

Additional Evidence on the Reaction of Shareholders to the Reversion of Surplus Pension Assets

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ABSTRACT

A dichotomy exists in the literature regarding the share price response to pension reversions. Mitchell and Mulherin (1989) report positive abnormal returns in response to a reversion announcement, but Mittelstaedt and Regier (1990) provide evidence that any abnormal returns are due to contamination or event date misspecification. This article resolves that dichotomy by providing evidence of a relationship between the stock price reaction to the reversion announcement, the financial strength of the plan sponsor, and the type of successor plan adopted subsequent to the reversion.

Voluntary terminations of overfunded defined benefit pension plans (excess asset reversions) have transferred over \$20 billion from pension funds to corporate treasuries since 1980 (PBGC). Termination filings were most frequent between August 1982 and December 1985 when the investment performance of pension assets exceeded the growth in the value of plan obligations, resulting in the creation of a substantial funding surplus within the defined benefit system. Often, the reversion of excess assets has been the consequence of a concurrent corporate event, such as a merger, plant shutdown, or benefit restructuring. In other instances, plan terminations have occurred for the exclusive purpose of gaining access to the surplus.

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The deliberate removal of surplus assets from a defined benefit pension plan frequently creates the impression that the security of the underlying retirement benefits is being compromised. The presence of such fears is almost always evident in the wake of highly publicized terminations involving huge plan surpluses, such as the Occidental Petroleum (\$250 million) and United Air Lines (\$962 million) reversions. Casual observation suggests that the angst experienced by plan participants is greatest when the reversion is conducted in connection with a hostile takeover. Whether justified or not, those anxieties are often played upon by the various parties involved, as witnessed in the recent takeover battle for Lockheed (*Wall Street Journal*, March 28, 1990, pg C9).

The concern over reversion activity has led to legislation designed to curb the termination of overfunded defined benefit pension plans.¹ Common opposition to asset reversions is based upon a concern that such activity will ultimately reduce the stream of benefits to the plan participants, and public policy initiatives designed to curb reversion activity are structured under the assumption that reversion-related losses to current and/or prospective retirees are direct gains to the plan sponsor. In point of fact, however, the incentives motivating plan sponsors to terminate an overfunded plan are not limited to (or may even exclude) an expropriation of future benefits represented by the surplus.

Alternative Hypotheses

Broadly speaking, the potential gains associated with a reversion can originate from both sides of the balance sheet. Here the incentives to recapture the plan surplus will be examined in the form of two non-mutually exclusive hypotheses: the redeployment hypothesis and the successor plan hypothesis.

From the asset side, the recapture of excess pension assets may represent the optimal redeployment of the surplus from the pension fund to higher-valued uses (e.g., an investment in profitable projects outside the pension fund, or a reduction in expensive borrowing). On a going concern basis (assuming no change in the plan) the removal of the surplus is costly, because the excess assets lose their tax-sheltered status and must ultimately be returned to the pension fund through higher future contributions. The decision to recapture the surplus will therefore be value-maximizing when the benefits associated with reallocation exceed the cost of recapturing the

¹ Section 1705 of the Revenue Reconciliation Act of 1990 provides that after September 30, 1990, an employer that receives assets after the termination of a pension plan is subject to a 20-percent excise tax on the amount of the reversion, up from 15-percent previously. If the employer does not establish a qualified replacement plan or amend the terminating plan to provide for benefit increases, the excise tax is 50-percent. The 50-percent excise tax does not apply to an employer who is in federal or state bankruptcy proceedings as of the plan termination date.

surplus. As such, it would appear that the incentive to conduct a plan termination should be greatest among financially weak sponsors (who may lack access to external sources of capital and/or temporarily not be paying taxes) and/or large surplus recoveries (which provide the greatest opportunity for profitable redeployment). Studies by Mittelstaedt (1989), Stone (1987) and Thomas (1989) support the redeployment hypothesis. Incentives to terminate are also present on the liability side of the balance sheet. Gains can accrue to the bottom line if the termination of the overfunded plan is followed by explicit changes in the terms of the company's retirement program (such as the subsequent adoption of a less generous defined benefit or defined contribution successor plan). In such instances, the termination-related benefits originate because the plan sponsor is exercising the right to change the retirement program offered to employees; the recapture of the surplus is an independent consideration.²

The ability of the redeployment and successor plan hypotheses to explain the recapture of the plan surplus might be evident from any stock price reaction to the announcement of the plan termination. As in any "event" study, the ability to conduct a meaningful examination is based upon the assumptions that the significant information regarding the plan termination is impounded in security prices at a single point in time, and that the magnitude of the share price reaction bears a relationship to the facts characterizing each respective event.

