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Incentives for Discretionary Accounting Practices: Ownership Structure, Earnings, Size, and Taxation

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ABSTRACT

Factors that motivate insurers' choices of accounting practices are established through agency theory and political cost theory. This study hypothesizes that ownership control, earnings, and size provide incentives for the management of insurers to exercise income-increasing or -decreasing accounting choices. A series of t-tests establishes an empirical association between accounting choices and the hypothesized explanatory variables. We find evidence that income-increasing behavior is associated with the level and growth of earnings. Income-decreasing behavior is associated with ownership control. The accounting choice literature indicates that the motives for write-offs may differ from those associated with clearly discretionary income-decreasing accounting choices. When write-offs are evaluated independently, the evidence supports an empirical association between income-decreasing behavior and ownership control, level of earnings, and size. Due to the unique tax environment in 1984 and 1987, a sample was created to include only those insurers with a fresh start tax adjustment in 1984. Using this sample, we perform a Wilcoxon two-sample test for differences between insurers that elect income-increasing events and those that do not. Controlling for the tax environment in 1984, significant differences in ownership control and size are reported.

Introduction

Although accounting conventions dictate the procedures for deriving and reporting earnings, opportunities for managerial discretion exist. In general, managers exercise discretion when choosing from alternative depreciation methods, inventory costing methods, or pension plan actuarial assumptions. It is widely understood that, given alternative accounting procedures, managers' selections will influence the level of reported earnings. The research issue here

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is not the impact of accounting choice on the level of reported earnings but rather the incentives underlying managers' decisions to exercise accounting discretion. This article empirically examines a hypothesis suggesting that control mechanisms for agency cost and political cost motivate managers to choose discretionary accounting practices which alter earnings reported in accordance with generally accepted accounting practices (GAAP). Since the insurance industry experienced a unique tax environment in 1984 and 1987, insurers affected by the tax law change of 1984 are examined independently.

Previous accounting choice studies exclude financial institutions, because their financial reporting processes tend not to conform with other industries.[1] The insurance industry is particularly well suited for a study of accounting choice due to the importance of estimated data such as loss reserves in insurer financial statements. An industry-specific approach is further motivated by the potentially confounding effects of ownership structure and managerial decision making in cross-industry studies. Ownership structure affects managerial decision making, while the firm's environment influences the appropriate ownership structure. An industry-specific analysis controls for many of these confounding variables. Finally, information regarding insurers' motivations for discretionary accounting adjustments is timely in light of initiatives by the Securities Exchange Commission and the Financial Accounting Standards Board.[2]

The next section reviews previous research regarding discretionary accounting practices and establishes the theory for the explanatory variables. Then, a discussion of the GAAP discretionary accounting practices available to insurance managers is followed by a description of the data and methodology and a discussion of the results. Insurers affected by the tax law change in 1984 are reexamined independently and results are reported before a final concluding section.

Explanatory Variables

The testable implications of discretionary accounting choices are established by agency theory (see Jensen and Meckling, 1976) and political cost theory (see Watts and Zimmerman, 1978). According to agency theory, widely-held (manager-controlled) insurers are more likely than closely-held (owner-controlled) insurers to make both income-decreasing and -increasing discretionary accounting choices. Also, insurers with reported profitability greater than the industry average are more likely to make income-decreasing accounting choices and less likely to make income-increasing accounting choices. According to political cost theory, large insurers are more hesitant to report increases in

[1] Exceptions include Moyer (1990) and Blaccioniere et al. (1991).

[2] In 1989, the Securities Exchange Commission (1989) drafted Staff Accounting Bulletin 87, which provides guidance to property-liability insurers regarding estimation and disclosure of additional policy reserves. In 1990, the Financial Accounting Standards Board (1990) drafted a discussion memorandum, which affects insurers' write-offs of deferred policy acquisition costs.

reported earnings due to political and regulatory pressures and therefore are more likely to execute income-decreasing accounting choices and less likely to execute income-increasing accounting choices.

