however, grants such waivers very rarely.

Earlier research has examined why a firm would want to under- or over-fund its pension plans (i.e., contribute in regions A or B). Bodie, Light, Morck, and Taggart (1984) find that profitability is positively associated with the extent of over-funding. Myers and Majluf (1984) argue that firms prefer to rely on internal sources of funds to finance investment projects due to negative signalling associated with new equity or debt issues. Niehaus (1985) concludes that, because of favorable tax treatment, pension funds are good places to store internal funds (build financial slack).

Francis and Reiter (1987) report that firms' marginal tax rates are positively associated and debt-equity ratios are negatively associated with pension funding levels. The authors point out that motivations for overfunding are obtaining tax benefits, storing financial slack, and reducing potential political costs. Motivations for underfunding are reducing agency costs of debt, bonding unionized employees, moving accounting numbers away from binding debt covenant restraints, and reducing debt costs through internal borrowing.

Black (1980) and Tepper (1981) show that the tax benefits of overfunding

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arise because contributions to the fund are tax-deductible and earnings in pension funds are tax-exempt. The net effect is a permanent exemption of plan earnings from taxation at the firm level.[12] If a firm overfunds the pension plan, it earns a tax-free rate of return on the investment. Thomas (1988) points out that this return could exceed the after-tax return from competing investment opportunities even after adjustment for withdrawal risks associated with pension fund investments.[13]

ERISA and the IRC define the rules for calculating **L** and **H**, but their actual computations involve several actuarial assumptions. Thus **L** and **H** are not

---

[12] The Tepper-Black argument can be illustrated as follows. Let τ_0 be a firm's current marginal tax rate, r be the pre-tax annual rate of return on pension assets, and τ_n be the marginal tax rate when withdrawals take place after n years. Marginal tax rates are defined as the expected present value of additional tax resulting from an additional unit of current taxable income. For a contribution of \$1 the firm gets a deduction of $\$\tau_0$, which reduces the cash outlay to $\$(1 - \tau_0)$. The dollar invested in the pension fund becomes $\$(1 + r)^n$ over a period of n years. No taxes are due during this period. The after-tax withdrawal is equal to $\$(1 + r)^n(1 - \tau_n)$. The annual after-tax rate of return on overfunding, r_{of}, is defined by

$$r_{of} = [\{(1 + r)^n(1 - \tau_n)/(1 - \tau_0)\}^{1/n} - 1]$$

If $\tau_0 = \tau_n$ then $r_{of} = r$ and the firm therefore avoids corporate taxes on all income earned by excess assets held in the fund.

[13] The reversion (withdrawal) of assets from pension plans is not costless. Recent amendment to the IRC (section 4980) imposes up to 20% tax on such reversions. However, the firm can avoid these taxes by withdrawing excess assets indirectly by reducing contributions or increasing benefits in the future.

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exogenous, since they depend on assumptions chosen by managers and actuaries.[14] Since the amount of federal penalties in regions **A** and **B** depend on the relative positions of **F**, **L**, and **H**, the manager may be able to minimize the penalties through her choice of actuarial assumptions. For example, if a firm contributes **F** less than **L** (i.e., funds in region **A**), the penalty is payable on the deficit (**L** - **F**).

The manager could reduce her penalty by reporting **L*** instead of **L**, assuming that she is better off when her firm avoids penalties and minimizes taxes. Similarly if the firm contributes **F** more than **H** (i.e., funds in region **B**), the

[14] Treasury Department Circular No. 230, *Regulations Governing the Practice of Attorneys, Certified Public Accountants, Enrolled Agents, Enrolled Actuaries, and Appraisers before the Internal Revenue Service* (as revised in July, 1994) and ERISA section 3042 require that actuaries function independently. They are also governed by a code of ethics However, due to the complexity of pension law and the difficulty in predicting future events, an actuary may be indifferent over a range of interest rates and other actuarial assumptions. An actuary might not object as long as the manager chooses a value within this range. Accommodating a manager, without violating the code of ethics, would also improve an actuary's chances of future assignments with that manager.

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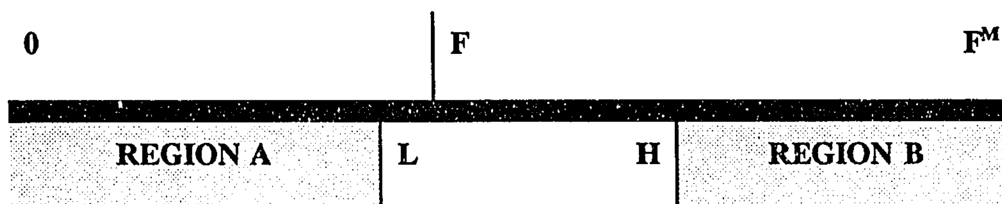
penalty is charged on the surplus (**F** - **H**).[15]

The manager could minimize the penalty by reporting **H*** instead of **H**. Finally, when the firm funds between the two statutory limits **L** and **H**, no federal penalties are levied and the manager has no incentive to adjust **L** and **H**.



The above analysis assumes **F** is 'frozen'. If **F** is allowed to vary, similar results can be derived by optimizing the manager's cost function (see the next section).

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[15] The Tax Equity and Fiscal Responsibility Act of 1982 limits the employers' deduction to the amount necessary to fund the maximum annual benefit of $90,000, indexed for inflation since 1988, per beneficiary (IRC section 415 b). As a result of this restriction, employers sometimes make non-tax-deductible contributions (i.e., fund in region **B**) to avoid an accumulated funding deficiency for highly paid executives with pension benefits above $90,000 a year. See Wilkie (1988) for a detailed discussion.

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3.2 Optimization of Manager's Cost Function

The above results can also be developed by 'defreezing' the contribution **F** and optimizing the manager's cost function as follows.

Let **L** and **H** be the minimum required contribution and the maximum tax-deductible contribution, respectively. The pension law only defines the rules for calculating **L** and **H**, but their actual calculations involve several actuarial assumptions like mortality rate, disability rate, termination rate, retirement rate, salary growth, actuarial cost method, and interest rate. Thus **L** and **H** are not exogenous, since managers can manipulate the assumptions needed to calculate them. Let **F** be the contribution made by the sponsor to the defined-benefit fund during the year and let $\mathbf{F^M}$ be the maximum funds available , then **F** is always less than or equal to $\mathbf{F^M}$. If $\mathbf{F} < \mathbf{L}$ (region **A**) or $\mathbf{F} > \mathbf{H}$ (region **B**), then ERISA and the IRC prescribe penalties which increase linearly with the extent of deviation from the statutory limits. Given the rules to calculate **L** and **H**, the

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manager decides the amount **F** to contribute to the pension plan, and how much, if at all, to manipulate **L** and **H**. Let **L*** and **H*** be the manipulated values of **L** and **H** respectively. When deciding **F**, **L*** and **H***, the manager minimizes the following cost function:

$$COST = \{a(L^* - F) \text{ if } F < L^*, 0 \text{ otherwise}\} + bF + \{c(F - H^*) \text{ if } F > H^*, 0 \text{ otherwise}\} + d(|L^*-L|) + e(|H^*-H|) \quad (1)$$

where: **a** (>0) is the cost of funding $1 below **L***. **a** includes the federal penalty, which increases with (**L* - F**) and the manager's expected personal losses from underfunding, if he himself is a beneficiary of the pension plan. **b** is the cost of transferring $1 from alternative investments to the pension fund and can be greater than, equal to, or less than 0.[16]

c (> 0) is the cost of funding $1 over the maximum limit **H*** and includes the federal penalty, which increases with (**F - H***). The implied losses due to

[16] Thus **bF** is the present value of the expected returns foregone plus transaction costs (broker's fee, termination costs etc.) less the present value of the expected returns in the pension fund (in the tax exempt region under **H***). For example, a firm may have money invested in some stock with a present value of expected after-tax future gains of $W. The firm sells the stock for $X, incurs $Y as miscellaneous expenses, and invests $X in the pension fund with a present value of expected tax-exempt future gains of $Z. Then **b** = ($W +$Y -$Z)/$X.

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non-tax-exempt status of funding over **H*** are also included in **c**. The Tax Equity and Fiscal Responsibility Act of 1982 limits the employers' deduction to the amount necessary to fund the maximum annual benefit of $90,000 per beneficiary indexed for inflation since 1988 (IRC section 415 b). As a result of this restriction, employers sometimes make non-tax-deductible contributions to avoid an accumulated funding deficiency for highly paid executives with pension benefits above $90,000 a year.[17] The inherent advantages of funding over **H***, in such situations, are also included in **c**. **d** and **e** are the expected costs of adjusting **L** and **H** and are increasing functions of the absolute amount of adjustment. For purposes of tractability assume that $d(|L^* - L|) = 0$ if $0 \leq |L^* - L| \leq l$ and infinite otherwise. Similarly assume that $e(|H^* - H|) = 0$ if $0 \leq |H^* - H| \leq h$ and infinite otherwise. In other words, as long as the manager manipulates **L** and **H** by amounts less than or equal to **l** and **h** respectively, she is not caught and there is no penalty. Beyond this range she is detected and suffers infinite penalty.[18] Thus **l** and **h** are the largest manipulations that go undetected and hence unpenalized. The funding decision will depend on

---

[17] See Wilkie (1988) for a detailed discussion.

[18] Although this simplification is made for the sake of tractability, the conclusions do not change when exponential or quadratic cost functions are used. For example $(1 - e^{-x})$ or $x^{1/2}$, where x is the absolute adjustment, yield similar results.

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will depend on the relative values of **a**, **b**, **c**, **l**, and **h**.

The manager's cost function has no continuous solution since it is a discrete function. Therefore, it has to be solved separately for each set of conditions. First consider the following set of conditions:

$F^M \geq H^*$

$c \geq a > 0 > b$

and $|b| > c$

The optimization problem in equation 1 is solved in two steps. First assume there is no manipulation ($L = L^*$ and $H = H^*$). Equation 1 can be rewritten as:

$$COST = \{a(L^* - F) \text{ if } F < L^*, 0 \text{ otherwise}\} + bF + \{c(F - H^*) \text{ if } F > H^*, 0 \text{ otherwise}\}$$

Consider the region $F < L^*$. Then $COST = a(L^* - F) + bF = aL^* + (b-a)F$

Since $a > 0$ and $b - a < 0$, **COST** can be minimized by maximizing **F**. The maximum value of **F** in this region can be $L^* - \epsilon$, where ϵ is an arbitrarily small positive number. Let the minimum **COST** in this region be **MIN1** then.

$$MIN1 = aL^* + (b - a)(L^* - \epsilon) = bL^* + (a - b)\epsilon$$

Next consider the region $L^* \leq F \leq H^*$. Then

$$COST = bF$$

Since $b < 0$, **COST** in this region can be minimized by maximizing **F**. Let **MIN2** be the minimum **COST**, then

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$$\mathbf{MIN2 = bH^*}$$

Finally consider the region $\mathbf{H^* < F}$. Then

$$\mathbf{COST = bF + c(F - H^*) = (b + c)F - cH^* = -(|b| - c)F - cH^*}$$

Since $\mathbf{|b| - c > 0}$, **COST** can be minimized by maximizing **F**. The manager selects $\mathbf{F = F^m}$ and the minimum **COST** (**MIN3**) can be written as:

$$\mathbf{MIN3 = -(|b| - c)F^m - cH^*}$$

Now

$$\mathbf{MIN1 - MIN2 = bL^* + (a - b)\epsilon - bH^* = -b(H^* - L^*) + (a - b)\epsilon}$$

$$> 0$$

$$\mathbf{MIN2 - MIN3 = bH^* + (|b| - c)F^m + cH^* = (|b| - c)(F^m - H^*)}$$

$$> 0$$

Thus the manager selects $\mathbf{F = F^m}$ to get

$$\mathbf{minimum\ COST = -(|b| - c)F^m - cH^*}$$

Now if the manager is allowed to manipulate, she can further reduce **COST** by maximizing **H*** (since $\mathbf{c > 0}$). She, therefore, chooses $\mathbf{H^* = H + h}$. She does not manipulate **L**, since there are no benefits from this, and chooses $\mathbf{L^* = L}$. These results can also be obtained by plotting **COST** (see figure 1).

Minimizing the cost function in a similar manner, under other possible conditions, gives the equilibrium solutions shown in table 1. First the conditions which result in the adjustment of **L** are depicted. Thus, whenever the maximum

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funds F^m are less than or equal to the minimum required contribution, the manager adjusts **L** downwards. When F^m lies between the two statutory limits, and **b** the cost of transferring capital is greater than 0, the manager again chooses to adjust **L** downwards. If **b** is less than or equal to zero the manager is indifferent and does not adjust either limits. When F^m is greater than or equal to the maximum tax-deductible limit and **b** is greater than zero, the manager is better off by adjusting **L** downwards. When **b** is less than zero, the manager prefers to adjust **H** upwards to minimize penalty and maximize tax benefits. However, when **b** = 0 the manager is indifferent and does not adjust either limits. The above analysis assumes that the manager does not manipulate beyond the level required to minimize *COST*. However, the manager may act strategically by manipulating **L*** below **F** or **H*** above **F** to avoid detection as well as to have a margin to appease the auditor or the IRS. Thus manipulation could occur if $F < L$ (region **A**) or $F > H$ (region **B**). Thus in region **A** the manager may be better off by reporting **L*** less than **L** and in region **B** by reporting **H*** greater than **H**.

3.3 Development of Hypotheses

Adjustments of **L** and **H** can be detected in two ways -- by the independent

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auditor or by the IRS. ERISA (section 103(a)(3)B) states that the auditor may rely on the correctness of any actuarial matter certified by an enrolled actuary. The AICPA (1989, section 10.18) states:

> "The independent auditor's qualifications do not encompass actuarial science or the complexities of probability and longevity associated with life contingencies. The auditor may have a general awareness and understanding of actuarial concepts and practices; he does not, however, purport to act in the capacity of an actuary. The auditor, therefore, needs to follow the guidance of Statement of Auditing Standards No. 11, *Using the Work of a Specialist*, to obtain assurance regarding the work of an actuary on such matters as plan contributions ..."

The dependence on the expertise of the actuary reduces the probability of the auditor detecting any adjustments.

The calculations of the minimum and maximum funding limits under ERISA and the IRC are extremely tedious and complex, involving several actuarial assumptions and choices of cost methods. Winklevoss (1993) concludes:

> "Many of us had such great expectations for ERISA and, while many of its provisions are clearly beneficial, the avalanche of regulations and new pension legislation since its passage has been terrifying... Unless Congress simplifies the various statutory and regulatory requirements for

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defined benefit pension plans, and does it quickly, only historians will be interested in this book, for it will provide the mathematics of a subject no longer relevant to corporate America."[19]

Given the complexity of the pension law, the IRS may not be very successful in detecting small "adjustments" of statutory funding limits.[20]

The analyses in sections 3.1 and 3.2 indicate that managers would have incentives to change (or adjust) actuarial assumptions or cost methods when **F** < **L** (region **A**) or **F** > **H** (region **B**). Thus, in region **A** the manager is better off by choosing assumptions and cost methods to lower **L** and in region **B** by choosing assumptions and cost methods to raise **H**. The calculations of **L** and **H** involve several actuarial assumptions like mortality rate, disability rate, termination rate, retirement rate, salary growth, and interest rate.[21] In addition, the actuary has to select one of the following cost methods to estimate the funding

---

[19] As an example of the complexity of the pension law, consider the formula for calculating the minimum required contribution in Winklevoss (1993). The formula involves more than 50 terms and occupies one full page (p. 156).

[20] The DOL, when contacted, was unable to provide any statistics.

[21] Pension plans report two different interest rates on Schedule B (Form 5500): pre- and post-retirement interest rates. The former is used for discounting future cash flows in the period prior to the employee's retirement and the latter is utilized for similar purpose in the post-retirement period. All the results reported in the paper are for pre-retirement interest rates. The results for post-retirement interest rates are similar and are, therefore, not reported.

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standard account: attained age normal, entry age normal, accrued benefit (unit credit), aggregate, frozen initial liability, individual level premium, or a variant of these. The manager can use these assumptions to manage **L** and **H**, with the agreement of the actuary (see footnote 14).

Interest rates, cost methods, and the termination rates are the most influential actuarial assumptions [see for example, Bulow (1979), Bulow, Scholes, and Menell (1983), Feldstein and Morck (1983), McGill and Grubbs (1989), Thomas (1988), Treynor, Regan, and Priest (1976), and Winklevoss (1993)]. According to Treynor, Regan, and Priest (1976), for a typical firm and with the other assumptions held constant, a 1 percent increase in the interest rate assumption allows a decrease in pension contributions of 16 percent to 30 percent.[22] The manager can use these three assumptions to adjust **L** and **H** in order to minimize federal taxes and penalties.[23] The above research literature

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[22] For example, Chrysler Corporation disclosed in the footnotes to its 1992 financial statements that a reduction in the discount rates from 9.65 percent to 8.5 percent resulted in a $910 million (10%) increase in the projected benefit obligations and a $46 million (6%) increase in the 1992 expense. Although the above figures refer to computations under FAS 87, the effect of change of discount rate on ERISA computations is similar.

[23] The IRS is aware of the possibility that managers may make unrealistic assumptions to adjust **L** and **H**. The IRS announced its intention to conduct special audits of 18,000 defined-benefit pension plans for the 1986 tax year. In particular, it targeted plans that assumed unrealistically low interest rates on investments (*New York Times*, June 2, 1990, p. 22). The outcome of these audits

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shows that **L** and **H** are decreasing in interest and termination rates, and increasing in choice of more conservative cost methods.

The accrued benefit (unit credit) method uses the accrued or legal liability measure. It allocates benefits earned to date and then derives the actuarial present value of the benefits. All other methods compute the actuarial present value of the total expected benefits and then assign a portion of that value to each plan year. Compared to the accrued benefit (unit credit) method, all the other cost methods are more conservative methods.[24] Thus, the hypotheses investigated in this paper are:

H1: In funding *region A*, managers adjust **L** downwards by using *high interest rate* assumptions.

H2: In funding *region B*, managers adjust **H** upwards by using *low interest rate* assumptions.

H3: In funding *region A*, managers adjust **L** downwards by selecting a *less conservative cost method.*

H4: In funding *region B*, managers adjust **H** upwards by selecting a *more conservative cost method.*

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is not publicly available.

[24] Thomas (1988) uses a similar classification.

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H5: In funding *region A*, managers adjust **L** downwards by using *high termination rate* assumptions.

H6: In funding *region B*, managers adjust **H** upwards by using *low termination rate* assumptions.

3.3.1 Management of Unfunded and Overfunded Current Pension Liabilities

Prior research provides evidence of negative valuation of underfunded pension liabilities by the capital market (see section 2.2). The manager, to maximize the market value of her firm, may manipulate to project a smaller underfunded pension liability. Overfunded pension plans (excess pension assets) have been identified as a possible lure for corporate raiders by Mitchell and Mulherin (1989). Firms may therefore be wary of disclosing excess pension assets and may like to project smaller excess assets by increasing the value of their pension liabilities. Moreover, by increasing the value of its pension liability, the firm can create tax-deferred storage for its funds. Feldstein and Morck (1983) examine these motivations using firm level aggregated data and find that firms with substantial unfunded benefit obligations try to reduce the reported present value of their obligations by choosing high interest rates. Similarly, firms with overfunded benefit obligations tend to choose low interest

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rate assumptions in order to increase the tax advantages of early funding. See figure 2 for a graphic presentation of these results.

Most of the above research pertains to the pension liabilities measured under FAS 87. The pension liabilities under ERISA can differ from those under FAS 87 since actuaries can use different actuarial assumptions and cost methods. However, as Bodie and Papke (1992) and Winklevoss (1993) point out, ERISA's definition of the current liability is essentially the same as FAS 87's definition of the accumulated benefit obligation (ABO). The manager's motivations to manipulate the unfunded pension liabilities (FAS 87) should be similar to those to manipulate unfunded current pension liabilities (ERISA). The next set of hypotheses can be written as:

H7: Managers adjust assumed interest rates upwards as the magnitude of the underfunded current pension liabilities (ERISA) increases and vice versa.

H8: Managers choose less conservative actuarial cost methods as the magnitude of the underfunded current pension liabilities (ERISA) increases and vice versa.

H9: Managers adjust projected termination rates upwards as the magnitude of the underfunded current pension liabilities (ERISA) increases and vice versa.

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H1-H6 may not be independent of H7-H9. Tests are carried out to check this and are reported in section 4.2.

3.4 Market Reaction

ERISA requires annual disclosures of detailed information on individual pension plans, including pension liabilities. Much of this information is not contained in the FAS 87 disclosures. Usually ERISA disclosures follow FAS 87 disclosures. The Securities and Exchange Commission (SEC) requires firms to file 10-Ks within 90 days of the end of their fiscal years. ERISA requires the submission of Form 5500 (including Schedule B) to the IRS by the end of the seventh month after the end of the plan year.[25] The IRS examines the forms and then sends a copy to the DOL. The form is open to public inspection after this date. Generally the date of FAS 87 disclosures (date of receipt at SEC) precedes the date of ERISA disclosures. During 1990-92 ERISA disclosure dates for 98.5% of all funds (reporting to the IRS and with fiscal years and plan years ending in December) were between July and October (well after March 31, the SEC deadline).

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[25] The plan year of a pension plan may be different from the fiscal year of the sponsoring firm.

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Since ERISA disclosures are made approximately four to six months after FAS 87 disclosures, ERISA disclosures should contain more accurate estimates of pension liabilities based on a larger and more recent information base. Prior research has shown that unfunded pension liabilities are value relevant, therefore the market should show predictable price adjustments around ERISA disclosures. Moreover, an efficient capital market should see through the adjustments of the statutory funding limits and pension liabilities and impound only unadjusted information into prices. The next hypothesis can, therefore, be written as:

H10: There is a significant market reaction around the date of ERISA disclosure as the unadjusted component of the disclosed pension information is impounded into the disclosing firm's stock price.

An efficient market should also reward the smart manager for minimizing penalties and maximizing tax benefits. Thus, the last hypothesis tested is:

H11: The market rewards the smart manager for her efforts to minimize panalties and maximize tax benefits.

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CHAPTER 4

RESEARCH METHODOLOGY

4.1 Calculation of the Minimum and Maximum Statutory Contributions

The minimum required contribution, as defined by ERISA, is calculated as follows:

$$L^*_{i,t} = \{PRFDEF_{i,t} + NCOST_{i,t} + AMORTCH_{i,t} + INTCH_{i,t} + ADDCH_{i,t} + LATECH_{i,t}\} - \{PRCRBAL_{i,t} + AMORTCR_{i,t} + INTCR_{i,t} + MISCR_{i,t}\} \quad (2)$$

where:

i indexes the defined-benefit, single employer pension fund

t indexes the year

L^* is the reported minimum required contribution under ERISA

PRFDEF is the prior year funding deficiency (if any)

NCOST is the normal cost at the beginning of the plan year

AMORTCH is the amortization charge on funding waivers and amounts

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other than waivers

INTCH is the interest on *PRDEF*, *NCOST*, and *AMORTCH* accrued during the plan year

ADDCH is the additional funding charge, if applicable

LATECH is the additional interest due to late quarterly contributions

PRCRBAL is the prior year credit balance, if any

AMORTCR is the amortization credit

INTCR is the interest on *PRCRBAL* and *AMORTCR* accrued during the plan year

MISCR is the miscellaneous credit on waived funding deficiency.

These values are obtained from Form 5500 and Schedule B.

Following Winklevoss (1993), the maximum tax deductible contribution is estimated as follows:[26]

$$H^*_{i,t} = Maximum\ (MIN_{i,t},\ UCL_{i,t}) \qquad (3)$$

where:

$$MIN_{i,t} = Minimum\ (COSTPLUS_{i,t},\ FFL(AL)_{i,t},\ FFL(CL)_{i,t})$$

[26] Computation of *COSTPLUS* requires the next ten years projected supplemental costs. This is approximated by *10 SCOST*, which is current supplemental cost multiplied by 10. If future supplemental costs increase, H^* may be under-estimated.

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$$UCL = Maximum\ [0, \{CLIAB\ (1 + R) - CASST\ (1 + OR)\}]$$

$$COSTPLUS_{i,t} = Maximum\ \{(NCOST_{i,t} + 10\ SCOST_{i,t}),\ L^*_{i,t}\}$$

$$FFL(AL) = (CLIAB + NCOST - CASST)\ (1 + OR)$$

$$FFL(CL) = 1.5\ \{(CLIAB + NCOST)\ (1 + R) - EXPAY\ (1 + 0.5\ R)\}$$
$$- \{CASST\ (1 + OR) - EXPAY\ (1 + 0.5\ OR)\}$$

where:

i indexes the defined-benefit, single-employer pension fund

t indexes the year

H^* is the reported maximum tax-deductible contribution

UCL is the unfunded current liability

FFL(AL) is the actuarial liability full funding limit defined under ERISA, which is equal to the year-end value of the liability less the market value of assets (excluding any contributions for the current year)

FFL(CL) is the current liability full funding limit defined under ERISA

NCOST is the normal cost at the beginning of the plan year

SCOST is the supplemental cost

CLIAB is the total current liability at beginning of plan year

CASST is the current value of assets at beginning of plan year

EXPAY is the expected benefit payment at the beginning of the plan year

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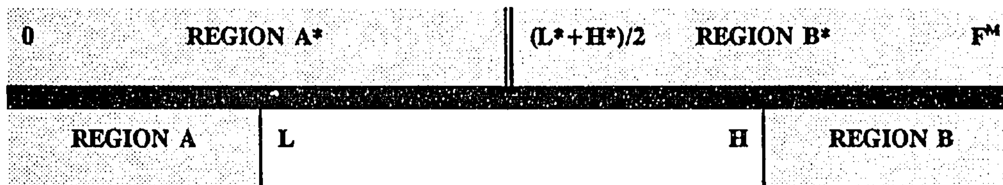
R is the pre-retirement interest rate for current liabilities reported in Schedule B

OR is the interest rate for all other calculated values.

Testing hypotheses 1 through 9 requires defining regions **A** and **B**. However, since unadjusted **L** and **H** are unobservable, regions **A*** and **B*** (as shown below) are used as proxies for **A** and **B**, respectively.[27]



Region **A***: If **F** $<$ (**L*** + **H***)/2

Region **B***: If **F** $>$ (**L*** + **H***)/2

Thus regions **A** and **B** are subsets of regions **A*** and **B***, respectively. Two dummy variables are now defined as:

If **F** belongs to **A*** then *DUML* = 1; = 0 otherwise;

If **F** belongs to **B*** then *DUMH* = 1; = 0 otherwise;

The dummy variables exclude instances where **F** = **L** = **H**, since it is impossible

[27] The results do not change if **A*** is defined as region **F** $\leq$ **L*** and **B*** is defined as region **F** $\geq$ **H***.

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to predict managerial behavior in such situations.

4.2 *Estimation of Adjusted Component of Interest Rate*

The following technique, similar to Winklevoss's (1993), is used for estimating the interest rates. The interest rate assumption is set at a level representing the expected return on the plan's assets in future years.[28] The interest assumption consists of three components: (1) a risk-free rate of return, (2) a premium for investment risk, and (3) a premium for inflation. The sum of (1) and (2) is the real rate of return and the sum of all three components is the nominal rate of return.

The risk-free rate is the inflation-corrected annual return on an investment whose principal and yield are completely secure. In a given year, all firms face the same risk-free rate.[29] The second component of interest rate is the investment risk premium. This component depends on the current and future

---

[28] Both GAAP and ERISA require interest rates to reflect the expected rates of returns on plan investments applicable to the periods for which payment of benefits is deferred.

[29] This statement is true ex-post. Firms may have divergent beliefs ex-ante about the risk-free and inflation rates. The analysis in this section is not affected as long as the divergence of beliefs does not vary systematically across the funding regions **A** and **B**.

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portfolios of plan assets. A premium for the current and expected future rate of inflation is the last component of the interest rate. This premium also is a constant, in a given year, for all the firms.

Pension plans investment policies depend upon the target rate of return, risk tolerance, liquidity requirements, and need for diversification (required under ERISA section 404(a)(1)(C)).[30] The interest rate can, therefore, be estimated with the following model:

REPORTED INTEREST RATE =

EXPECTED INFLATION RATE + *EXPECTED RISK-FREE RATE* + *EXPECTED INVESTMENT RISK PREMIUM* + *ADJUSTED COMPONENT* + *ESTIMATION ERROR* (4)

Expected inflation and *risk-free rates*, which are constant in a year for all firms, are estimated using dummy variables for each year.[31] *Expected investment risk premium* is the weighted average of expected risk premiums of individual

---

[30] For a detailed discussion on the determinants of pension plan investment policies see McGill and Grubbs (1989).

[31] See footnote 29. The effect of divergence of beliefs regarding risk-free and inflation rates will end up in the error term, as long as it does not show systematic behavior across regions **A** and **B**.

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investment categories = $\Sigma_p w_p \gamma_p$, where p indexes the investment category, w_p is the proportion of total pension assets invested in category p [i.e., value of investment in category p (INV_p) divided by total value of pension assets of the plan (PA)], and γ_p is expected risk premium of investment category p and is estimated using cross-sectional regression. The *adjusted components* have been predicted for regions **A** and **B** in chapter 3 and are estimated with the help of *DUML*, *DUMH*, and *UFCPL*. Equation 4 is, therefore, estimated by the following cross-sectional OLS regression:[32]

$$R^*_{i,t} = \Sigma_t (\alpha_t \, YR_t) + \beta \; ANRET_{i,t} + \Sigma_p \{ \gamma_p (INV_{i,t,p} / PA_{i,t}) \}$$
$$+ \kappa (UFCPL_{i,t} / PA_{i,t}) + \lambda_1 \, DUML_{i,t} + \lambda_2 DUMH_{i,t} + \epsilon_{i,t} \quad (5)$$

where:

i indexes the defined-benefit, single-employer pension fund in the sample

t indexes the year

R^* is the reported pre-retirement interest rate

YR is a dummy variable for each year in the sample

[32] Since $DUML$ = 1 for 19.02% of the observations used in the computation, $DUMH$ = 1 for 56.67%, and **F** = **L*** = **H*** for the rest, the two sets of intercepts (*YR* and *DUM*) used in equations 5, 6, and 7 are not exhaustive and overlapping. As a result the equations are not over-specified.

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ANRET is the actual annual return on the investment portfolio in the current year and is calculated as realized and unrealized gain (loss) on the investments divided by the total pension assets of the plan[33]

UFCPL is the unfunded current pension liability and is equal to current liability less current value of pension assets

α, β, γ, κ, and λ are the regression coefficients

ϵ is the error term in the regression.

Fourteen investment categories are considered in the estimation. The selection is based on the aggregate investment pattern. 98.94 percent of the combined pension assets of the sample firms are invested in these 14 categories. The 14 investment categories are:

p = 1: accounts receivable less allowance for doubtful accounts

p = 2: interest-bearing cash (including money market funds)

p = 3: certificates of deposits

p = 4: U.S. Government securities

p = 5: corporate debt instruments (preferred)

p = 6: corporate debt instruments (all others)

p = 7: corporate stocks (preferred)

---

[33] This includes net gain (loss) on sale of assets, unrealized appreciation (depreciation), net investment gain (loss), interest, and dividends.

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p = 8: corporate stocks (common)

p = 9: common/collective trusts

p = 10: pooled separate accounts

p = 11: master trusts

p = 12: registered investment companies

p = 13: insurance company general account (unallocated contracts)

p = 14: other Investments such as options, index futures, state and municipal securities, etc.

Noninterest bearing cash, partnership/joint venture interests, real state investments, petty loans, 103-12 investments, and employer related investments account for the remaining 1.06 percent funds and are not included in the estimation.

The independent variable *ANRET* is included to capture effects of the distribution of assets within investment categories which are not reflected in the variable INV_p. For example, consider $p = 8$ (corporate common stocks). A firm wanting a higher future return may invest in relatively riskier common stocks, without affecting the overall investment in this category (INV_8). Since riskier investment will, on average, result in a higher annual return, *ANRET* will capture this effect in equation 5.

Overall funded status does not significantly affect the current year's

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contribution. Pearson's correlation coefficients between *UFCPL* and *(F - L)* or *(F - H)* are not significant, even at 10% level. Thus variables *UFCPL* and *DUM* capture different effects in equations 5, 6, and 7.

The operational version of hypotheses 1, 2, and 7 can be written as:

H1*: $\lambda_1 > 0$

H2*: $\lambda_2 < 0$

H7*: $\kappa > 0$

Since R^* is the expected return in future periods, it could reflect manager's inside information about future investment portfolios, different from the current portfolio. To test this possibility, equation 5 is rerun with INV_t, PA_t, and $ANRET_t$ replaced by INV_{t+1}, PA_{t+1}, and $ANRET_{t+1}$, respectively, and H1*, H2*, and H7* tested again. If this is correct, λ_1, λ_2, and κ should no longer be significant.

Future spot rates are known to vary systematically (see for example Fama (1984) and Fama and Bliss (1987)). The term structure of interest rates is usually upwards sloping. In other words, long rates of interest are higher than short rates. Since $R^*_{i,t}$ is a long rate of interest, it may be more than the actual annual return reported by the pension plan. However, given the investment portfolio, the manager can objectively estimate the expected long rate of return from forward rates. The cross-sectional regression coefficients of *INV* variables in equation 5 should capture the effects of term structure of interest rates and the

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coefficients of *DUML* and *DUMH* should not be affected.

4.3 Estimation of Adjusted Component of Cost Method

To test hypotheses 3, 4, and 8 the following regression is estimated:[34]

$$LOGIT(METHOD_{i,j,t}) =$$

$$\Sigma_t (\alpha_t YR_t) + \nu_1 IMETHOD_{j,t} + \nu_2 (UFCPL_{i,j,t} / PA_{i,j,t}) + \nu_3 DUML_{i,j,t} + \nu_4 DUMH_{i,j,t} + \epsilon_{i,j,t} \quad (6)$$

where: j indexes the industry; *METHOD* is a dummy variable with value = 0, if selected actuarial cost method is the accrued benefit (unit credit) method, otherwise it has value = 1. 39.5% of the sample plans used the unit credit method during the sample period; *IMETHOD* is the industry mean of *METHOD* and is included to control for any industry specific practices in selecting the cost method and as an anchor for evaluating the adjusted component of *METHOD*. This method is similar to Holthausen, Larcker, and Sloan's (1992) *Industry Index Model*.

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[34] See footnote 32.

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In the above regression the dependent variable *METHOD* is a dichotomous variable which has values 0 or 1. The predicted values from OLS regression can lie outside the admissible range (0,1). Moreover, Maddala (1988) shows that such regressions suffer from heteroskedasticity and the estimates of the slopes are not efficient. To overcome these problems the LOGIT method is used for estimation.

The testable hypotheses can be written as:

H3*: $\nu_3 < 0$,

H4*: $\nu_4 > 0$,

H8*: $\nu_2 < 0$.

4.4 *Estimation of Adjusted Component of Termination Rate*

The following regression is estimated for testing the hypotheses on termination rates (H5, H6, and H9):[35]

$$TRATE_{i,j,t} =$$

$$\Sigma_t (\alpha_t \, YR_t) + \mu_1 \, ITRATE_{j,t} + \mu_2 (UFCPL_{i,j,t} / PA_{i,j,t}) + \mu_3 \, DUML_{i,j,t} + \mu_4 DUMH_{i,j,t} + \epsilon_{i,j,t} \qquad (7)$$

[35] See footnote 32.