The empirical evidence on the share price reaction to the recapture of surplus pension assets is in disagreement. The purpose of this article is to re-examine whether shareholders gain when the surplus is recaptured, and if so, whether that gain is driven by a set of identifiable factors. The analysis demonstrates that stock prices do react to excess asset reversions, but indicates that the abnormal returns are concentrated among a sub-sample of firms which (1) have large reversions (relative to the market value of the firm); (2) exhibit significant financial weakness prior to the termination; and (3) do not replace the terminated plan with an identical one. In the following sections, the findings of prior research on asset reversions are reviewed, the data and research methods are described, and the results are summarized.

Prior Research

Earlier studies on the share price reaction to the recapture of surplus pension assets (Alderson and Chen, 1986, VanDerhei, 1987, and Haw,

² The controversy over termination/reversions has been fueled by the suggestion that explicit changes in the retirement program subsequent to the termination of an overfunded plan may constitute the breach of an implicit contract with the employees (Pesando (1985) and Ippolito (1986)). According to that hypothesis, the plan sponsor would gain from the termination of an overfunded defined benefit pension plan if the termination were to reduce the value of an implied promise to pay deferred wages.

Ruland, and Hamdallah, 1988) were limited in that they predominantly covered time periods prior to the joint administration guidelines issued in May 1984 and/or misspecified the event dates.³ The two most recent studies (Mitchell and Mulherin, 1989, and Mittelstaedt and Regier, 1990) have extended the analysis to include post-guideline activity and corrected earlier methodologies to include information dissemination in both PBGC filings and the financial press.⁴

Mitchell and Mulherin examined the share price reaction to termination filings over the period from July 1980 through December 1987. Using the PBGC filing date as the event date (unless there was a *Wall Street Journal* article prior to that time), they documented a statistically significant, positive average abnormal return of .47 percent to a sample of 327 reversion announcements. A cross-sectional analysis of the sample indicated that plan terminations conducted in proximity to corporate reorganization activity elicited a larger and more significant share price response than the other plan terminations. Mitchell and Mulherin therefore concluded that pension terminations appear to signal the higher cash flows derived from reorganization activity; however, they acknowledged that events in their sample not linked with corporate reorganizations also experienced positive and significant abnormal returns that were independent of both financial distress and favorable tax treatment.⁵

Mittelstaedt and Regier (1990) analyzed the stock price reaction to reversion filings over the period October 1981 through December 1987, but found no significant abnormal returns at the event date. Their methodology differed from the approach of Mitchell and Mulherin by virtue of the fact that plan terminations resulting from asset sales and/or discontinued operations were eliminated from the sample. According to Mittelstaedt and Regier, those events do not qualify as "true" terminations because the information content of the reversion filing may be contaminated by the association of the reversion with a change in corporate control.

It would appear that the major difference in the results of these two studies stems from the treatment of terminations related to corporate reorganizations; however, the positive significant abnormal returns among non-reorganization-related events in Mitchell and Mulherin's sample suggests that the different results cannot be reconciled strictly by the

³ This date is of extreme importance since it resolved the legal uncertainty inherent in the plan sponsor's ability to recapture excess pension assets, especially if the original plan was replaced with another defined benefit pension plan.

⁴ See VanDerhei (1987) for an explanation of the mechanics of a plan termination filing.

⁵ The MM results for the last temporal quartile (December 1985- December 1987) showed that the abnormal returns are no longer significant. The authors attribute this to the 10-percent excise tax on post - 1985 terminations introduced by Tax Reform Act of 1986. However, the Single-Employer Pension Plan Amendments Act of 1986 required that after April 7, 1986, notification of a reversion to the participants had to be made 60 days prior to termination. This introduces the possibility that the information regarding an eventual reversion would have been released prior to the event date specified in the study.

elimination of events connected with corporate control activity. As such, the existence of any share price reaction to the reversion of surplus pension assets, and the nature of the factors driving it, are open questions. This study attempts to resolve those issues by reexamining the stock price reaction to a reversion announcement with a methodology that differs in several respects from the procedures employed previously. Specifically, an alternative measure is used to examine the relationship between the abnormal share price reaction and the financial strength of the plan sponsor. The analysis also screens for the influence of asset sales or discontinued operations on the abnormal returns, but eliminates only those events occurring concomitantly (and therefore capable of confounding the measured event). Finally, previously unavailable evidence on the relationship between the stock price reaction to the plan termination and the type of successor plan is presented.