The proxies for variables hypothesized as incentives for discretionary accounting practices among insurers are presented in Table 1. The hypothesized relation between each explanatory variable and income-decreasing and income-increasing behavior is reported. The rationale for each hypothesis is discussed in the next section. For income-decreasing behavior, write-offs are addressed independently for reasons established below.

Ownership Control

Mayers and Smith (1988, 1992) hypothesize that the coexistence of various forms of ownership structure is partly attributable to their relative efficiency in controlling agency costs. Since costs of controlling management are significantly higher for mutual than for stock insurers, mutual insurers will concentrate in lines of business where managerial discretion is less important—for example, in less risky lines of insurance. Likewise, stock insurers will concentrate in lines where managerial discretion is more important.[3] Using the variability of a profit ratio as a risk proxy, Lamm-Tennant and Starks (1993) provide empirical evidence that stock insurers have higher total risk than mutual insurers. Given that stock insurers experience higher profit variability, it is hypothesized that widely-held stock insurers are more likely and closely-held stock insurers are less likely to exercise both income-increasing and income-decreasing discretionary accounting choices in an attempt to smooth earnings.[4]

An analysis of the incentives underlying discretionary accounting practices is motivated further when recognizing agency cost control mechanisms such as management compensation plans.[5] A typical compensation plan awards a bonus such as performance shares based upon reported earnings. Ayres (1986) indicates that limits are usually placed such that the bonus is a function of the level of or growth in earnings to some upper boundary. The compensation plan may provide an incentive for managers to elect discretionary accounting practices that increase earnings level or growth when it falls inside the boundaries and those that decrease earnings level or growth when it falls outside the boundaries. In an attempt to constrain agency costs, the widely-held stock

[3] Smith and Stutzer (1990) attribute the coexistence of multiple forms of ownership structure in the insurance industry to the adverse selection problem. Garven (1992) examines the differences in risk incentives for mutual and stock insurers caused by the existence of asymmetric taxes combined with limited liability. In general, the implications are consistent with those established through the agency problem.

[4] When the sample is limited by design to stock insurers, a closely-held stock insurer proxies for the mutual, whereas a widely-held stock insurer proxies for the stock insurer.

[5] Debt covenants are considered by the accounting choice literature but are of lesser importance to the insurance industry due to the limited amount of traditional debt on the balance sheet.

Table 1
Summary of Explanatory Variables

Panel A: Explanatory Variables

Variable	*Measure*
Ownership Control	Total Shares Outstanding/Number of Shareholders
Earnings	
Prechange Earnings	(Net Income-Aftertax Effect of Change)$_t$ - Net Income$_{t-1}$]/|Net Income$_{t-1}$|
Prechange Operating Earnings	[(Pretax Income-Effect of Earnings Change)$_t$ - Pretax Income$_{t-1}$]/|Pretax Income$_{t-1}$|
Return on Premiums	(Net Income-Aftertax Effect of Change)/ Premium Revenue
Return on Revenues	(Net Income-Aftertax Effect of Change)/ (Premium Revenue + Net Investment Income)
Size	
Market Value of Invested Assets	
Total Revenues	
Stockholders' Equity	

Panel B: Hypothesized Relation with Sample Average

Variable	*Income-Increasing*	*Income-Decreasing*	*Income-Decreasing (Write-offs)*
Ownership Control	-	-	-
Earnings			
Prechange Earnings	-	+	-
Prechange Operating Earnings	-	+	-
Return on Premiums	-	+	-
Return on Revenues	-	+	-
Size			
Market Value of Invested Assets	-	+	+
Total Revenues	-	+	+
Stockholders' Equity	-	+	+

insurer is more likely to establish mechanisms such as performance shares. Likewise, it is hypothesized that widely-held stock insurers are more likely to exercise income-increasing and -decreasing accounting provisions.