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where: *TRATE* is the projected termination (withdrawal) rate of the plan reported on Form 5500 (available on ERISA tapes for 1992 only); *ITRATE* is the industry mean of *TRATE* and is included to control for any industry specific termination practices and as an anchor for evaluating the adjusted component of *TRATE*. This method is similar to Holthausen, Larcker, and Sloan's (1992) *Industry Index Model*. H5, H6, and H9 can now be tested as:

H5*: $\mu_3 > 0$

H6*: $\mu_4 < 0$

H9*: $\mu_2 > 0$

4.4 Tests for Market Reaction

The hypothesis on market reaction is tested by event-study methodology. If the ERISA disclosures contain price relevant information, the variance of abnormal returns should increase around the date of public knowledge (the date of receipt of Form 5500 and Schedule B at the DOL - these are included in the ERISA tapes). Five event-windows (-22, -14), (-13, -5), (-4, +4), (+5, +13), (+14, +22) and estimation period (-122, -23), relative to the ERISA disclosure date, are used for the analysis. The following regression is first estimated

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$$RET_{i,r,t} = \alpha_i + \beta_i \, MRET_{r,t} + \epsilon_{i,r,t} \qquad (8)$$

where:

i	indexes sponsoring firms of the disclosing pension funds
r	indexes day relative to ERISA disclosure date and runs from -122 to -23
t	indexes the year
$RET_{i,r,t}$	is the return on common stock of firm i on day r of year t (obtained from CRSP tape)
$MRET_{r,t}$	is the value-weighted market index on CRSP for day r of year t
α, β, and ϵ	are the regression coefficients and the error term respectively

Dimson (1979) and Scholes and Williams (1977) have shown that in the presence of non-synchronous trading, OLS estimates of β_i in equation 8 are biased and inconsistent. However, Brown and Warner (1985) point out that in event study methodology the bias in β_i is compensated by a bias in α_i. Therefore, the corrective procedures prescribed by Dimson (1979) and Scholes and Williams (1977) convey no clear-cut benefit in an event study and are not used in this paper.

The estimated regression coefficients from equation 8 are used to estimate abnormal returns (AR) in the five event windows as follows:

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$$AR_{i,s,t}^{p} = (RET_{i,s,t}^{p} - \hat{\alpha}_i - \hat{\beta}_i MRET_{s,t}^{p}) \quad (9)$$

where s indexes the day in the p th event window. Let $\sigma_{i,p}^2$ be the variance of AR (corrected for increase in variance due to prediction outside the estimation period, using Patell's (1976) technique) for disclosing firm i in event-window p and let ϕ_i^2 be the variance of error term ϵ (from equation 8) for disclosing firm i in the estimation period. Define mean standardized variance (MSV) for event-window p as:

$$MSV_p = (1/N)\Sigma_{i,t}(\sigma_{i,t,p}^2/\phi_{i,t}^2) \quad (10)$$

where N is the total number of observations used in the computation. If ERISA disclosures have value relevant information, then MSV should be significantly greater than one. In other words, ERISA disclosure should cause an increase in the residual variance as the new information is impounded into stock price of the announcing firm. The first component of hypothesis 10 can, therefore, be tested as:

$H10_A$*: $MSV > 1$ for event-windows (-4, +4), (+5, +13) and +(14, 22) and $MSV = 1$ for event-windows (-22, -14) and (-13, -5)

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ERISA disclosures are "passive" since they do not appear in any newspaper (unlike earnings announcements), nor are they mailed to the investors. On the disclosure date Form 5500 is available for public inspection in the Public Disclosure Division of the DOL. Substantial time may elapse before the market actually receives and impounds the new information. As a result, the market reactions in three post-disclosure event windows are examined.

To test the market's efficiency in recognizing funding manipulations the following regression is estimated:[36]

$$CAR_{i,t} = \Sigma_t (\alpha_t \, YR_t) + \beta_1 \, CHINT_{i,t} + \beta_2 \, CHADJ_{i,t} + \beta_3 \, CHADJL_{i,t} + \beta_4 \, CHADJH_{i,t} + \epsilon_{i,t} \quad (11)$$

where:

$CAR_{i,t} = \Sigma_s AR_{i,s,t}$ is the cumulative abnormal return for event window (-4, +4)

$CHINT_{i,t} = \{ (R^*_{i,t} - R^*_{i,t-1}) / R^*_{i,t-1} \}$

$CHADJ_{i,t} = \{ (ADJ_{i,t} - ADJ_{i,t-1}) / R^*_{i,t-1} \}$

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[36] The results do not change when $R^*_{i,t-1}$ is not used as a deflator for the independent variables.

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$CHADJL = CHADJ * DUML$ and $CHADJH = CHADJ * DUMH$

R^* is the reported pre-retirement interest rate

ADJ is the adjusted component of $R^* = \kappa\ (\ UFCPL_{i,t}\ /\ PA_{i,t}\ ) + \lambda_1$ $DUML_{i,t} + \lambda_2 DUMH_{i,t}$ (from equation 5)

If ERISA disclosures have value relevant information, then β_1 will be significantly different from zero. Increase in R^* reduces reported current pension liabilities (good news) resulting in positive abnormal returns and a positive β_1. Increase in ADJ implies a lower R (where R is the unadjusted interest rate such that $R^* = R + ADJ$ or $R = R^* - ADJ$). A lower R implies an actual current pension liability which is more than the reported current pension liability (bad news) and a negative β_2. In other words, an efficient capital market will adjust its response to R^* by the extent of adjustment (ADJ). An inefficient market will, however, only respond to R^* and β_2 will not be significant.

A market which values manager's actions resulting in lower taxes and penalties will reward her accordingly. In other words, if a manager funding in region A* increases ADJ in comparison to last year (that is if $CHADJL > 0$), the market will reward her and β_3 will be greater than 0. Similarly $CHADJH < 0$ is a good strategy and the manager will be rewarded. Thus β_4 will be less than 0.

The previous year's R^* and ADJ are used as random-walk expectations for

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the current year. These expectations should work well since firms do not disclose fund specific pension information in their quarterly or annual financial statements. Some firms may disclose pension information on individual pension plans, under provisions of FAS 35. However, since FAS 35 is not mandatory, few firms issue such reports. Thus, using random-walk expectations appears to be the most feasible alternative.

Thus the last set of testable hypotheses can be written as:

$H10_B$*: $\beta_1 > 0$

$H10_C$*: $\beta_2 < 0$

$H11_A$*: $\beta_3 > 0$

$H11_B$*: $\beta_4 < 0$

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CHAPTER 5

DATA AND SAMPLE SELECTION CRITERIA

Sections 104 and 4065 of ERISA and sections 6039(d), 6057(b), and 6058(a) of the IRC require each employer with an employee benefit plan (with 100 or more participants) to submit an audited Form 5500 to the IRS on or before the last day of seventh month after close of the plan year.[37] Each defined-benefit pension plan (subject to ERISA minimum funding requirements) must also file Schedule B with Form 5500. This schedule describes the actuarial assumptions used to determine costs for the plan and includes a facsimile of the *funding standard account*. The IRS provides a copy of Form 5500 and Schedule B to the Pension and Welfare Benefits Administration division of the DOL and the PBGC. These Forms and Schedules are open to public inspection. The data are available from the DOL under the Freedom of Information Act and my sample is based on the 1990-92 data.[38]

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[37] During the sample period, 57,592 firms filed reports for 144,174 funds.

[38] Prior to 1990 the format of the ERISA tapes is different and several variables used in the analysis are not available.

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For a pension plan to be included in the sample it must satisfy the following criteria: (1) the fund is included on the ERISA tapes, (2) it is a defined-benefit pension plan, (3) it is a single-employer plan, (4) there are non-missing observations for at least one year, (5) the plan year ends on December 31, (6) waiver of funding deficiency has not been approved by the IRS, (7) it was not terminated during the plan year, and (8) it did not merge with other plans during the plan year.

Defined-contribution plans are excluded from the sample since they are always fully funded and motivation to manage contributions does not exist. Multi-employer plans are also dropped from the sample since, in their case, it is impossible to estimate the firm specific motivations to manage the statutory funding limits. Only plans with a December 31 year end are included to align the observations so that each fund faces the same inflation and risk free rate in a reference year. Funds with funding deficiencies waived by the IRS have no incentive to manage funding and are excluded from the sample. Merged and terminated funds are also not included since the motivations of managers of such funds are not clear. This gives the first sample for testing H1 through H9.

For the hypotheses on the market reaction, the following additional criteria are imposed: (1) the fund is sponsored by a firm which is available on CRSP, (2) the sponsoring firm has a December 31 year-end, and (3) there are no missing observations on CRSP for at least one year.

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CHAPTER 6

EMPIRICAL RESULTS

6.1 Descriptive Statistics

Table 2 presents the population profile of pension plans reporting to the DOL on Form 5500. 56.78% of the pension assets of such plans belong to defined-benefit pension plans while 37.39% belong to single-employer plans. Only 11.25% of plans are defined-benefit and single-employer and these form the target population for drawing the sample. Table 3 describes the sample selection procedure which results in sample with 18,199 observations (for 8,859 plans sponsored by 6,254 firms). Due to incomplete information on the ERISA tapes some plans cannot be identified as defined-benefit or single-employer plans. Several consistency checks are performed to ensure that only clean data are included in the sample, for example, sum of investments in different categories should equal total pension assets; sum of employees in different vesting classes should equal total employees in the plan, etc.

Tables 4 and 5 present the profile of pension plans in samples A and B, respectively. The mean and median pension assets of sample plans are greater than the mean and median pension liabilities, respectively. Thus the majority of

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sample pension plans are overfunded. On average, there are 1.42 pension plans per firm with a mean age of 23 years.

Figures 4 and 5 show the cumulative distributions of funding around **L*** and **H***. 47% of the sample observations are clustered within $1,000 of these two limits, showing that firms prefer to fund at either the minimum or maximum statutory limits. This clustering supports the analysis in section 3.2, where **L*** or **H*** are equilibrium solutions in 14 out of possible 26 scenarios. Table 5 shows the distribution of pension assets among fourteen investment categories. Master trusts, insurance companies general accounts (unallocated contracts), common/collective trusts, common stocks, and U.S. Government Securities are the most popular investments and account for 74% of the assets.

6.2 Regression Diagnostics

Variables **L*** and **H*** are functions of *R**, *METHOD*, and *TRATE*. As a result *DUML* and *DUMH*, which depend on **L*** and **H***, may not be exogenous in equations 5, 6, and 7. Presence of endogenous regressors causes OLS estimates to be biased and inconsistent. Hausman's (1978) specification error test (see Appendix 2 for a detailed discussion) is conducted on equations 5, 6, and 7 to test for exogeneity. The test yields no significant endogeneity in equations 5 and 7. However, the variable *(UFCPL / PA)* is not exogenous in OLS version of equation 6 (the null of exogeneity is rejected at 5% significance level; t =

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2.508; prob. > |t| = 0.0122). To avoid the ill-effects of endogeneity (biased and inconsistent estimates), the predicted value of the variable (from equation 2.3, Appendix 2) is used as an instrumental variable in the LOGIT estimation of equation 6.

Collinearity can also be a problem in regressions with several variables, specially dummy variables. Collinearity, when present, causes biased standard errors and inefficient tests of significance. To test for collinearity, the condition indexes and variance inflation factors (VIF) are calculated for each regression, in accordance with the procedure discussed by Belsley, Kuh, and Welsch (1980, p.93 and 112) and Warga (1989). The diagnostic procedure requires checking high variance-decomposition proportions (VDP) for instances with condition indexes exceeding 5. If two or more variables have high VDP (> 0.5) then collinearity exists. Similarly if VIF > 10 then collinearty could be a problem. The VDP, condition indexes and VIF are within the critical limits for all the variables used in testing H1* - H11*. Therefore, collinearity is not a problem in the estimations.

Outliers can have substantial effects on the regression estimation. Belsley, Kuh, and Welsch (1980, p.20 and 28) suggest computation of the studentized residuals and external scaling by truncating any observation which is more than a standard deviation away from the mean studentized residual. The procedure is performed on all the regressions. The results after truncation of outliers are unchanged and hence outliers are not a potential problem in the estimations.

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Chow's (1980) test is also conducted to confirm that regression coefficients are stable across time. The null hypothesis of stable coefficients is not rejected at 5% significance level for equation 5 ($F = 1.108$; $F_{critical} = 1.510$). Since this test can only be performed on OLS regressions, LOGIT regression 6 is not tested. Equation 7 is also not tested, because data for this equation is limited to one year, 1992.

Heteroskedasticity occurs when errors in a regression do not have a constant variance and the least squares estimators, though unbiased, are inefficient and the estimates of standard errors are biased. Thus the tests of significance are invalid. White (1980) has suggested a test for heteroskedasticity and also prescribed procedures for computing the heteroskedasticity corrected standard errors. White's (1980) test rejects the null of homoskedastic errors for equations 5 and 7 (at 1% significance level) and for equation 11 (at 5% significance level). The heteroskedasticity corrected standard errors have, therefore, been reported for these equations.

6.3 Estimation Results

Description of variables used in the analysis appears in table 7. Results of regression equation 5 are shown in table 8. The coefficient of *DUML* is positive at 1% significance level ($t = 4.70$; prob. $> |t| = 0.0000$). Thus significant adjustments of R takes place in region **A***. Similarly, coefficient of

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DUMH is negative at 1% significance level (t = -9.40; prob. > |t| = 0.0000). Coefficient of *(UFCPL / PA)* is significant (at 5% level; t = 3.00; prob. > |t| = 0.0081) in the predicted direction. Thus, the results support H1*, H2*, and H7*. The results do not change when equation 5 is rerun with INV_{t+1}, PA_{t+1}, and $ANRET_{t+1}$ instead of INV_t, PA_t, and $ANRET_t$. Future investment portfolios also do not explain the significance of the coefficients of *DUML* and *DUMH*. The means of adjusted components of *R** (*ADJ*) in regions **A*** and **B*** are equal to 0.05030 and -0.08339, respectively.[39] All the other nineteen regression coefficients are positive, as expected, and thirteen of them are significantly different from zero.

Table 9 presents LOGIT estimates of regression equation 6. *DUML* (*DUMH*) is negative (positive) at 1% significance level with Wald Chi-square = 65.9103 and prob. > Chi-square = 0.0001 (Wald Chi-square = 80.4302 and prob. > Chi-square = 0.0001). (*UFCPL / PA*) is not significant. The results support H3* and H4* but not H8*. Thus, firms use choice of actuarial cost methods to further adjust statutory funding limits and minimize federal penalties.

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[39] Using results of Bulow (1979) and Treynor, Regan, and Priest (1976), the adjustments by sample firms in region **A*** (region **B***) result in masking of an estimated $280 million ($1.44 billion) deficit (surplus) contribution annually. Since the sample comprises about 6% of all defined-benefit pension plans in the U.S.A., the corresponding estimates for the entire economy would be much higher. It should, however, be pointed out that these estimates are based on several assumptions and simplifications and should be interpreted with caution. The actual computations are very complex and require information not disclosed on Form 5500 or Schedule B.

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In region **B***, firms are 18.27% more likely to use conservative actuarial cost methods, which result in higher pension liabilities and maximum-tax deductible contributions, than in region **A***.[40]

Estimates of equation 7 are shown in table 10. *DUML* (*DUMH*) are positive (negative) at 10% significance level (in a one-sided test) with $t = 1.3824$ and prob $> t = 0.08345$ ($t = -1.3779$ and prob $< t = 0.0841$). Thus, managers mask over (under) funding and minimize federal penalties by projecting significantly higher termination rates in region **A*** in comparison to region **B***. Significantly positive coefficients of *IMETHOD* and *ITRATE*, in equations 6 and 7 respectively, imply existence of industry specific preferences for actuarial cost methods and termination practices.

The results of the standardized variance tests are reported in Table 11. The MSVs for the periods (-22, -14) and (-13,-5) are not significantly different from 1 and for periods (-4, +4), (+5, +13), and (+14, +22) are significantly greater than 1 at 1% significance level, as predicted in $H10_A$*. Figure 6 shows the plot of MSV against time. MSV > 1 after the disclosure date showing that value relevant pension information is arriving in the market.

Regression equation 11 estimates are presented in Table 12. β_1 is significantly positive (at 10% level; t = 1.906; prob. > |t| = 0.0567). Thus,

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[40] This is calculated with the help of LOGIT probability density function. Thus:

$$Probability\ (METHOD = 1) = \{ e^z / (1 + e^z) \}$$

where z is the predicted value from equation 6.

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an unexpected increase in interest rate of a pension plan from 5% to 6% causes an abnormal return of 1.7% (= 8.5 x {6-5} / 5) in the stock of the sponsoring firm, in a nine day period around the disclosure date. However, the market is not efficient in seeing through the manipulations of the interest rate, since β_2 is not significant (t = 1.217; prob. > |t| = 0.2236). The results support $H10_B$* but not $H10_C$*. β_3 is not significant (t = -0.662; prob > |t| = 0.5080) but β_4 is significantly less than zero (t = -1.987; prob > |t| = 0.0469). The market appears to reward managers for adjustments in region **B*** but not in region **A***. Thus $H11_A$* is not supported but $H11_B$* is.

Kendall's (1943, p. 347) test is also conducted to see if the null of $\rho(CAR, \Delta R^*) = \rho(CAR, \Delta R)$ is rejected, where $R = R^* - ADJ$, is the unadjusted interest rate. The test yields a Z-statistic of 0.419 and the null is not rejected, further confirming that market is inefficient in adjusting for the manipulations in the reported interest rates.

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CHAPTER 7

CONCLUSIONS

This dissertation represents the first attempt to examine empirically the management of contributions to defined-benefit pension plans with the help of a new data base, the ERISA tapes. The manager's incentive to manage pension funding, federal penalties and taxes is analyzed. The manager is shown to be better off by under-reporting the minimum statutory funding limit when the contribution is less than the limit and over-reporting the maximum statutory funding limit when the contribution is more than the limit. Federal revenue and employee welfare are adversely affected by such managements.

Disclosures under ERISA on Form 5500 and Schedule B are used to empirically test the hypothesized management of pension contributions. Such tests cannot be conducted with aggregated data for the firm, but are possible with the new data since the heterogeneity of manager's funding decisions for individual plans is preserved.

Ordinary Least Squares and Logit regressions are run to test the hypothesized management. While selecting R^* and *TRATE*, the coefficients of

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DUML (*DUMH*) are significantly positive (negative). This implies that managers adjust R^* and *TRATE* upwards (downwards) when funding in region **A*** (region **B***). Similarly the coefficient of *DUML* (*DUMH*) is negative (positive) when choosing the actuarial cost method. In other words, managers prefer to use less conservative cost methods in region **A*** in comparison to region **B***. The results of the study confirm that managers use actuarial assumptions to manage pension contributions and minimize federal penalties and taxes. The tests on the coefficients of the variable *(UFCPL / PA)* further confirm that the manager projects a smaller unfunded pension obligations to maximize the value of her firm and projects a smaller overfunded pension obligation to maximize tax advantage of early funding.

The study also examines market response on disclosure of adjusted pension information. Market response on disclosure of adjusted pension information was hitherto an unresolved research issue. Daley (1984) did not find evidence of market reaction to discount rates, whereas Feldstein and Morck (1983) report such evidence. This paper provides evidence of market response to ERISA disclosures and market's inability in detecting and correcting for the adjustments to the actuarial assumptions. Market inefficiency could be one answer. However, model misspecification, measurement error in *ADJ*, or data unavailability at the time of disclosure could also be possible reasons. Further

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investigation is required to ascertain the exact cause.

The dissertation addresses issues that are important for the following reasons. Employers contribute several billion dollars annually to fund defined-benefit pension plans. A major portion of these contributions are tax-deductible under provisions of ERISA and the IRC. Law makers and law enforcers are interested in discovering and preventing funding adjustments that may result in the reduction of U.S. tax revenue by several billion dollars without the stipulated benefits accruing to society. Employees are also interested in any managerial decisions affecting their pension plans, since the plans are a major source of post-retirement income. Underfunding of a pension plan can hurt employees if the plan is terminated, despite the insurance provided by PBGC.

The empirical tools used in the paper provide a means to actuaries, auditors, employees, investors, and the IRS for identifying plans most likely to report funding limits based on unrealistic actuarial assumptions. The stability of regression slopes across time makes such identification reliable. Increased vigilance in such cases can reduce the chances of funding adjustments and their associated effects.

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TABLE 1

OPTIMAL SOLUTIONS TO MANAGER'S COST FUNCTION

CONDITIONS		F	L*	H*	COST AT EQUILIBRIUM
$F^m \leq L^*$	$a > b \geq 0$	F^m	L - 1	H	$aL^* + (b - a)F^m$
$F^m \leq L^*$	$a > 0 > b$	F^m	L - 1	H	$aL^* + (b - a)F^m$
$F^m \leq L^*$	$b > a > 0$	0	L - 1	H	aL^*
$F^m \leq L^*$	$a = b > 0$	$[0, F^m]$	L - 1	H	aL^*
$L^* < F^m < H^*$	$a > b > 0$	L^*	L - 1	H	bL^*
$L^* < F^m < H^*$	$b > a > 0$	0	L - 1	H	aL^*
$L^* < F^m < H^*$	$a = b > 0$	$[0, L^*]$	L - 1	H	aL^*
$F^m \geq H^*$	$c \geq b > a > 0$	0	L - 1	H	aL^*
$F^m \geq H^*$	$b > c \geq a > 0$	0	L - 1	H	aL^*
$F^m \geq H^*$	$b \geq c > a > 0$	0	L - 1	H	aL^*
$F^m \geq H^*$	$b > a > c > 0$	0	L - 1	H	aL^*
$F^m \geq H^*$	$c \geq a > b > 0$	L^*	L - 1	H	bL^*
$F^m \geq H^*$	$a > c > b > 0$	L^*	L - 1	H	bL^*
$F^m \geq H^*$	$a > b \geq c > 0$	L^*	L - 1	H	bL^*
$F^m \geq H^*$	$c \geq b = a > 0$	$[0, L^*]$	L - 1	H	aL^*

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TABLE 1 (CONTINUED)

CONDITIONS		F	L*	H*	COST AT EQUILIBRIUM
$F^m \geq H^*$	$b = a > c > 0$	$[0, L^*]$	$L - l$	H	aL^*
$F^m \geq H^*$	$c \geq a > 0 > b$ $\lvert b \rvert < c$	H^*	L	$H + h$	$-\lvert b \rvert H^*$
$F^m \geq H^*$	$a > c > 0 > b$ $\lvert b \rvert < c$	H^*	L	$H + h$	$-\lvert b \rvert H^*$
$F^m \geq H^*$	$c \geq a > 0 > b$ $\lvert b \rvert = c$	$[H^*, F^m]$	L	$H + h$	$-\lvert b \rvert H^*$
$F^m \geq H^*$	$a > c > 0 > b$ $\lvert b \rvert = c$	$[H^*, F^m]$	L	$H + h$	$-\lvert b \rvert H^*$
$F^m \geq H^*$	$c \geq a > 0 > b$ $\lvert b \rvert > c$	F^m	L	$H + h$	$-(\lvert b \rvert - c)F^m - cH^*$
$F^m \geq H^*$	$a > c > 0 > b$ $\lvert b \rvert > c$	F^m	L	$H + h$	$-(\lvert b \rvert - c)F^m - cH^*$
$L^* < F^m < H^*$	$a > 0 > b$	F^m	L	H	$-\lvert b \rvert F^m$
$L^* < F^m < H^*$	$a > b = 0$	$[L^*, F^m]$	L	H	0
$F^m \geq H^*$	$c \geq a > b = 0$	$[L^*, H^*]$	L	H	0
$F^m \geq H^*$	$a > c > b = 0$	$[L^*, H^*]$	L	H	0

Where:

F^m	maximum funds available with the firm
F	current year contribution to the defined-benefit pension plan
L	minimum required contribution under ERISA
H	maximum tax-deductible contribution under IRC
L^* & H^*	adjusted values of L & H reported on FORM 5500
l & h	largest adjustments to L & H that go undetected and unpenalized

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TABLE 2

POPULATION PROFILE

TYPE OF PENSION PLAN	PERCENTAGE OF TOTAL PLANS REPORTING TO DOL	PERCENTAGE OF TOTAL PENSION ASSETS OF SUCH PLANS
Welfare or fringe benefit	41.40	2.32
Defined-benefit	21.98	56.78
Defined-contribution	35.69	39.62
Other	.93	1.28
Total	100.00	100.00
Single-employer	67.55	37.39
Multi-employer	2.64	8.41
Other	29.81	54.20
Total	100.00	100.00

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TABLE 3

SAMPLE SELECTION

SELECTION CRITERION	OBSERVATIONS		PENSION PLANS		FIRMS	
	LOST	LEFT	LOST	LEFT	LOST	LEFT
SAMPLE A						
Total on ERISA tapes		386,489		144,174		57,592
Defined-benefit and single employer plan	352,173	34,316	127,960	16,214	45,891	11,701
Non-missing observations for at least 1 yr.	8,711	25,605	3,521	12,693	2,425	9,276
Plan year ending on 12/31	6,709	18,896	3,567	9,126	2,868	6,408
No funding deficiency waiver	23	18,873	3	9,123	0	6,408
Plan not terminated	205	18,668	121	9,002	84	6,324
Plan not merged	469	18,199	143	8,859	70	6,254
SAMPLE B						
Data on CRSP for at least 1 yr.	16,172	2,027	7,907	952	5,942	312

Note:

The 6,254 firms in the sample belong to 255 industries (identified by four digit SIC codes) and the 312 firms in Sample B belong to 101 industries.

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TABLE 4

PROFILE OF SAMPLE A PENSION PLANS

ATTRIBUTE	MEAN	STD. DEVN.	MIN.	FIRST QUARTL.	MEDIAN	THIRD QUARTL.	MAX.
Pension assets	$23.0 mill.	$265 mill.	$2	$1.53 mill.	$4.02 mill.	$11.67 mill.	$24.12 bill.
Pension liabilities	$17.0 mill.	$150 mill.	$9380	$1.22 mill.	$3.06 mill.	$8.83 mill.	$13.17 bill.
Interest rate (Pre)	8.54 %	0.524	2 %	8 %	9 %	9 %	10 %
Interest rate (Post)	8.54 %	0.505	4 %	8 %	9 %	9 %	10 %
Total participants	1168	5078	100	198	388	950	436,279
Employer contribution	$0.71 mill.	$5.4 mill.	$0	$0	$83,002	$362,700	$0.42 bill.
Minimum reqd. contr.	$28.05 mill.	$2.28 bill.	$0	$0	$23,451	$0.25 mill.	$232 bill.
Max. tax deduct. contr.	$29.34 mill.	$2.28 bill.	$0	$0	$62,506	$0.42 mill.	$232 bill.
Benefit payments	$1.25 mill.	$11.53 mill.	$0	$48,219	$168,805	$563,740	$1.1 bill.
No. of plans per firm	1.42	1.62	1	1	1	1	47
Age of plan	23 years	13 years	1 year	13 years	22 years	33 years	85 years
Termination rate	4.2%	2.25%	1%	2.5%	4%	5%	10%

Note: Interest rate (Pre/Post) is the actuarial interest rate for pre-/post-retirement period. Total participants includes active, retired, separated, and deceased participants whose dependents are receiving or entitled to receive benefits. Less than 10% of the sample firms sponsor more than one pension plan. Age of the plan is as on 12/31/92.

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TABLE 5

PROFILE OF SAMPLE B PENSION PLANS

ATTRIBUTE	MEAN	STD. DEVN.	MINIMUM	FIRST QUARTILE	MEDIAN	THIRD QUARTILE	MAXIMUM
Pension assets	$67.2 mill.	$587 mill.	$11,279	$2.21 mill.	$6.92 mill.	$32.06 mill.	$24.12 bill.
Pension liabilities	$48.2 mill.	$340 mill.	$28,770	$1.76 mill.	$5.50 mill.	$24.25 mill.	$13.17 bill.
Interest rate (Pre)	8.67 %	0.467	6 %	8 %	9 %	9 %	10 %
Interest rate (Post)	8.67 %	0.466	6 %	8 %	9 %	9 %	10 %
Total participants	2470	11,717.12	100	277	597	1,937	436,279
Employer contribution	$1.70 mill.	$13.5 mill.	$0	$0	$44,997	$411,433	$0.42 bill.
Benefit payments	$3.80 mill.	$27.9 mill.	$0	$71,283	$328,883	$1.69 mill.	$1.1 bill.
Sponsoring firm's risk	0.77	0.67	-4.90	0.38	0.76	1.10	3.93
Sponsoring firm's MV	$2.9 bill.	$8.8 bill.	$2.0 mill.	$157.6 mill.	$708.0 mill.	$2.0 bill.	$78.1 bill.

Note:

Interest rate (Pre/Post) is the actuarial interest rate for pre-/post-retirement period. Total participants includes active, retired, separated, and deceased participants whose dependents are receiving or entitled to receive benefits. Risk is the systematic risk from a CAPM model and MV is the market value.

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TABLE 6

ASSET ALLOCATION PROFILE OF PENSION PLANS IN SAMPLE A

[Figures are (value invested/total value of pension assets) x 100]

INVESTMENT CLASS	MEAN	STD. DEVN.
Accounts receivable	3.29%	7.59%
Interest-bearing cash	4.42%	13.99%
Certificates of deposits	0.75%	6.23%
U.S. Government securities	7.61%	16.68%
Preferred corporate debt	1.09%	6.08%
Other corporate debt	3.03%	9.76%
Preferred corporate stock	0.26%	3.26%
Common Corporate stock	9.57%	19.24%
Common/collective trusts	9.98%	27.08%
Pooled separate accounts	6.03%	20.57%
Master trusts	34.27%	46.04%
Registered investment Co.	2.75%	14.20%
Insurance companies	12.45%	29.21%
Other investments	3.44%	15.04%

TABLE 7

VARIABLE DEFINITIONS

VARIABLE	DEFINITION
*L**	Minimum required contribution reported under ERISA and IRC
PRFDEF	Prior year funding deficiency (if any)
NCOST	Normal cost at the beginning of the plan year
AMORTCH	Amortization charge on funding waivers and amounts other than waivers
INTCH	Interest on *PRDEF*, *NCOST*, and *AMORTCH*
ADDCH	Additional funding charge, if applicable
LATECH	Additional interest due to late quarterly contributions
PRCRBAL	Prior year credit balance, if any
AMORTCR	Amortization credit
INTCR	Interest on *PRCRBAL* and *AMORTCR*
MISCR	Miscellaneous credit on waived funding deficiency etc.
*H**	Maximum tax deductible contribution reported under IRC
UCL	Unfunded current liability
FFL(AL)	Actuarial liability full funding limit defined under ERISA. It is equal to the year-end value of the liability less the market value of assets (excluding any contributions for the current year)
FFL(CL)	Current lability full funding limit defined under ERISA.
NCOST	Normal cost at the beginning of the plan year
SCOST	Supplemental cost
CLIAB	Total current liability at beginning of plan year
*R**	Reported pre-retirement interest rates
CASST	Current value of assets at beginning of plan year
OR	Interest rate for all other calculated values
YR	Dummy variable for each year in the sample
ANRET	Annual return on the investment portfolio in the current year
PA	Total value of the pension assets of the fund

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TABLE 7 (CONTINUED)

VARIABLE	DEFINITION
INV	Value of the investment in a particular type of investment by the fund
EXPAY	Expected benefit payment at the beginning of the plan year
DUM	Dummy variables defining the location of the funding with respect to the minimum and maximum funding limits
UFCPL	Unfunded current pension liability
METHOD	Dummy variable with value = 0 if selected actuarial cost method is the accrued benefit (unit credit) method, otherwise it has value =1
IMETHOD	Industry mean of *METHOD*. This variable controls for any industry specific practices in selecting the cost method
TRATE	Projected termination rates
ITRATE	Industry mean of *TRATE*. This variable controls for any industry specific termination practices
ADJ	Adjusted component of the reported interest rate
MSV	Mean standardized variance
CAR	Cumulative abnormal return in the event window (-4, +4) around the date of ERISA disclosure
MV	Market value of the firm sponsoring the disclosing pension plan, on close of day -5 relative to disclosure date
R	Unadjusted interest rate = R^* - *ADJ*

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TABLE 8

REGRESSION ESTIMATES

$$R_{i,t} = \Sigma_t (\alpha_t \, YR_t) + \beta \, ANRET_{i,t} + \Sigma_p \{ \gamma_p (INV_{i,t,p} / PA_{i,t}) \} + \kappa (UFCPL_{i,t} / PA_{i,t}) + \lambda_1 \, DUML_{i,t} + \lambda_2 \, DUMH_{i,t} + \epsilon_{i,t}$$

Coefficient	Variable	Estimate	Std-Error	t	Prob > |t|
α_{90}	YR_{90}	8.3697	0.0694	120.60	0.0000 *
α_{91}	YR_{91}	8.3866	0.0689	121.75	0.0000 *
α_{92}	YR_{92}	8.1913	0.0691	118.54	0.0000 *
β	*ANRET*	0.0113	0.0144	2.99	0.0134 **
γ_1	INV_1/PA	0.2520	0.0843	2.99	0.0028 *
γ_2	INV_2/PA	0.1970	0.0737	2.67	0.0075 **
γ_3	INV_3/PA	0.0174	0.0924	0.19	0.8502
γ_4	INV_4/PA	0.1277	0.0737	1.73	0.0831
γ_5	INV_5/PA	0.3522	0.0943	3.73	0.0002 *
γ_6	INV_6/PA	0.0198	0.0854	0.23	0.8164
γ_7	INV_7/PA	0.1227	0.1325	0.93	0.3543
γ_8	INV_8/PA	0.2905	0.0736	3.95	0.0001 *
γ_9	INV_9/PA	0.2396	0.0703	3.41	0.0007 *
γ_{10}	INV_{10}/PA	0.0820	0.0694	1.18	0.2372
γ_{11}	INV_{11}/PA	0.3969	0.0692	5.73	0.0000 *
γ_{12}	INV_{12}/PA	0.2615	0.0744	3.51	0.0004 *
γ_{13}	INV_{13}/PA	0.0543	0.0702	0.77	0.4392
γ_{14}	INV_{14}/PA	0.2359	0.0734	3.21	0.0013 *
κ	*UFCPL/PA*	0.0003	0.0001	3.00	0.0081 **
λ_1	*DUML*	0.0503	0.0107	4.70	0.0000 *
λ_2	*DUMH*	-0.0837	0.0089	-9.40	0.0000 *

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TABLE 8 (CONTINUED)

where

Number of observations = 18,199, adjusted-R^2 = 0.9966, F = 254,113, and prob > F = 0.0001. The reported standard-error is the White's (1980) heteroskedasticity corrected standard-error (the null of homoskedasticity is rejected at 1 % significance level).

i	indexes the defined-benefit, single employer pension fund in the sample
t	indexes the year
p	indexes the type of investment into which the pension assets are distributed
$p = 1$	Accounts receivable less allowance for doubtful accounts
$p = 2$	Interest-bearing cash (including money market funds)
$p = 3$	Certificates of deposits
$p = 4$	U.S. Government securities
$p = 5$	Corporate debt instruments (preferred)
$p = 6$	Corporate debt instruments (all others)
$p = 7$	Corporate stocks (preferred)
$p = 8$	Corporate stocks (common)
$p = 9$	Common/collective trusts
$p = 10$	Pooled separate accounts
$p = 11$	Master trusts
$p = 12$	Registered investment companies
$p = 13$	Insurance company general account (unallocated contracts)
$p = 14$	Other investments
R	is the reported pre-retirement interest rate
YR	is a dummy variable for each year in the sample
$ANRET$	is the annual return on the investment portfolio in the current year
INV	is the value invested in a particular type of investment by the fund
PA	is the total value of the pension assets of the fund
$\alpha, \beta, \gamma, \kappa, \lambda$	are the regression coefficients

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TABLE 8 (CONTINUED)

DUML, H	are dummy variables for each of the regions $F < (L^* + H^*)/2$ and $F > (L^* + H^*)/2$, where F is the employer's contribution to the pension fund, L^* is the reported minimum required contribution, and H^* is the reported maximum tax-deductible contribution.
UFCPL	is the unfunded current pension liability and is equal to current liability less current value of pension assets
ϵ	is the error term in the regression
*	implies significance at 1% level.
**	implies significance at 5% level.