Data and Research Methodology

Sample Selection

The initial population of overfunded defined benefit pension plan terminations was obtained from the Pension Benefit Guaranty Corporation (PBGC). The data file contained detailed information on 2,622 completed plan terminations drawn from Form 5310 (Application for Determination upon Termination) reversion filings made between September 1974 and October 1988. In order to maximize the likelihood of capturing any information effects associated with the announcement to terminate an overfunded defined benefit pension plan, the analysis was confined to the set of initial reversion filings for each firm in the data base.

The sample of firms examined were NYSE/AMEX firms which recaptured surplus pension assets either directly or through a subsidiary. Sample construction began by cross-matching the names of the terminating sponsors on the data file against the *Directory of Corporate Affiliation*. The search for parent-sponsor relationships consisted of checking each reversion case against the issue of the *Directory* that covered the year in which the reversion filing occurred, as well as the year prior and year following. To increase the likelihood that the parent-sponsor relationship existed at the time of the reversion filing, it was necessary that either (1) the terminating sponsor be listed in the *Directory* for each of the three years examined, and/or (2) that the indicated relationship be confirmed in the *Wall Street Journal Index* within the year prior to the reversion filing. Both the entire list of terminating firms and the list of parent-sponsor relationships were checked against the CRSP daily master file, resulting in a total of 311 reversion cases available for the residual analysis.

The event date ($t=0$) for the purpose of conducting the residual analysis was the earlier of (1) the date upon which Form 5310 was received by the PBGC (hereafter the filing date), or (2) the announcement (if one existed) of the plan termination in the *Wall Street Journal*. To minimize the chance

that the residuals in the -1:0 event window were contaminated by events unrelated to the plan termination, the *Wall Street Journal Index* was examined for potentially contaminating influences over the interval (-1:+1). Seventy-one cases were removed from the sample in response to the presence of confounding events.⁶

In order to further increase the likelihood of capturing any valuation effects associated with the termination decision, two additional filtering procedures were imposed. First, the sample was confined to firms which terminated defined benefit pension plans that had accrued benefit obligations exceeding 1-percent of the market value of the plan sponsor's common equity, measured three days prior to the reversion announcement. That constraint (arbitrarily chosen) was imposed to insure that the pension plan was a material component of the plan sponsor's combined operations, thereby making it feasible for changes in the terms of the plan to have a measurable share price impact. In addition, the analysis was confined to events occurring prior to May 1986 because of the passage of the Single Employer Pension Plan Amendments Act (SEPPAA), which required terminating sponsors to notify plan participants at least 60 days prior to filing for a termination. The existence of a 60-day notification rule virtually eliminated any possibility that the Form 5310 filing date is the earliest announcement of the intention to terminate the plan. Although a list of the dates upon which employees were notified was available, the analysis was confined to the pre-SEPPAA period in the interest of uniformity. The final sample consisted of 137 cases.

Sample Characteristics

Table 1 describes the characteristics of the sample of 137 material, pre-SEPPAA reversion cases. As shown in Panel A, approximately two-thirds of the sample observations occurred in the years 1984 and 1985. The observed concentration is attributable to a confluence of two factors. One pertains to the fact that plan surpluses were large over that period because of a combination of high equity values and depressed prices for fixed income securities. That particular combination of circumstances allowed plan sponsors to extinguish accumulated benefit obligations with guaranteed annuity contracts at attractive prices, at a time when the value of plan assets was enhanced due to the receipt of large unanticipated investment returns. Reversion activity was further encouraged over that period by the release of a set of regulatory guidelines (in May 1984) that eliminated the uncertainty surrounding the ability of a plan sponsor to recapture surplus pension assets.

Panel B of Table 1 summarizes the primary reason for the plan termination, as reported on Form 5310. While the accuracy of the self-reported

⁶ Cases were eliminated for the following reasons (frequency in parentheses): earnings and/or dividend announcements (26), takeover activity (14), management changes (11), operational and/or financial restructuring (8), legal/regulatory (6) and miscellaneous (6).