For this analysis, ownership control is measured by the average number of shares held per owner. The smaller the ownership control proxy, the more widely-held (manager-controlled) the stock insurer. Consequently, the hypothesized relation between the owner control proxy and the use of discretionary accounting practices is negative.

Earnings Level and Growth

The argument that the earnings level and growth are incentives for accounting choice is established through agency theory and the signaling effect of earnings. Low earnings or low growth in earnings signals owners that managers may be imposing agency costs. Alternatively, high earnings or high growth in earnings signals policyholders that managers and owners may be monopolistically pricing the product. The incentive therefore exists for management to make income-increasing accounting choices when earnings or earnings growth is low and elect income-decreasing choices when earnings are high.

This analysis recognizes four measures of earnings. The first two variables—the percentage change in pre-adjusted net income and the percentage change in pre-adjusted before-tax operating earnings—proxy for earnings growth. The second two variables—return on premiums and return on revenues—proxy for level of earnings. The hypothesized relation between the earnings variable and the industry average is negative for insurers making income-increasing choices and positive for those making income-decreasing choices.

Size

Incentives for discretionary accounting practices are also predicted by the political cost theory of Watts and Zimmerman (1978), which states that exposure to political scrutiny and regulatory intervention is related to size, because large insurers are in the public eye more than small insurers.[6] Large increases in earnings may be perceived as overpricing and thus gouging the consumer, while large decreases in earnings may signal financial distress. Either event may attract public attention as well as regulatory scrutiny. Recognizing that these political costs are related to size, it follows that large insurers may be hesitant to show significant increases or decreases in earnings.

This analysis uses three proxies for size: total revenues, invested assets, and stockholders' equity. Insurers that make either income-increasing or income-decreasing choices are hypothesized to be larger than average.

Discretionary Accounting Choices Under GAAP

Empirical research on insurers frequently uses statutory accounting data instead of GAAP data, a preference that is justified when the research issue is solvency or regulation. The performance of the insurer in the capital markets as well as the evaluation of this performance by managers and investors is more appropriately supported by GAAP data. Therefore, GAAP financial data are the basis for this analysis.[7]

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[6] Although size is frequently used as a proxy for political cost, the results have been mixed. Ball and Foster (1982) indicate that accounting choice may be related to size for reasons other than political costs.

[7] For a discussion of the differences in GAAP and statutory accounting, see Cummins and Grace (1993).

As with all other companies, an insurer can change from one generally accepted accounting principle to another. However, the most common types of accounting choices in other industries—changes in inventory method or depreciation policy—do not usually occur in the insurance industry. During the period examined, accounting choices available to all industries include changes in the method of accounting for notes receivable, investment tax credits, and changes in pension actuarial assumptions or cost methods that affect the computation of pension expenses. Accounting changes available only to insurers include changes in deferred policy acquisition (DPAC) expenses and accounting for policy reserves. The former includes changing the method of accounting for or amortizing DPAC expenses and write-offs of DPAC expenses. Policy reserve changes include changes in the method of accounting for policy reserves, reserve strengthening, or reserve releases.

Data and Methodology

The sample is selected from two sources. Fifty-five of the 63 stock insurers included on Compustat had the necessary four or more years of financial statement information available for the period of 1981 through 1987.[8] An additional 15 stock insurers identified from a *Forbes* industry survey are included in the sample. This resulted in a sample of 70 insurers. Although many insurers were multiple line insurers, 32 are primarily property-liability insurers and 38 are life insurers. The firms in the sample are listed in the Appendix.