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TABLE 9
LOGIT REGRESSION ESTIMATES

$$LOGIT(METHOD_{i,j,t}) = \Sigma_t (\alpha_t YR_t) + \nu_1 IMETHOD_{j,t} + \nu_2 (UFCPL_{i,j,t} / PA_{i,j,t}) + \nu_3 DUML_{i,j,t} + \nu_4 DUMH_{i,j,t} + \epsilon_{i,j,t}$$

Coefficient	Variable	Estimate	Std-Error	Wald χ^2	Prob > χ^2
α_{90}	YR_{90}	-2.3730	0.0786	911.0567	0.0001*
α_{91}	YR_{91}	-2.3399	0.0779	902.8613	0.0001*
α_{92}	YR_{92}	-2.3765	0.0795	894.6681	0.0001*
ν_1	*IMETHOD*	4.4879	0.1145	1536.4998	0.0001*
ν_2	*UFCPL/PA*	-0.00036	0.00045	0.6324	0.4265
ν_3	*DUML*	-0.3924	0.0483	65.9103	0.0001*
ν_4	*DUMH*	0.3494	0.0390	80.4302	0.0001*

where

Number of observations = 18,199, Hosmer and Lemeshow goodness-of-fit statistic = 26.396 (p = 0.0009). Hausman's (1978) test results in the rejection of the null hypothesis of exogeneity for variable (UFCPL/PA). Predicted value of the variable (from reduced form regression equation 2.3, Appendix 2) is used as instrumental variable for the estimation.

i	indexes the defined-benefit, single employer pension fund in the sample
t	indexes the year
j	indexes the industry
YR	are dummy variables for each year in the sample
METHOD	is a dummy variable with value = 0 if selected actuarial cost method is the accrued benefit (unit credit) method, otherwise it has value = 1
IMETHOD	is the industry mean of *METHOD*. This variable is included to control for any industry specific practices in selecting the cost method and as an anchor for evaluating the extent of adjustment

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TABLE 9 (CONTINUED)

α, γ	are the regression coefficients
DUML, H	are dummy variables for each of the regions $F < (L^* + H^*)/2$ and $F > (L^* + H^*)/2$, where F is the employer's contribution to the pension fund, L^* is the reported minimum required contribution, and H^* is the reported maximum tax-deductible contribution.
UFCPL	is the unfunded current pension liability and is equal to current liability less current value of pension assets
PA	is the total value of the pension assets of the fund
ϵ	is the error term in the regression
*	implies significance at 1% level

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TABLE 10

REGRESSION ESTIMATES

$$TRATE_{i,j,t} = \Sigma_t (\alpha_t \, YR_t) + \mu_1 \, ITRATE_{j,t} + \mu_2 (UFCPL_{i,j,t} / PA_{i,j,t}) + \mu_3 \, DUML_{i,j,t} + \mu_4 \, DUMH_{i,j,t} + \epsilon_{i,j,t}$$

Coefficient	Variable	Estimate	Std-Error	t	Prob > |t|
α_{92}	YR_{92}	0.112205	0.1988645	0.5642	0.5727
μ_1	*ITRATE*	0.994289	0.0443846	22.4017	0.0000*
μ_2	*UFCPL/PA*	0.000160	0.0000139	11.5108	0.0000*
μ_3	*DUML*	0.172749	0.1249643	1.3824	0.1669***
μ_4	*DUMH*	-0.118808	0.0862223	-1.3779	0.1682***

where:

Number of observations = 3,716 (data is available only for 1992), adjusted-R^2 = 0.7987, F = 2,950, prob > F = 0.0001, The reported standard-error is the White's (1980) heteroskedasticity corrected standard-error (the null of homoskedasticity is rejected at 1% significance level).

i	indexes the defined-benefit, single employer pension fund in the sample
t	indexes the year
j	indexes the industry
YR	are dummy variables for each year in the sample
TRATE	is the termination rate
ITRATE	is the industry mean of *TRATE*. This variable is included to control for any industry specific effects and as an anchor for evaluating the extent of adjustment in *TRATE*
α, μ	are the regression coefficients
DUML, H	are dummy variables for each of the regions F < (L* + H*)/2 and F > (L* + H*)/2, where F is the employer's contribution to the pension fund, L* is the

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TABLE 10 (CONTINUED)

	reported minimum required contribution, and H* is the reported maximum tax-deductible contribution.
UFCPL	is the unfunded current pension liability and is equal to current liability less current value of pension assets
PA	is the total value of the pension assets of the fund
ϵ	is the error term in the regression
*	implies significance at 1% level
***	implies significance at 10% level in a one-sided test

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TABLE 11

STANDARDIZED VARIANCE TEST

EVENT WINDOW	MEAN STANDARDIZED VARIANCE (MSV)	t (H0: MSV = 1)	PROBABILITY > |t|
(-22, -14)	1.03500	0.74683	0.45539
(-13, -5)	0.98381	-0.34484	0.73031
(-4, +4)	1.17660	2.79675	0.00529 *
(+5, +13)	1.18875	3.20935	0.00138 *
(+14, +22)	1.23972	3.85260	0.00013 *

Where:

Event window is relative to ERISA disclosure date.

MSV = $(1/N)\Sigma_i(\sigma_i^2 / \phi_i^2)$; where σ_i^2 is firm i's variance of prediction errors (corrected for variance increase due to prediction outside the estimation period using Patell's (1976) technique) in the event window; ϕ_i^2 is firm i's variance of residuals (from CAPM) in the estimation window (-122, -23); and N is the total number of observations used in the computation.

* implies significance at 1% level

TABLE 12
REGRESSION ESTIMATES

$$CAR_{i,t} = \Sigma_t \left(\alpha_t \, YR_t \right) + \beta_1 \, CHINT_{i,t} + \beta_2 \, CHADJ_{i,t} + \beta_3 \, CHADJL_{i,t} + \beta_4 \, CHADJH_{i,t} + \epsilon_{i,t}$$

Coefficient	Variable	Estimate	Std-Error	t	Prob > |t|
α_{90}	YR_{90}	0.1042	0.00000	28,931	0.0000 *
α_{91}	YR_{91}	0.0044	0.00199	2.211	0.0270 ***
α_{92}	YR_{92}	-0.0021	0.00279	-0.770	0.4401
β_1	*CHINT*	0.0850	0.04459	1.906	0.0567 ***
β_2	*CHADJ*	1.3143	1.07981	1.217	0.2236
β_3	*CHADJL*	-0.7497	1.13243	-0.662	0.5080
β_4	*CHADJH*	-2.3751	1.19528	-1.987	0.0469 ***

where number of observations = 1,077,adjusted-R^2 = 0.0200, F = 4.139, and prob > F = 0.0002. White's (1980) test rejects the null of homoskedasticity at 5% and the heteroskedasticity corrected standard-errors are reported.

i	indexes the defined-benefit, single-employer pension fund in the sample B.
t	indexes the year.
α, β, etc.	are the regression coefficients.
CAR	is the cumulative abnormal return from CAPM for the period -4 to 4 relative to the date of ERISA disclosure.
YR	are dummy variables for each year in the sample.
R^*	is the reported pre-retirement interest rate.
$CHINT_{i,t}$	$= (R^*_{i,t} - R^*_{i,t-1}) / R^*_{i,t-1}$
$CHADJ_{i,t}$	$= (ADJ_{i,t} - ADJ_{i,t-1}) / R^*_{i,t-1}$
ADJ	$= \kappa \, (UFCPL / PA) + \lambda_1 \, DUML + \lambda_2 DUMH$ is the manipulated component of R^*
DUML, H	are dummy variables for each of the regions F < (L* + H*)/2 and F > (L* + H*)/2, where F is the employer's contribution to the pension fund, L* is the reported minimum required contribution, and H* is the reported maximum tax-deductible contribution.
UFCPL	is the unfunded current pension liability and is equal to current liability less current value of pension assets.
PA	is the total value of the pension assets of the fund.
CHADJL	= *CHADJ* * *DUML*
CHADJH	= *CHADJ* * *DUMH*
ϵ	is the error term in the regression.
*	implies significance at 1% level
***	implies significance at 10% level

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FIGURE 1

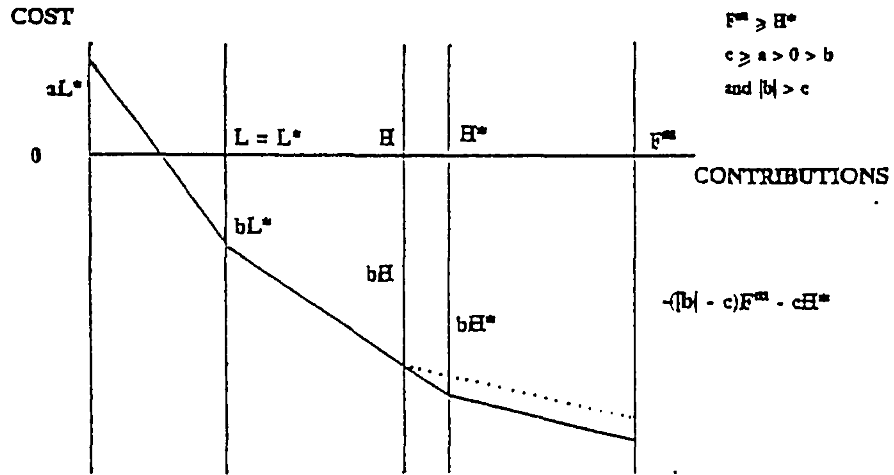

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FIGURE 2

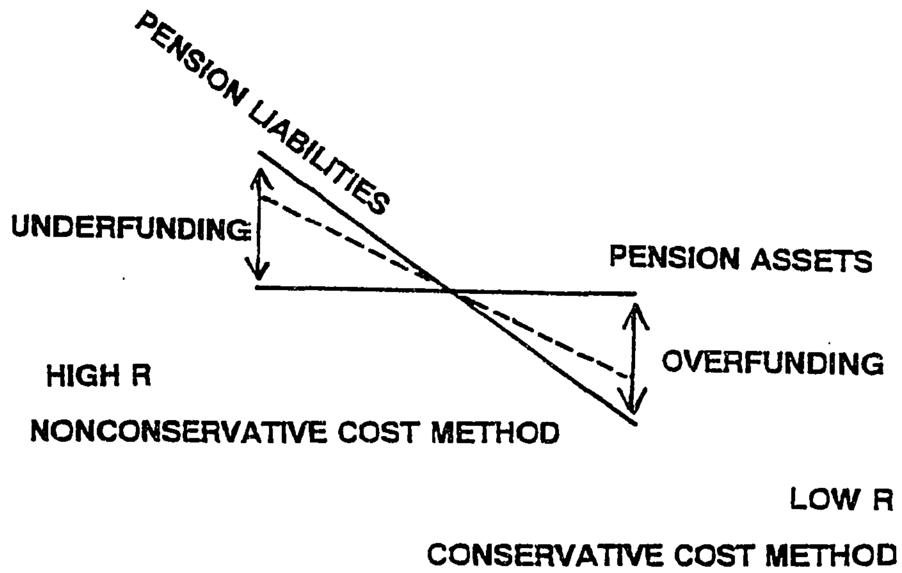

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FIGURE 3

THE "FUNDING GAME"

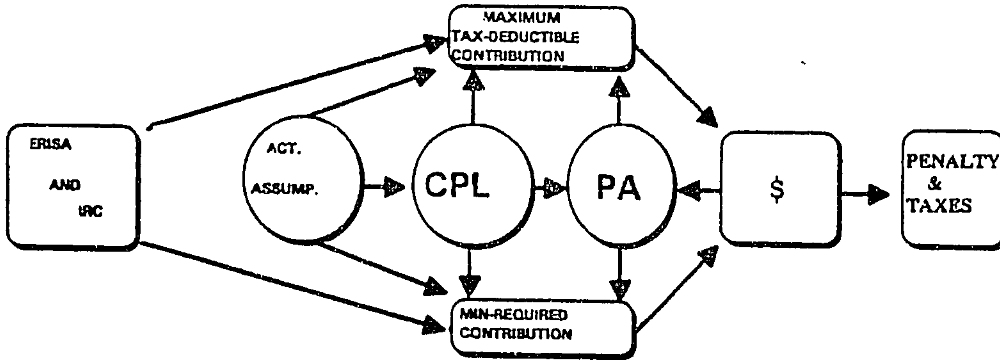

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FIGURE 4

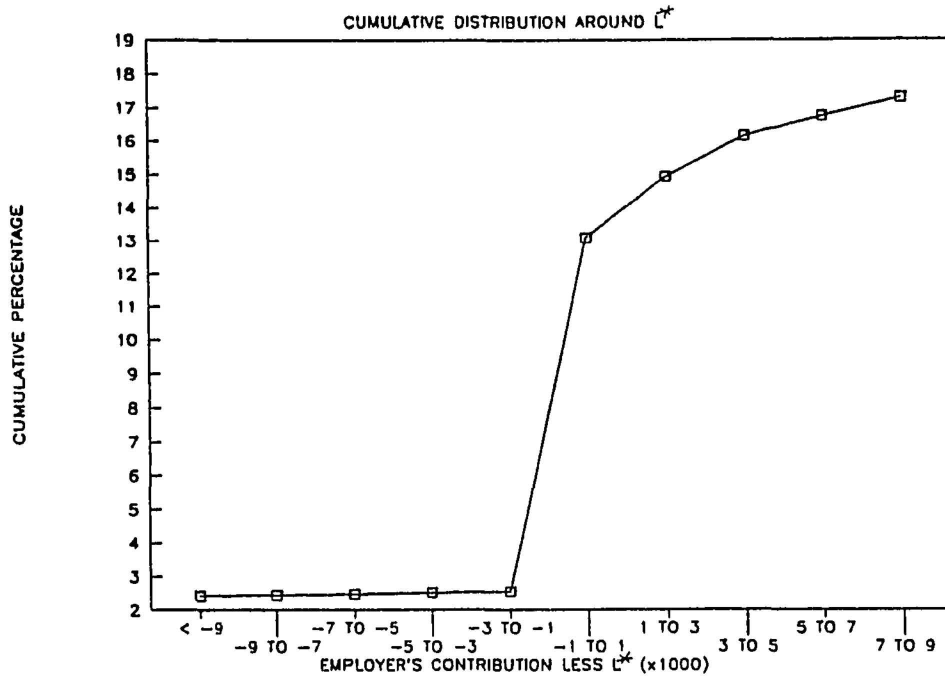

Figure shows distribution of employers' contributions relative to L^* (minimum required contribution). A large number of plans are clusterd around L^*.

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FIGURE 5

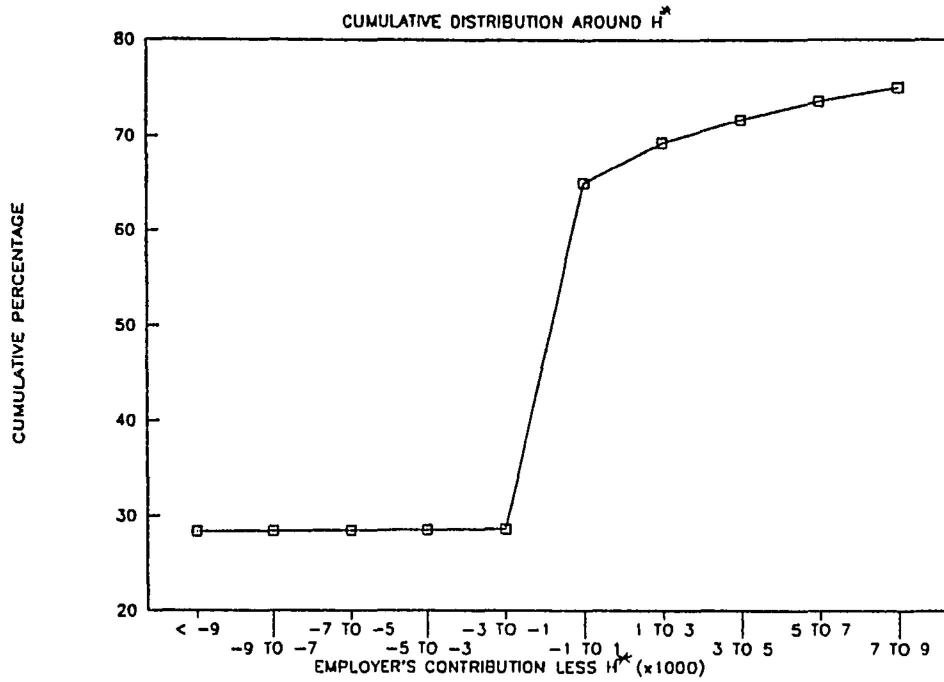

Figure shows distribution of employers' contributions relative to H^* (maximum tax-deductible contribution). A large number of plans are clusterd around H^*.

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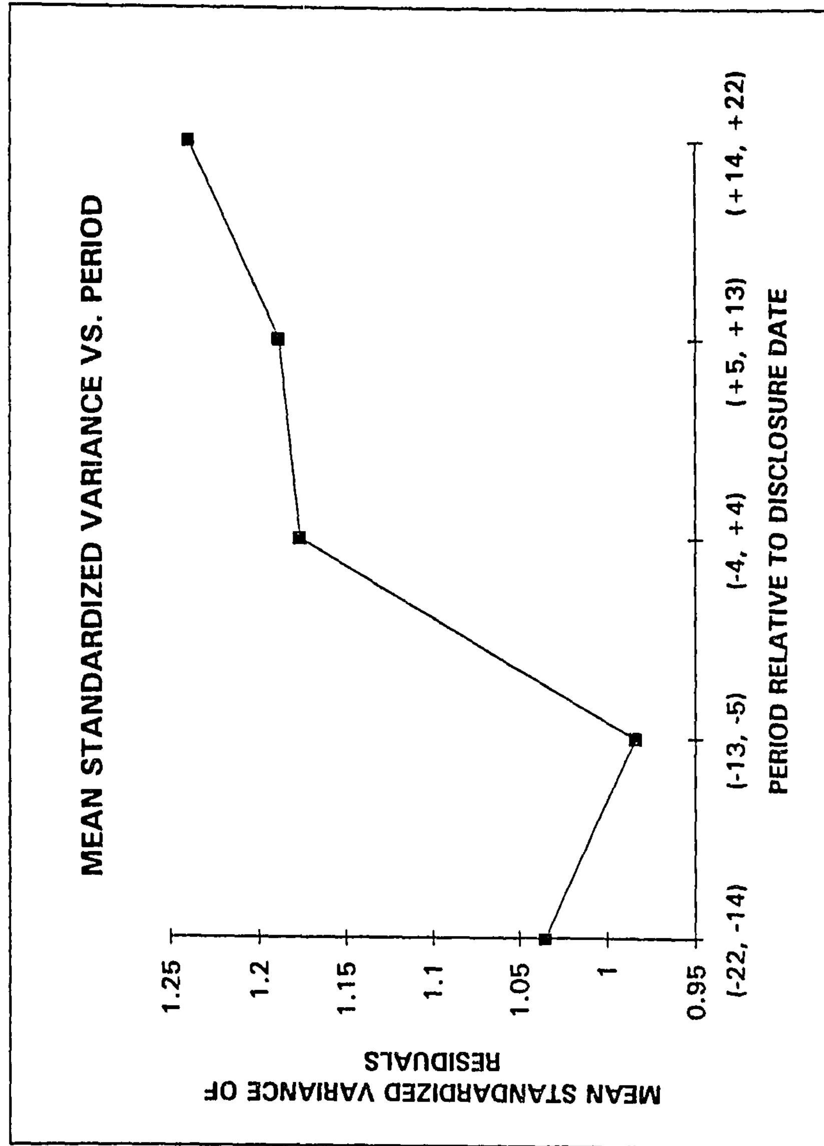
FIGURE 6



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APPENDIX 1

Form **5500** — Department of the Treasury, Internal Revenue Service; Department of Labor, Pension and Welfare Benefits Administration; Pension Benefit Guaranty Corporation

Annual Return/Report of Employee Benefit Plan
(With 100 or more participants)

This form is required to be filed under sections 104 and 4065 of the Employee Retirement Income Security Act of 1974 and sections 6039D, 6057(b), and 6058(a) of the Internal Revenue Code, referred to as the Code.
▶ See separate instructions

OMB No. 1210-0016

1991

This Form Is Open to Public Inspection.

For the calendar plan year 1991 or fiscal plan year beginning JANUARY 1, 1991, and ending DECEMBER 31, 1991

A If (1) through (4) do not apply to this year's return/report, leave the boxes unmarked. This return/report is:
(1) ☐ the first return/report filed for the plan;
(2) ☐ an amended return/report;
(3) ☐ the final return/report filed for the plan; or
(4) ☐ a short plan year return/report (less than 12 months).

For IRS Use Only
EP-ID

Information in 1a through 6b is used to identify your employee benefit plan. Check it for accuracy and make any necessary corrections. Also complete any incomplete items in 1a through 6b. This page must accompany your completed return/report.

B IF YOU MADE ANY CHANGES TO THE PREPRINTED INFORMATION OR FILLED IN ANY INCOMPLETE INFORMATION IN 1a THROUGH 6b BELOW, CHECK HERE ▶ ☐
C If your plan year changed since the last return/report, check this box ▶ ☐
D If you filed for an extension of time to file this return/report, check this box and attach a copy of the extension ▶ ☐

1a Name and address of plan sponsor (employer, if for a single-employer plan) (address should include room or suite no.)

MAYTAG CORPORATION

1b Employer identification number
42 0401785

1c Sponsor's telephone number

1d Business code (see instructions, page 19)
3630

1e CUSIP issuer number

2a Name and address of plan administrator (if same as plan sponsor, enter "Same")

2b Administrator's employer identification no.

2c Administrator's telephone number

3 If you are not filing a page one with the historical plan information preprinted and the name, address and EIN of the plan sponsor or plan administrator is different than that on the last return/report filed for this plan, enter the information from the last return/report in a and/or b and complete c.
a Sponsor .... EIN .... Plan number ....
b Administrator .... EIN ....
c If a indicates a change in the sponsor's name, address and EIN, is this a change in sponsorship only? (See instruction 3c for definition of sponsorship.) Enter "Yes" or "No."

4 Enter the applicable plan entity code listed in the instructions for line 4 on page 8. ▶ A (SINGLE EMPLOYER PLAN)

5a(1) Name of plan ▶ ....

5b Effective date of plan (mo., day, yr.)
01/01/1937

(2) Does this plan cover self-employed individuals? (Enter "Yes" or "No.") ▶

5c Enter three-digit plan number ▶ 046

All filers must complete 6a, 6b, and 6c as applicable.
6a(1) Welfare or fringe benefit plan (Enter the applicable codes from page 8 of the instructions in the boxes.) ▶

(2) If you entered a code M, N, or O is the plan funded? (see instructions) ▶ ☐ Yes ☐ No
6b Pension benefit plan (Enter the applicable pension codes from page 8 of the instructions.) ▶ 1 (DEFINED BENEFIT)

Be sure to include all required schedules and attachments. This page must accompany your completed return/report.
Caution: A penalty for the late or incomplete filing of this return/report will be assessed unless reasonable cause is established.

Under penalties of perjury and other penalties set forth in the instructions, I declare that I have examined this return/report, including accompanying schedules and statements, and to the best of my knowledge and belief, it is true, correct, and complete.

Signature of employer/plan sponsor ▶ .... Date ▶ ....
Type or print name of individual signing for the employer/plan sponsor ....
Signature of plan administrator ▶ .... Date ▶ ....
Type or print name of individual signing for the plan administrator

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6c Other plan features (if you check box (1) or (2), attach Schedule E (Form 5500)): (1) ☐ ESOP (2) ☐ Leveraged ESOP
(3) ☐ Participant-directed account plan (4) ☐ Pension plan maintained outside the United States
(5) ☑ Master trust (see instructions) (6) ☐ 103-12 investment entity (see instructions)
(7) ☐ Common/collective trust (8) ☐ Pooled separate account

....

d Single-employer plans enter the tax year end of the employer in which this plan year ends ▶ Month 12 Day 31 Year 91

	Yes	No
e Is the employer a member of an affiliated service group?		
f Does this plan contain a cash or deferred arrangement described in Code section 401(k)?		

7 Number of participants as of the end of the plan year (welfare plans complete only a(4), b, c, and d):

a Active participants (1) Number fully vested	a(1)	5 7
(2) Number partially vested	a(2)	0
(3) Number nonvested	a(3)	8 2
(4) Total	a(4)	1 3 9
b Retired or separated participants receiving benefits	b	10
c Retired or separated participants entitled to future benefits	c	5
d Subtotal (add a(4), b, and c)	d	154
e Deceased participants whose beneficiaries are receiving or are entitled to receive benefits	e	0
f Total (add d and e)	f	154
g Number of participants with account balances (Defined benefit plans do not complete this line item.)	g	—

		Yes	No
h (1) Was any participant(s) separated from service with a deferred vested benefit for which a Schedule SSA (Form 5500) is required to be attached to this form? (See instructions.)	h(1)		
(2) If "Yes," enter the number of separated participants required to be reported ▶			

		Yes	No
8a Was this plan amended in this plan year or any prior plan year? If "No," go to item 9a	8a	✓	
b If a is "Yes," enter the date the most recent amendment was adopted. ▶ Month...... Day........ Year....... If the date in b is in the plan year for which this return/report is filed, complete c through f			
c Did any amendment during the current plan year result in the retroactive reduction of accrued benefits for any participants?	c		
d Did any amendment during the current plan year provide former employees with an additional allocation or accrual this year?	d		
e During this plan year did any amendment change the information contained in the latest summary plan descriptions or summary description of modifications available at the time of amendment?	e		
f If e is "Yes," has a summary plan description or summary description of modifications that reflects the plan amendments referred to in e been both furnished to participants and filed with the Department of Labor?	f		
9a Was this plan terminated during this plan year or any prior plan year? If "Yes," enter the year ▶	9a		✓
b Were all plan assets either distributed to participants or beneficiaries, transferred to another plan, or brought under the control of PBGC?	b		
c Was a resolution to terminate this plan adopted during this plan year or any prior plan year?	c		✓
d If a or c is "Yes," have you received a favorable determination letter from IRS for the termination?	d		
e If d is "No," has a determination letter been requested from IRS?	e		
f If a or c is "Yes," have participants and beneficiaries been notified of the termination or the proposed termination?	f		
g If a is "Yes" and the plan is covered by PBGC, is the plan continuing to file a PBGC Form 1 and pay premiums until the end of the plan year in which assets are distributed or brought under the control of PBGC?	g		
h During this plan year, did any trust assets revert to the employer for which the Code section 4980 excise tax is due?	h		
i If h is "Yes," enter the amount of tax paid with your Form 5330 ▶ $			

10a In this plan year, was this plan merged or consolidated into another plan(s), or were assets or liabilities transferred to another plan(s)? If "No," go to item 11 ☐ Yes ☑ No

If "Yes," identify other plan(s)	c Employer identification number(s)	d Plan number(s)
b Name of plan(s) ▶		

e Has Form 5310 or 5310-A been filed? ☐ Yes ☐ No

11 Enter the plan funding arrangement code from page 9 of the instructions ▶ | 12 Enter the plan benefit arrangement code from page 9 of the instructions ▶

		Yes	No
13a Is this a plan established or maintained pursuant to one or more collective bargaining agreements?	13a		
b If a is "Yes," enter the appropriate six-digit LM number(s) of the sponsoring labor organization(s) (see instructions): (1) (2) (3)			
14 If any benefits are provided by an insurance company, insurance service, or similar organization, enter the number of Schedules A (Form 5500), Insurance Information, that are attached. If none, enter "-0-." ▶			

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Welfare Plans Do Not Complete Items 15 Through 27. Go To Item 28. Fringe Benefit Plans see page 5 of the instructions.

		Yes	No
15a	If this is a defined benefit plan, subject to the minimum funding standards for this plan year, is Schedule B (Form 5500) required to be attached? (If this is a defined contribution plan leave blank.)	15a ✓	
b	If this is a defined contribution plan, i.e., money purchase or target benefit, is it subject to the minimum funding standards? (If a waiver was granted, see instructions.) (If this is a defined benefit plan leave blank.)	b	
	If "Yes," complete (1), (2), and (3) below:		
	(1) Amount of employer contribution required for the plan year under Code section 412 — b(1) $		
	(2) Amount of contribution paid by the employer for the plan year — b(2) $		
	Enter date of last payment by employer ▶ Month........ Day....... Year......		
	(3) If (1) is greater than (2), subtract (2) from (1) and enter the funding deficiency here; otherwise, enter zero. (If you have a funding deficiency, file Form 5330.) — b(3) $		
16	Has the plan been top-heavy at any time beginning with the 1984 plan year?	16	
17	Has the annual compensation of each participant taken into account under the current plan year been limited to $222,220?	17	
18a	(1) Did the plan distribute any annuity contracts this year? (See instructions.)	a(1)	
	(2) If (1) is "Yes," did these contracts contain a requirement that the spouse consent before any distributions under the contract are made in a form other than a qualified joint and survivor annuity?	a(2)	
b	Did the plan make distributions to participants or spouses in a form other than a qualified joint and survivor annuity (a life annuity if a single person) or qualified preretirement survivor annuity (exclude deferred annuity contracts)?	b	
c	Did the plan make distributions or loans to married participants and beneficiaries without the required consent of the participant's spouse?	c	
d	Upon plan amendment or termination, do the accrued benefits of every participant include the subsidized benefits that the participant may become entitled to receive subsequent to the plan amendment or termination?	d	
19	Were distributions, if any, made in accordance with the requirements under Code sections 411(a)(11) and 417(e)?	19	
20	Have any contributions been made or benefits accrued in excess of the Code section 415 limits, as amended by the Tax Reform Act of 1986?	20	
21	Has the plan made the required distributions in 1991 under Code section 401(a)(9)? (See instructions.)	21	
22a	Does the employer apply the separate line of business rules of Code section 414(r) when testing to see if this plan satisfies the coverage and discrimination tests of Code sections 410(b) and 401(a)(4)?	22a	
b	If a is "Yes," enter the total number of separate lines of business claimed by the employer ▶ .... If more than one separate line of business, see instructions for additional information to attach.		
c	Does the plan consist of more than one part that is mandatorily disaggregated under Income Tax Regulations section 1.410(b)-7(c)? If "Yes," see instructions for additional information to attach.	c	
d	In testing whether this plan satisfies the coverage and discrimination tests of Code sections 410(b) and 401(a), does the employer aggregate plans?	d	
e	Does the employer restructure the plan into component plans to satisfy the coverage and discrimination tests of Code sections 410(b) and 401(a)(4)?	e	
f	If you meet either of the following exceptions, check the applicable box to tell us which exception you meet and do NOT complete the rest of question 22: (1) ☐ No highly compensated employee benefited under the plan at any time during the plan year; (2) ☐ This is a collectively bargained plan that benefits only employees covered under a collective bargaining agreement, and no more than 2 percent of the employees who are covered under the collectively bargained agreement are professional employees.		
g	Did any leased employee perform services for the employer at any time during the plan year?	g	
			Number
h	Enter the total number of employees of the employer. Employer includes entities aggregated with the employer under Code sections 414(b), (c), or (m). The number of employees includes leased employees and self-employed individuals.	h	
i	Enter the total number of employees excludable because of: (1) failure to meet requirements for minimum age and years of service; (2) coverage under a collective bargaining agreement; (3) nonresident aliens who receive no earned income from U. S. sources; and (4) the 500 hours of service/last day rule	i	
j	Enter the number of nonexcludable employees (subtract line i from line h)	j	
k	Do 100 percent of the nonexcludable employees entered on line j benefit under the plan? ☐ Yes ☐ No If line k is "Yes," do NOT complete lines 22l through 22o.		
l	Enter the number of nonexcludable employees (line j) who are highly compensated employees	l	
m	Enter the number of nonexcludable employees (line j) who benefit under the plan	m	
n	Enter the number of employees entered on line m who are highly compensated employees	n	
o	This plan satisfies the coverage requirements on the basis of (check one): (1) ☐ The average benefits test (2) ☐ The ratio percentage test—Enter value ▶		

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		Yes	No
23a Is it intended that this plan qualify under Code section 401(a)? . . . . If "Yes," complete b and c.	23a	✓	
b Enter the date of the most recent IRS determination letter. . . . . ▶ Month 04 Year 1987			
c Is a determination letter request pending with IRS?	c		✓
24a If this is a plan with Employee Stock Ownership (ESOP) features, was a current appraisal of the value of the stock made immediately before any contribution of stock or the purchase of the stock by the trust for the plan year covered by this return/report? (If this plan has NO ESOP features leave blank and go to item 25.)	24a		
b If a is "Yes," was the appraisal made by an unrelated third party?	b		
c If dividends paid on employer securities held by the ESOP were used to make payments on ESOP loans enter the amount of the dividends used to make the payments 24c:			
25 Does the plan provide for permitted disparity? See Code sections 401(a)(5) and 401(l)	25		
26 Does the employer/sponsor listed in 1a of this form maintain other qualified pension benefit plans? . . . If "Yes," enter the total number of plans, including this plan ▶	26		
27 If this plan is an adoption of a master, prototype, or regional prototype plan, indicate which type by checking the appropriate box: a ☐ Master b ☐ Prototype c ☐ Regional Prototype			
28a Did any person who rendered services to the plan receive directly or indirectly $5,000 or more in compensation from the plan during the plan year (except for employees of the plan who were paid less than $1,000 in each month)? . . If "Yes," complete Part I of Schedule C (Form 5500).	28a		
b Did the plan have any trustees who must be listed in Part II of Schedule C (Form 5500)?	b		
c Has there been a termination in the appointment of any person listed in d below?	c		✓
d If c is "Yes," check the appropriate box(es), answer e and f, and complete Part III of Schedule C (Form 5500): (1) ☐ Accountant (2) ☐ Enrolled actuary (3) ☐ Insurance carrier (4) ☐ Custodian (5) ☐ Administrator (6) ☐ Investment manager (7) ☐ Trustee			
e Have there been any outstanding material disputes or matters of disagreement concerning the above termination?	e		
f If an accountant or enrolled actuary has been terminated during the plan year, has the terminated accountant/actuary been provided a copy of the explanation required by Part III of Schedule C (Form 5500) with a notice advising them of their opportunity to submit comments on the explanation directly to DOL?	f		
g Enter the number of Schedules C (Form 5500) that are attached. If none, enter -0- ▶			
29a Is this plan exempt from the requirement to engage an independent qualified public accountant? . . .	29a		✓
b If a is "No," attach the accountant's opinion to this return/report and check the appropriate box. This opinion is: (1) ☒ Unqualified (2) ☐ Qualified/disclaimer per Department of Labor Regulations 29 CFR 2520.103-8 and/or 2520.103-12(d) (3) ☐ Qualified/disclaimer other (4) ☐ Adverse (5) ☐ Other (explain)			
c If a is "No," does the accountant's report, including the financial statements and/or notes required to be attached to this return/report disclose (1) errors or irregularities; (2) illegal acts; (3) material internal control weaknesses; (4) a loss contingency indicating that assets are impaired or a liability incurred; (5) significant real estate or other transactions in which the plan and (A) the sponsor, (B) the plan administrator, (C) the employer(s), or (D) the employee organization(s) are jointly involved; (6) that the plan has participated in any related party transactions; or (7) any unusual or infrequent events or transactions occurring subsequent to the plan year end that might significantly affect the usefulness of the financial statements in assessing the plan's present or future ability to pay benefits?	c		✓
d If c is "Yes," provide the total amount involved in such disclosure ▶			
30 If 29a is "No," complete the following questions. (You may NOT use "N/A" in response to item 30): If a, b, c, d, e, or f is checked "Yes," schedules of these items in the format set forth in the instructions are required to be attached to this return/report. During the plan year:			
a Did the plan have assets held for investment?	30a		
b Were any loans by the plan or fixed income obligations due the plan in default as of the close of the plan year or classified during the year as uncollectible?	b		
c Were any leases to which the plan was a party in default or classified during the year as uncollectible? .	c		
d Were any plan transactions or series of transactions in excess of 5% of the current value of plan assets?	d		
e Do the notes to the financial statements accompanying the accountant's opinion disclose any nonexempt transactions with parties-in-interest?	e		
f Did the plan engage in any nonexempt transactions with parties-in-interest not reported in e ?	f		
g Did the plan hold qualifying employer securities that are not publicly traded?	g		
h Did the plan purchase or receive any nonpublicly traded securities that were not appraised in writing by an unrelated third party within 3 months prior to their receipt?	h		
i Did any person manage plan assets who had a financial interest worth more than 10% in any party providing services to the plan or receive anything of value from any party providing services to the plan? . . .	i		
31 Did the plan acquire individual whole life insurance contracts during the plan year?	31		

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	Yes	No
32 During the plan year:		
a (1) Was this plan covered by a fidelity bond? If "Yes," complete a(2) and a(3) . . . . . 32a(1)		
(2) Enter amount of bond ▶ $		
(3) Enter the name of the surety company ▶		
b (1) Was there any loss to the plan, whether or not reimbursed, caused by fraud or dishonesty? . . . b(1)		
(2) If (1) is "Yes," enter amount of loss ▶ $		

33a Is the plan covered under the Pension Benefit Guaranty Corporation termination insurance program?
☑ Yes ☐ No ☐ Not determined

b If a is "Yes" or "Not determined," enter the employer identification number and the plan number used to identify it.
Employer identification number ▶ Plan number ▶

34 Current value of plan assets and liabilities at the beginning and end of the plan year. Combine the value of plan assets held in more than one trust. Allocate the value of the plan's interest in a commingled trust containing the assets of more than one plan on a line-by-line basis unless the trust meets one of the specific exceptions described in the instructions. Do not enter the value of that portion of an insurance contract which guarantees, during this plan year, to pay a specific dollar benefit at a future date. **Round off amounts to the nearest dollar; any other amounts are subject to rejection.** Plans with no assets at the beginning and the end of the plan year, enter zero on line f.