Table 1
Sample Distributions of Filing Year, Termination Reason, Reversion Amount, and Financial Quality of the Plan Sponsor for the Sample of Excess Asset Reversions.

The events in the sample represent initial filings with the PBGC to terminate overfunded defined benefit pension plans sponsored by corporations with returns on the CRSP file.

<i>Panel A. Yearly Distribution of Events</i>													
	1975	76	77	78	79	80	81	82	83	84	85	86	TOTAL
Number	1	0	0	0	1	2	4	16	16	42	51	4	137
Frequency (Percent)	0.73	0.00	0.00	0.00	0.73	1.46	2.92	11.68	11.68	30.65	37.23	2.92	100.00

<i>Panel B. Primary Reason for Termination</i>		
<i>Primary Reason</i>	<i>Number</i>	<i>Frequency (percent)</i>
Change in company ownership by sale or transfer	10	7.29
Company merger	4	2.92
Liquidation or dissolution of employer	4	2.92
Closing of subsidiary, division, or plant	5	3.65
Adverse business conditions	12	8.76
Plan too costly to maintain	1	0.74
ERISA impact	2	1.46
Employer or employees dissatisfied with plan	0	0.00
Bankruptcy	1	0.74
Adoption of a superceding plan	72	52.55
Other	26	18.97
Total	137	100%

<i>Panel C. Distribution of Plan Surplus at Filing Date</i>		
<i>Surplus Range (\$ millions)</i>	<i>Number</i>	<i>Frequency (Percent)</i>
$S < 1$	0	0.00
$1 \leq S < 5$	64	46.71
$5 \leq S < 10$	22	16.06
$10 \leq S < 20$	22	16.06
$20 \leq S < 30$	6	4.38
$30 \leq S < 50$	6	4.38
$50 \leq S < 100$	11	8.03
$100 \leq S$	6	4.38
TOTAL	137	100%

<i>Panel D. Distribution of Surplus as Fraction of Market Value</i>			
Maximum	1.097	Mean	.122
Median	.058	Minimum	.003

<i>Panel E. Distribution by Standard and Poor's Quality Rating</i>										
Quality Rating	A+	A	A-	B+	B	B-	C	D	Not Rated	Total
Number	2	7	13	27	30	25	23	2	8	137
Frequency (percent)	1.46	5.10	9.48	19.70	21.89	18.24	16.78	1.46	5.84	100%

Termination Reason is the principal reason cited by the plan sponsor for the termination at the time Form 5310 was filed. Quality Rating is the quality rating assigned to the common equity of the plan sponsor at the filing date by Standard and Poor's Corporation, and is based upon an appraisal of the past performance of earnings and dividends. Plan Surplus is the estimated value of surplus plan assets at the filing date. Market value of common equity is the market value of the common equity of the plan sponsor at the close of trading on the third day prior to the filing date. Fraction of market-value is the ratio of reversion size to the market value of the common equity of the plan sponsor.

reasons is not guaranteed, the figures provide some additional perspective on the sample of reversion cases. Seventeen percent of the plan terminations resulting in the recovery of surplus assets were reportedly conducted in connection with a change in corporate control and 12 percent occurred in response to business hardship. More than half of the sample terminations were conducted because of the establishment of a new plan; however, it is unclear what proportion of those 72 reported cases involved the adoption of a different retirement program (such as defined contribution plan) versus a termination and subsequent re-establishment of an identical plan for the specific purpose of recapturing the surplus.

Panels C and D describe the distribution of the recaptured surplus in both absolute terms and as a fraction of the plan sponsor's market value. A full 46 percent of the termination cases involved surplus assets of between only one and five million dollars, while only 12 percent of the reported terminations resulted in the recapture of \$50 million or more. In relation to the market value of the sponsor's common equity, the amount of the surplus ranged from a negligible portion to an amount in excess of the net worth of the sponsor. The mean fraction of common equity value was 12.2 percent, versus a median just under 6 percent, clearly identifying the presence of outliers in the sample.

In an attempt to gauge the financial strength of the terminating sponsors, the quality rating assigned to the common equity of the plan sponsor by Standard and Poor's Corporation in the month of the termination filing was observed. The S&P quality rating is based upon an appraisal of the past performance of earnings and dividends, and ranges from a high of A+ to a low of D. As shown in Panel E, 58 percent of the sample firms were rated B (below average) or lower. The financial condition of the firms in the sample thus appears to be on the weak side, and is consistent with the profile of a typical terminating firm described in both the financial press and in prior studies on plan terminations (Mittelstaedt, 1989, Stone, 1987, and Thomas, 1989).