The incidence of discretionary accounting changes by year for the sample insurers is presented in Table 2, Panel A. Insurers are required to report in their financial statements the impact of accounting changes on earnings (see Accounting Principles Board, 1971). This information allows for the estimation of earnings without the accounting change, which is necessary when analyzing the proxies for earnings. Of the 48 accounting changes observed, ten are pension changes and two are general accounting changes. The remaining 36 accounting changes relate to policy reserves and deferred policy acquisition costs.[9]

Initial analysis considers all accounting changes. Income-increasing events are analyzed independently from income-decreasing events. An insurer's financial characteristics are compared with the sample average using a standard-

[8] Although Compustat provides detailed financial information, it does not provide premium income and certain policyholder reserve information. Therefore, data was obtained from annual reports appearing in Q-file, a microfiche source, or NAARS, a data retrieval service.

[9] Ten companies made changes in more than one year; of these ten, eight reported two changes, and two reported three changes. Of the ten companies, seven made increasing changes followed by decreasing changes; although the events were as much as six years apart. Two companies made an increasing and decreasing change in the same year which were netted out and treated as one change. Typically, one of these changes was significantly larger than the other.

Table 2
Summary of Accounting Changes

Panel A: Types of Accounting Changes by Year

Accounting Change	*1987*	*1986*	*1985*	*1984*	*1983*	*1982*	*1981*	*Total*
Changes to Deferred Policy Acquisition Costs (DPAC)								
Write-offs of DPAC	2	2	2	6	2	0	0	14
Change in Accounting Method or Refinement to Assumption	2	1	0	1	1	0	0	5
Changes to Policy Reserves								
Reserve Strengthening	3	1	2	3	1	0	0	10
Change in Accounting Method or Refinement to Assumption	2	0	2	2	1	0	0	7
Changes in Pension Method or Assumption	1	0	2	4	1	2	0	10
Other Accounting Changes	0	0	0	1	0	1	0	2
Total Changes								
Number	10	4	8	17	6	3	0	48
Percent of Total	21	8	17	35	13	6	0	100

Panel B: Financial Statement Impact of Accounting Changes

Change/ Accounting Change	*Pretax Change Mean*[a]	*Aftertax Change Mean*[a]	*Pretax Change/ Pretax Income Mean (%)*	*Aftertax Change/ Net Income Mean (%)*
Income-Increasing Accounting Changes	14,036	10,330	89.36	29.45
All Income-Decreasing Changes	75,136	59,169	202.66	184.41
Income-Decreasing Accounting Changes Only	4,787	3,300	38.81	35.07
Writeoffs Only	108,635	85,774	280.69	255.53

[a] In thousands of dollars.

ized z-score for each of the explanatory variables.[10] A t-test is performed to determine if the differences are significantly different from zero.

Discretionary accounting changes are clustered in 1984 (35 percent) and in 1987 (21 percent). A possible explanation for this is the 1984 federal tax legislation that significantly impacted the insurance industry in these years. As part of the 1984 Deficit Reduction Act, Congress passed tax reform that changed the life insurance industry's method of taxation such that earnings were initially enhanced through a one-time tax reduction in 1984. In 1987, a similar,

[10] The z-score is the difference between the explanatory variable and the sample average of the variable expressed relative to the standard deviation of the variable across insurers. Recognizing that the observations are year-specific, the sample average and standard deviation are derived for the same year as the variable. Also, the sample average is the average for the insurers in the sample exclusive of those electing the accounting change in that year.

though not as significant, tax change was imposed on the accident and health business of property-liability insurers. Therefore, an analysis is performed whereby insurers affected by the 1984 tax change are separated into two groups: those that did and did not make income-decreasing accounting changes in 1984. A Wilcoxon two-sample test is performed for each group to isolate the insurers affected by the tax change and to test for differences in ownership control, earnings, and size between the insurers offsetting the earnings boost through tax adjustment versus those that do not.[11]

Discussion of Results

Mean values of the eight proxies for the hypothesized explanatory variables across the group of insurers making income-increasing accounting choices and those making income-decreasing accounting choices versus the sample mean are presented in Table 3. Statistical analysis of the differences between the income-increasing and income-decreasing change groups and the sample are presented in Table 4.