Assets		(a) Beginning of year	(b) End of Year
a Total noninterest-bearing cash	a		0
b Receivables: (1) Employer contributions	b(1)		
(2) Participant contributions	(2)		
(3) Income	(3)		
(4) Other	(4)		
(5) Less allowance for doubtful accounts	(5)		
(6) Total. Add b(1) through (4) and subtract (5) ▶	(6)		21,736
c General investments: (1) Interest-bearing cash (including money market funds)	c(1)		0
(2) Certificates of deposit	(2)		0
(3) U.S. Government securities	(3)		0
(4) Corporate debt instruments: (A) Preferred	(4)(A)		0
(B) All other	(4)(B)		0
(5) Corporate stocks: (A) Preferred	(5)(A)		0
(B) Common	(5)(B)		0
(6) Partnership/joint venture interests	(6)		0
(7) Real estate: (A) Income-producing	(7)(A)		0
(B) Nonincome-producing	(7)(B)		0
(8) Loans (other than to participants) secured by mortgages: (A) Residential	(8)(A)		0
(B) Commercial	(8)(B)		0
(9) Loans to participants: (A) Mortgages	(9)(A)		0
(B) Other	(9)(B)		0
(10) Other loans	(10)		0
(11) Value of interest in common/collective trusts	(11)		0
(12) Value of interest in pooled separate accounts	(12)		
(13) Value of interest in master trusts	(13)		153,453
(14) Value of interest in 103-12 investment entities	(14)		0
(15) Value of interest in registered investment companies	(15)		0
(16) Value of funds held in insurance company general account (unallocated contracts)	(16)		0
(17) Other	(17)		0
(18) Total. Add c(1) through c(17) ▶	(18)		153,453
d Employer-related investments: (1) Employer securities	d(1)		0
(2) Employer real property	(2)		0
e Buildings and other property used in plan operation	e		0
f Total assets. Add a, b(6), c(18), d(1), d(2), and e ▶	f		175,189
Liabilities			
g Benefit claims payable	g		
h Operating payables	h		
i Acquisition indebtedness	i		
j Other liabilities	j		
k Total liabilities. Add g through j ▶	k	0	0
Net Assets			
l Line f minus line k ▶	l		

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35 Plan income, expenses, and changes in net assets for the plan year. *Include all income and expenses of the plan, including any trust(s) or separately maintained fund(s), and any payments/receipts to/from insurance carriers.* Round off amounts to the nearest dollar; any other amounts are subject to rejection.

Item	Line	(a) Amount	(b) Total
Income			
a Contributions:			
(1) Received or receivable from:			
(A) Employers	a(1)(A)	34,3[illegible]	
(B) Participants	(B)	0	
(C) Others	(C)	0	
(2) Noncash contributions	(2)	0	
(3) Total contributions. Add a(1)(A), (B), (C) and a(2) ▶	(3)		34,3[illegible]
b Earnings on investments:			
(1) Interest			
(A) Interest-bearing cash (including money market funds)	b(1)(A)		
(B) Certificates of deposit	(B)		
(C) U.S. Government securities	(C)		
(D) Corporate debt instruments	(D)		
(E) Mortgage loans	(E)		
(F) Other loans	(F)		
(G) Other interest	(G)		
(H) Total interest. Add b(1)(A) through (G) ▶	(H)		
(2) Dividends: (A) Preferred stock	b(2)(A)		
(B) Common stock	(B)		
(C) Total dividends. Add b(2)(A) and (B) ▶	(C)		
(3) Rents	(3)		
(4) Net gain (loss) on sale of assets: (A) Aggregate proceeds	(4)(A)		
(B) Aggregate carrying amount (see instructions)	(B)		
(C) Subtract (B) from (A) and enter result	(C)		
(5) Unrealized appreciation (depreciation) of assets	(5)		
(6) Net investment gain (loss) from common/collective trusts	(6)		
(7) Net investment gain (loss) from pooled separate accounts	(7)		
(8) Net investment gain (loss) from master trusts	(8)		
(9) Net investment gain (loss) from 103-12 investment entities	(9)		
(10) Net investment gain (loss) from registered investment companies	(10)		
c Other income	c		
d Total income. Add all amounts in column (b) and enter total ▶	d		[illegible]
Expenses			
e Benefit payment and payments to provide benefits:			
(1) Directly to participants or beneficiaries	e(1)	5,2[illegible]	
(2) To insurance carriers for the provision of benefits	(2)	0	
(3) Other	(3)	0	
(4) Total payments. Add e(1) through (3) ▶	(4)		
f Interest expense	f		
g Administrative expenses: (1) *Salaries and allowances*	g(1)		
(2) Accounting fees	(2)	0	
(3) Actuarial fees	(3)	0	
(4) Contract administrator fees	(4)		
(5) Investment advisory and management fees	(5)		
(6) Legal fees	(6)		
(7) Valuation/appraisal fees	(7)		
(8) Trustees fees/expenses (including travel, seminars, meetings, etc.)	(8)		
(9) Other	(9)		
(10) Total administrative expenses. Add g(1) through (9)	(10)		
h Total expenses. Add e(4), f and g(10) ▶	h		5,2[illegible]
i Net income (loss). Subtract h from d ▶	i		
j Transfers to (from) the plan (see instructions)	j		
k Net assets at beginning of year (Item 34, line l, column (a))	k		
l Net assets at end of year (Item 34, line l, column (b)) ▶	l		

36 Did any employer sponsoring the plan pay any of the administrative expenses of the plan that were not reported in line 35g? Yes / No

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SCHEDULE B (Form 5500)
Department of the Treasury
Internal Revenue Service
Department of Labor
Pension and Welfare Benefits Administration
Pension Benefit Guaranty Corporation

RECD. 01/17/92 D.O.L.

Actuarial Information

This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974, referred to as ERISA, and section 6059(a) of the Internal Revenue Code, referred to as the Code.

► Attach to Form 5500, 5500-C/R, or 5500EZ if applicable.
► See separate instructions.

OMB No. 1210-0016

1991

This Form Is Open to Public Inspection

For calendar plan year 1991 or fiscal plan year beginning JANUARY 1, 1991, and ending DECEMBER 31, 1991

► Read the specific instructions before attempting to complete this form.
► Please complete every item on this form. If an item does not apply, enter "N/A." ► Round off amounts to nearest dollar.
► Caution: *A penalty of $1,000 will be assessed for late filing of this report unless reasonable cause is established.*

Name of plan sponsor as shown on line 1a of Form 5500, 5500-C/R, or 5500EZ: MAYTAG CORPORATION

Employer identification number: [illegible]

Name of plan

Enter three-digit plan number ► 046

		Yes	No
1	Has a waiver of a funding deficiency for this plan year been approved by the IRS? If "Yes," attach a copy of the IRS approval letter.		✓
2	Is a waived funding deficiency of a prior plan year being amortized in this plan year?		✓
3	Have any of the periods of amortization for charges described in Code section 412(b)(2)(B) been extended by IRS? If "Yes," attach a copy of the IRS approval letter.		
4a	Was the shortfall funding method the basis for this plan year's funding standard account computations?		
b	Is this plan a multiemployer plan which is, for this plan year, in reorganization as described in Code section 418 or ERISA section 4241? If "Yes," you are required to attach the information described in the instructions.		
5	Has a change been made in funding method for this plan year? If "Yes," attach either a copy of the letter showing IRS approval or state the applicable Revenue Procedure authorizing approval if used.		

6 Operational information:

a Enter the most recent actuarial valuation date ►

b Enter the date of the last independent appraisal of property such as real estate, collectibles and closely held stock, etc. Date ►

c Current value of the assets accumulated in the plan as of the beginning of this plan year: 155,222

d Current liability as of beginning of plan year:	(1) No. of Persons	(2) Vested Benefits	(3) Total Benefits
(i) For retired participants and beneficiaries receiving payments			
(ii) For terminated vested participants			
(iii) For active participants			
(iv) Total			178,310

e Expected current liability increase as of mo. .... day ..... yr. ...... attributable to benefits accruing during the plan year: 12,394

f Expected benefit payments: 3,596

7 Contributions made to the plan for the plan year by employer(s) and employees:

(a) Month Day Year	(b) Amount paid by employer	(c) Amount paid by employees	(a) Month Day Year	(b) Amount paid by employer	(c) Amount paid by employees
			Total	34,364	

Statement by Enrolled Actuary (see instructions before signing):

To the best of my knowledge, the information supplied in this schedule and on the accompanying statements, if any, is complete and accurate, and in my opinion each assumption used in combination, represents my best estimate of anticipated experience under the plan. Furthermore, in the case of a plan other than a multiemployer plan, each assumption used (a) is reasonable (taking into account the experience of the plan and reasonable expectations) or (b) would, in the aggregate, result in a total contribution equivalent to that which would be determined if each such assumption were reasonable. In the case of a multiemployer plan, the assumptions used, in the aggregate, are reasonable (taking into account the experience of the plan and reasonable expectations).

Signature of actuary .... Date ....

Print or type name of actuary .... Most recent enrollment number ....

Firm name and address .... Telephone number (including area code) ....

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8 Funding standard account and other information:

- **a** Accrued liability as determined for funding standard account as of (enter date) ▶ ....
- **b** Value of assets as determined for funding standard account as of (enter date) ▶ ....
- **c** Unfunded liability for spread-gain methods with bases as of (enter date) ▶ ....
- **d** (i) Actuarial gains or (losses) for period ending ▶ ....
  - (ii) Shortfall gains or (losses) for period ending ▶ ....
- **e** Amount of contribution certified by the actuary as necessary to reduce the funding deficiency to zero, from 9o or 10h (or the attachment for 4b if required).

9 Funding standard account statement for this plan year ending ▶ ....

Charges to funding standard account:

- **a** Prior year funding deficiency, if any 0
- **b** Employer's normal cost for plan year as of mo. .... day .... yr. .... [illegible]
- **c** Amortization charges: (Balance)
  - (i) Funding waivers (outstanding balance as of mo. ...... day ...... yr. ...... ▶ $ ....0....) . . . 0
  - (ii) Other than waivers (outstanding balance as of mo. .... day .... yr. .... ▶ $ ..[illegible]..) . . . [illegible]
- **d** Interest as applicable on a, b, and c . . . . . [illegible]
- **e** Additional funding charge, if applicable (see line 13, page 3) 0
- **f** Additional interest charge due to late quarterly contributions 0
- **g** Total charges (add a through f) 34,347

Credits to funding standard account:

- **h** Prior year credit balance, if any 0
- **i** Employer contributions (total from column (b) of item 7) . . . . . [illegible]
- **j** Amortization credits (outstanding balance as of mo. ...... day ...... yr. ...... ▶ $ ....0....) . . . 0
- **k** Interest as applicable to end of plan year on h, i, and j . . . . . [illegible]
- **l** Miscellaneous credits:
  - (i) FFL credit before reflecting 150% of current liability component . . . . .
  - (ii) Additional credit due to 150% of current liability component . . . . .
  - (iii) Waived funding deficiency . . . . .
  - (iv) Total 0
- **m** Total credits (add h through l) . . . . . [illegible]

Balance:

- **n** *Credit balance: if m is greater than g, enter the difference* . . . . .
- **o** Funding deficiency: if g is greater than m, enter the difference . . . . .

Reconciliation:

- **p** Current year's accumulated reconciliation account:
  - (i) Due to additional funding charge as of the beginning of the plan year . . .
  - (ii) Due to additional interest charges as of the beginning of the plan year . . .
  - (iii) Due to waived funding deficiency:
    - (a) Reconciliation outstanding balance as of mo. ...... day ...... yr. ......
    - (b) Reconciliation amount (9c(i) balance minus 9p(iii)(a)) . . . .
  - (iv) Total as of mo. .... day .... yr. ....

10 Alternative minimum funding standard account (omit if not used):

- **a** Was the entry age normal cost method used to determine entries in line 9, above . . . . ☐ Yes ☐ No
  - If "No," do not complete b through h.
- **b** Prior year alternate funding deficiency, if any . . . . .
- **c** Normal cost . . . . .
- **d** Excess, if any, of value of accrued benefits over market value of assets . . . . .
- **e** Interest on b, c, and d . . . . .
- **f** Employer contributions (total from columns (b) of item 7) . . . . .
- **g** Interest on f . . . . .
- **h** Funding deficiency: if the sum of b through e is greater than the sum of f and g, enter difference

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11 Actuarial cost method used as the basis for this plan year's funding standard account computation:

a ☐ Attained age normal b ☒ Entry age normal c ☐ Accrued benefit (unit credit)
d ☐ Aggregate e ☐ Frozen initial liability f ☐ Individual level premium
g ☐ Other (specify) ▶

12 Checklist of certain actuarial assumptions:

	Pre-retirement		Post-retirement	
a Rates specified in insurance or annuity contracts	☐ Yes	☐ No	☐ Yes	☒ No
b Mortality table code:				
(i) Males				
(ii) Females				
c Interest rate:				
(i) Current liability		%		%
(ii) All other calculated values		%		%
d Retirement age				
e Expense loading		%		%
f Annual withdrawal rate:	Male	Female		
(i) Age 25	%	%		
(ii) Age 40	%	%		
(iii) Age 55	%	%		
g Ratio of salary at normal retirement to salary at:				
(i) Age 25	%	%		
(ii) Age 40	%	%		
(iii) Age 55	%	%		

h Estimated investment return on actuarial value of plan assets for the year ending on the valuation date %

13 Additional Required Funding Charge—Multiemployer plans or plans with NO unfunded current liability or plans with 100 or fewer participants check the box at the right and do not complete a through r below ☐

a Current liability as of valuation date
b Adjusted value of assets as of valuation date (subtract line 9h from line 8b)
c Funded current liability percentage (b divided by a) %
d Unfunded current liability as of valuation date (subtract b from a)
e Outstanding balance of unfunded old liability as of valuation date
f Liability attributable to any unpredictable contingent event benefit
g Unfunded new liability (subtract e and f from d)
h Unfunded new liability amount (_____ % of g)
i Unfunded old liability amount
j Deficit reduction contribution (add h and i)
k Net amortization charge for certain bases
l Unpredictable contingent event amount:
(i) Benefits paid during year attributable to unpredictable contingent event
(ii) Unfunded current liability percentage (subtract the percentage on 13c from 100%) %
(iii) Transition percentage %
(iv) Enter the product of lines (i), (ii), and (iii)
(v) Amortization of all unpredictable contingent event liabilities
(vi) Enter the greater of line iv or line v
m Additional funding charge as of valuation date (excess of j over k (if any) plus l(vi))
n Assets needed to increase current liability percentage to 100% (line d)
o Lesser of m or n
p Interest adjustment
q Additional funding charge (add o and p)
r Adjustment for plans with more than 100 but less than 150 participants (_____ % of q)

14 Has this form been prepared and signed subject to the qualification under Income Tax Regulations section 301.6059-1(d)(5)? (See instructions.) ☐ Yes ☐ No

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Department of the Treasury
Internal Revenue Service

Department of Labor
Pension and Welfare Benefits Administration

Pension Benefit Guaranty Corporation

1991 Instructions for Form 5500

Annual Return/Report of Employee Benefit Plan (With 100 or more participants)

(Code references are to the Internal Revenue Code. ERISA refers to the Employee Retirement Income Security Act of 1974.)

Paperwork Reduction Act Notice.—We ask for the information on this form to carry out the law as specified in ERISA and Code section 6039D. You are required to give us the information. We need it to determine whether the plan is operating according to the law.

The time needed to complete and file the forms listed below reflects the combined requirements of the Internal Revenue Service, Department of Labor, Pension Benefit Guaranty Corporation, and the Social Security Administration. These times will vary depending on individual circumstances. The estimated average times are:

	Recordkeeping	Learning about the law or the form	Preparing the form	Copying, assembling, and sending the form to the IRS
Form 5500 (initial filers)	87 hrs., 3 min.	8 hrs., 51 min.	13 hrs., 27 min.	48 min.
Form 5500 (all other filers)	81 hrs., 19 min.	8 hrs., 51 min.	13 hrs., 22 min.	48 min.
Schedule A (Form 5500)	17 hrs., 20 min.	20 min.	1 hr., 42 min.	16 min.
Schedule B (Form 5500)	33 hrs., 58 min.	2 hrs., 19 min.	3 hrs., 3 min.	......
Schedule C (Form 5500)	5 hrs., 10 min.	18 min.	23 min.	......
Schedule E (Form 5500) (non leveraged ESOP)	1 hr., 40 min.	12 min.	14 min.	......
Schedule E (Form 5500) (leveraged ESOP)	10 hrs., 2 min.	1 hr., 41 min.	1 hr., 56 min.	......
Schedule P (Form 5500)	1 hr., 40 min.	30 min.	32 min.	......
Schedule SSA (Form 5500)	6 hrs., 42 min.	12 min.	19 min.	......

If you have comments concerning the accuracy of these time estimates or suggestions for making these forms more simple, we would be happy to hear from you. You can write to both the Internal Revenue Service, Washington, DC 20224, Attention: IRS Reports Clearance Officer, T:FP; and the Office of Management and Budget, Paperwork Reduction Project (1210-0016), Washington, DC 20503. DO NOT send this form to either of these offices. Instead, see the instructions on page 2 for information on where to file.

File 1991 forms for plan years that started in 1991. If the plan year differs from the calendar year, fill in the fiscal year space just under the form title. For a short plan year, see Section 1, instruction B on page 1.

Reminder: The return/report will be considered incomplete and penalties may be imposed if information required to be submitted on a schedule is not typed or printed on the appropriate schedule, such as the Schedule A (Form 5500). See "Schedules" on page 5. An annual return/report must be filed for employee welfare benefit plans which provide benefits wholly or partially through a Multiple Employer Welfare Arrangement (MEWA) as defined in ERISA section 3(40), unless otherwise exempt (see page 2).

In addition to filing this form with IRS, plans covered by the Pension Benefit Guaranty Corporation (PBGC) termination insurance program must file their Annual Premium Payment, PBGC Form 1, directly with that agency.

Penalties.—ERISA and the Code provide for the assessment or imposition of penalties for not giving complete information and not filing statements and returns/reports. Certain penalties are administrative; that is, they may be imposed or assessed by one of the governmental agencies delegated to administer the collection of the Form 5500 series data. Others require a legal conviction.

A. Administrative Penalties.—Listed below are various penalties for not meeting the Form 5500 series filing requirements. One or more of the following five penalties may be assessed or imposed in the event of incomplete filings or filings received after the due date unless it is determined that your explanation for failure to file properly is for reasonable cause:

1. A penalty of up to $1,000 a day for each day a plan administrator fails or refuses to file a complete return/report. See ERISA section 502(c)(2) and 29 CFR 2560.502c-2.

2. A penalty of $25 a day (up to $15,000) for not filing returns for certain plans of deferred compensation, certain trusts and annuities, and bond purchase plans by the due date(s). See Code section 6652(e). This penalty also applies to returns required to be filed under Code section 6039D.

3. A penalty of $1 a day (up to $5,000) for each participant for whom a registration statement (Schedule SSA (Form 5500)) is required but not filed. See Code section 6652(d)(1).

4. A penalty of $1 a day (up to $1,000) for not filing a notification of change of status of a plan. See Code section 6652(d)(2).

5. A penalty of $1,000 for not filing an actuarial statement. See Code section 6692.

B. Other Penalties.—

1. Any individual who willfully violates any provision of Part 1 of Title I of ERISA shall be fined not more than $5,000 or imprisoned not more than 1 year, or both. See ERISA section 501.

2. A penalty of up to $10,000, 5 years imprisonment, or both, for making any false statement or representation of fact, knowing it to be false, or for knowingly concealing or not disclosing any fact required by ERISA. See section 1027, Title 18, U.S. Code, as amended by section 111 of ERISA.

How To Use This Instruction Booklet

The instructions are divided into four main sections.

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Section 1

A. Who Must File.—Any administrator or sponsor of an employee benefit plan subject to ERISA must file information about each plan every year (Code section 6058 and ERISA sections 104 and 4065). Also required to file, for each year, is every employer maintaining a specified fringe benefit plan as described in Code section 6039D except Code sections 79, 105, 106 and 129 plans. These plans are not required to file until further notice from IRS. The Internal Revenue Service (IRS), Department of Labor (DOL), and Pension Benefit Guaranty Corporation (PBGC) have consolidated their returns and report forms to minimize the filing burden for plan administrators and employers. The chart on page 4 gives a brief guide to the type of return/report to be filed.

B. When To File.—File all required forms and schedules by the last day of the 7th month after the plan year ends. For a short plan year, file the form and applicable schedules by the last day of the 7th month after the short plan year ends. For purposes of this return/report, the short plan year ends upon

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the date of the change in accounting period or upon the complete distribution of the assets of the plan. (Also see Section 3.) If the current year Form 5500 is not available before the due date of your short plan year return/report, use the latest year form available and change the date printed on the return/report to the current year. Also show the dates your short plan year began and ended.

Request for Extension of Time To File.—A one time extension of time up to 2½ months may be granted for filing returns/reports if Form 5558, Application for Extension of Time To File Certain Employee Plan Returns, is filed before the normal due date (not including any extensions) of the return/report.

Exception: *Plans are automatically granted extensions of time to file Form 5500 until the due date of the Federal income tax return of the employer if all the following conditions are met: (1) The plan year and the employer's tax year are the same. (2) The employer has been granted an extension of time to file its Federal income tax return to a date later than the normal due date for filing the Form 5500. (3) A copy of the IRS extension of time to file the Federal income tax return is attached to the Form 5500 filed with IRS. An extension granted by using this exception CANNOT be extended further by filing a Form 5558.*

Note: *An extension of time to file the return/report does not operate as an extension of time to file the PBGC Form 1.*

C. Where To File.—Please file the return/report with the Internal Revenue Service Center indicated below. No street address is needed.

See page 5 for the filing address for investment arrangements filing directly with DOL.

If the principal office of the plan sponsor or the plan administrator is located in	Use the following Internal Revenue Service Center address
Connecticut, Delaware, District of Columbia, Foreign Address, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Puerto Rico, Rhode Island, Vermont, Virginia	Holtsville, NY 00501
Alabama, Alaska, Arkansas, California, Florida, Georgia, Hawaii, Idaho, Louisiana, Mississippi, Nevada, North Carolina, Oregon, South Carolina, Tennessee, Washington	Atlanta, GA 39901
Arizona, Colorado, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Montana, Nebraska, New Mexico, North Dakota, Ohio, Oklahoma, South Dakota, Texas, Utah, West Virginia, Wisconsin, Wyoming	Memphis, TN 37501
All Form 5500EZ filers	Andover, MA 05501

Section 2

A. Kinds of Plans.—Employee benefit plans include pension benefit plans and welfare benefit plans. File the applicable return/report for any of the following plans.

(a) Pension benefit plan.—This is an employee pension benefit plan covered by ERISA. The return/report is due whether or not the plan is qualified and even if benefits no longer accrue, contributions were not made this plan year, or contributions are no longer made ("frozen plan" or "wasting trust"). See Section 3 "Final Return/Report" on page 6.

Pension benefit plans required to file include defined benefit plans and defined contribution plans (e.g., profit-sharing, stock bonus, money purchase plans, etc.). The following are among the pension benefit plans for which a return/report must be filed:

(i) Annuity arrangements under Code section 403(b)(1).

(ii) Custodial account established under Code section 403(b)(7) for regulated investment company stock.

(iii) Individual retirement account established by an employer under Code section 408(c).

(iv) Pension benefit plan maintained outside the United States primarily for nonresident aliens if the employer who maintains the plan is:

(A) a domestic employer, or

(B) a foreign employer with income derived from sources within the U.S. (including foreign subsidiaries of domestic employers) and deducts contributions to the plan on its U.S. income tax return. See "Plans Excluded From Filing" below.

(v) Church plans electing coverage under Code section 410(d).

(vi) A plan that covers residents of Puerto Rico, the Virgin Islands, Guam, Wake Island, or American Samoa. This includes a plan that elects to have the provisions of section 1022(i)(2) of ERISA apply.

See "Items To Be Completed on Form 5500" on page 4 for more information about what questions need to be completed by pension plans.

(b) Welfare benefit plan.—This is an employee welfare benefit plan covered by Part 1 of Title I of ERISA. Welfare plans would provide benefits such as medical, dental, life insurance, apprenticeship and training, scholarship funds, severance pay, disability, etc.

See "Items To Be Completed on Form 5500" on page 4 for more information about what questions need to be completed for welfare benefit plans.

(c) Fringe benefit plan.—Group legal services plans described in Code section 120, cafeteria plans described in Code section 125, and educational assistance programs described in Code section 127 are considered fringe benefit plans and generally are required to file the annual information specified by Code section 6039D. However, Code section 127 educational assistance programs which provide only job-related training which is deductible under Code section 162 do not need to file Form 5500.

See "Items To Be Completed on Form 5500" on pages 4 and 5 for more information about how to complete this form for a fringe benefit plan.

B. Plans Excluded From Filing (this does not apply if you are a fringe benefit plan required to file by Code section 6039D).—Do not file a return/report for an employee benefit plan that is any of the following:

(a) A welfare benefit plan which covered fewer than 100 participants as of the beginning of the plan year and is: (i) fully insured, (ii) unfunded, or (iii) a combination of insured and unfunded.

(1) An unfunded welfare benefit plan has its benefits paid as needed directly from the general assets of the employer or the employee organization that sponsors the plan.

(2) A fully insured welfare benefit plan has its benefits provided exclusively through insurance contracts or policies, the premiums of which must be paid directly by the employer or employee organization from its general assets or partly from its general assets and partly from contributions by its employees or members (which the employer or organization forwards within 3 months of receipt).

(3) A combination unfunded/insured welfare plan has its benefits provided partially as an unfunded plan and partially as a fully insured plan. An example of such a plan is a welfare plan which provides medical benefits as in (1) above and life insurance benefits as in (2) above.

The insurance contracts or policies discussed above must be issued by an insurance company or similar organization (such as Blue Cross, Blue Shield or a health maintenance organization) that can legally do business in any state. A plan meeting (1) above cannot have any assets at any time during the plan year.

"Directly," as used in (1) above, means that the plan cannot use a trust or separately maintained fund (including a Code section 501(c)(9) trust) to hold plan assets or to act as a conduit for the transfer of plan assets.

See 29 CFR 2520.104-20.

Note: *An "employees' beneficiary association" as used in Code section 501(c)(9) should not be confused with the employee organization or employer which establishes and maintains (i.e., sponsors) the welfare benefit plan.*

(b) An unfunded pension benefit plan or an unfunded or insured welfare benefit plan: (1) whose benefits go only to a select group of management or highly compensated employees, and (2) which meets the terms of Department of Labor Regulations 29 CFR 2520.104-23 (including the requirement that a notification statement be filed with DOL) or 29 CFR 2520.104-24.

(c) Plans maintained only to comply with workers' compensation, unemployment compensation, or disability insurance laws.

(d) An unfunded excess benefit plan.

(e) A welfare benefit plan maintained outside the United States primarily for persons substantially all of whom are nonresident aliens.

(f) A pension benefit plan maintained outside the United States if it is a qualified foreign plan within the meaning of Code section 404A(e) that does not qualify for the treatment provided in Code section 402(c).

(g) An annuity arrangement described in 29 CFR 2510.3-2(f).

(h) A simplified employee pension (SEP) described in Code section 408(k) which conforms to the alternative method of compliance described in 29 CFR 2520.104-48 or 29 CFR 2520.104-49. A SEP is a pension plan which meets certain minimum

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qualifications regarding eligibility and employer contributions.

(i) A church plan not electing coverage under Code section 410(d) or a governmental plan.

(j) A welfare benefit plan (other than a fringe benefit plan) that participates in a group insurance arrangement that files a return/report Form 5500 on behalf of the welfare benefit plan. See 29 CFR 2520.104-43.

(k) An apprenticeship or training plan meeting all of the conditions specified in 29 CFR 2520.104-22.

C. Kinds of Filers.—The different types of plan entities that file the forms are described below. (Also see instructions for item 4 on page 7.)

(a) Single-employer plan.—If one employer or one employee organization maintains a plan, file a separate return/report for the plan. If the employer or employee organization maintains more than one such plan, file a separate return/report for each plan.

If a member of either a controlled group of corporations, a group of trades or businesses under common control, or an affiliated service group maintains a plan that does not involve other group members, file a separate return/report as a single-employer plan.

If several employers participate in a program of benefits wherein the funds attributable to each employer are available only to pay benefits to that employer's employees, each employer must file a separate return/report.

(b) Plan for controlled group of corporations, group of trades or businesses under common control, or an affiliated service group.—These groups are defined in Code sections 414(b), (c), and (m), and are referred to as controlled groups.

If the benefits are payable to participants from the plan's total assets without regard to contributions by each participant's employer, file one return/report for the plan. On the return/report for the plan, complete item 22 only for the controlled group's employees.

Exception: Employers who participate in a pension plan of one of the groups listed above but who are not members of the group must file a separate return/report. The return/report should be filed on Form 5500-C/R regardless of the number of participants. The years you are required to file pages 1 and 3 through 6 as Form 5500-C complete only items 1 through 7a, 9, and 22. The years you file pages 1 and 2 as Form 5500-R complete only items 1 through 7a, 8a, and 8b. These participating employers must enter code F in item 4 of the Form 5500-C/R.

If several employers participate in a program of benefits wherein the funds attributable to each employer are available only to pay benefits to that employer's employees, each employer must file a separate return/report as a single employer plan.

(c) Multiemployer plan.—Multiemployer plans are plans: (1) to which more than one employer is required to contribute, (2) which are maintained pursuant to one or more collective bargaining agreements, and (3) have not made the election under Code section 414(f)(5) and ERISA section 3(37)(E). File one return/report for each of these plans. Contributing employers do not file individually with respect to such plans. See Code section 414 for more information.

(d) Multiple-employer-collectively-bargained plan.—A multiple-employer-collectively-bargained plan involves more than one employer, is collectively bargained and collectively funded, and, if covered by PBGC termination insurance, had properly elected before 9-27-81 not to be treated as a multiemployer plan under Code section 414(f)(5) or ERISA sections 3(37)(E) and 4001(a)(3). File one return/report for each such plan. Participating employers do not file individually for these plans.

Note: *Filers described in (c) or (d) above complete item 22 only if a plan: (1) benefits employees who are not collective bargaining unit employees, or (2) only covers collective bargaining unit employees and 2% or more of them are professionals.*

(e) Multiple-employer plan (other).— A multiple-employer plan (other) involves more than one employer and is not one of the plans already described. A multiple-employer plan (other) includes only plans whose contributions from individual employers are available to pay benefits to all participants. File one return/report for each such plan.

Exception: Each employer participating in a multiple-employer plan (other) which provides pension benefits must file a Form 5500-C/R regardless of the number of participants. For the years you are required to file pages 1 and 3 through 6 as Form 5500-C, complete only items 1 through 7a, 9, and 22. For the years you file pages 1 and 2 as Form 5500-R, complete only items 1 through 7a, 8a, and 8b. Each participating employer filing the Form 5500-C/R must enter code F in item 4.

Note: *If a participating employer is also the sponsor of the multiple-employer plan (other), the plan number on the return/ report filed for the plan should be 333 and if more than one plan they should be consecutively numbered starting with 333.*

The Form 5500-C or Form 5500-R filed by the participating employer should list the appropriate plan number.

If more than one employer participates in the plan and the plan provides that each employer's contributions are available to pay benefits only for that employer's employees who are covered by the plan, one annual return/report must be filed for each participating employer. These filers will be considered single employers and should complete the entire form.

(f) Group insurance arrangement.— A group insurance arrangement is an arrangement which provides benefits to the employees of two or more unaffiliated employers (not in connection with a multiemployer plan or a multiple-employer-collectively-bargained plan), fully insures one or more welfare plans of each participating employer, and uses a trust (or other entity such as a trade association) as the holder of the insurance contracts and the conduit for payment of premiums to the insurance company.

You do not need to file a separate return/report for a welfare benefit plan that is part of a group insurance arrangement if a consolidated return/report for all the plans in the arrangement was filed by the trust or other entity according to 29 CFR 2520.104-43. Form 5500 is required by 29 CFR 2520.103-2 to be part of the consolidated report.

D. Investment Arrangements Filing Directly With DOL.—Some plans invest in certain trusts, accounts, and other investment arrangements which may file information concerning themselves and their relationship with employee benefit plans directly with DOL (as specified on pages 5 and 6). Plans participating in an investment arrangement as described in paragraphs a through c below, are required to attach certain additional information to the return/report filed with IRS as specified below.

a. Common/Collective Trust and Pooled Separate Account

(i) Definition. For reporting purposes, a "common/collective trust" is a trust maintained by a bank, trust company, or similar institution which is regulated, supervised, and subject to periodic examination by a state or Federal agency for the collective investment and reinvestment of assets contributed thereto from employee benefit plans maintained by more than one employer or controlled group of corporations, as the term is used in Code section 1563. For reporting purposes, a "pooled separate account" is an account maintained by an insurance carrier which is regulated, supervised, and subject to periodic examination by a state agency for the collective investment and reinvestment of assets contributed thereto from employee benefit plans maintained by more than one employer or controlled group of corporations, as the term is used in Code section 1563. See 29 CFR sections 2520.103-3, 2520.103-4, 2520.103-5, and 2520.103-9.