Empirical Results

Tests of Hypothesis

The residual analysis was conducted by computing the abnormal returns to the common equity of the sample companies using the methodology of Dodd and Warner (1983). Market model estimates were computed for each security over the period from $t = -250$ to $t = -121$ and $+121$ to $+250$, where $t = 0$ is the event date. Daily prediction errors then were calculated for each firm in the sample over select intervals and averaged across the entire sample. When there are no factors present to cause abnormal performance, the average prediction error has a zero expected value. The significance of the measured abnormal returns was determined by a test-statistic that was

computed by multiplying the mean of the standardized prediction errors by the square root of the sample size.

Table 2 contains a summary of the cumulative prediction errors (in percent) for the sample of plan terminations.⁷ The table displays both the mean and median prediction errors over select intervals from 120 days both prior to and following the termination filing. Over the (-1:0) event window, the average measured abnormal share price reaction was 0.955 percent (significant at the 2-percent level, two-tailed test), but the median abnormal price change was only -0.032 percent. In summary, although the average abnormal return was positive and statistically significant, less than one-half of the companies in the sample experienced positive share price reactions to the reversion announcement.

The redeployment hypothesis states that any gains from a plan termination are attributable to the reallocation of the plan surplus to higher-valued uses. To test that hypothesis, the sample was examined for any evidence that the observed share price reaction was higher among events where the opportunity for value-maximizing redeployment was the greatest. The findings of Mittelstaedt (1989), Stone (1987), and Thomas (1989) suggest that those type of events would likely involve financially weak sponsors and/or large surpluses. Accordingly, the sample was stratified by quartile separately on the basis of the financial condition of the plan sponsor and the magnitude of the plan surplus as a percentage of the plan sponsor's market value. Although the results (not reported) show the presence of statistically significant abnormal returns only among the low financial quality and large reversion strata, respectively, the average abnormal returns of each respective strata are not significantly different from the average abnormal returns exhibited by the remaining quartiles. Stated differently, the share price reaction to an excess asset reversion does not appear to vary with either the size of the reversion or the financial strength of the plan sponsor.

The sample was also examined for any evidence that the observed share price reaction was derived from a change in the retirement program following the termination of the overfunded defined benefit plan. According to the successor plan hypothesis, any gains from a plan termination are attributable to explicit changes in the company's retirement program which reduce operating costs. If the hypothesis holds, observed abnormal returns should be concentrated among terminating firms that chose to eliminate their pension programs entirely or which adopted defined contribution successor plans.

Information on the characteristics of the successor plan was obtained from the PBGC and supplemented with data gathered from annual reports

⁷ The residuals were also examined for the sample which included post-SEPPAA event dates and immaterial (plan liabilities less than 1-percent of market value) pension plans. The average prediction errors for both the full sample of 311 contaminated events and the clean sample of 240 events were 0.794 percent ($Z=2.663$) and 0.649 percent ($Z=1.898$), respectively.

Table 2

Summary of Cumulative Prediction Errors (in Percent) for the Sample of 137 Overfunded Defined Benefit Pension Plan Termination Events: 1975-1986.

The event date ($t = 0$) is the date that the plan sponsor initially filed (or announced intention to file) to terminate the overfunded defined benefit pension plan. Prediction errors are computed by estimating the market model over both the pre-event ($t = -250$ to -121) and post event ($t = 121$ to 250) periods. Individual prediction errors are standardized by their respective forecast error estimates in the computation of the Z-statistic, which is equal to the average standardized prediction error times the square root of the sample size.

Panel A. Cumulative Prediction Errors (CPE) for the Pure Sample of 137 Events (Z-statistics in parentheses)		
Interval	Average CPE	Median CPE
(-120,-11)	-0.532 (-0.128)	0.265
(-10, -2)	-0.467 (-0.358)	0.064
(-1, 0)	0.955 (2.544)	-0.032
1	0.259 (-0.036)	-0.084
(2, 10)	-0.08 (0.240)	-0.037
(11,120)	3.021 (1.289)	4.028

and articles in the *Wall Street Journal* and *Pensions and Investment Age*. The successor plan hypothesis was tested by stratifying the sample on the basis of the nature of the successor plan (defined benefit versus defined contribution or no successor plan). The results (not reported) failed to reject the null hypothesis that the abnormal returns to each respective strata differed either from zero or from the average abnormal return exhibited by the other strata. Across the entire sample, the share price reaction to the event does not appear to be influenced by the choice of the successor plan.