Table 3
Mean Comparisons to the Sample of Income-Increasing, Income-Decreasing, and Write-Off Income-Decreasing Insurers

Variable	*Income-Increasing (N = 14) Change Group*[a]	*Sample*[a]	*Income-Decreasing (N = 34) Change Group*[b]	*Sample*[b]	*Write-Off Income-Decreasing (N = 24) Change Group*[c]	*Sample*[c]
Ownership Control	7.165	6.875	4.735	6.906	4.536	7.654
Earnings Ratios						
Prechange Earnings	-0.1560	0.1995	1.1369	0.5135	1.3972	0.4354
Prechange Operating Earnings	-0.6949	0.2537	0.7656	0.7993	0.8252	0.7327
Return on Premiums	0.0875	0.1243	0.1295	0.1313	0.1154	0.1331
Return on Revenues	0.0592	0.0840	0.0815	0.2096	0.0752	0.0915
Size (in Thousands of Dollars)						
Invested Assets	4696	2352	3726	2683	4535	2645
Total Revenues	3297	1456	2684	1618	3270	1589
Stockholders' Equity	1279	854	1120	959	1332	943

[a] The sample mean was computed for each year and excludes firms making income-increasing changes in that year. The sample mean averaged across all years is reported here.

[b] The sample mean was computed for each year and excludes firms making income-decreasing changes in that year. The sample mean averaged across all years is reported here.

[c] The sample mean was computed for each year and excludes firms making income-decreasing changes with write-offs in that year. The sample mean averaged across all years is reported here.

[11] Use of clearly disclosed information is a limitation of the methodology. Insurers may prefer to use less easily discernible means such as accruals to improve earnings ratios. However, as Moses (1987) notes, an analysis of accounting changes does not imply that these are the only choices available to the firm.

Table 4
Statistical Analysis of Differences Between Sample and Income-Increasing, Income-Decreasing, and Write-Off Income-Decreasing Insurers

Variable	*Mean Z-Score*[a]	*Standard Deviation*	*T-Value*	*One-Tailed Probability (t)*
Income-Increasing				
Ownership Control	0.046	1.294	0.123	0.905[b]
Earnings				
Prechange Earnings	0.035	0.833	0.155	0.879[b]
Prechange Operating Earnings	-0.131	0.298	-1.525	0.078***
Return on Premiums	-0.236	0.545	-1.623	0.064***
Return on Revenues	-0.239	0.555	-1.550	0.073***
Size				
Invested Assets	0.748	1.937	1.445	0.172[b]
Total Revenues	0.776	1.896	1.532	0.150[b]
Stockholders' Equity	0.276	0.923	1.117	0.284[b]
Income-Decreasing				
Ownership Control	-0.341	0.830	-1.782	0.22**
Earnings				
Prechange Earnings	0.237	1.417	0.945	0.176
Prechange Operating Earnings	0.149	1.279	0.660	0.257
Return on Premiums	-0.093	0.652	-0.810	0.424[b]
Return on Revenue	-0.020	0.805	-0.139	0.891[b]
Size				
Invested Assets	0.104	0.890	0.664	0.256
Total Revenue	0.570	2.017	1.599	0.060***
Stockholders' Equity	0.130	0.729	1.006	0.161
Write-Off Income-Decreasing				
Ownership Control	-0.459	0.830	-2.471	0.017**
Earnings				
Prechange Earnings	0.389	1.628	1.170	0.254[b]
Prechange Operating Earnings	0.221	1.453	0.759	0.455[b]
Return on Premium	-0.198	0.605	-1.637	0.057***
Return on Revenue	-0.194	0.664	-1.463	0.078***
Size				
Invested Assets	0.676	1.897	1.780	0.044**
Total Revenue	0.826	2.245	1.841	0.039**
Stockholders' Equity	0.251	0.788	1.592	0.062***