Note: *For reporting purposes, a separate account not considered to be holding plan assets pursuant to 29 CFR 2510.3-101(h)(1)(iii) shall not constitute a pooled separate account.*

(ii) Additional Information Required To Be Attached to the Form 5500 for Plans Participating in Common/Collective Trusts and Pooled Separate Accounts.—A plan participating in a common/collective trust or pooled separate account must complete the annual return/report and attach either: (1) the most recent statement of the assets and liabilities of any common/collective trust or pooled separate account, or (2) a certification that (A) the statement of the assets and liabilities of the common/collective trust or pooled separate account has been submitted directly to DOL by the financial institution or insurance carrier; (B) the plan has received a copy of the statement; and (C) includes the EIN and other numbers used by the financial institution or insurance carrier to identify the trusts or accounts in the direct filing made with DOL.

b. Master Trust

(i) Definition. For reporting purposes, a master trust is a trust for which a regulated financial institution (as defined below) serves as trustee or custodian (regardless of whether such institution exercises discretionary authority or control with respect to the management of assets held in the trust), and in which assets of more than one plan sponsored by a single employer or by a group of employers under common control are held.

A "regulated financial institution" means a bank, trust company, or similar financial

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Summary of Filing Requirements for Employers and Plan Administrators
(File forms ONLY with IRS)

Type of plan	What to file	When to file
Most pension plans with only one participant or one participant and that participant's spouse	Form 5500EZ	File all required forms and schedules for each plan by the last day of the 7th month after the plan year ends.
Pension plan with fewer than 100 participants	Form 5500-C/R	
Pension plan with 100 or more participants	Form 5500	
Annuity under Code section 403(b)(1) or trust under Code section 408(c)	Form 5500 or 5500-C/R	
Custodial account under Code section 403(b)(7)	Form 5500 or 5500-C/R	
Welfare benefit plan with 100 or more participants*	Form 5500	
Welfare benefit plan with fewer than 100 participants (see exception on page 1 of these instructions)*	Form 5500-C/R	
Pension or welfare plan with 100 or more participants (see instructions for item 29)	Financial statements, schedules, and accountant's opinion	
Pension or welfare plan with benefits provided by an insurance company	Schedule A (Form 5500)	
Pension plan that requires actuarial information	Schedule B (Form 5500)	
Pension or welfare plan with 100 or more participants	Schedule C (Form 5500)	
Pension plan with ESOP benefits	Schedule E (Form 5500)	
Pension plan filing a registration statement identifying separated participants with deferred vested benefits from a pension plan	Schedule SSA (Form 5500)	

*This includes Code section 6039D filers.

institution which is regulated, supervised, and subject to periodic examination by a state or Federal agency. Common control is determined on the basis of all relevant facts and circumstances (whether or not such employers are incorporated). See 29 CFR 2520.103-1(e).

For reporting purposes, the assets of a master trust are considered to be held in one or more "investment accounts." A master trust investment account may consist of a pool of assets or a single asset.

Each pool of assets held in a master trust must be treated as a separate master trust investment account if each plan which has an interest in the pool has the same fractional interest in each asset in the pool as its fractional interest in the pool, and if each such plan may not dispose of its interest in any asset in the pool without disposing of its interest in the pool. A master trust may also contain assets which are not held in such a pool. Each such asset must be treated as a separate master trust investment account.

Financial information must generally be provided with respect to each master trust investment account as specified on pages 5 and 6.

(ii) Additional Information Required To Be Attached to the Form 5500 for Plans Participating in Master Trusts. A plan participating in a master trust must complete the annual return/report and attach a schedule listing each master trust investment account in which the plan has an interest indicating the plan's name, EIN, and plan number and the name of the master trust used in the master trust information filed with DOL (see pages 5 and 6). In tabular format, show the net value of the plan's interest in each investment account at the beginning and end of the plan year, and the net investment gain (or loss) allocated to the plan for the plan year from the investment account (see instructions for items 34c(11) through (15) on page 17).

Note: *If a master trust investment account consists solely of one plan's asset(s) during the reporting period, the plan may report the(se) asset(s) either as an investment account to be reported as part of the master trust report filed directly with DOL or as a plan asset(s) which is not part of the master trust (and therefore subject to all instructions pertaining to assets not held in a master trust).*

c. 103-12 Investment Entities

Definition. 29 CFR 2520.103-12 provides an alternative method of reporting for plans which invest in an entity (other than an investment arrangement filing with DOL described in a or b above), the underlying assets of which include "plan assets" (within the meaning of 29 CFR 2510.3-101) of two or more plans which are not members of a "related group" of employee benefit plans. For reporting purposes, a "related group" consists of each group of two or more employee benefit plans (1) each of which receives 10% or more of its aggregate contributions from the same employer or from a member of the same controlled group of corporations (as determined under Code section 1563(a), without regard to Code section 1563(a)(4) thereof); or (2) each of which is either maintained by, or maintained pursuant to a collective bargaining agreement negotiated by, the same employee organization or affiliated employee organizations. For purposes of this paragraph, an "affiliate" of an employee organization means any person controlling, controlled by, or under common control with such organization. See 29 CFR 2520.103-12.

For reporting purposes, the investment entities described above with respect to which the required information is filed directly with DOL constitute "103-12 investment entities" (103-12 IEs).

E. *What To File*—This section describes the different categories of the 5500 series of forms and schedules. In addition, this section also lists items to be completed by different types of Form 5500 filers. In addition, this section contains a description of the special filing requirements for plans that invest in certain investment arrangements. For a brief guide illustrating which forms and schedules are required by different types of plans and filers, see the chart above.

Forms

Form 5500.—File Form 5500, Annual Return/Report of Employee Benefit Plan, annually for each plan with 100 or more participants at the beginning of the plan year.

Form 5500-C/R.—File Form 5500-C/R, Return/Report of Employee Benefit Plan, for each pension benefit plan, welfare benefit plan, and fringe benefit plan (unless otherwise exempted) with fewer than 100 participants (one-participant plans see "Form 5500EZ" below) at the beginning of the plan year.

Note: Generally, under the filing requirements explained above, if the number of plan participants increases to 100 or more, or decreases to under 100, from one year to the next, you would have to file a different form from that filed the previous year. However, there is an exception to this rule. You may continue to file the same form you filed last year, provided that at the beginning of this plan year the plan had at least 80 participants, but not more than 120.

Form 5500EZ.—Form 5500EZ, Annual Return of One-Participant Pension Benefit Plan, should be filed by most one-participant plans.

A one-participant plan is: (1) a pension benefit plan that covers only an individual or an individual and his or her spouse who wholly own a trade or business, whether incorporated or unincorporated; or (2) a pension benefit plan for a partnership that covers only the partners or the partners and the partners' spouses.

See Form 5500EZ and its instructions to see if the plan meets the requirements for filing the form.

Form 8822.—Form 8822, Change of Address, may be used to notify the IRS if the plan's mailing address changes after the return/report has been filed.

Items To Be Completed on Form 5500

Certain kinds of plans and certain kinds of filers that are required to submit an annual Form 5500 are not required to complete the entire form. These are described below, by type of plan. Check the list of headings to see if your plan is affected.

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1. Welfare Benefit Plans—Welfare benefit plans generally must complete the following items on the Form 5500: 1 through 6a; 6c, 7a(4), b, c, and d; 8a, b, e, and f; 9a, b, c, and f; 10a through d; 11 through 14; 28 through 32; and 34 through 36.

2. Fringe Benefit Plans—For a Form 5500 filed only for fringe benefit plans described in Code sections 120, 125 and 127, complete only items 1 through 6a, 7a(4), 7b, 9a and b, 22h, 22m, and 35g and h. Do NOT file 5500 Schedules A, B, C, E, P or SSA (Form 5500).

If the annual return/report is also for a welfare benefit plan (see "Who Must File" on page 1), complete the above items and those specified for welfare benefit plans in "1" above.

3. Pension Plans—In general, most pension plans (defined benefit and defined contribution) are required to complete all items on the form. However, some items need not be completed by certain types of pension plans, as described below.

a. *Plans exclusively using a tax deferred annuity arrangement under Code section 403(b)(1).* These plans (see "Who Must File" on page 1) need only complete items 1 through 5, 6b (enter code 4), and 9.

b. *Plans exclusively using a custodial account for regulated investment company stock under Code section 403(b)(7).* These plans need only complete items 1 through 5, 6b (enter code 5), and 9.

c. *Individual Retirement Account Plan.*—A pension plan utilizing individual retirement accounts or annuities (as described in Code section 408) as the sole funding vehicle for providing benefits need only complete items 1 through 5, 6b (enter code 6), and 9.

d. *Fully Insured Pension Plan.*—A pension benefit plan providing benefits exclusively through an insurance contract, or contracts that are fully guaranteed and which meet all of the conditions of 29 CFR 2520.104-44 need only complete items 1 through 29, 32, and 33.

A pension plan which includes both insurance contracts of the type described in 29 CFR 2520.104-44 as well as other assets should limit its reporting in items 34 and 35 to those other assets.

Note: *For purposes of the annual return/report and the alternative method of compliance set forth in 29 CFR 2520.104-44, a contract is considered "allocated" only if the insurance company or organization that issued the contract unconditionally guarantees, upon receipt of the required premium or consideration, to provide a retirement benefit of a specified amount, without adjustment for fluctuations in the market value of the underlying assets of the company or organization, to each participant, and each participant has a legal right to such benefits which is legally enforceable directly against the insurance company or organization.*

e. *Nonqualified pension benefit plans maintained outside the U.S.*—Nonqualified pension benefit plans maintained outside the United States primarily for nonresident aliens required to file a return/report (see "Who Must File" on page 1) need only complete items 1 through 6c, 9 through 12, and 15 through 17.

4. Plans of More Than One Employer—All plans of more than one employer (plans of a controlled group, multiemployer plans, multiple-employer-collectively-bargained plans, and multiple-employer plan (other)) generally should complete all applicable (welfare or pension) items on the form except for item 6d. Only single-employer pension plans must complete this item.

Schedules

The various schedules to be attached to the return/report are listed below.

Note: *All attachments to the Forms 5500, and 5500-C/R must include the name of the plan, the plan sponsor's EIN, and plan number (PN) as found in items 5a, 1b, and 5c, respectively.*

Attach Schedule A (Form 5500), Insurance Information, to Form 5500, or 5500-C/R, if any benefits under the plan are provided by an insurance company, insurance service, or other similar organization (such as Blue Cross, Blue Shield, or a health maintenance organization). (This includes investments with insurance companies such as guaranteed investment contracts (GICs).)

Exceptions: *(1) Schedule A (Form 5500) is not needed if the plan covers only: (a) an individual, or an individual and his or her spouse, who wholly owns a trade or business, whether incorporated or unincorporated; or (b) a partner in a partnership, or a partner and his or her spouse.*

(2) A Schedule A (Form 5500) is not required to be filed with the Form 5500 or Form 5500-C/R if a Schedule A (Form 5500) is filed for the contract as part of the master trust or 103-12 IE information filed directly with DOL.

Do not file a Schedule A (Form 5500) with a Form 5500EZ.

Attach Schedule B (Form 5500), Actuarial Information, to Form 5500, 5500-C/R, or 5500EZ for most defined benefit pension plans. See the instructions for Schedule B.

Attach Schedule C (Form 5500), Service Provider and Trustee Information, to Form 5500. See item 28 and the instructions to Schedule C.

Attach Schedule E (Form 5500), ESOP Annual Information, to Form 5500, 5500-C/R, or 5500EZ for all pension benefit plans with ESOP benefits. See the instructions for Schedule E.

Schedule SSA (Form 5500), Annual Registration Statement Identifying Separated Participants With Deferred Vested Benefits, may be needed for separated participants. See "When To Report Separated Participants" in the instructions for Schedule SSA.

Schedule P (Form 5500), Annual Return of Fiduciary of Employee Benefit Trust—Any fiduciary (trustee or custodian) of an organization that is qualified under Code section 401(a) and exempt from tax under Code section 501(a) who wants to protect the organization under the statute of limitations provided in Code section 6501(a) must file a Schedule P (Form 5500).

File the Schedule P (Form 5500) as an attachment to Form 5500, 5500-C/R or 5500EZ for the plan year in which the trust year ends.

Other Filings

Reporting Requirements for Investment Arrangements Filing Directly with DOL

Certain investment arrangements for employee benefit plans file financial information directly with DOL. These arrangements include common/collective trusts, pooled separate accounts, master trusts, and 103-12 IEs. Definitions of these investment arrangements may be found on pages 3 and 4. Their DOL filing requirements are described below.

1. Common/Collective Trust and Pooled Separate Account Information To Be Filed Directly With DOL

Financial institutions and insurance carriers filing the statement of the assets and liabilities of a common/collective trust or pooled separate account should identify the trust or account by providing the EIN of the trust or account, or (if more than one trust or account is covered by the same EIN) both the EIN and any additional number assigned by the financial institution or insurance carrier (such as: 99-1234567 Trust No. 1); and a list of all plans participating in the trust or account, identified by the plan number, EIN, and name of the plan sponsor. The direct filing should be addressed to:

Common/Collective Trust (OR)
Pooled Separate Account
Pension and Welfare Benefits
Administration
U.S. Department of Labor, Room N5644
200 Constitution Avenue, NW
Washington, DC 20210

2. Master Trust Information To Be Filed Directly With DOL.

The following information with respect to a master trust must be filed with DOL by the plan administrator or by a designee, such as the administrator of another plan participating in the master trust or the financial institution serving as trustee of the master trust, no later than the date on which the plan's return/report is due. While only one copy of the required information should be filed for all plans participating in the master trust, the information is an integral part of the return/report of each participating plan, and the plan's return/report will not be deemed complete unless all the information is filed within the prescribed time.

Note: *If a master trust investment account consists solely of one plan's asset(s) during the reporting period, the plan may report the(se) asset(s) either as an investment account to be reported as part of the master trust report filed directly with DOL or as a plan asset(s) which is not part of the master trust (and therefore subject to all instructions pertaining to assets not held in a master trust).*

Each of the following statements and schedules must indicate the name of the master trust and the name of the master trust investment account. The information shall be filed with DOL by mailing it to:

Master Trust
Pension and Welfare Benefits
Administration
U.S. Department of Labor, Room N5644
200 Constitution Avenue, NW
Washington, DC 20210

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a. The name and fiscal year of the master trust and the name and address of the master trustee.

b. A list of all plans participating in the master trust, showing each plan's name, EIN, PN, and its percentage interest in each master trust investment account as of the beginning and end of the fiscal year of the master trust ending with or within the plan year.

c. A Schedule A (Form 5500) for each insurance or annuity contract held in the master trust.

d. A statement, in the same format as Part I of Schedule C (Form 5500), for each master trust investment account showing amounts of compensation paid during the fiscal year of the master trust ending with or within the plan year to persons providing services with respect to the investment account and subtracted from the gross income of the investment account in determining the net increase (decrease) in net assets of the investment account.

e. A statement for each master trust investment account showing the assets and liabilities of the investment account at the beginning and end of the fiscal year of the master trust ending with or within the plan year, grouped in the same categories as those specified in item 34 of Form 5500.

f. A statement for each master trust investment account showing the income and expenses, changes in net assets, and net increase (decrease) in net assets of each such investment account during the fiscal year of the master trust ending with or within the plan year, in the categories specified in item 35 of Form 5500. In place of item 35a, show the total of all transfers of assets into the investment account by participating plans. In place of item 35j, show the total of all transfers of assets out of the investment account by participating plans.

g. Schedules, in the format set forth in the instructions for item 30 of Form 5500, of the following items with respect to each master trust investment account for the fiscal year of the master trust ending with or within the plan year: assets held for investment, nonexempt party-in-interest transactions, defaulted or uncollectible loans and leases, and 5% transactions involving assets in the investment account. The 5% figure shall be determined by comparing the current value of the transaction at the transaction date with the current value of the investment account assets at the beginning of the applicable fiscal year of the master trust.

3. 103-12 IE Information To Be Filed Directly With DOL:

The information described below must be filed with the DOL by the sponsor of the 103-12 IE no later than the date on which the plan's return/report is due before the plan administrator can elect the alternative method of reporting. While only one copy of the required information should be filed for the 103-12 IE, the information is an integral part of the return/report of each plan electing the alternative method of compliance.

The filing address is:

103-12 Investment Entity
Pension and Welfare Benefits Administration
U. S. Department of Labor, Room N5644
200 Constitution Avenue, NW
Washington, DC 20210

a. The name, fiscal year, and EIN of the sponsor of the 103-12 IE and the name and address of the sponsor of the 103-12 IE. If more than one 103-12 IE is covered by the same EIN, they shall be sequentially numbered as follows: 99-1234567 Entity No. 1.

b. A list of all plans participating in the 103-12 IE, showing each plan's name, EIN, PN, and its percentage interest in the 103-12 IE as of the beginning and end of the fiscal year of the 103-12 IE ending with or within the plan year.

c. A Schedule A (Form 5500) for each insurance or annuity contract held in the 103-12 IE.

d. A statement, in the same format as Part I of Schedule C (Form 5500), for the 103-12 IE showing amounts of compensation paid during the fiscal year of the 103-12 IE ending with or within the plan year to persons providing services to the 103-12 IE.

e. A statement showing the assets and liabilities at the beginning and end of the fiscal year of the 103-12 IE ending with or within the plan year, grouped in the same categories as those specified in item 34 of Form 5500.

f. A statement showing the income and expenses, changes in net assets, and net increase (decrease) in net assets during the fiscal year of the 103-12 IE ending with or within the plan year, grouped in the same categories as those specified in item 35 of Form 5500. In place of item 35a, show the total of all transfers of assets into the 103-12 IE by participating plans. In place of item 35j, show the total of all transfers of assets out of the 103-12 IE by participating plans.

g. Schedules, in the format set forth in the instructions for item 30 of Form 5500 (except item 30d) with respect to the 103-12 IE for the fiscal year of the 103-12 IE ending with or within the plan year. Substitute the term "103-12 IE" in place of the word "plan" when completing the schedules.

h. A report of an independent qualified public accountant regarding the above items and other books and records of the 103-12 IE that meets the requirements of 29 CFR 2520.103-1(b)(5).

Section 3:

General Information

Final Return/Report.—If all assets under the plan (including insurance/annuity contracts) have been distributed to the participants and beneficiaries or distributed to another plan (and when all liabilities for which benefits may be paid under a welfare benefit plan have been satisfied), check the "final return/report" box at the top of the form filed for such plan. The year of complete distribution is the last year a return/report must be filed for the plan. For purposes of this paragraph, a complete distribution will occur in the year in which the assets of a terminated plan are brought under the control of PBGC.

For a defined benefit plan covered by PBGC, a PBGC Form 1 must be filed and a premium must be paid until the end of the plan year in which the assets are distributed or brought under the control of PBGC.

Filing the return/report marked "Final return" and indicating that the plan terminated satisfies the notification requirement of Code section 6057(b)(3).

Signature and Date.—The plan administrator must sign and date all returns/reports filed. The name of the individual who signed as plan administrator must be typed or printed clearly on the line under the signature line. In addition, the employer must sign a return/report filed for a single-employer plan or a plan required to file only because of Code section 6039D (i.e., for a fringe benefit plan).

When a joint employer-union board of trustees or committee is the plan sponsor or plan administrator, at least one employer representative and one union representative must sign and date the return/report.

Participating employers in a multiple-employer plan (other), who are required to file Form 5500-C/R, are required to sign the return/report. The plan administrator need not sign the Form 5500-C/R filed by the participating employer.

Reproductions.—Original forms are preferable, but a clear reproduction of the completed form is acceptable. Sign the return/report after it is reproduced. All signatures must be original.

Change in Plan Year.—Generally only defined benefit pension plans need to get prior approval for a change in plan year. (See Code section 412(c)(5).) Rev. Proc. 87-27, 1987-1 C.B. 769 explains the procedure for automatic approval of a change in plan year. A pension benefit plan that would ordinarily need to obtain approval for a change in plan year under Code section 412(c)(5) is granted an automatic approval for a change in plan year if all the following criteria are met:

1. No plan year exceeds 12 months long.

2. The change will not delay the time when the plan would otherwise have been required to conform to the requirements of any statute, regulation, or published position of the IRS.

3. The trust, if any, retains its exempt status for the short period required to effect the change, as well as for the taxable year immediately preceding the short period.

4. All actions necessary to implement the change in plan year, including plan amendment and a resolution of the board of directors (if applicable), have been taken on or before the last day of the short period.

5. No change in plan year has been made for any of the preceding plan years.

6. In the case of a defined benefit plan, deductions are taken in accordance with section 5 of Rev. Proc. 87-27.

For the first return/report that is filed following the change in plan year, check the box on line C at the top of the form.

Amended Return/Report.—If you file an amended return/report, check box A(2) "an amended return/report" at the top of the form. When filing an amended return, be sure to answer all questions and put a circle around the numbers of the items that have been amended.

How The Annual Return/Report Information May Be Used.—All Form 5500 series return/reports will be subjected to a computerized review. It is, therefore, in the filer's best interest that the responses accurately reflect the circumstances they were designed to report. Annual reports filed

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under Title I of ERISA must be made available by plan administrators to plan participants and by the Department of Labor to the public pursuant to ERISA section 104.

Section 4

Specific Instructions for Form 5500

Important: Answer all items on the Form 5500 with respect to the plan year, unless otherwise explicitly stated in the item-by-item instructions or on the form itself. Therefore, your responses usually apply to the year entered or printed at the top of the first page of the form. "Yes" and "No" questions are to be marked either "Yes" or "No," but not both. "N/A" cannot be used to respond to a "Yes" or "No" question which is required to be answered by the filer as specified on page 4 or 5 under "Items To Be Completed On Form 5500."

Information To Be Completed at the Top of the Form

First Line at the top of the form— Complete the space for dates when: (1) the 12-month plan year is not a calendar year, or (2) the plan year is less than 12 months (a short plan year).

A. Check box (1) if this is the initial filing for this plan. Do not check this box if you have ever filed for this plan even if it was on a different form (Form 5500 vs. Form 5500-C or Form 5500-R).

Check box (2) if you have already filed for the 1991 plan year and are now submitting an amended return/report to reflect errors and/or omissions on the previously filed return/report.

Check box (3) if the plan no longer exists to provide benefits. See section 3 on page 6 for instructions concerning the requirement to file a final return/report.

Check box (4) if this form is being filed for a period of less than 12 months.

B. Check the box if you made any changes to the preprinted information on page 1.

C. Check the box if the plan year has been changed since the last return/report was filed.

D. Check this box if you filed for an extension of time to file this form. Attach a copy of Form 5558 or a copy of the employer's extension of time to file the income tax return if you are using the exception in "Request for Extension of Time to File" on page 2 of these instructions.

The numbers of the following instructions are the same as the item numbers on the return/report.

Check the information printed in 1 through 6b for accuracy and completeness. Line out any incorrect information and enter the correct information. Complete any incomplete items.

If you did not receive a Form 5500 with the page one information filled in, complete items 1 through 6b as follows:

1a. Enter the name and address of the plan sponsor. If the plan covers only the employees of one employer, enter the employer's name. If the Post Office does not deliver mail to the street address and the sponsor has a P.O. box, show the P.O. box number instead of the street address.

The term "plan sponsor" means—

(i) the employer, for an employee benefit plan that a single employer established or maintains;

(ii) the employee organization in the case of a plan of an employee organization; or

(iii) the association, committee, joint board of trustees, or other similar group of representatives of the parties who establish or maintain the plan, if the plan is established or maintained jointly by one or more employers and one or more employee organizations, or by two or more employers.

Include enough information in item 1(a) to describe the sponsor adequately. For example, "Joint Board of Trustees of Local 187 Machinists" rather than just "Joint Board of Trustees."

For group insurance arrangements, enter the name of the trust or other entity that holds the insurance contracts. In addition, *attach a list of all participating employers and their EINs.*

A "group insurance arrangement" is an arrangement which provides benefits to the employees of two or more unaffiliated employers (not in connection with a multiemployer plan or a multiple-employer-collectively-bargained plan), fully insures one or more welfare plans of each participating employer, and uses a trust (or other entity such as a trade association) as the holder of the insurance contracts and the conduit for payment of premiums to the insurance company.

1b. Enter the 9-digit employer identification number (EIN) assigned to the plan sponsor/employer. For example, 00-1234567.

Employers and plan administrators who do not have an EIN should apply for one on Form SS-4, available from most IRS or Social Security Administration offices. Send Form SS-4 to the Internal Revenue Service Center to which this form will be sent.

Plan sponsors are reminded that they should use the trust EIN when opening a bank account or conducting other *transactions for a plan that requires an* employer identification number. The trust may apply for an EIN as explained in the preceding paragraph.

A plan of a controlled group of corporations whose sponsor is more than one of the members of the controlled group should insert only the EIN of one of the sponsoring members. This EIN must be used in all subsequent filings of the annual returns/reports for the controlled group unless there is a change in the sponsor.

If the plan sponsor is a group of individuals, get a single EIN for the group. When you apply for a number, enter on line 1 of Form SS-4 the name of the group, such as "Joint Board of Trustees of the Local 187 Machinists' Retirement Plan."

Note: Although EINs for funds (trusts or custodial accounts) associated with plans are not required to be furnished on the Form 5500 series returns/reports, the IRS will issue EINs for such funds for other reporting purposes. EINs may be obtained by filing Form SS-4 as explained above.

1d. From the list of business codes on pages 19 and 20, enter the one that best describes the nature of the employer's business. If more than one employer is involved, enter the business code for the main business activity.

1e. Plans entering code A or B in item 4 must enter the first six digits of the CUSIP (Committee on Uniform Securities Identification Procedures) number, "issuer number," if one has been assigned to the plan sponsor for purposes of issuing corporate securities. CUSIP issuer numbers are assigned to corporations and other entities which issue public securities listed on stock exchanges or traded over the counter. The CUSIP issuer number is the first six digits of the number assigned to the individual *securities which are traded. If the plan sponsor has no CUSIP issuer number, enter "N/A."*

2a. If the document constituting the plan appoints or designates a plan administrator other than the sponsor, enter the administrator's name and address. If the plan administrator is also the sponsor, enter "Same." If filing as a group insurance arrangement, enter "Same." If "Same" is entered on 2a, then items 2b and 2c should be left blank.

The term "administrator" means—

(i) the person or group of persons specified as the administrator by the instrument under which the plan is operated;

(ii) the plan sponsor/employer if an *administrator is not so designated; or*

(iii) any other person prescribed by regulations of the Secretary of Labor if an administrator is not designated and a plan sponsor cannot be identified.

2b. A plan administrator must have an EIN for reporting purposes. Enter the plan administrator's 9-digit EIN here. If the plan administrator has no EIN, apply for one as explained in 1b above.

Employees of an employer are not plan administrators unless so designated in the plan document, even though they engage in administrative functions of the plan. If an employee of the employer is designated as the plan administrator, that employee must get an EIN.

3. *If the plan sponsor's/administrator's* name, address and EIN are different than what appears on the last return/report filed for this plan, enter the plan sponsor's/administrator's name, address and EIN as it appears on the last return/report filed for this plan.

3c. Indicate if the change in 3a is only a change in sponsorship. "Change in sponsorship" means the plan's sponsor has been changed but no assets or liabilities have been transferred to another plan(s), the plan has not terminated or merged with any other plan, and so forth. Therefore, the plan is now the responsibility of the new sponsor whose name is entered in item 1a of this return/report.

4. From the following list of plan entities choose the one that describes your plan entity and enter the code for it in item 4.

Entity	Code
Single-employer plan	A
Plan of controlled group of corporations or common control employers	B
Multiemployer plan	C
Multiple-employer-collectively-bargained plan	D
Multiple-employer plan (other)	E

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Group insurance arrangement of welfare plans . . . F

5a(1). Enter the formal name of the plan, group insurance arrangement, or enough information to identify the plan. This name should be no more than 70 characters long. If the present plan name is longer than this, try to abbreviate it so that it is no more than 70 spaces long.

5b. Enter the date the plan first became effective.

5c. Enter the 3-digit number the employer or plan administrator assigned to the plan. All welfare benefit plan numbers and Code section 6039D plan numbers start at 501. All other plans start at 001.

Once you use a plan number, continue to use it for that plan on all future filings with IRS, DOL and PBGC. Do not use it for any other plan even if you terminated the first plan.

6a. Enter every code from the list below that describes the welfare benefit plan for which this return/report is being filed.

Example: If your plan provides health insurance, life insurance, dental insurance, eye examinations, the four codes A, B, D, and E should be entered. If your plan has a benefit not described by one of the codes, enter "Z" and write in a description of this benefit in the space provided.

A fringe benefit plan (i.e., a Code section 120, 125 or 127 plan) filing because of the reporting requirement under Code section 6039D should enter either code M, N, or O. A plan that is required to file under Title I of ERISA as a welfare plan and under Code section 6039D as a fringe benefit plan should enter the applicable welfare and fringe benefit codes.

If you entered code M, N, or O, you must check 6a(2) "No" if the plan is: (1) unfunded, (2) fully insured, or (3) a combination of unfunded/insured as defined on page 2, Section 2B(b).

Type of Welfare or Fringe Benefit Plan	Code
Health (other than dental or vision)	A
Life insurance	B
Supplemental unemployment	C
Dental	D
Vision	E
Temporary disability (accident and sickness)	F
Prepaid legal	G
Long-term disability	H
Severance pay	I
Apprenticeship and training	J
Scholarship (funded)	K
Death benefits (other than life ins.)	L
Code section 120 group legal services plan	M
Code section 125 cafeteria plan	N
Code section 127 educational assistance program	O
Taft-Hartley Financial Assistance for Employee Housing Expenses	P
Other (specify on page 1)	Z

6b. Pension benefit plans must enter the codes from the list below that describe the type of benefits the Form 5500 is being filed for. If none of the codes in the list describe the type of pension plan, enter code "7" and describe the type of pension plan you are filing for.

Type of Pension Benefit Plan	Code
Defined benefit	1
Defined Contribution	
Profit-sharing	2A
Stock bonus	2B
Target Benefit	2C
Other money purchase	2D
Other (specify on page 1)	2E
Note: ESOP plans must check 6c(1) or 6c(2).	
Other	
Defined benefit plan with benefits based partly on balance of separate account of participant (Code section 414(k))	3
Annuity arrangement of certain exempt organizations (Code section 403(b)(1))	4
Custodial account for regulated investment company stock (Code section 403(b)(7))	5
Pension plan utilizing individual retirement accounts or annuities (described in Code section 408) as the sole funding vehicle for providing benefits	6
Other (describe the type of plan)	7

6c(1) and 6c(2). If you check either of these boxes, complete Schedule E (Form 5500) and attach it to the Form 5500-C/R you file for this plan.

6c(2). Check the box for a leveraged ESOP if the plan acquires employer securities with borrowed money or other debt-financing techniques.

6c(3). Check if the plan is a pension plan that provides for individual accounts and permits a participant or beneficiary to exercise independent control over the assets in his or her account (see ERISA section 404(c)).

6c(4). Check this box for pension benefit plans maintained outside the United States primarily for nonresident aliens. See "Kinds of Filers" on page 3 for more information.

6c(5). In the space provided following 6c(6), enter name of the trust and financial institution. Also enter city and state where the trust is maintained. (See page 3 for master trust instructions.)

6c(6). In the space provided following 6c(6), enter name and address of the 103-12 IE. (See page 6 for 103-12 IE instructions.)

6d. For single-employer pension plans enter the date the employer's tax year ends. For example, if the tax year is a calendar year, enter 12-31-91. For all plans with more than one employer, enter "N/A."

6e. Definition of Affiliated Service Group.— In general, Code section 414(m)(2) defines an affiliated service group as a first service organization (FSO) that has:

(1) a service organization (A-ORG) that is a shareholder or partner in the FSO and that regularly performs services for the FSO, or is regularly associated with the FSO in performing services for third persons, and/or

(2) any other organization (B-ORG) if:

(a) a significant portion of the business of that organization consists of performing services for the FSO or A-ORG of a type historically performed by employees in the service field of the FSO or A-ORG, and

(b) 10% or more of the interest of the B-ORG is held by persons who are highly compensated employees of the FSO or A-ORG.

An affiliated service group also includes a group consisting of an organization whose principal business is performing management functions for another organization (or one organization and other related organizations) on a regular and continuing basis, and the organization for which such functions are so performed by the organization. For a plan maintained by more than one employer, check "Yes" if any such employer is a member of an affiliated service group.

6f. A cash or deferred arrangement described under Code section 401(k) is a part of a qualified defined contribution plan which provides for an election by employees to defer part of their compensation or receive these amounts in cash.

7. The description of "participant" in the instructions below is only for purposes of item 7 of this form.

For welfare benefit plans, dependents are considered to be neither participants nor beneficiaries. For pension benefit plans, "alternate payees" entitled to benefits under a qualified domestic relations order are not to be counted as participants for this item.

"Participant" means any individual who is included in one of the categories below.

7a. Active participants include any individuals who are currently in employment covered by a plan and who are earning or retaining credited service under a plan. This category includes any individuals who are: (i) currently below the integration level in a plan that is integrated with social security, and/or (ii) eligible to elect to have the employer make payments to a Code section 401(k) qualified cash or deferred arrangement. Active participants also include any nonvested individuals who are earning or retaining credited service under a plan. This category does not include nonvested former employees who have incurred the break in service period specified in the plan.

For determining if active participants are fully vested, partially vested, or nonvested, consider vesting in employer contributions only.

For purposes of Code section 6039D, (fringe benefit plan) "participant" means any individual who, for a plan year, has had at least one dollar excluded from income by reason of Code section 120, 125, or 127. If you are filing Form 5500 for a welfare plan that is required to file under Title I of ERISA and under Code section 6039D as a fringe benefit plan, the preceding sentence does not apply.

7b. Inactive participants receiving benefits are any individuals who are retired or separated from employment covered by the plan and who are receiving benefits under the plan. This includes former employees who are receiving group health continuation coverage benefits pursuant to Part 6 of ERISA who are covered by the employee welfare benefit plan. This category does not include any individual to whom an insurance company has made an irrevocable commitment to pay all the

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benefits to which the individual is entitled under the plan.

7c. Inactive participants entitled to future benefits are individuals who are retired or separated from employment covered by the plan and who are entitled to begin receiving benefits under the plan in the future. This category does not include any individual to whom an insurance company has made an irrevocable commitment to pay all the benefits to which the individual is entitled under the plan.

7e. Deceased participants are any deceased individuals who had one or more beneficiaries who are receiving or are entitled to receive benefits under the plan. This category does not include an individual if an insurance company has made an irrevocable commitment to pay all the benefits to which the beneficiaries of that individual are entitled under the plan.

7g. Enter the number of participants included in line 7f who have account balances. For example, for a Code section 401(k) plan, the number entered on line 7g should be the number of participants counted in line 7f who have made a contribution to the plan during this plan year or any prior plan year.

7h(1). If "Yes," file Schedule SSA (Form 5500) as an attachment to Form 5500. **Plan administrators:** Code section 6057(e) provides that the plan administrator must give each participant a statement showing the same information for that participant as is reported on Schedule SSA.

8a. Check "Yes" if an amendment to the plan was adopted regardless of the effective date of the amendment.

8b. Enter the date the most recent amendment was adopted regardless of the *date of the amendment or the effective date of* the amendment.

8c. Check "Yes" only if the accrued benefits were retroactively reduced. For example, a plan provides a benefit of 2% for each year of service, but the plan is amended to change the benefit to 1½% a year for all years of service under the plan. Do not check "Yes" if accrued benefits were retroactively reduced solely to the extent permitted under a model amendment provided in IRS Notice 88-131, 1988-2 C.B. 546.