Additional Analysis

Although the statistical tests in the previous section fail to provide support for either the redeployment or successor plan hypotheses, an analysis of the sample shows that the observed abnormal returns appear to exhibit an economically (but not statistically) significant concentration among financially weak plan sponsors, plans with large surpluses and, between the two respective groups, plan terminations that are followed by a change in the terms of the pension plan. A further examination of the sample reveals that nine of the plan terminations in the sample met all three of those criteria (weak firm, large surplus, and different successor plan), and

that those firms experienced an average abnormal return (not reported in the Tables) of 10.90 percent (significant at the 1-percent level, two-tailed test). In contrast, the average share price reaction exhibited by the remaining 128 firms was only 0.254 percent. Thus, the stock price reaction to the recapture of surplus assets is confined to a small sub-sample of firms with a very distinct set of characteristics. Select information on each of the nine respective terminations is displayed in Table 3.

At the time of the reversion, each of the nine companies were engaged in a restructuring program which appears to have included significant changes to the pension plan. As shown in the table, one company was a takeover target (it was acquired subsequent to the filing), and two were adjusting to a new business environment following the deregulation of the airline industry. In addition, four of the companies were operating under Chapter 11 reorganization either at the time of the filing or soon thereafter. Following the termination of the overfunded defined benefit plan, one firm instituted a reduced defined benefit plan in conjunction with a savings plan, one established a profit sharing and employee stock ownership plan, three adopted defined contribution successor plans, and four companies did not provide a retirement plan of any kind.

If the observed stock price reaction among the nine firms was in response to the plan termination, it could have been driven by the shifting of assets from the pension fund to more pressing needs. One company (Western Airlines) explicitly cited the recapture of the surplus as crucial to the survival of the company (*Pensions and Investment Age*, February 21, 1983, page 1). On the other hand, the stock price reaction might also have been attributable to the cost-savings associated with changes in labor compensation. Information obtained from the PBGC indicated that the nine terminated plans affected 32,678 individuals. The nature of the changes subsequent to the termination of the respective overfunded plans strongly suggests that substantial losses may have been inflicted on those participants, either because the successor plan was less generous (or non-existent) and/or because it required the participant to shoulder a greater portion of the investment risk associated with the retirement program. Because both the number of participants and the relative value of benefit obligations was large, it would appear possible that changes in the labor contract could have had a material impact on the respective share prices of the terminating firms.

Conclusion

The evidence reported in this article shows that common share prices react favorably when financially weak firms terminate their overfunded defined benefit plans, recapture a large surplus, and restructure the retirement program.

The study provides additional insight into the nature of the positive abnormal returns reported by Mitchell and Mulherin for reversions prior

Table 3
Financially Weak Plan Sponsors which Recaptured Surplus Assets in Excess of 15
Percent of Market Value and Adopted a Different Retirement Program.

<i>Company (principal business)</i>	<i>Market Value Surplus Obligations (in \$ Millions)</i>		<i>Successor Plan</i>	<i>Special Circumstances</i>
AM International (business equipment)	57.61	63.22	80.95	profit share/ESOP In Chapter 11
Anglo Energy (drilling service)	5.07	1.89	2.37	none In Chapter 11
Cleopak Corp (materials manufacturing)	33.93	21.33	52.38	defined contribution takeover target
Crompton Inc (textile manufacturing)	16.30	7.37	6.88	none in Chapter 11 six months hence
Superscope (consumer audio equipment)	5.19	1.10	2.05	none
Telecom Corp (motor carrier/distribution)	6.46	2.67	8.00	none (discontinued operation) major subsidiary in Chapter 11
Texas Air Corp (regional airlines)	50.95	21.67	51.08	defined contribution deregulated industry
Wean United (machinery mfg)	15.44	9.84	48.10	savings plan/reduced defined benefit
Western Airline (regional airline)	50.55	11.84	44.56	defined contribution deregulated industry

to the SEPPAA effective date. The results can also be reconciled with the findings of Mittelstaedt and Regier, since the significant gains for the aggregate sample have been attributed to a very select group of firms.

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