[a] The z-score is the difference between the explanatory variable and the sample average of the variable expressed relative to the standard deviation of the variable across insurers. The observations are year specific, and the sample average and standard deviation are derived for the same year as the variable.
[b] Two-tailed probability.
* Significant at alpha < 0.01
** Significant at alpha < 0.05
*** Significant at alpha < 0.10

Income-Increasing Changes

Fourteen insurers made discretionary accounting choices that increased earnings within the time period analyzed. The mean values of all four earnings proxies are lower for the income-increasing firms when compared to the sample. The results of the t-tests on the z-scores indicate that three of the earnings proxies—prechange operating earnings, return on premiums, and return on revenue—are statistically significant at a 0.10 level or better (see Table 4). These results support the hypothesis that insurers with reported earnings less than the sample mean are more likely to make income-increasing accounting choices. Low reported earnings may provide an incentive for management to exercise discretionary accounting choices that enhance reported earnings. The empirical results do not support the hypothesized relation between owner control or size and income-increasing accounting choice.[12]

Income-Decreasing Changes

Thirty-two insurers made income-decreasing accounting choices (including write-offs and reserve strengthening). The ownership control proxy is lower on average for insurers electing income-decreasing changes. This difference is significant at a 0.05 level, indicating that a lower level of ownership control may provide an incentive for management to exercise discretionary accounting choices that decrease reported earnings. The results for earnings and two size variables are not significant. One explanation for these results is that different motives exist for write-offs (and, in this study, reserve strengthening) and discretionary accounting changes, as suggested by Elliott and Shaw (1988). A write-off or reserve strengthening typically results from a deterioration in a line of business or product, whereas the accounting principle change may be attributed to management preference for the new method. Also, the impact of the write-off can be significantly larger than the impact of an accounting change (see Table 2, Panel B). Therefore, an analysis of the discretionary accounting principle changes is performed separately from the write-offs of deferred policy acquisition costs and strengthening of policy reserves.[13]

The previously stated hypotheses are changed for insurers with write-offs and reserve strengthening, such that insurers with reported earnings less than the sample average are more likely to exercise income-decreasing accounting choices. The analysis of insurers electing write-offs and reserve strengthening income-decreasing accounting choices is presented in the last two columns of Table 3 and the lowest panel of Table 4. For these insurers, proxies for level

[12] Ten out of the 14 income-increasing choices are pension changes. Unlike most accounting changes, pension changes affect cash flow. While the political cost theory suggests that large firms want to minimize reported earnings, the cash flow benefits of pension changes may create incentives to increase earnings.

[13] The results for the ten firms making an income-decreasing discretionary accounting change indicate that the growth in earnings was significantly lower than the industry average (at a 0.10 level), not as hypothesized. The firms making income-decreasing changes were smaller than the industry average (at a 0.01 level), as hypothesized.

of earnings (two of the four variables), size, and ownership control are significant at the 0.10 level or better. The mean z-scores are in the direction hypothesized in all cases. The results support the hypothesis that the level of earnings, size, and ownership control provide incentives for discretionary accounting choices.

Taxation and Income-Decreasing Accounting Choices

Implications of Tax Legislation

The intent of the 1984 tax legislation was to simplify insurers' tax calculations, to set a "sharing" of the tax burden between stock and mutual life insurers, and to increase tax revenues from the industry. To accomplish the latter objective, the deduction for the increase in policy reserves was changed, limiting the deduction that insurers could take. However, to reduce the impact of this change, insurers were allowed a fresh-start basis for reserves that was generally higher than in prior years. Therefore, when insurers calculated their tax provision for GAAP purposes, the deferred tax liability decreased because of the impact of this permanent difference.[14]