8e. Check "Yes" only if an amendment changed the information previously provided to participants by the summary plan description or summary description of modifications.

8f. A revised summary plan description or summary description of modifications must be filed with DOL and distributed to all participants and pension plan beneficiaries no later than 210 days after the close of the plan year in which the amendment(s) was adopted. If the material was distributed and filed since the amendments were adopted (even if after the end of the plan year), check "Yes" to item 8f.

9a. Check "Yes" if the plan was terminated or if the plan was merged or consolidated into another plan. Enter the year of termination if applicable. If you entered a code M, N, or O in 6a(1) and indicated that this is an unfunded plan and you also checked 9a "Yes," you must also check 9b "Yes."

9b. If the plan was terminated and all plan assets were not distributed, file a return/report for each year the plan has assets. In that case, the return/report must be filed by the plan administrator, if designated, or by the person or persons who actually control the plan's property.

If all plan assets were used to buy individual annuity contracts and the contracts were distributed to the participants, check "Yes."

If all the trust assets were legally transferred to the control of another plan or brought under the control of PBGC, check "Yes."

Do not check "Yes" for a welfare benefit plan which is still liable to pay benefits for claims which were incurred prior to the termination date, but not yet paid. See 29 CFR 2520.104b-2(g)(2)(ii).

9h. The Code provides for a nondeductible excise tax on a reversion of assets from a qualified plan.

9i. The employer must report the reversion by filing Form 5330 and pay any applicable tax. The tax will not be imposed upon employers who are tax-exempt entities under Code section 501(a). See instructions for Form 5330.

10a. If this plan was merged or consolidated into another plan(s), or plan assets or liabilities were transferred to another plan(s), indicate which other plan or plans were involved.

10c. Enter the EIN of the sponsor (employer, if for a single-employer plan) of the other plan.

10e. Pension benefit plans must file Form 5310-A, Notice of Merger, Consolidation, or Transfer of Plan Assets or Liabilities, at least 30 days before any plan merger or consolidation or any transfer of plan assets or liabilities to another plan.

Caution: *There is a penalty for not filing Form 5310-A on time.*

11. Enter the code for the funding arrangement used by the plan for the plan year from the list below.

The "funding arrangement" is the method used during the plan year for the receipt, holding, investment, and transmittal of plan assets prior to the time the plan actually provides the benefits promised under the plan. For purposes of items 11 and 12, the term "trust" includes any fund or account which receives, holds, transmits, or invests plan assets other than an account or policy of an insurance company.

Note: *An employee benefit plan which enters a code 2, 3, or 5 in item 11 and/or 12 must attach a Schedule A (Form 5500), Insurance Information, to provide information pertaining to each contract year ending with or within the plan year. See Schedule A (Form 5500) instructions.*

	Plan Funding Arrangement Codes
Trust	1
Trust and insurance	2
Insurance	3
Exclusively from general assets of sponsor (unfunded)	4
Partially insured and partially from general assets of sponsor	5
Other	6

12. Enter the code for the benefit arrangement used by the plan for the plan year from the list below.

The "benefit arrangement" is the method by which benefits were actually provided during the plan year to participants by the plan. For example, if all participants received their benefits from a trust (as defined in 11 above) the plan's benefit arrangement code would be "1." If some benefits come from a trust and some come from an insurance company, the code would be "2." If all benefits were paid from an account or policy of an insurance company, the code would be "3."

	Plan Benefit Arrangement Codes
Trust	1
Trust and insurance	2
Insurance	3
Exclusively from general assets of sponsor (unfunded)	4
Partially insured and partially from general assets of sponsor	5
Other	6

13a. Enter "Yes" if either the contributions to the plan or the benefits paid by the plan are subject to the collective bargaining process, even if the plan is not established and administered by a joint board of trustees. Enter "Yes" even if only some of those covered by the plan are members of a collective bargaining unit which negotiates benefit levels on its own behalf. The benefit schedules need not be identical for all employees under the plan.

13b. All plans entering code C or D on line 4 must enter the 6-digit LM number to identify each sponsoring labor organization which is a party to the collective bargaining agreement. Other plans which are maintained pursuant to collective bargaining agreements should enter the appropriate LM number, if available. The "LM number" is the six-digit Labor-Management file number entered by the sponsoring labor organization in item 1 of the Form LM-2 or LM-3 (Labor Organization Annual Report) filed with the Department of Labor. Accordingly, the LM number(s) should be readily available from the sponsoring labor organization(s). If all sponsoring labor organizations' LM numbers cannot be entered in the spaces provided in item 13b on the form, enter the additional LM numbers on a *supplemental sheet to accompany the Form* 5500.

14. If either the funding arrangement code (item 11) and/or the benefit arrangement code (item 12) is 2, 3, or 5, at least one Schedule A (Form 5500) must be attached to the Form 5500 filed for pension and welfare plans to provide information concerning the contract year ending with or within the plan year. The insurance company (or similar organization) which provides benefits is required to provide the plan administrator with the information needed to complete the return/report, pursuant to ERISA section 103 (a)(2). If you do not receive this information in a timely *manner, contact the insurance company (or similar organization).* If information is missing on Schedule A (Form 5500) due to a refusal to provide this information, note this on the Schedule A. If there are no Schedule(s) A attached, enter "0."

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15b. If a waived funding deficiency is being amortized in the current plan year, do not complete (1), (2), and (3) but complete items 1, 2, 3, 7, and 9 of Schedule B (Form 5500). An enrolled actuary need not sign Schedule B under these circumstances.

15b(3). File Form 5330 with IRS to pay the excise tax on any funding deficiency.

Caution: *There is a penalty for not filing Form 5330 on time.*

16. A "top-heavy plan" is a plan which during any plan year is:

(1) any defined benefit plan if, as of the determination date, the present value of the cumulative accrued benefits under the plan for key employees exceeds 60% of the present value of the cumulative accrued benefits under the plan for all employees; and

(2) any defined contribution plan if, as of the determination date, the aggregate of the accounts of key employees under the plan exceeds 60% of the aggregate of the accounts of all employees under the plan.

• Each plan of an employer included in a required aggregation group is to be treated as a top-heavy plan if such group is a top-heavy group. See definitions of required aggregation group and top-heavy group, below.

Key Employee—A key employee is any participant in an employer plan who at any time during the plan year, or any of the 4 preceding years, is:

(1) an officer of the employer having an annual compensation greater than 50% of the amount in effect under Code section 415(b)(1)(A),

(2) one of the 10 employees having annual compensation from the employer of more than the limitation in effect under Code section 415(c)(1)(A) and owning (or considered as owning within the meaning of Code section 318) the largest interests in the employer,

(3) a 5% owner of the employer, or

(4) a 1% owner of the employer having an annual compensation from the employer of more than $150,000.

In determining whether an individual is an officer of the employer, no more than 50 employees, or, if less, the greater of 3 employees or 10% of the employees, are to be treated as officers. See Code section 416(i) and T-12 of Regulations section 1.416. A key employee will not include any officer or employee of a governmental plan under Code section 414(d).

Required Aggregation Group—A required aggregation group consists of:

(1) each plan of the employer in which a key employee is or was a participant; and

(2) each other plan of the employer which enables a plan to meet the requirements for nondiscrimination in contributions or benefits under Code section 401(a)(4) or the participation requirements under Code section 410.

Top-Heavy Group—A top-heavy group is an aggregation group if, as of the determination date, the sum of the present value of the cumulative accrued benefits for key employees under all defined benefit plans included in such group and the aggregate of the accounts of key employees under all defined contribution plans in such group exceeds 60% of a similar sum determined for all employees. To determine if a plan is top-heavy, include distributions made in the 5-year period ending on the determination date. However, do not take into account accrued benefits for an individual who hasn't performed services for the employer during the 5-year period ending on the determination date.

A qualified plan must limit the annual compensation of each employee taken into account for the year to $222,220 adjusted annually for the cost of living. The family members (spouse and lineal descendants under age 19) of 5% owners or one of the 10 most highly compensated employees are treated as a single employee. Qualified plans must comply with this requirement in operation even if the plan has not yet been amended to comply with the *Tax Reform Act of 1986*.

18a(1). Check "Yes" if the plan distributed any annuity contracts. Check "Yes" even if the plan was terminated.

18a(2). If "Yes" was checked for item 18a(1), the annuity contract must provide that all distributions from it will meet the participant and spousal consent requirements *of Code section 417. However, consent is not needed for the distribution of the contract itself.* If the contracts contained the Code section 417 requirements check "Yes."

18b. In general, distributions must be made in the form of a qualified joint and survivor annuity for life or a qualified preretirement survivor annuity. An annuity distribution to a single individual (see 18c(1) below), is a qualified joint and survivor annuity. Check "Yes" if distributions in other forms were made, even if these distributions were permissible e.g., because consent was obtained or was not required.

18c. Generally, within the 90 days prior to the date of any benefit payment or the making of a loan to a participant, you must get the spouse's consent to the payment of the benefit or the use of the accrued benefit for the making of the loan. However, there are some circumstances where obtaining the spousal consent is not required. The following is a partial list of circumstances when spousal consent is not required:

(1) The participant is not married and no former spouse is required to be treated as a current spouse under a qualified domestic relations order issued by a court;

(2) The participant's nonforfeitable accrued benefit in the plan does not have at the time of distribution a present value of more than $3,500;

(3) The benefit is paid in the form of a qualified joint and survivor annuity, i.e., an annuity for the life of the participant with a survivor annuity for the life of the spouse which is not less than 50% of (and is not greater than 100% of) the amount of the annuity which is payable during the joint lives of the participant and the spouse. See Code section 417(b).

(4) The payout is from a profit-sharing or stock bonus plan that pays the spouse the participant's full account balance upon the participant's death, no annuity payment is not elected by the participant, and the profit-sharing or stock bonus plan is not a transferee plan with respect to the participant (i.e., had not received a transfer from a plan that was subject to the consent requirements with respect to the participant).

(5) The participant had no service under the plan after August 22, 1984.

18d. A plan may not eliminate a subsidized benefit or a retirement option by plan amendment or plan termination.

19. If distributions were not made in accordance with the joint and survivor annuity rules of Code sections 411(a)(11) and 417(e) answer "No." If distributions did comply with Code sections 411(a)(11) and 417(e) or if no distributions were made answer "Yes."

20. The maximum annual benefit that may be provided under a defined benefit plan may not exceed the lesser of $90,000 or 100% of compensation. However, if benefits begin before the social security retirement age, the $90,000 limit must be reduced as described in IRS Notice 87-21, 1987-1 C.B. 458.

In addition, the dollar limitations will be reduced for participants with fewer than 10 years of participation in a defined benefit plan, i.e., a 10% reduction for each year under 10 years of participation.

For defined contribution plans, Code section 415 now provides that the dollar limit on annual additions to a qualified plan may not exceed the greater of $30,000 or 25% of the defined benefit dollar limit for such limitation year. The limitation for defined contributions plans under section 415(c)(1)(A) remains at $30,000 for 1991 since the law provides that it shall not be changed until the section 415(b)(1)(A) limit ($108,963 for 1991) for defined benefit plans exceeds $120,000.

Annual additions to a defined contribution plan will, for years beginning after December 31, 1986, include 100% of all after-tax employee contributions. For participants participating in plans of tax-exempt organizations, the pre-Tax Reform Act limits remain in effect.

The Tax Reform Act of 1986 provides that a participant's previously accrued benefit won't be reduced merely because of the reduction in dollar limits or increases in required periods of participation. The transitional rule applies to an individual who was a participant prior to January 1, 1987, in a plan in existence on May 5, 1986. If this participant's current accrued benefit exceeds the dollar limit under the Tax Reform Act of 1986 but complies with prior law, then the applicable dollar limit for the participant is equal to the current accrued benefit. The term "current accrued benefit" is defined as the participant's accrued benefit as of the close of the last limitation year beginning before January 1, 1987, and expressed as an annual benefit. To compute the defined benefit fraction, the current accrued benefit would replace the dollar limit otherwise used in the denominator of the fraction. The current accrued benefit is also reflected in the numerator of the defined benefit fraction.

21. Employees must begin to receive minimum distributions pursuant to Code section 401(a)(9) by April 1 of the calendar year following the calendar year in which the employee attains age 70½. Once begun, minimum distributions must continue each calendar year.

If your plan was required to make the distributions and did not, check "No." If your plan made the required distributions or if no distributions were made, check "Yes."

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22. In general, a plan must satisfy one of the coverage tests on each day of the year being tested. However, if the plan satisfies one of the tests on at least one day in each quarter of the year being tested, the plan will be deemed to pass the coverage tests for the entire year provided that the quarterly testing dates reasonably represent the coverage of the plan over the entire plan year. Complete item 22 for the testing date selected by the employer (typically the last day of the plan year). For an alternative testing option see Income Tax Regulations section 1.410(b)-8(a)(4).

If Form 5500 is being filed solely because of Code section 6039D, for item 22, complete only 22h and 22m.

Multiemployer plan (code C in item 4) and multiple-employer-collectively-bargained plan (code D in item 4) need to complete line 22 only if a plan: (1) benefits employees who are not collective bargaining unit employees (other than employees required to benefit under the terms of a collective bargaining agreement) or (2) only covers collective bargaining unit employees and 2% or more of them are professionals. Multiple-employer plan (other) filers (Code E in item 4) are not required to complete item 22. However, the *participating employers in multiple-employer plan (other) pension benefit plans are required to complete the applicable questions in item 22 on the Form 5500C/R that they file.*

22a. In general, if the employer operated separate lines of business within the meaning of Code section 414(r) for a year, the employer may apply the coverage and discrimination requirements separately to employees in each separate line of business. If 22a is "Yes," complete 22b through 22o for the separate line of business covered by the plan as if the employees of the separate line of business were the sole employees of the employer. If this plan benefits employees in more than one separate line of business, complete item 22 for one of the lines of business and for each additional line of business covered by the plan submit an *attachment completed in the same format as item 22.*

22c. Income Tax Regulations section 1.410(b)-7(c) requires the "disaggregation" of certain single plans into two or more separate plans. Each of the disaggregated parts of the plan must then satisfy the coverage requirements under Code section 410(b) as if they were a separate plan. For purposes of item 22c the following plans must be disaggregated: (i) a plan that has a section 401(k) provision (a qualified cash or deferred arrangement (CODA)) and a provision that is not a 401(k) plan, (ii) a plan that has a section 401(m) provision (employee and matching contributions) and a provision that is not a 401(m) provision, (iii) a plan that has an ESOP provision and a provision that is not an ESOP, and (iv) a plan that benefits both collectively and noncollectively bargained employees (see Income Tax Regulations section 1.410(b)-6(f) for an exception).

If any of the above apply to your plan, complete item 22 for one of the disaggregated plans and for each additional part of the plan that must be disaggregated, submit an attachment completed in the same format as item 22. Also see Income Tax Regulations section 1.410(b)-7(c) for more details on other plans that may have to be disaggregated to satisfy the coverage requirements of Code section 410(b).

22d. Under section 1.410(b)-7(d) of the Income Tax Regulations, employers can aggregate any qualified pension or profit sharing plans that are not mandatorily disaggregated under the rules for item 22c above in order to satisfy the coverage tests. However, the aggregated plan must also satisfy the discrimination rules of section 401(a)(4) on an aggregated basis. Note that a special aggregation rule applies for the purposes of computing the average benefit percentage. See item 22o(1) below. If the employer aggregates plans for the purposes of the coverage and discrimination tests, check this item "Yes."

22e. Income Tax Regulations section 1.401(a)(4)-9(c) allows an employer to restructure a plan into component plans to satisfy the coverage and discrimination tests. Check "Yes," if the employer is satisfying the coverage and discrimination tests by restructuring the plan, and do not complete the rest of item 22.

22f(1). Check this box if this plan benefited no highly compensated employees (within the meaning of Code section 414(q)). This box should be checked for plans under which no employee receives an allocation or accrues a benefit. See the instructions to item 22m for the definition of benefiting.

22f(2). Check this box if this plan is a collectively bargained plan that benefits only collectively bargained employees and no more than 2% of the employees who are covered pursuant to such agreement are professional employees. See section 1.410(b)-9 of the Income Tax Regulations.

22g. Check "Yes," if any leased employee, within the meaning of section 414(n), performed services for the employer or any entity aggregated with the employer under Code sections 414(b), (c), or (m).

22h. Enter the total number of employees of the employer. Include all self-employed individuals, common-law employees and leased employees, within the meaning of Code section 414(n), of any of the entities aggregated with the employer under Code section 414(b), (c), or (m).

22i. Enter the total number of excludable employees in the following categories:

(1) Employees who have not attained the minimum age and service requirements of the plan.

(2) Collectively bargained employees. Do not count any employees covered under a collective bargaining agreement if more than 2% of the employees covered pursuant to such agreement are professional employees. See section 1.410 (b)-9 of the Income Tax Regulations.

(3) Nonresident aliens (within the meaning of Income Tax Regulations section 1.410(b)-6(c)).

(4) Employees who fail to accrue a benefit solely because they fail to satisfy a minimum hour of service or last day requirement under the plan, they do not have more than 500 hours of service, and they are not employed on the last day of the plan year.

22k. See the instructions for item 22m for the definition of benefiting.

22l. The definition of highly compensated employee is contained in Code section 414(q) and the income tax regulations thereunder.

22m. In general, an employee is benefiting if the employee receives an allocation of contributions or forfeitures, or accrues a benefit under the plan for the plan year. Certain other employees are treated as benefiting even if they fail to receive an allocation of contributions and/or forfeitures, or to accrue a benefit solely because the employee is subject to plan provisions that limit plan benefits, such as a provision for maximum years of service, maximum retirement benefits, or limits designed to satisfy Code section 415. An employee is treated as benefiting under a plan if the employee is eligible to make elective contributions or after-tax employee contributions and matching distributions subject to Code section 401(k) or (m). An eligible employee is treated as benefiting under the plan even if they do not actually make contributions.

22o(1). A plan satisfies the average benefit test if it satisfies both the nondiscriminatory classification test and the average benefit percentage test.

A plan satisfies the nondiscriminatory classification test if benefiting employees are defined by reasonable and objective business criteria set out in the plan and such classification is nondiscriminatory. A classification will be deemed nondiscriminatory if the ratio in item 22o(2) below is equal to or greater than the safe harbor percentage. The safe harbor percentage is 50%, reduced by ¾ of a percentage point for each percentage point by which the nonhighly compensated employee concentration percentage exceeds 60%. The nonhighly compensated employee concentration percentage is the percentage of all the employees of the employer who are not highly compensated employees. See Income Tax Regulations section 1.410(b)-4.

In general, a plan satisfies the average benefit percentage test if the actual benefit percentage for nonhighly compensated employees is at least 70% of the actual benefit percentage for highly compensated employees. All qualified plans of the employer, including CODAs and plans containing employee or matching contributions (Code section 401(k) or (m)) are aggregated in determining the actual benefit percentages. Do not aggregate plans that may not be aggregated for the purposes of satisfying the ratio percentage test, other than plans subject to Code section 401(k) or (m). In addition, all nonexcludable employees, including those with no benefit under any qualified plan of the employer, are included in determining the actual benefit percentages. See Income Tax Regulations section 1.410(b)-5 for complete details on the computation.

22o(2). In general to compute the ratio, divide the number of nonexcludable employees who benefit under the plan and are not highly compensated by the total number of nonexcludable nonhighly compensated employees; put the result in the numerator (top of the fraction). Divide the number of nonexcludable employees who benefit under the plan and who are highly compensated by the total number of nonexcludable highly compensated employees; put this result in the denominator

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(bottom of the fraction). Divide the numerator by the denominator and put the result in item 22c(2).

23a. Check "Yes" if it is your intention that this plan qualify under Code section 401(a). Otherwise check "No" and go to item 24a.

23b. If item 23a is "Yes," and you have received a determination letter from IRS, enter the date of the most recent determination letter received.

23c. Check "Yes" if you have applied for a determination letter from IRS but have not received a reply from IRS. Otherwise check "No."

24b. An independent appraiser must be used to ascertain the value of securities, acquired by a plan after December 31, 1986, if the securities aren't readily tradeable on an established securities market.

28a. Check "Yes" if any person (including, when applicable, a corporation or partnership) received, directly or indirectly, $5,000 or more during the plan year for providing services to the plan. For exceptions, see the instructions for Part I of Schedule C (Form 5500). If you checked "Yes," complete Part I of Schedule C (Form 5500), and attach it to Form 5500. Include payments from the plan sponsor which are reimbursable by the plan.

Check "No" if all plan assets are held in a master trust and the master trust report filed with DOL includes a Schedule C that reports all payments to service providers for the master trust.

28b. Include all trustees in office during the plan year. List these trustees on Part II of Schedule C (Form 5500) and attach it to the Form 5500.

28c. Check "Yes" if there has been a termination in the appointment of any person for which a box must be checked in item 28d. In case the service provider is not an individual (i.e., when the service provider is a legal entity such as a corporation, partnership, etc.), check "Yes" when the service provider (not the individual) has been terminated. If item 28c is checked "Yes," complete Part III of Schedule C (Form 5500) and attach the Schedule C to the Form 5500. Otherwise, check "No" and skip to item 28g.

28d. Check all appropriate boxes and complete Part III of Schedule C (Form 5500). At least one box must be checked if item 28c is answered "Yes."

28e. If item 28c is checked "Yes," check 28e "Yes" if, during the two most recent plan years preceding the termination and any subsequent interim period preceding such termination, resignation, or dismissal, there were any disagreements (whether or not the disagreements were a factor in the termination) on any matter of professional judgment which, if not resolved to the satisfaction of the former appointee, would have caused (or did cause) the former appointee to take some action, such as including the subject matter of the disagreement within a written report. For example, check "Yes" if the accountant was terminated as a result of a disagreement over the valuation of plan assets and the accountant would have required that the matter be disclosed in a note to the financial statements. Disagreements not involving a matter of professional judgment, such as the payment or nonpayment of fees, or the amount of the fee charged should not be included.

28f. If item 28d(1) or 28d(2) has been checked, indicating that an independent qualified public accountant or enrolled actuary has been terminated, the plan administrator must provide the terminated accountant or enrolled actuary with a copy of the explanation for the termination provided in Part III of Schedule C (Form 5500), along with a completed copy of the notice which follows.

Notice To Terminated Accountant or Enrolled Actuary

In accordance with this requirement, I, as plan administrator, verify that the explanation that is either reproduced below or attached to this notice is the explanation concerning your termination as reported on the Schedule C (Form 5500) attached to the 1991 Annual Return/Report Form 5500 for the (enter name of plan).
This return/report is identified in item 1b by the nine-digit
EIN - (enter Employer Identification Number) and in item 5c by the three-digit PN (enter plan number).

Signed

Dated

Any comments concerning this explanation should include the name, EIN, and PN of the plan and be submitted directly to:

Office of Enforcement
Pension and Welfare Benefits
Administration
U. S. Department of Labor
200 Constitution Avenue, NW
Washington, DC 20210

An explanation of the reasons for the termination of an accountant or enrolled actuary (terminated party) must be provided as part of the annual report (Part III of Schedule C). The plan administrator of the employee benefit plan is also required to provide the terminated party with a copy of this explanation and a notification that the terminated party has the opportunity to comment directly to the Department of Labor concerning any aspect of this explanation.

28g. A Schedule C (Form 5500) must be attached if item 28a, 28b, and/or 28c are checked "Yes." More than one Schedule C may be required if additional space is required to complete any part of the Schedule C. If no Schedule(s) C is required to be attached, enter "0."

29. Employee benefit plans filing the Annual Return/Report Form 5500 are generally required to engage an independent qualified public accountant pursuant to ERISA section 103(a)(3)(A). An independent qualified public accountant's opinion must be attached to Form 5500 unless (i) the plan is an employee welfare benefit plan which is unfunded, fully insured, or a combination of unfunded and insured, as described in 29 CFR 2520.104-44(b)(1); (ii) the plan is an employee pension benefit plan whose sole asset(s) consists of insurance contracts which provide that, upon receipt of the premium payment, the insurance carrier fully guarantees the amount of benefit payments attributable to plan participants for that plan year as specified in 29 CFR 2520.104-44(b)(2); or (iii) the plan has elected to defer attaching the accountant's opinion for the first of two plan years, one of which is a short plan year of 7 months or less as allowed by 29 CFR 2520.104-50. (Also see the instructions for item 29a below.)

Welfare benefit plans sponsored by one employer (or by a controlled group of employers) which use a Code section 501(c)(9) trust are generally not exempt from the requirement of engaging an independent qualified public accountant.

29a. Plans meeting (i) or (ii) above should check "Yes" for item 29a and skip to item 31. Plans meeting (iii) must attach the required explanation and statements in lieu of the opinion and should check "No" to item 29a and "Other" to item 29b, and specify, in the space provided, that "the opinion is to be attached to the next Form 5500 pursuant to 29 CFR 2520.104-50." All other plans should check "No." "N/A" is NOT an acceptable response to this item. If the required accountant's opinion is not attached to the Form 5500, the filing is subject to rejection as incomplete and penalties may be imposed (see page 1).

29b and c. 29CFR 2520.103-1(b) requires that any separate financial statements prepared in order for the independent qualified public accountant to form the opinion and notes to financial statements (or items 34 and 35 if applicable) must be attached to the annual return/report Form 5500. Any separate statements must include the information required to be disclosed in items 34 and 35 of the Form 5500; however, they may be aggregated into categories in a manner other than that used on Form 5500. The separate statements should be either typewritten or printed and consist of reproductions of items 34 and 35 or statements incorporating by reference items 34 and 35; See 29 CFR 2520.103-1(b).

29b(1). Generally, an unqualified opinion is issued when the auditor concludes that the plan's financial statements present fairly, in all material respects, the financial status of the plan as of the end of the period audited, and the changes in its financial status for the period under audit are in conformity with generally accepted accounting principles. Check this box if the plan received an unqualified opinion.

29b(2). Department of Labor Regulations 29 CFR 2520.103-8 and 2520.103-12(d) generally state that the examination and report of an independent qualified public *accountant need not extend to:*
(1) information prepared and certified to by a bank or similar institution or by an insurance carrier which is regulated and supervised and subject to periodic examination by a state or Federal agency, or (2) information concerning a 103-12 IE which is reported directly to the Department of Labor. Check this box if the plan received an accountant's opinion as discussed in 29b(1) above except for the information not audited pursuant to the above regulations.

29b(3). Generally a qualified opinion is issued by an independent qualified public accountant when the plan's financial statements present fairly, in all material respects, the financial position of the plan as of the end of the audit period and the results of its operations for the audit period are in conformity with generally accepted accounting principles except for the effects of one or more matters which are described in

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the opinion. A disclaimer of opinion is issued when the independent qualified public accountant does not express an opinion on the financial statements because he has not performed an audit sufficient in scope to enable him to form an opinion of the financial statements. Check this box if the plan received a qualified opinion or if a disclaimer of opinion was issued. If the audit was of limited scope pursuant to 29 CFR 2520.103-8 and/or 2520.103-12(d), and no other limitations as to scope or procedures were in effect, then check the box in item 29b(2).

29b(4). Generally an adverse opinion is issued by an independent qualified public accountant when the plan's financial statements do not present fairly, in all material respects, the financial position of the plan as of the end of the audit period and the results of its operations for the audit period in conformity with generally accepted accounting principles. Check this box if the plan received an adverse accountant's opinion.

29b(5). Generally, an independent qualified public accountant's opinion will be described by one of the categories in 29b(1) through (4). Check this box if the accountant's opinion received by the plan is not described by one of the categories in 29b(1) through (4). Explain the nature of the opinion in the space next to this box. If the explanation requires more space, enter "See attached" and on a separate sheet of paper explain in detail the nature of the accountant's opinion. Any attachments should identify the item number and include the plan's name, EIN and PN.

29c and 29d. These items must be answered by all plans required to engage an independent qualified public accountant (item 29a is "No"). The disclosure of the transactions and financial conditions listed in 29c are some of the disclosures required to be made when a plan's financial statements are presented in accordance with generally accepted accounting principles. (Usually these disclosures are contained in the notes to the financial statements.) If you are unsure as to whether the disclosures presented in or accompanying the plan's financial statements fall within one of the disclosures described in 29c, you should consult with the plan's independent qualified public accountant.

Check 29c "Yes" and provide the amount involved in 29d if the financial statements or the notes to the statements contain any of the disclosures listed in 29c. The amount should be determined by adding the amounts of all of the applicable disclosures. For example, if two significant transactions are disclosed between the plan and the sponsor, the amounts, if any, disclosed in the notes should be added together and the total reported.

If you confirm, through consultation with the accountant, if necessary, that the accountant's report, including any applicable financial statements or notes, does not contain any of the disclosures noted in item 29c, check item 29c "No" and enter "0" in item 29d.

30. Plans with assets held in a master trust and/or 103-12 IE (see pages 3 and 4 for the definition of these terms) should complete items 30a, b, c, and d to report information relating to assets held and transactions occurring outside the master trust and/or 103-12 IE. In determining the 5% figure for item 30d, subtract the value of plan assets held in the master trust or 103-12 IE from the current value of the plan's total assets at the beginning of the plan year.

"Current value" means fair market value where available. Otherwise, it means the fair value as determined in good faith under the terms of the plan by a trustee or a named fiduciary, assuming an orderly liquidation at time of the determination.

Do not complete sub-items 30a through 30f if all plan funds are held in a master trust.

If "Yes" is checked for item(s) 30a, b, c, d, e, and/or f, schedules must be completed and attached to the Form 5500. If the required schedule is not clearly labeled and attached to the Form 5500, the filing is subject to rejection as incomplete and penalties may be imposed (see page 1). Any attachments must identify the item number, and include the plan's name, EIN, and PN.

30a–30d. If the assets or investment interests of two or more plans are maintained in one trust (except investment arrangements reported in 34c(11) through 34c(15) (see page 17)), all entries in the schedules included under items 30a, b, and c which relate to the trust shall be computed by including the plan's allocable portion of the trust. For purposes of item 30d, the plan's allocable portion of the transactions of the trust shall be combined with the other transactions of the plan, if any, to determine which transactions (or series of transactions) are reportable. Do not include individual transactions of investment arrangements reported in 34c(11) through 34c(15).

For purposes of this form, party-in-interest is deemed to include a disqualified person—see Code section 4975(e)(2). The term "party-in-interest" means, as to an employee benefit plan—

(A) any fiduciary (including, but not limited to, any administrator, officer, trustee or custodian), counsel, or employee of the plan;

(B) a person providing services to the plan;

(C) an employer, any of whose employees are covered by the plan;

(D) an employee organization, any of whose members are covered by the plan;

(E) an owner, direct or indirect, of 50% or *more of—(i)* the combined voting power of all classes of stock entitled to vote, or the total value of shares of all classes of stock of a corporation; (ii) the capital interest or the profits interest of a partnership, or (iii) the beneficial interest of a trust or unincorporated enterprise that is an employer or an employee organization described in (C) or (D);

(F) a relative of any individual described in (A), (B), (C), or (E);

(Continued on page 15)

30a. Check "Yes" and attach one or both of the following two schedules to the Form 5500 if the plan had any assets held for investment purposes at any time during the plan year. Assets held for investment purposes shall include:

1 Any investment asset held by the plan on the last day of the plan year, and

2 Any investment asset purchased during the plan year and sold before the end of the plan year except:

(i) Debt obligations of the U.S. or any U.S. agency.

(ii) Interests issued by a company registered under the Investment Company Act of 1940 (e.g., a mutual fund).

(iii) Bank certificates of deposit with a maturity of one year or less.

(iv) Commercial paper with a maturity of 9 months, or less, if it is valued in the highest rating category by at least two nationally recognized statistical rating services and is issued by a company required to file reports with the Securities and Exchange Commission under section 13 of the Securities Exchange Act of 1934.

(v) Participations in a bank common or collective trust.

(vi) Participations in an insurance company pooled separate account.

(vii) Securities purchased from a broker-dealer registered under the Securities Exchange Act of 1934 and either:

(A) listed on a national securities exchange and registered under section 6 of the Securities Exchange Act of 1934, or (B) quoted on NASDAQ. Assets held for investment purposes shall not include any investment which was not held by the plan on the last day of the plan year if that investment is reported in the annual report for that plan year in any of the following:

1 The schedule of loans or fixed income obligations in default required by item 30b;

2 The schedule of leases in default or classified as uncollectible required by item 30c;

3 The schedule of reportable transactions required by item 30d; and

4 The schedule of party-in-interest transactions required by items 30e and 30f.

The first schedule required to be attached to the Form 5500 is a schedule of all assets held for investment purposes at the end of the plan year, aggregated and identified by issue, maturity date, rate of interest, collateral, par or maturity value, cost and current value, and, in the case of a loan, the payment schedule. The schedule must use the following or a similar format and the same size paper as the Form 5500:

Note: In column (a), place an asterisk (*) on the line of each identified person known to be a party-in-interest to the plan. In column (c), include any restriction on transferability of corporate securities. (Include lending of securities permitted under Prohibited Transactions Exemption 81-6.)

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The following schedule must be clearly labeled "Item 30a.– Schedule of Assets Held for Investment Purposes."

(a)	(b) Identity of issue, borrower, lessor, or similar party	(c) Description of investment including maturity date, rate of interest, collateral, par or maturity value	(d) Cost	(e) Current value

The second schedule required to be attached to the Form 5500 is a schedule of investment assets which were both acquired and disposed of within the plan year (see 29 CFR 2520.103-11). The schedule should use the following or a similar format and the same size paper as the Form 5500. The following schedule must be clearly labeled "Item 30a – Schedule of Assets Held for Investment Purposes."

(a) Identity of issue, borrower, lessor, or similar party	(b) Description of investment including maturity date, rate of interest, collateral, par or maturity value	(c) Costs of acquisitions	(d) Proceeds of dispositions

Note: Participant loans under an individual account plan with investment experience segregated for each account, that are made in accordance with 29 CFR 2550.408b-1 and that are secured solely by a portion of the participant's vested accrued benefit, may be aggregated for reporting purposes in item 30a. Under identity of borrower enter "Participant loans," under rate of interest enter the lowest rate and the highest rate charged during the plan year (e.g., 8%-10%), under the cost and proceeds columns enter "-0-", and under current value enter the total amount of these loans.

30b. Check "Yes" and attach the following schedule to the Form 5500 if the plan had any loans or fixed income obligations in default or determined to be uncollectible as of the end of the plan year. Include obligations where the required payments have not been made by the due date. With respect to notes and loans, the due date, payment amount and conditions for default are usually contained in the note or loan documents. Defaults can occur at any time for those obligations which require periodic repayment. Generally loans and fixed income obligations are considered uncollectible when payment has not been made and there is little probability that payment will be made. A loan by the plan is in *default* when the borrower is unable to pay the obligation upon maturity. A fixed income obligation has a fixed maturity date at a specified interest rate. List any loans by the plan which are in default and any fixed income obligations which have matured, but have not been paid, for which it has been determined that payment will not be made. The schedule should use the following or similar format and the same size paper as the Form 5500. *The following schedule must be clearly labeled "Item 30b – Schedule of Loans or Fixed Income Obligations."*

Note: In column (a), place an asterisk (*) on the line of each identified person known to be a party-in-interest to the plan. Include all loans that were renegotiated during the plan year. Also, explain what steps have been taken or will be taken to collect overdue amounts for each loan listed.

(a)	(b) Identity and address of obligor	(c) Original amount of loan	Amount received during reporting year		(f) Unpaid balance at end of year	(g) Detailed description of loan including dates of making and maturity, interest rate, the type and value of collateral, any renegotiation of the loan and the terms of the renegotiation and other material items	Amount overdue	
			(d) Principal	(e) Interest			(h) Principal	(i) Interest

30c. Check "Yes," and attach to Form 5500 the following schedule if the plan had any leases in default or classified as uncollectible. The schedule should use the following or a similar format and the same size paper as Form 5500. The following schedule must be clearly labeled **"Item 30c – Schedule of Leases in Default or Classified as Uncollectible."**

A **lease** is an agreement conveying the right to use property, plant or equipment for a stated period. A lease is in default when the required payment(s) has not been made. An uncollectible lease is one where the required payments have not been made and for which there is little probability that payment will be made. *Also, explain what steps have been taken or will be taken to collect overdue amounts for each lease listed.*

(a)	(b) Identity of lessor/lessee	(c) Relationship to plan, employer, employee organization or other party-in-interest	(d) Terms and description (type of property, location and date it was purchased, terms regarding rent, taxes, insurance, repairs, expenses, renewal options, date property was leased)	(e) Original cost	(f) Current value at time of lease	(g) Gross rental receipts during the plan year	(h) Expenses paid during the plan year	(i) Net receipts	(j) Amount in arrears

30d. Check "Yes" and attach to the Form 5500 the following schedule if the plan had any reportable transactions (see 29 CFR 2520.103-6). The schedule should use the following or a similar format and the same size paper as the Form 5500.

A **reportable transaction** includes:

1. A **single** transaction within the plan year in excess of 5% of the current value of the plan assets;

2. Any **series** of transactions with, or in conjunction with, the same person, involving property other than securities, which amount in the **aggregate** within the plan year (regardless of the category of asset and the gain or loss on any transaction) to more than 5% of the current value of **plan assets;**

3. Any **transaction** within the plan year involving securities of the same issue if within the plan year any series of transactions with respect to **such securities** amount in the aggregate to more than 5% of the current value of the plan assets; and

4. Any **transaction** within the plan year with respect to securities with, or in conjunction with, a person if any prior or subsequent single transaction within the plan year with such person, with respect to securities, exceeds 5% of the current value of plan assets.

The 5% *figure* is *determined* by comparing the current value of the transaction at the transaction date with the current value of the plan **assets** at the beginning of the plan year.

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If the assets of two or more plans are maintained in one trust, the plan's allocable portion of the transactions of the trust shall be combined with the other transactions of the plan, if any, to determine which transactions (or series of transactions) are reportable (5%) transactions. This does not apply to investment arrangements whose current value is reported in items 34c(11) through 34c(15). Instead, for investments in common/collective trusts, pooled separate accounts, 103-12 IEs and registered investment companies, determine the 5% figure by comparing the transaction date value of the acquisition and/or disposition of units of participation or shares in the entity with the current value of the plan assets at the beginning of the plan year. Do not complete item 30d if all plan funds are held in a master trust. Plans with assets in a master trust which have other transactions should determine the 5% figure by subtracting the current value of plan assets held in the master trust from the current value of all plan assets at the beginning of the plan year. Do not include individual transactions of investment arrangements reported in items 34c(11) through 34c(15).

In the case of a purchase or sale of a security on the market, do not identify the person from whom purchased or to whom sold.

The following schedule must be clearly labeled "Item 30d — Schedule of Reportable Transactions."

(a) Identity of party involved	(b) Description of asset (include interest rate and maturity in case of a loan)	(c) Purchase price	(d) Selling price	(e) Lease rental	(f) Expense incurred with transaction	(g) Cost of asset	(h) Current value of asset on transaction date	(i) Net gain or (loss)

30e and f. Check "Yes" and attach the following schedule to the Form 5500 if the plan had any nonexempt transactions with a party-in-interest.

For purposes of this form, party-in-interest is deemed to include a disqualified person (see Code section 4975(e)(2)). The term "party-in-interest" is defined on page 13. Nonexempt transactions with a party-in-interest include any direct or indirect:

1. Sale or exchange, or lease, of any property between the plan and a party-in-interest.
2. Lending of money or other extension of credit between the plan and party-in-interest.
3. Furnishing of goods, services, or facilities between the plan and a party-in-interest.
4. Transfer to, or use by or for the benefit of, a party-in-interest, of any income or assets of the plan.
5. Acquisition, on behalf of the plan, of any employer security or employer real property in violation of ERISA section 407(a).
6. Dealing with the assets of the plan for a fiduciary's own interest or own account.
7. Acting in a fiduciary's individual or any other capacity in any transaction involving the plan on behalf of a party (or represent a party) whose interests are adverse to the interests of the plan or the interests of its participants or beneficiaries.
8. Receipt of any consideration for his or her own personal account by a party-in-interest who is a fiduciary for any party dealing with the plan in connection with a transaction involving the income or assets of the plan.

Do not check "Yes" for item 30e or 30f, or list transactions that are statutorily exempt under Part 4 of Title I of ERISA, or administratively exempt under ERISA section 408(a), or exempt under Code sections 4975(c) and 4975(d), or include transactions of a 103-12 IE with parties other than the plan. You may indicate that an application for an administrative exemption is pending.

If you are unsure as to whether a transaction is exempt or not, you should consult with either the plan's independent qualified public accountant or legal counsel or both.

Set out each transaction with the information set forth below in the following or similar format using the same size paper as the Form 5500. The following schedules must be clearly labeled as appropriate "Item 30e — Schedule of Nonexempt Transactions" and/or "Item 30f — Schedule of Nonexempt Transactions."

If a nonexempt prohibited transaction occurred with respect to a disqualified person, file Form 5330 with IRS to pay the excise tax on the transaction.

(a) Identity of party involved	(b) Relationship to plan, employer or other party-in-interest	(c) Description of transactions including maturity date, rate of interest, collateral, par or maturity value	(d) Purchase price	(e) Selling price	(f) Lease rental	(g) Expenses incurred in connection with transaction	(h) Cost of asset	(i) Current value of asset	(j) Net gain or (loss) on each transaction

(Continued from page 13)

(G) a corporation, partnership, or trust or estate of which (or in which) 50% or more of: (i) the combined voting power of all classes of stock entitled to vote or the total value of shares of all classes of stock of such corporation, (ii) the capital interest or profits interest of such partnership, or (iii) the beneficial interest of such trust or estate is owned directly or indirectly, or held by, persons described in (A), (B), (C), (D) or (E);

(H) an employee, officer, director (or an individual having powers or responsibilities similar to those of officers or directors), or a 10% or more shareholder, directly or indirectly, of a person described in (B), (C), (D), (E), or (G), or of the employee benefit plan; or

(I) a 10% or more (directly or indirectly in capital or profits) partner or joint venturer of a person described in (B), (C), (D), (E), or (G).

30g. Employer Security.—An employer security is any security issued by an employer (including affiliates) of employees covered by the plan. These may include common stocks, preferred stocks, bonds, zero coupon bonds, debentures, convertible debentures, notes, and commercial paper. Generally, a publicly traded security is a security which is bought and sold on a recognized market (e.g., NYSE, AMEX, over the counter, etc.) for which there is a pool of willing buyers and sellers. Securities which are listed on a market but for which there does not exist a pool of willing buyers and sellers are not publicly traded.

Qualifying Employer Security.—An employer security which is a stock or a "marketable obligation" is considered a qualifying employer security. For purposes of this definition, the term "marketable obligation" means a bond, debenture, note, certificate, or other evidence of indebtedness (obligation) if:

(i) such obligation is acquired—

(A) on the market, either: (1) at the price of the obligation prevailing on a national securities exchange which is registered with the Securities and Exchange Commission, or (2) if the obligation is not traded on such a national securities exchange, at a price not less favorable to the plan than the offering price for the obligation as established by current bid and asked prices quoted by persons independent of the issuer;

(B) from an underwriter, at a price: (1) not in excess of the public offering price for the obligation as set forth in a prospectus or offering circular filed with the Securities and Exchange Commission, and (2) at which a substantial portion of the same issue is

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acquired by persons independent of the issuer; or

(C) directly from the issuer, at a price not less favorable to the plan than the price paid currently for a substantial portion of the same issue by persons independent of the issuer;

(ii) immediately following the acquisition of such obligation—

(A) not more than 25% of the aggregate amount of obligations issued in such issue and outstanding at the time of acquisition is held by the plan, and

(B) at least 50% of the aggregate amount referred to in subparagraph (A) is held by persons independent of the issuer; and

(iii) immediately following the acquisition of the obligation, not more than 25% of the assets of the plan is invested in obligations of the employer or an affiliate of the employer.

For purposes of the qualifying employer security definition, the term "stock" must meet the following conditions:

1. No more than 25% 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% of the aggregate amount of stock described in the preceding paragraph is held by persons independent of the issuer.

For exceptions to the above, see ERISA section 407(f).

30h. Generally, as it relates to this question, an appraisal by an unrelated third party is an evaluation of the value of a security prepared by an individual or firm who knows how to judge the value of securities and does not have an ongoing relationship with the plan or plan fiduciaries except for preparing the appraisal. Non-publicly traded securities are generally held by few people and not traded on a stock exchange.

32a(1). Generally, every plan official of an employee benefit plan who "handles" funds or other property of such plan must be bonded. Generally a person shall be deemed to be handling funds or other property of a plan, so as to require bonding, whenever his or her duties or activities with respect to given funds are such that there is a risk that such funds could be lost in the event of fraud or dishonesty on the part of such person, acting either alone or in collusion with others. Section 412 of ERISA and Regulations 29 CFR 2580 provide the bonding requirements, including the definition of "handling" (29 CFR 2580.412-6), the permissible forms of bonds (29 CFR 2580.412-10), the amount of the bond (29 CFR 2580, subpart C), and certain exemptions such as the exemption for unfunded plans, certain banks and insurance companies (ERISA section 412), and the exemption allowing plan officials to purchase bonds from surety companies authorized by the Secretary of the Treasury as acceptable reinsurers on Federal bonds (29 CFR 2580.412-23).

Check "Yes" only if the plan itself (as opposed to the plan sponsor or administrator) is a named insured under a fidelity bond covering plan officials and if the plan is protected as described in 29 CFR 2580.412-18.

Plans are permitted under certain conditions to purchase fiduciary liability insurance. These policies do not protect the plan from dishonest acts and are not bonds which should be reported in question 32.

32a(2). Indicate the aggregate amount of coverage available for all claims.

32b(1). Check "Yes" if the plan has suffered or discovered any loss as the result of a dishonest or fraudulent act(s).

32b(2). If item 32b(1) has been answered "Yes," enter the full amount of the loss. If the full amount of the loss has not yet been determined, provide and disclose that the figure is an estimate, such as "Approximately $1,000."

Note: Willful failure to report is a criminal offense. See ERISA section 501.

33a. If you are uncertain as to whether the plan is covered under the PBGC termination insurance program, check the box "Not determined" and contact the PBGC and request a coverage determination. Welfare and fringe benefit plans do not complete this item.

34 and 35. You can use either the cash, modified accrual, or accrual basis for recognition of transactions in items 34 and 35, as long as you use one method consistently.

Round off all amounts in items 34 and 35 to the nearest dollar. Any other amounts are subject to rejection. Check all subtotals and totals carefully.

Caution: *Do not mark through the printed line descriptions and insert your own description as this may cause additional correspondence due to a new computerized review of the Form 5500.*

"Current value" means fair market value, where available. Otherwise, it means the fair value as determined in good faith under the terms of the plan by a trustee or a named fiduciary, assuming an orderly liquidation at the time of the determination.

If the assets of two or more plans are maintained in one trust, such as when an employer has two plans which are funded through a single trust (except investment arrangements reported in items 34c(11) through 34c(15)), complete items 34 and 35 by entering the plan's allocable part of each line item.

If assets of one plan are maintained in two or more trust funds, report the combined financial information in items 34 and 35.

Fully insured, unfunded, and unfunded/insured welfare plans, and fully insured pension plans meeting the conditions of 29 CFR 2520.104-44, need not complete items 34 and 35. To determine if your welfare benefit plan is fully insured, unfunded, or unfunded/insured, see page 2.

To determine if your pension plan is fully insured, see page 5.

Exception: Plans which are both welfare and fringe benefit plans must complete items 35g and 35h.

34. Column (a) should be used to enter the current value of plan assets and liabilities as of the beginning of the plan year. Column (b) should be used to enter the current value of plan assets and liabilities as of the end of the plan year.

Amounts reported in column (a) must be the same as reported for corresponding line items in column (b) of the return/report for the preceding plan year.

34a. Total noninterest-bearing cash includes, among other things, cash on hand or cash in a noninterest-bearing checking account.

34b(1). Noncash basis filers should include contributions due the plan by the employer but not yet paid. Do not include other amounts due from the employer such as the reimbursement of an expense or the repayment of a loan.

34b(2). Noncash basis filers should include contributions withheld by the employer from participants and amounts due directly from participants which have not yet been received by the plan. Do not include the repayment of participant loans.

34b(3). Noncash basis filers should include income from investment income earned but not yet received by the plan.

34b(4). Noncash basis filers should include amounts due to the plan which are not includable in items 34b(1)-(3) above. These may include amounts due from the employer or another plan for expense reimbursement or from a participant for the repayment of an overpayment of benefits.

34c(1). Include all assets which earn interest in a financial institution account including interest bearing checking accounts, passbook savings accounts, et al., or in a money market fund.

34c(3). Include securities issued or guaranteed by the U.S. Government or its designated agencies such as U.S. Savings Bonds, Treasury bonds, Treasury bills, FNMA, and GNMA.

34c(4). Include investment securities issued by a corporate entity at a stated interest rate repayable on a particular future date such as most bonds, debentures, convertible debentures, commercial paper and zero-coupon bonds. Do not include debt securities of Governmental units or municipalities reported under 34c(3) or 34c(17).

"Preferred" means any of the above securities that are publicly traded on a recognized securities exchange and the securities have a rating of "A" or above. If the securities are not "preferred" they are listed as "Other".

34c(5)(A). Include stock issued by corporations which is accompanied by preferential rights such as the right to share in distributions of earnings at a higher rate or has general priority over the common stock of the same entity. Include the value of warrants convertible into preferred stock.

34c(5)(B). Include any stock which represents regular ownership of the corporation and is not accompanied by preferential rights plus the value of warrants convertible into common stock.

34c(6). Include the value of the plan's participation in a partnership or joint venture if the underlying assets of the partnership or joint venture are not considered to be plan assets under 29 CFR 2510.3-101. Do not include the value of a plan's interest in a partnership or joint venture which is a 103-12 IE (see the instructions for 34c(11) through 34c(15), below).

34c(7)(A). Include the current value of real property owned by the plan which produces income from rentals, etc. This property is not to be included in item 34e, buildings and other property used in plan operations.

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34c(7)(B). Include the current value of real property owned by the plan which is not producing income or used in plan operations.

34c(8)(A). Include the current value of all loans made by the plan to provide mortgage financing to purchasers (other than plan participants) of residential dwelling units, either by making or participating in loans directly or by purchasing mortgage loans originated by a third party. (For participant loans, see 34c(9)(A) and (B), below.)

34c(8)(B). Include the current value of all loans made by the plan to provide mortgage financing to purchasers (other than participants) of commercial real estate, either by making or participating in the loans directly or by purchasing mortgage loans originated by a third party. (For participant loans, see 34c(9)(A) and (B), below).

34c(9)(A). Include the current value of all loans to participants which are made by the plan to provide mortgage financing to participants who were purchasers of real property, irrespective of whether the mortgage was for residential, commercial or farm property.

34c(9)(B). Include the balance of any loans made to participants which were not reported in item 34c(9)(A).

34c(10). Include all loans made by the plan which are not to be reported elsewhere in item 34 such as loans for construction, securities loans, and other miscellaneous loans.

34c(11) through 34c(15). In items 34c(11) through 34c(15), enter the current value of the plan's interest at the beginning and end of the plan year. If some plan funds are held in these investment arrangements, and other plan funds are held in other funding media, complete all applicable sub-items of item 34 with regard to assets held in other funding media.

A plan investing in common/collective trusts or pooled separate accounts should attach to the return/report either the statement of assets and liabilities of the common/collective trust or pooled separate account or the certification discussed on page 3 of these instructions.

The value of the plan's interest in a master trust is the sum of the net values of the plan's interest in master trust investment accounts. The net values of such interests are obtained by multiplying the plan's percentage interest in each master trust investment account by the net assets of the investment account (total assets minus total liabilities) at the beginning and end of the plan year.

34c(16). You can use the same method for determining the value of the insurance contracts reported in 34c(16) that you used for line 6e of Schedule A (Form 5500) as long as the contract values are stated as of the beginning and end of the plan year.

34c(17). Other investments include options, index futures, repurchase agreements, and state and municipal securities among other things.

34d. See 30g on page 16 for the definition of employer security.

34e. Include the current (not book) value of the buildings and other property used in the operation of the plan. Buildings or other property held as plan investments should be reported in item 34c(7)(A) or (B), or 34d(2).

Do not include the value of future pension payments in items 34g, 34h, 34i, 34j or 34k.

34g. Noncash basis plans should include the total amount of benefit claims which have been processed and approved for payment by the plan.

34h. Noncash basis plans should include the total amount of obligations owed by the plan which were incurred in the normal operations of the plan and have been approved for payment by the plan but have not been paid.

34i. Acquisition Indebtedness.—"Acquisition indebtedness," for debt-financed property other than real property, means the outstanding amount of the principal debt incurred:

(1) by the organization in acquiring or improving the property;

(2) before the acquisition or improvement of the property if the debt was incurred only to acquire or improve the property; or

(3) after the acquisition or improvement of the property if the debt was incurred only to acquire or improve the property and was reasonably foreseeable at the time of such acquisition or improvement.

For further explanation, see Code section 514(c).

34j. Noncash basis plans should include amounts owed for any liabilities which would not be classified as benefit claims payable, operating payables, or acquisition indebtedness.

34l. Column (b) must equal the sum of column (a) plus items 35i and 35j.

35a(1). Include the total cash contributions received and/or (for accrual basis plans) due to be received.

35a(2). Use the current value, at date contributed, of securities or other noncash property.

35b(1)(A). Include the interest earned on interest-bearing cash. This is derived from investments which are includable in 34c(1), including earnings from sweep accounts, STIF accounts, etc.

35b(1)(B). Include the interest earned on certificates of deposit. This is the interest earned on the investments which are reported on line 34c(2).

35b(1)(C). Include the interest earned on U.S. Government securities. This is the interest earned on the investments which are reported on line 34c(3).

35b(1)(D). Generally, this is the interest earned on securities which are reported on lines 34c(4)(A) and (B) and 34d(1).

35b(1)(E). Include the interest earned on the investments which are reported on lines 34c(8)(A) and (B) and 34c(9)(A).

35b(1)(F). Include the interest earned on the investments which are reported on lines 34c(9)(B) and 34c(10).

35b(1)(G). Include any interest not reported in 35b(1)(A)–(F).

35b(2) (A) and (B). Generally, these dividends are from the investments which are reported in items 34c(5)(A) and (B) and 34d(1).

For accrual basis plans, include any dividends declared for stock held on the date of record, but not yet received as of the end of the plan year.

35b(3). Generally, rents represent the income earned on the real property which is reported in items 34c(7)(A) and 34d(2). Rents should be entered as a "Net" figure. Net rents are determined by taking the total rent received and subtracting all expenses directly associated with the property. If the real property is jointly used as income producing property and for the operation of the plan, that portion of the expenses attributable to the income producing portion of the property should be netted against the total rents received.

35b(4). Column (b), total of net gain (loss) on sale of assets, should reflect the sum of the net realized gain (or loss) on each asset held at the beginning of the plan year which was sold or exchanged during the plan year and each asset which was both acquired and disposed of within the plan year.

Note: As current value reporting is required for the Form 5500, assets are revalued to current value at the end of the plan year. For purposes of this form, the increase or decrease in the value of assets since the beginning of the plan year (if held on the first day of the plan year) or their acquisition date (if purchased during the plan year) is reported in item 35b(5) below, with two exceptions: (1) the realized gain (or loss) on each asset which was disposed of during the plan year is reported in 35b(4) (NOT in 35b(5)), and (2) the net investment gain (or loss) from certain investment arrangements is reported in items 35b(6) through 35b(10).

The sum of the realized gain (or loss) of all assets sold or exchanged during the plan year is to be calculated by—

(1) entering the sum of the amount received for these former assets in 35b(4), column (a), line (A),

(2) entering in 35b(4), column (a), line (B), the sum of the current value of these former assets as of the beginning of the plan year, for those assets on hand at the beginning of the plan year, or the purchase price for those assets acquired during the plan year, and

(3) subtracting (B) from (A) and entering this result on line c in column (b).

A negative figure should be placed in parentheses.

35b(5). Subtract the current value of assets at the beginning of the year plus the cost of any assets acquired during the plan year from the current value of assets at the end of the year to obtain this figure. A negative figure should be placed in parentheses. Do not include the value of assets reportable in items 35b(4) and 35b(6) through 35b(10).

35b(6) through (10). Report all earnings, expenses, gains or losses, and unrealized appreciation or depreciation which were included in computing the net investment gain (or loss) from these investment arrangements here. If some plan funds are held in any of these investment arrangements and other plan funds are held in other funding media, complete all applicable sub-items of item 35 to report plan earnings, and expenses, relating to the other funding media.

The net investment gain (or loss) allocated to the plan for the plan year from the plan's investment in these investment arrangements is equal to:

(A) the sum of the current value of the plan's interest in each investment arrangement at the end of the plan year,

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(B) minus the current value of the plan's interest in each investment arrangement at the beginning of the plan year,

(C) plus any amounts transferred out of each investment arrangement by the plan during the plan year, and

(D) minus any amounts transferred into each investment arrangement by the plan during the plan year.

Enter the net gain as a positive number or the net loss in parentheses.

35c. Include any other plan income earned that is not included in 35a or 35b. Do not include transfers from other plans which should be reported in item 35j.

35d. Add all amounts in column (b) and enter the total income.

35e. If distributions include securities or other property, use the current value at date distributed for this item. See page 10 for the definition of current value. If this return/report is being filed only for a fringe benefit plan (or for both a fringe benefit plan and a welfare benefit plan which is exempt from completing item 35), you must complete items 35g and 35h (reasonable estimates will be acceptable for these figures).

35e(1). Include the current value of all cash, securities or other property at the date of distribution.

35e(2). Include payments to insurance companies and similar organizations such as Blue Cross, Blue Shield, and health maintenance organizations for the provision of plan benefits, e.g., paid-up annuities, accident insurance, health insurance, vision care, dental coverage, etc.

35e(3). Include payments made to other organizations or individuals providing benefits. Generally, these are individual providers of welfare benefits such as legal services, day care services, training and apprenticeship services.

35f. Interest expense is a monetary charge for the use of money borrowed by the plan. This amount should include the total of interest paid or to be paid (for accrual basis plans) during the plan year.

35g. Expenses incurred in the general operations of the plan are classified as administrative expenses. Report all administrative expenses (by specified category) paid by or charged to the plan, including those which were not subtracted from the gross income of common/collective trusts, pooled separate accounts, master trust investment accounts, and 103-12 IEs in determining their net investment gain(s) or loss(es). If this return/report is filed only for a fringe benefit plan and NOT for a welfare benefit plan, do not include overhead expenses such as utilities and photocopying expenses. Also, if you are filing for an educational assistance program described in Code section 127, do not include expenses for job-related training which are deductible under Code section 162.

35g(1). Include all of the plan's expenditures such as salaries and the payment of premiums to provide benefits to plan employees (e.g., health insurance, life insurance, etc.).

35g(2). Include the total fees paid (or in the case of accrual basis plans, costs incurred during the plan year but not paid as of the end of the plan year) by the plan for outside accounting services. These may include the fee(s) for the annual audit of the plan by an independent qualified public accountant, for payroll audits, and for accounting/bookkeeping services. These do not include amounts paid to plan employees to perform accounting functions.

35g(3). Include the total fees paid (or in the case of accrual basis plans, costs incurred during the plan year but not paid as of the end of the plan year) to an actuary for services rendered to the plan.

35g(4). Include the total fees paid (or in the case of accrual basis plans, costs incurred during the plan year but not paid as of the end of the plan year) to a contract administrator for performing administrative services for the plan. For purposes of the return/report, a contract administrator is any individual, partnership, or corporation, responsible for managing the clerical operations (e.g., handling membership rosters, claims payments, maintaining books and records) of the plan on a contractual basis. Do not include salaried staff or employees of the plan or banks, or insurance carriers.

35g(5). Include the total fees paid (or in the case of accrual basis plans, costs incurred during the plan year but not paid as of the end of the plan year) to an individual, partnership or corporation (or other person) for advice to the plan relating to its investment portfolio. These may include fees paid to manage the plan's investments, fees for specific advice on a particular investment, and fees for the evaluation of the plan's investment performance.

35g(6). Include total fees paid (or in the case of accrual basis plans, costs incurred during the plan year but not paid as of the end of the plan year) to a lawyer for services rendered to the plan. Include fees paid for rendering legal opinions, litigation, and advice but not for providing legal services as a benefit to plan participants.

35g(7). Include the total fees paid (or in the case of accrual basis plans, costs incurred during the plan year but not paid as of the end of the plan year) for valuations or appraisals to determine the cost, quality, or value of an item. These may include the fee(s) paid for appraisals of real property (real estate, gemstones, coins, etc.), and a valuation of closely held securities for which there is no ready market.

35g(8). Include the total fees and expenses paid to or on behalf of plan trustees (or in the case of accrual basis plans, costs incurred during the plan year but not paid as of the end of the plan year). These may include reimbursement of expenses associated with trustees such as lost time, seminars, travel, meetings, etc.

35g(9). Other expenses are those that cannot be associated definitely with items 35g(1) through 35g(8). All miscellaneous expenses are also included in this figure. These may include expenses for office supplies and equipment, cars, telephone, postage, rent, and expenses associated with the ownership of a building used in the operation of the plan.

35h. Add column (b) of items 35e(4), 35f, and 35g(10).

35i. Subtract item 35h from item 35d.

35j. Include in this reconciliation figure any transfers of assets into or out of the plan resulting from mergers and consolidations of plans or associated with benefit liabilities which are also being transferred. A transfer is not a shifting of assets or liabilities from one investment medium to another used for a single plan (e.g., between a trust and an annuity contract). Transfers out should be shown in parentheses.

35k. Include the amount of net assets at the beginning of the year. This amount must equal item 34l, column (a).

35l. Include the amount of net assets at the end of the year. This amount must equal item 34l, column (b).

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Codes for Principal Business Activity and Principal Product or Service

These industry titles and definitions are based, in general, on the Enterprise Standard Industrial Classification System authorized by the Regulatory and Statistical Analysis Division, Office of Information and Regulatory Affairs, Office of Management and Budget, to classify enterprises by type of activity in which they are engaged.

AGRICULTURE, FORESTRY, AND FISHING

Code
0120 Field crop.
0150 Fruit, tree nut, and vegetable.
0180 Horticultural specialty.
0230 Livestock.
0270 Animal specialty.

Agricultural services and forestry:

0740 Veterinary services.
0750 Animal services, except veterinary.
0780 Landscape and horticultural services.
0790 Other agricultural services.
0800 Forestry.

Farms:

Fishing, hunting, and trapping:

0930 Commercial fishing, hatcheries, and preserves.
0970 Hunting, trapping, and game propagation.

MINING

Metal mining:

1010 Iron ores.
1070 Copper, lead and zinc, gold and silver ores.
1098 Other metal mining.
1150 Coal mining.

Oil and gas extraction:

1330 Crude petroleum, natural gas, and natural gas liquids.
1380 Oil and gas field services.

Nonmetallic minerals (except fuels) mining:

1430 Dimension, crushed and broken stone; sand and gravel.
1498 Other nonmetallic minerals, except fuels.

CONSTRUCTION

General building contractors and operative builders:

1510 General building contractors.
1531 Operative builders.

Heavy construction contractors:

1611 Highway and street construction.
1620 Heavy construction, except highway.

Special trade contractors:

1711 Plumbing, heating, and air conditioning.
1721 Painting, paperhanging, and decorating.
1731 Electrical work.
1740 Masonry, stonework, and plastering.
1750 Carpentering and flooring.
1761 Roofing and sheet metal work.
1771 Concrete work.
1781 Water well drilling.
1790 Miscellaneous special trade contractors.

MANUFACTURING

Food and kindred products:

2010 Meat products.
2020 Dairy products.
2030 Preserved fruits and vegetables.
2040 Grain mill products.
2050 Bakery products.
2060 Sugar and confectionery products.
2081 Malt liquors and malt.
2088 Alcoholic beverages, except malt liquors and malt.
2089 Bottled soft drinks and flavorings.
2096 Other food and kindred products.
2100 Tobacco manufacturers.

Textile mill products:

2228 Weaving mills and textile finishing.
2250 Knitting mills.
2298 Other textile mill products.

Apparel and other textile products:

2315 Men's and boys' clothing.

Code
2345 Women's and children's clothing.
2388 Hats, caps, millinery, fur goods, and other apparel and accessories.
2390 Misc. fabricated textile products.

Lumber and wood products:

2415 Logging camps and logging contractors, sawmills, and planing mills.
2430 Millwork, plywood, and related products.
2498 Other wood products, including wood buildings and mobile homes.
2500 Furniture and fixtures.

Paper and allied products:

2625 Pulp, paper, and board mills.
2699 Other paper products.

Printing, publishing, and allied industries:

2710 Newspapers.
2720 Periodicals.
2735 Books, greeting cards, and miscellaneous publishing.
2799 Commercial and other printing, and printing trade services.

Chemical and allied products:

2815 Industrial chemicals, plastics materials, and synthetics.
2830 Drugs.
2840 Soap, cleaners, and toilet goods.
2850 Paints and allied products.
2898 Agricultural and other chemical products.

Petroleum refining and related industries (including those integrated with extraction):

2910 Petroleum refining (including those integrated with extraction).
2998 Other petroleum and coal products.

Rubber and miscellaneous plastics products:

3050 Rubber products, plastics footwear, hose, and belting.
3070 Misc. plastics products.

Leather and leather products:

3140 Footwear, except rubber.
3198 Other leather and leather products.

Stone, clay, glass, and concrete products:

3225 Glass products.
3240 Cement, hydraulic.
3270 Concrete, gypsum, and plaster products.
3298 Other nonmetallic mineral products.

Primary metal industries:

3370 Ferrous metal industries; miscellaneous primary metal products.
3380 Nonferrous metal industries.

Fabricated metal products, except machinery and transportation equipment:

3410 Metal cans and shipping containers.
3428 Cutlery, hand tools, and hardware; screw machine products, bolts, and similar products.
3430 Plumbing and heating, except electric and warm air.
3440 Fabricated structural metal products.
3460 Metal forgings and stampings.
3470 Coating, engraving, and allied services.
3480 Ordnance and accessories, except vehicles and guided missiles.
3490 Miscellaneous fabricated metal products.

Machinery, except electrical:

3520 Farm machinery.
3530 Construction, mining and materials handling machinery, and equipment.
3540 Metalworking machinery.
3550 Special industry machinery, except metalworking machinery.
3560 General industrial machinery.
3570 Office, computing, and accounting machines.

Code
3598 Engines and turbines, service industry machinery, and other machinery, except electrical.

Electrical and electronic machinery, equipment, and supplies:

3630 Household appliances.
3665 Radio, television, and communication equipment.
3670 Electronic components and accessories.
3698 Other electric equipment.

Transportation equipment:

3710 Motor vehicles and equipment.
3725 Aircraft, guided missiles, and parts.
3730 Ship and boat building and repairing.
3798 Other transportation equipment.

Measuring and controlling instruments; photographic and medical goods, watches and clocks:

3815 Scientific instruments and measuring devices; watches, and clocks.
3845 Optical, medical, and ophthalmic goods.
3860 Photographic equipment and supplies.
3998 Other manufacturing products.

TRANSPORTATION, COMMUNICATION, ELECTRIC, GAS, SANITARY SERVICES

Transportation:

4000 Railroad transportation.

Local and interurban passenger transit:

4121 Taxicabs.
4189 Other passenger transportation.

Trucking and warehousing:

4210 Trucking, local and long distance.
4289 Public warehousing and trucking terminals.

Other transportation including transportation services:

4400 Water transportation.
4500 Transportation by air.
4600 Pipelines, except natural gas.
4722 Passenger transportation arrangement.
4723 Freight transportation arrangement.
4789 Other transportation services.

Communication:

4825 Telephone, telegraph, and other communication services.
4830 Radio and television broadcasting.

Electric, gas, and sanitary services:

4910 Electric services.
4920 Gas production and distribution.
4930 Combination utility services.
4990 Water supply and other sanitary services.

WHOLESALE TRADE

Durable:

5010 Motor vehicles and automotive equipment.
5020 Furniture and home furnishings.
5030 Lumber and construction materials.
5040 Sporting, recreational, photographic, and hobby goods, toys, and supplies.
5050 Metals and minerals, except petroleum and scrap.
5060 Electrical goods.
5070 Hardware, plumbing, and heating equipment.
5083 Farm machinery and equipment.
5088 Other machinery, equipment, and supplies.
5098 Other durable goods.

Nondurable:

5110 Paper and paper products.
5129 Drugs, drug proprietaries, and druggists' sundries.
5130 Apparel, piece goods, and notions.
5140 Groceries and related products, except meats and meat products.
5147 Meats and meat products.
5150 Farm product raw materials.
5160 Chemicals and allied products.
5170 Petroleum and petroleum products.
5180 Alcoholic beverages.
5190 Miscellaneous nondurable goods.

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RETAIL TRADE

Code

Building materials hardware, garden supply, and mobile home dealers:

5211 Lumber and other building materials dealers.
5231 Paint, glass and wallpaper stores.
5251 Hardware stores.
5261 Retail nurseries and garden stores.
5271 Mobile home dealers.

General merchandise:

5331 Variety stores.
5398 Other general merchandise stores.

Food stores:

5411 Grocery stores.
5420 Meat and fish markets and freezer provisioners.
5431 Fruit stores and vegetable markets.
5441 Candy, nut, and confectionery stores.
5451 Dairy products stores.
5460 Retail bakeries.
5490 Other food stores.

Automotive dealers and service stations:

5511 New car dealers (franchised).
5521 Used car dealers.
5531 Auto and home supply stores.
5541 Gasoline service stations.
5551 Boat dealers.
5561 Recreational vehicle dealers.
5571 Motorcycle dealers.
5599 Aircraft and other automotive dealers.

Apparel and accessory stores:

5611 Men's and boys' clothing and furnishings.
5621 Women's ready-to-wear stores.
5631 Women's accessory and specialty stores.
5641 Children's and infants' wear stores.
5651 Family clothing stores.
5661 Shoe stores.
5681 Furriers and fur shops.
5699 Other apparel and accessory stores.

Furniture, home furnishings, and equipment stores:

5712 Furniture stores.
5713 Floor-covering stores.
5714 Drapery, curtain, and upholstery stores.
5719 Home furnishings, except appliances.
5722 Household appliance stores.
5732 Radio and television stores.
5733 Music stores.

Eating and drinking places:

5812 Eating places.
5813 Drinking places.

Miscellaneous retail stores:

5912 Drug stores and proprietary stores.
5921 Liquor stores.
5931 Used merchandise stores.
5941 Sporting goods stores and bicycle shops.
5942 Book stores.
5943 Stationery stores.
5944 Jewelry stores.
5945 Hobby, toy, and game shops.
5946 Camera and photographic supply stores.
5947 Gift, novelty, and souvenir shops.
5948 Luggage and leather goods stores.
5949 Sewing, needlework, and piece goods stores.
5961 Mail order houses.

Code

5962 Merchandising machine operators.
5963 Direct selling organizations.
5982 Fuel and ice dealers except fuel oil and bottle gas dealers.
5983 Fuel oil dealers.
5984 Liquefied petroleum gas (bottled gas).
5992 Florists.
5993 Cigar stores and stands.
5994 News dealers and newsstands.
5999 Other miscellaneous retail stores.

FINANCE, INSURANCE, AND REAL ESTATE

Banking:

6030 Mutual savings banks.
6060 Banking holding companies.
6090 Banks, except mutual savings banks and bank holding companies.

Credit agencies other than banks:

6120 Savings and loan associations.
6140 Personal credit institutions.
6150 Business credit institutions.
6199 Other credit agencies.

Security, commodity brokers, dealers, exchanges, and services:

6212 Security underwriting syndicates.
6218 Security brokers and dealers, except underwriting syndicates.
6299 Commodity contract brokers and dealers; security and commodity exchanges; and allied services.

Insurance:

6355 Life insurance.
6356 Mutual insurance, except life or marine and certain fire or flood insurance companies.
6359 Other insurance companies.
6411 Insurance agents, brokers, and services.

Real estate:

6511 Real estate operators (except developers) and lessors of buildings.
6516 Lessors of mining, oil, and similar property.
6518 Lessors of railroad property and other real property.
6531 Real estate agents, brokers and managers.
6541 Title abstract offices.
6552 Subdividers and developers, except cemeteries.
6553 Cemetery subdividers and developers.
6599 Other real estate.
6611 Combined real estate, insurance, loans and law offices.

Holding and other investment companies:

6742 Regulated investment companies.
6743 Real estate investment trusts.
6744 Small business investment companies.
6749 Holding and other investment companies, except bank holding companies.

SERVICES

Hotels and other lodging places:

7012 Hotels.
7013 Motels, motor hotels, and tourist courts.
7021 Rooming and boarding houses.
7032 Sporting and recreational camps.
7033 Trailer parks and camp sites.
7041 Organizational hotels and lodging houses on a membership basis.

Code

Personal services:

7215 Coin-operated laundries and dry cleaning.
7219 Other laundry, cleaning and garment services.
7221 Photographic studios, portrait.
7231 Beauty shops.
7241 Barber shops.
7251 Shoe repair and hat cleaning shops.
7261 Funeral services and crematories.
7299 Miscellaneous personal services.

Business services:

7310 Advertising.
7340 Services to buildings.
7370 Computer and data processing services.
7392 Management, consulting, and public relations services.
7394 Equipment rental and leasing.
7399 Other business services.

Automotive repair and services:

7510 Automotive rentals and leasing, without drivers.
7520 Automobile parking.
7531 Automobile top and body repair shops.
7533 General automobile repair shops.
7539 Other automobile repair shops.
7540 Automobile services, except repair.

Miscellaneous repair services:

7622 Radio and TV repair shops.
7628 Electrical repair shops, except radio and TV.
7641 Reupholstery and furniture repair.
7680 Other miscellaneous repair shops. Motion pictures:
7812 Motion picture production, distribution, and services.
7830 Motion picture theaters.

Amusement and recreation services:

7920 Producers, orchestras, and entertainers.
7932 Billiard and pool establishments.
7933 Bowling alleys.
7980 Other amusement and recreation services.

Medical and health services:

8011 Offices of physicians.
8021 Offices of dentists.
8031 Offices of osteopathic physicians.
8041 Offices of chiropractors.
8042 Offices of optometrists.
8048 Registered and practical nurses.
8050 Nursing and personal care facilities.
8060 Hospitals.
8071 Medical laboratories.
8072 Dental laboratories.
8098 Other medical and health services.

Other services:

8111 Legal services.
8200 Educational services.
8911 Engineering and architectural services.
8932 Certified public accountants.
8933 Other accounting, auditing, and bookkeeping services.
8999 Other services not classified elsewhere.

TAX-EXEMPT ORGANIZATIONS

9002 Church plans making an election under section 410(d) of the Internal Revenue Code.
9319 Other tax-exempt organizations.
9904 Governmental instrumentality or agency.

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Department of the Treasury
Internal Revenue Service

Department of Labor
Pension and Welfare
Benefits Administration

Pension Benefit
Guaranty Corporation

1991

Instructions for Schedule B (Form 5500)

Actuarial Information

Code references are to the Internal Revenue Code. ERISA refers to the Employee Retirement Income Security Act of 1974.

General Instructions

Who Must File

The employer or plan administrator of a defined benefit plan that is subject to the minimum funding standards (see Code section 412 and Part 3 of Title I of ERISA) must file this schedule as an attachment to the return/report filed for this plan year.

Note: *(1) For split-funded plans, the costs and contributions reported on Schedule B should include those relating to both trust funds and insurance carriers. (2) For plans with funding standard account amortization charges and credits see the instructions for lines 9c and 9j regarding attachment.*

Statement by Enrolled Actuary

An enrolled actuary must sign Schedule B. The signature of the enrolled actuary may be qualified to state that it is subject to attached qualifications. See Income Tax Regulations section 301.6059-1(d) for permitted qualifications. A stamped or machine produced signature is not acceptable. In addition, the actuary may offer any other comments related to the information contained in Schedule B.

Specific Instructions

(References are to line items on the form.)

4a. Only certain collectively bargained plans may elect the shortfall funding method (see regulations under Code section 412). Advance approval from the IRS of the election of the shortfall method of funding is NOT required if it is first adopted for the first plan year to which Code section 412 applies. However, advance approval from IRS is required if the shortfall funding method is adopted at a later time, if a specific computation method is changed, or if the shortfall method is discontinued.

4b. Attach an explanation of the basis for the determination that the plan is in reorganization for this plan year. Also, attach a worksheet showing for this plan year (i) the amounts considered contributed by employers, (ii) any amount waived the by IRS, (iii) the development of the minimum contribution requirement (taking into account the applicable overburden credit, cash-flow amount, contribution bases and limitation on required increases on the rate of employer contributions), and (iv) the resulting accumulated funding deficiency, if any, which is to be reported on line 8a in lieu of an amount from line 9o.

5. Changes in funding methods include changes in actuarial cost method, changes in asset valuation method, and changes in the valuation date of plan costs and liabilities or of plan assets. Generally, these changes require IRS approval. If approval was granted by an individual ruling letter for this plan, attach a copy of the letter. If approval was granted pursuant to a regulation, class ruling, or revenue procedure, attach a copy of the items required by the applicable regulation, ruling, or revenue procedure.

6a. The valuation for a plan year may be as of any date in the year, including the first and last. Valuations must be performed within the period specified by ERISA section 103(d) and Code section 412(c)(9).

6b. In computing current liability, certain service may be disregarded under Code section 412(l)(7)(D), and ERISA section 302(d)(7)(D). If the plan has participants to whom these provisions apply, only a percentage of the years of service before such individual became a participant in the plan is taken into account, unless the employer has elected otherwise.

6c. Enter the current value of total assets as of the beginning of the plan year, as shown on Form 5500 or Form 5500-C/R. Contributions designated for 1993 should not be included in this amount.

6d, 6e, and 6f. All plans regardless of the number of participants must provide the information indicated in accordance with these instructions.

With the exception of the interest rate, each actuarial assumption used in calculating the current liability reported in line 12 should reflect the best estimate of the plan's future experience solely with respect to that assumption applicable to the plan on an ongoing (rather than a terminating) basis. The actuary must take into account rates of early retirement and the plan's early retirement provisions as they relate to benefits, where these would significantly affect the results. With the exception of line 6e, no salary scale projections should be used in computing the present values.

The interest rate used to compute the current liability must be in accordance with guidelines issued by the IRS.

The current liability must be computed in accordance with guidelines issued by the IRS.

Omit from lines 6d, 6e, and 6f liabilities fully funded by annuity and insurance contracts other than any contract funds not allocated to individuals.

6d. Enter the current liability as of the beginning of the plan year. Do not include the liability attributable to benefits accruing during the plan year.

Column (1)—If the valuation date is not the beginning of the plan year, enter the number of participants as of the most recent valuation date.

Column (2)—Include only the portion of the current liability attributable to vested benefits.

Column (3)—Include the current liability attributable to all benefits, both vested and nonvested.

6e. Enter the amount by which the current liability is expected to increase due to benefits accruing during the plan year. One year's salary scale may be reflected. This amount is included in the full funding limitation calculation.

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6f. Enter the amount of benefit payments expected to be paid during the plan year.

6g(i). Check "Yes" if line 6c, the current value of total assets as of the beginning of the plan year, is less than 70% of line 6d(iv), column (3), the total current liability as of the beginning of the plan year.

6g(ii). Enter the percentage if line 6c is less than 70% of line 6d(iv), column (3). Enter "N/A" on this line if the percentage is 70% or more.

7. Show all employer and employee contributions for the plan year, and employer contributions made not later than 2½ months (or the later date allowed under Code section 412(c)(10) and ERISA section 302(c)(10)) after the end of the plan year. Show only contributions actually made to the plan by the date Schedule B is signed. Certain employer contributions must be made in quarterly installments, see Code section 412(m).

Add the amounts in both columns (b) and (c) and enter the result on the total line.

8a. If the attained age normal, aggregate, frozen initial liability, or other method that does not develop an accrued liability is used, enter "N/A."

8b. Enter the value of assets determined in accordance with Code section 412(c)(2) or ERISA section 302(c)(2). Contributions designated for 1993 should not be included in this amount.

8d(ii). For the methods to be used to determine the shortfall gain (loss), see the regulations under Code section 412.

8e. Enter amount from line 9o. However, if the alternative method is elected and line 10h is smaller than line 9o, enter the amount from line 10h. Multiemployer plans in reorganization, see instruction 4b. File Form 5330 with the IRS to pay the 10% excise tax (5% in the case of a multiemployer plan) on the funding deficiency.

9. Under the shortfall method of funding, the *normal cost* in the funding standard account is the charge per unit of production (or per unit of service) multiplied by the actual number of units of production (or units of service) which occurred during the plan year. Each amortization installment in the funding standard account is similarly calculated.

9c and 9j. If there are any amortization charges or credits, attach the maintenance schedule of funding standard account bases. The attachment should clearly indicate the type of base (i.e., original unfunded liability, amendments, actuarial losses, etc.), the outstanding balance of each base, the number of years remaining in the amortization period, and the amortization amount.

The outstanding balance may be as of any day in this plan year.

9c(i). Amortization for waivers must be based on the mandated interest rate.

9c(ii). If a credit described in 9l(ii) was entered on the prior year's Schedule B, establish a new base equal to the amount of the credit and amortize the base over a 10-year period at the valuation rate.

9e. Enter the required additional funding charge from line 13r (or 13q if 13r does not apply). Enter "N/A" if line 13 is not applicable.

For corporations described in section 806(b) of the Steel Import Stabilization Act, enter the smaller of line 13r and the transition charge provided under Act *section 9303(e) of OBRA 1987.* Include an attachment outlining the calculation of the transition charge.

9f. Interest is charged for the entire period of underpayment. Refer to IRS Notice 89-52, 1989-1, C.B. 692, for a description of how this amount is calculated.

Note: *Notice 89-52 was issued prior to the amendment of section 412(m)(1) by the Revenue Reconciliation Act of 1989. Rather than using the rate in the Notice, the applicable interest rate for this purpose is the greater of (1) 175% of the Federal mid-term rate at the beginning of the plan year or (2) the rate used to determine the current liability. All other descriptions of the additional interest charge contained in Notice 89-52 still apply.*

9l(i). Enter the excess, if any, of the accumulated funding deficiency, disregarding the credit balance, if any, over the full funding limitation (FFL) before reflecting the 150% current liability component.

9l(ii). If the full funding limitation after reflecting the 150% current liability component is less than the full funding limitation before reflecting the 150% current liability component, enter the amount which, absent the 150% current liability component, would have been required.

Note: *The sum of lines 9l(i) and 9l(ii) is the excess of the accumulated funding deficiency over the full funding limitation (i.e., the full funding credit under Code section 412(c)(6)).*

9l(iii). Enter a credit for a waived funding deficiency for the current plan year (Code section 412(b)(3)(C)). If a waiver of a funding deficiency is pending, do not report it as a credit but as a funding deficiency. If the waiver is granted, file an amended Schedule B (Form 5500) to report it.

9p. The reconciliation account is comprised of those components that upset the balance equation of Income Tax Regulations section 1.412(c)(3)-1(b). Valuation assets should not be adjusted by the reconciliation account balance when computing the required minimum funding.

9p(i). The accumulation of additional funding charges for prior plan years must be included. Enter the sum of line 9p(i) (increased by 1 year's interest at the valuation rate) and line 9e, both from the prior year's Schedule B (Form 5500).

Example. Enter the 1991 additional charge with 1 year's interest plus the 1992 additional funding charge.

9p(ii). The accumulation of additional interest charges due to late or unpaid quarterly installments for prior plan years must be included. Enter the sum of line 9p(ii) (increased with 1 year's interest at the valuation rate) and line 9f, both from the prior year's Schedule B (Form 5500).

Example. For 1993, enter the 1991 additional interest charges with 1 year's interest at the valuation rate, plus the 1992 additional interest charges.

9p(iii)(c). If a waived funding deficiency is being amortized at an interest rate that differs from the valuation rate, enter the prior year's "reconciliation waiver outstanding balance" increased with 1 year's interest at the valuation rate and decreased with the year end amortization amount based on the mandated interest rate.

This amount must be as of the same *date entered in line 9(c)(i).*

9p(iv). Enter the sum of lines (i), (ii), and (iii)(b) (each adjusted with interest at the valuation rate, if necessary).

Note: *The net outstanding balance of amortization charges and credits minus the prior year's credit balance minus the amount on line 9p(iv) (each adjusted with interest at the valuation rate, if necessary) must equal the unfunded liability.*

10a. If the entry age normal cost method was not used to determine the entries on line 9, the alternative minimum funding standard account may not be used.

10d. The value of accrued benefits should exclude benefits accrued for the current plan year. The market value of assets should be reduced by the amount of any contributions for the current plan year.

11. Enter only the primary method used. If the plan uses one actuarial cost method in 1 year as the basis of establishing an accrued liability for use under the frozen initial liability method in subsequent years, answer as if the frozen initial liability method were used in all years.

For a modified individual level premium method for which actuarial gains and losses are spread as a part of future normal cost, check the box for 11g and describe the cost method. For the shortfall funding method, check the appropriate box for the underlying

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actuarial cost method used to determine the annual computation charge.

12. If gender-based statistics are used in developing plan costs, enter those rates where appropriate in line 12. Note that requests for gender-based cost information do not suggest that gender-based benefits are legal. Complete all blanks. Enter "N/A" if not applicable.

If unisex tables are used, enter the values in both the "Male" and "Female" columns.

Attach a statement of actuarial assumptions (if not fully described by line 12), and actuarial methods used to calculate: (i) the figures shown in lines 8, 9, and 10 (if not fully described by line 11), and (ii) the value of assets shown on line 8b. Also attach a summary of the principal eligibility and benefit provisions on which the valuation was based, an identification of benefits not included in the valuation, a description of any significant events that occurred during the year, a summary of any changes in principal eligibility or benefit provisions since the last valuation, a description (or reasonably representative sample) of plan early retirement factors, and any change in actuarial assumptions or cost methods and justifications for any such change. Also, include any other information needed to fully and fairly disclose the actuarial position of the plan.

Note: *See the 1993 Instructions for Form 5500 or 5500-C/R (item 15a of Form 5500, item 15a of Form 5500-C, or item 12a of Form 5500-R), for a suggested format and instructions to provide the information on the distribution of active employees by age and service groupings with average compensation data.*

12a. Check "Yes," if the rates in the contract were used (e.g., purchase rates at retirement).

12b. Enter the mortality table code as follows:

Table	Code
1937 Standard Annuity	1
a-1949 Table	2
Progressive Annuity Table	3
1951 Group Annuity	4
1971 Group Annuity Mortality	5
1971 Individual Annuity Mortality	6
UP-1984	7
1983 I.A.M	8
1983 G.A.M	9
Other	10
None	11

Where an indicated table consists of separate tables for males and females, add F to the female table (e.g., 4F). When a projection is used with a table, follow the code with "P" and the year of projection (omit the year if the projection is unrelated to a single calendar year); the identity of the projection scale should be omitted. When an age setback or setforward is used, indicate with "–" or "+" and the years. For example, if for females the 1951 Group Annuity Table with Projection C to 1971 is used with a 5-year setback, enter "4P71-5." If the table is not one of those listed, enter "10" with no further notation. If the valuation assumes a maturity value to provide the post-retirement income without separately identifying the mortality, interest and expense elements, under "post-retirement," enter on line 12b the value of $1.00 of monthly pension beginning at the age shown on line 12d, assuming the normal form of annuity for an unmarried person; in this case enter "N/A" on lines 12c and 12e.

12c(i). Enter the interest rate used to determine the current liability on line 6. The rate used must be in accordance with the guidelines issued by the IRS. See Notice 90-11, 1990-1 C.B. 319.

12c(ii). Enter the assumption as to the expected interest rate (investment return) used to determine all other calculated values with the exception of current liability and liabilities determined under the alternative minimum funding standard (line 10). If the assumed rate varies with the year, enter the weighted average of the assumed rate for 20 years following the valuation date.

12d. If each participant is assumed to retire at his/her normal retirement age, enter the age specified in the plan as normal retirement age; do not enter "NRA." Otherwise, enter the assumed retirement age. If the valuation uses rates of retirement at various ages, enter the nearest whole age that is the weighted average retirement age. On an attachment to Schedule B, list the rate of retirement at each age and describe the methodology used to compute the weighted average retirement age, including a description of the weight applied at each potential retirement age.

12e. If there is no expense loading, enter -0-. If there is a single expense loading not separately identified as pre-retirement or post-retirement, enter it under pre-retirement and enter "N/A" under post-retirement. Where expenses are assumed other than as a percent of plan costs or liabilities, enter the assumed expense as a percent of the calculated normal cost.

12f. Enter rates to the nearest 0.1%. If select and ultimate rates that vary with both age and years of service are used, enter the rates for a new participant at the age shown and enter "S" before the rate.

12g. Enter the salary ratio for the age indicated to the nearest 1%.

12h. Enter the estimated rate of return on the actuarial value of plan assets for the 1-year period ending on the valuation date. For this purpose, the rate of return is determined by using the formula 2I/(A – B – I), where I is the dollar amount of investment return under the asset valuation method used for the plan, A is the actuarial value of the assets 1 year ago, and B is the actuarial value of the assets on the current valuation date.

Note: *If the actuary feels that the result of using the formula above does not represent the true estimated rate of return on the actuarial value of plan assets for the 1-year period ending on the valuation date, line 12h should still be completed according to the instructions above, and the actuary may attach a statement to Schedule B showing both the actuary's estimate of the rate of return and the actuary's calculations of that rate.*

13. Multiemployer plans or plans with NO unfunded current liability or plans with 100 or fewer participants should check this box and skip lines 13a through 13r.

A plan has 100 or fewer participants only if there were 100 or fewer participants (both active participants and nonactive participants) on each day of the preceding plan year taking into account participants in all defined benefit plans maintained by the same employer who are also employees of such employer.

13a. Enter the current liability as of the valuation date. If the valuation date is the beginning of the plan year, this amount is the same as line 6d(iv), column (3) "total benefits." Otherwise, adjust the current liability by interest (at the rate used to determine current liability).

13b. Enter the actuarial value of assets (reduced by the prior year's credit balance) as of the valuation date. If the prior year's credit balance (line 9h) was determined at a date other than the valuation date, adjust the balance with the appropriate interest adjustment before subtracting. Do not make any adjustment to reflect a prior year's funding deficiency.

13c. Enter the adjusted actuarial value of assets expressed as a percentage of current liability. Round off to two decimal places (e.g., 28.72%).

13d. Enter the outstanding balance of the unfunded old liability as of the valuation date.

Note: *In the case of a collectively bargained plan, this amount must be increased by the unamortized portion of any "unfunded benefit increase liability" in accordance with Code section 412(l)(3)(C).*

13f. Enter the liability with respect to any unpredictable contingent event

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benefit that was included on line 13a, whether or not such event has occurred.

13g. This amount is the unfunded new liability. It will be recalculated each year. If the result is negative, enter -0-.

13h. If the unfunded new liability is zero, *enter $0 for unfunded new liability amount.* If the unfunded new liability amount is greater than zero, calculate the amortization percentage as follows:

1. If the funded current liability percentage (line 13c) is less than or equal to 35%, enter 30%.

2. If the funded current liability percentage exceeds 35%, reduce 30% by the product of 25% and the amount of such excess; round off to two decimal places, and enter the resulting percentage.

The unfunded new liability amount is equal to the above-calculated percentage of the unfunded new liability.

13i. Enter the amortization of the outstanding balance of the unfunded old liability as of the valuation date (line 13e). In the case of a collectively bargained plan, the unfunded old liability amount to be entered on line 13i must include the amortization of any unfunded existing benefit increase liability calculated in accordance with Code section 412(l)(3)(C)(ii). On a separate attachment show the breakdown of the various liabilities being amortized, the outstanding balance of each liability, the number of years remaining in the amortization period, and the amortization amount.

Any such amortization amount must be determined based on: (1) the current liability interest rate in effect at the beginning of the plan year, and (2) use the valuation date as the due date of the amortization payment. The amortization period *must be the remainder of the original 18-year period that applies when the amortization began.*

Any such amortization amount must be redetermined each year based on the outstanding balance (line 13e). If the plan becomes fully funded as a current liability basis, the unfunded old liability (including any arising from collectively bargained plans) will be considered fully amortized.

13j. Enter the sum of lines 13h and 13i. This amount is the deficit reduction contribution at the valuation date.

13k. *When entering the net* amortization amounts for certain bases include only charges (included on line 9c) and credits (included on line 9j) attributable to original unfunded liability, amendments, funding waivers, charges resulting from a "switchback" arising from the utilization of the alternative minimum, and "offsetable bases" as described in Announcement 90-87, 1990-30 I.R.B. 23, which were shown as an attachment to your 1989 Schedule B.

If a base resulted from combining and/or offsetting pre-existing bases among which were bases not designated in the preceding paragraph, then such resulting base may not be included in this line 13k.

Regardless of how the attachment (schedule of bases described in the instructions for lines 9c and 9j) is prepared, enter the amount assuming the payment was on the valuation date.

13l. Item l does not apply to the unpredictable contingent event benefits (and liabilities attributable thereto) for which the event occurred before the first plan year beginning after December 31, 1988.

13l(i). Enter the total of all benefits paid during the plan year that were paid solely because the unpredictable contingent event occurred.

13l(ii). Enter 100% minus the funded current liability percentage (line 13c).

13l(iii). Enter 20% for plan years beginning in 1993. (See Code section 412(l)(5)(B).)

13l(v). Amortization should be based on the current liability interest rate and assume beginning of year payments for a 7-year period.

Note: *Alternative calculation of unpredictable contingent event amount is available for the first year of amortization. Refer to Code section 412(l)(5)(D) for a description. If alternative is used, include an attachment describing the calculation.*

13p. Enter the applicable amount of interest, based on the current liability interest rate, to bring the additional funding charge (line 13o) to the end of the plan year.

13r. If the plan had 150 or more participants on each day of the preceding plan year, enter N/A. If the plan had less than 150 participants but more than 100 participants on each day of the preceding plan year, only an applicable percentage of line 13q is charged to the funding standard account. The same aggregation rule described in the instructions for line 13 applies.

The applicable percentage is calculated as follows:

a. Determine the excess of the greatest number of participants during the preceding plan year over 100.

b. The applicable percentage is 2% of such excess.

This amount (or line 13q, if line 13r is N/A) will also be entered on line 9e.

14. Generally, if the actuary signs the required certification statement on the actuarial report, but "materially qualifies" that statement, the certification is invalid. However, Income Tax Regulations section 301.6059-1(d) lists certain qualifying statements that the actuary is allowed to make. Among them is a statement that in his or her opinion, the report fully reflects the requirements of the statute, but does not conform to the requirements of a regulation or ruling that the actuary believes is contrary to that statute (Income Tax Regulations section 301.6059-1(d)(5)).

Check the "Yes" box on line 14 if the report is being signed subject to this qualification. If a funding deficiency or a disallowed contribution would have resulted for this plan year had the report conformed to the requirements of a regulation or ruling under the subject statute, the actuary must state that on an attachment to Schedule B.

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The Form 5500 and Schedule B for the Maytag Corporation have been reconstructed with the help of information on DOL 1991 tapes. The variables are in the same order as they appear in the paper. F[5a(1)] refers to item number 5a(1) on the form 5500 and B[12c(ii)] refers to item number 12c(ii) on the Schedule B.

R^*	= B[12c(i)(pre-retirement) = 9% = 0.09
ANRET	= {F[35(d)] - F[35(a)(3)]} / F[34f(b)
	= {31,316 - 34,369} / 181,189 = -0.0168 = -1.68%
INV_1	= F[34b(6)(b) = 21,736
INV_2	= F[34c(1)(b) = 0
INV_3	= F[34c(2)(b) = 0
INV_4	= F[34c(3)(b) = 0
INV_5	= F[34c(4)(A)(b) = 0
INV_6	= F[34c(6)(B)(b) = 0
INV_7	= F[34c(5)(A)(b) = 0
INV_8	= F[34c(5)(B)(b) = 0
INV_9	= F[34c(11)(b) = 0
INV_{10}	= F[34c(12)(b) = 0
INV_{11}	= F[34c(13)(b) = 159,453
INV_{12}	= F[34c(14)(b) = 0

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INV_{13} = F[34c(15)(b) = 0

INV_{14} = F[34c(16)(b) = 0

PA = F[34f(b) = 181,189

PRFDEF = B[9a] = 0

NCOST = B[9b] = 15,213

AMORTCH = B[9c(i)] + B[9c(ii) = 0 + 14,600 = 14,600

INTCH = B[9d] = 5,084

ADDCH = B[9e] = 0

LATECH = B[9f] = 0

PRCRBAL = B[9h] = 0

AMORTCR = B[9j] = 0

INTCR = B[9k] = 528

MISCR = B[9l(iv)] = 0

*L** = {*PRFDEF* + *NCOST* + *AMORTCH* + *INTCH* +*ADDCH* + *LATECH*} - {*PRCRBAL* + *AMORTCR* + *INTCR* + *MISCR*}

= 0 + 15,213 +14,600 + 5,084 + 0 + 0 - 0 - 0 - 528 - 0 = 34,369

CLIAB = B[6d(iv)(3)] = 178,310

CASST = B[6c] = 155,222

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OR	= B[12c(ii)] = 9% =0.09
UCL	= *MAXIMUM [0, {CLIAB(1 + R) - CASST(1 + OR)}]*
	= MAXIMUM [0, {178,310(1 + 0.09) - 155,222(1 + 0.09)}] = 25,165.92
FFL(AL)	= *(CLIAB + NCOST - CASST)(1 + OR)* = (178,310 + 15,213 155,222)(1 + 0.09) = 41,748.09
EXPAY	= B[6f] = 9,596
FFL(CL)	= *1.5{(CLIAB + NCOST)(1 + R) - EXPAY(1 + R/2)} - {CASST(1 + OR) - EXPAY(1 + OR/2)}*
	= 1.5{(178,310 + 15,213)(1 + 0.09) - 9,596(1 + 0.09/2)} - {155,222(1 + 0.09) - 9,596(1 +0.09/2)} = 142,204.22
SCOST	= B[9c(ii)] = 14,600
COSTPLUS	= *MAXIMUM {(NCOST + 10.SCOST) ,L*}*
	= MAXIMUM {(15,213 + 146,000), 34,369} = 161,213
MIN	= *MINIMUM (COSTPLUS, FFL(AL),FFL(CL))*
	= MINIMUM (161,213, 41,748.09, 142,204.22) = 41,748.09

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*H**	= *MAXIMUM (MIN, UCL)* = MAXIMUM (41,748.09, 25,165.92) = 41,748.09
F	= F[35a(1)(A)(a)] = 34,369
DUML	= 1
DUMH	= 0
UFCPL	= *{CLIAB(1 + R) - PA}* = 178,310(1 + 0.09) - 181,189 = 13,168.9
METHOD	= *0 IF B[11]* = C / = 1 OTHERWISE = 1

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APPENDIX 2

Variables **L***, **H*** (and *DUML* and *DUMH*, as a consequence), and *UFCPL* are functions of $\overset{*}{R}$, *TRATE*, and *METHOD*. As a result, these three variables may not be exogenous in equations 5, 6, and 7. Presence of endogenous variables as regressors causes the regression parameters from ordinary least squares estimation to be biased and inconsistent. Hausman's (1978) specification error test is conducted to test the null of exogeneity. First, the following three reduced form regression equations, with only exogenous regressors, are estimated:

$$(L^*_{i,j,t} / PA_{i,j,t}) = \Sigma_t (\alpha_t YR_t) + \beta (ANRET) + \Sigma_p \gamma_p (INV_{i,j,t,p} / PA_{i,j,t}) + \Sigma_q \lambda_q (EMP_{i,j,t,q} / PA_{i,j,t}) + \nu \, IMETHOD_{j,t} + \phi \, ITRATE_{j,t} + \varepsilon_{i,j,t} \quad (2.1)$$

$$(H^*_{i,j,t} / PA_{i,j,t}) = \Sigma_t (\alpha_t YR_t) + \beta (ANRET) + \Sigma_p \gamma_p (INV_{i,j,t,p} / PA_{i,j,t}) + \Sigma_q \lambda_q (EMP_{i,j,t,q} / PA_{i,j,t}) + \nu \, IMETHOD_{j,t} + \phi \, ITRATE_{j,t} + \varepsilon_{i,j,t} \quad (2.2)$$

$$(UFCPL_{i,j,t} / PA_{i,j,t}) = \Sigma_t (\alpha_t YR_t) + \beta (ANRET) + \Sigma_p \gamma_p (INV_{i,j,t,p} / PA_{i,j,t}) + \Sigma_q \lambda_q (EMP_{i,j,t,q} / PA_{i,j,t}) + \nu \, IMETHOD_{j,t} + \phi \, ITRATE_{j,t} + \varepsilon_{i,j,t} \quad (2.3)$$

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where *EMP* is the number of employees and q indexes the employee category: EMP_1 = number of fully vested active participants of the pension plan, EMP_2 = number of partially vested active participants, EMP_3 = number of non- vested active participants, EMP_4 = number of retired or separated participants receiving benefits, EMP_5 = number of retired or separated participants entitled to future benefits, and EMP_6 = number of deceased participants whose beneficiaries are receiving or entitled to receive benefits in the future. Next, equations 2.1, 2.2, and 2.3 are used to calculate the predicted values of *DUML*, *DUMH*, and *(UFCPL / PA)*. To conduct Hausman's (1978) test, equations 5 and 7 and OLS version of equation 6 are run with these predicted values as additional regressors. If the coefficient of any additional regressors is significant, the corresponding variable is not exogenous. To remove the effects of endogeneity, the endogenous variables in equations 5, 6, and 7 are replaced by their predicted values (obtained from reduced form equations 2.1 - 2.3, above).

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GLOSSARY

Accrued Benefit: Pension credits earned for years of service under a defined benefit pension plan expressed in terms of an annual benefit beginning at normal retirement age; the balance in each employee's account under a defined contribution plan.

Accumulated Funding Deficiency: A deficit balance in a pension plan's funding standard account, which means that the required minimum contributions have not been made by the plan.

Actuarial Assumptions: Estimates made by actuaries on which pension costs are based, using factors such as rate of interest on plan investments and rate of deaths, terminations, disabilities, and early retirements.

Actuarial Cost Methods: Different methods used for accounting and tax purposes to allocate the expected cost of a pension plan for the services of the employees covered by that plan. The general purpose of an actuarial cost method is to assign to each year the cost assumed to have accrued in that year.

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Actuary: A professional technician or mathematician who computes premium rates, dividends, and risks according to probabilities based on statistical records for insurance and pensions.

Beneficiary: The persons designated to receive benefits under an employee benefit plan in the event of the death of the person covered by the plan.

Current Liability: A standard used to measure whether a pension plan is underfunded by calculating the plan's liability on the basis of the value of all accrued benefits, both vested and nonvested, as if the plan were terminating.

Deficit Reduction Contribution: For a pension plan that is less than 100 percent funded, an additional amount that an employee must contribute to the pension plan over and above the required minimum annual contribution. This additional payments consists of a portion of old liabilities (such as benefit increases granted before 1988), which must be amortized over 18 years, and a portion of new liabilities (such as benefit increases or other plan amendments).

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Defined Benefit Plan: A pension plan providing a definite formula for calculating the benefit to be paid to employees at retirement, such as flat monthly amount, a percentage of salary, or a percentage of salary times years of service.

Defined Contribution Plan: A pension plan in which fixed contributions are made to an individual account for each employee. The retirement benefit is dependent on amounts contributed to the account and any income, expenses, gains, losses, and forfeitures of accounts of other employees.

Employee Benefit Plan: A welfare or pension plan established or maintained by an employer engaged in commerce or in any industry or activity affecting commerce or an employee organization representing employees in these activities.

Employee Pension Plan: A pension plan established to provide retirement income to employees or that results in the deferral of income by employees.

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Employee Welfare Plan: A plan providing medical, surgical, or hospital care or benefits, as well as benefits in the event of sickness, accident, disability, death, or unemployment, or other benefits, including apprenticeship or other training programs or day care, scholarship funds, or prepaid legal services.

Funding: The process of accumulating assets on a regular, systematic basis to meet benefit obligations of a pension plan.

Funding Standard Account: An account that every pension plan under ERISA must maintain to determine whether the plan is meeting the minimum funding standards imposed by the law.

Guaranteed Benefits: Vested accrued pension benefits insured by the Pension Benefit Guaranty Corporation in the event of the termination of a pension plan.

Multiemployer Plan: A collectively bargained pension plan to which more than one employer contributes.

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Normal Costs: Annual cost to a pension plan for the benefits accrued that year by employees and administrative expenses.

Participant: An employee eligible to receive benefits from an employee pension or welfare plan or whose beneficiaries may be eligible to receive such benefits.

Pension Benefit Guaranty Corporation: The nonprofit independent government corporation established to insure pension benefits in the event of plan termination.

Plan Termination: The final phase of a pension plan when benefits accruals cease and all participants become 100 percent vested.

Plan Year: The 12-month period used in administration of pension plans, which may be the calendar year, fiscal year, or 12-month period from the anniversary date of the plan to one year later.

Profit-Sharing Plan: A pension plan established and maintained by an employer to provide for the participation in its profits by its employees

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or their beneficiaries.

Tax-Qualified Plans: Employee benefit plans that meet Internal Revenue Service requirements for tax deductibility of employer contributions up to specified amounts.

Thrift or Savings Plan: A pension plan that requires employee contributions as a condition for participation in the plan. Employer contributions match or equal some fraction of the employee contribution.

Unfunded Liabilities: The benefit obligations of an employee benefit plan that are not covered by assets of the plan.

Vesting: The process by which an employee, after satisfying service requirements, acquires a nonforfeitable right to pension benefits even if he or she leaves the job before retirement. An accrued benefit attributable to the employee's own contribution is always 100 percent vested.

Years of Service: A 12-month period during which an employee works at

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least 1,000 hours. Used to determine eligibility for participation in a pension plan and the satisfaction of requirements for vesting as well as the determination of accrued benefits.

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VITA

Sharad Chandra Asthana was born in Lucknow, India, on October 11, 1954, the son of Pushpa Asthana and Bipin Chandra Asthana. After graduating from Colvin Taluqdars College, Lucknow, India, in 1971, he entered the University of Lucknow at Lucknow. He received the degrees of Bachelor of Science (Honors) in Physics in May 1974 and Master of Science in Physics in May 1975. During the following years he was employed by the Government of India as a member of the Indian Administrative Service. In August 1992 he entered the Graduate School of The University of Texas.

Permanent Address: c/o B. C. Asthana, C-720 Mahanagar, Lucknow, U.P. 226006 INDIA.

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