Prior to the 1984 act, stock life insurers could include one-half of their net profit essentially tax-free in policyholders' surplus. Insurers did not pay taxes on this amount since they did not intend to pay any of this surplus to shareholders. The 1984 act allows most insurers to freeze the amount of sheltered net income in surplus at the time of the act but does not allow additional money to go into the account. The effect of this and other changes in the 1984 tax legislation is to increase the overall tax rate for the life insurance industry. Therefore, the life insurance industry faced an unusually low tax rate for financial reporting purposes for 1984, while facing an increased current rate (taxes actually paid) for future years. The 1986 act, affecting 1987 financial statements, had a similar impact on the property-liability industry. A significant

[14] Insurers provide an increase to deferred tax liability when the increase in GAAP reserves is less than tax reserves, and they provide a decrease to deferred tax liability when the increase in GAAP reserves is greater than tax reserves. Income tax expense on a GAAP basis is similarly affected. For example, assume that an insurer has tax basis reserves of $1,000 and GAAP reserves of $800 and an overall tax rate of 25 percent. The difference between the GAAP reserves and the tax reserves is treated as a timing difference for financial reporting purposes. According to the Accounting Principles Board (1967), a deferred tax liability of $50 would have been recognized (1,000 - 800) * 0.25).

Under the new tax act, the method of calculating the tax reserves required discounting of certain products. The result is that the increase to the tax reserves will generally be lower in the future, creating a higher current tax expense. However, as part of the phase-in, the tax changes allowed insurers to reset their beginning reserves, i.e., a fresh start. Assume that the tax reserves are now $900. The timing difference is only $100 instead of $200. The difference is a permanent difference, which does not require deferred taxes. Therefore, the insurer only needs $25 for the deferred tax liability for the reserves and releases $25 into income (the original $50 less the $25 now needed).

change permitted insurers to deduct only the present value and not the full nominal value of losses.[15]

In 1984 and 1987, the number of income-decreasing accounting adjustments (including write-offs) are noticeably higher than in other years. The tax basis of reserves has always been computed on a different basis than for GAAP purposes. However, many insurers made adjustments in the GAAP reserves at the same time. In addition, there were write-offs or changes in accounting method of the deferred policy acquisition expenses for many insurers. Although write-offs were not required as part of the tax legislation, some insurers attempted to link the two events in their disclosure.

Discussion of Results

Thirty-nine insurers recognized a fresh-start tax in 1984, whereas 37 insurers recognized such a benefit in 1987. The mean size of the fresh-start tax benefit was $35.3 million in 1984 and $29.6 million in 1987. As a percent of pretax income, the fresh-start tax was 157 percent in 1984 and 50 percent in 1987. In 1984, nine insurers with fresh-start tax specifically recognized write-offs or accounting changes, and the remaining 30 did not disclose similar changes. In 1987, three of the 37 insurers recognizing a tax benefit made similar write-offs; therefore no further analysis is performed on the 1987 event. Because some insurers with a fresh-start benefit did not make write-offs in 1984, a question arises regarding differences between those with fresh-start adjustments and write-offs versus those with fresh-start adjustments and no write-offs.

Hypotheses previously stated in accordance to the accounting choice literature are tested. That is, insurers making income-decreasing accounting adjustments in a year while recognizing a fresh-start adjustment are expected to have a higher prechange earnings growth or be more profitable than insurers that did not make accounting changes. Insurers making income-decreasing accounting adjustments in a year while recognizing a fresh-start adjustment are expected to be larger than insurers that do not make changes. Insurers making income-decreasing accounting adjustments in a year while recognizing a fresh-start adjustment are hypothesized to be more widely-held (manager-controlled) than insurers that do not make such changes.

Of the insurers with a fresh-start tax benefit in 1984, a Wilcoxon two-sample test is performed for differences between those insurers with income-decreasing events and those without such events. Controlling for the unique tax environment in 1984, the insurers with income-decreasing accounting events differed significantly in terms of size and ownership control from the insurers without income-decreasing accounting events. A proxy for size, invested assets, carried the hypothesized sign and is significant at a 0.05 level. Insurers making income-decreasing accounting adjustments in 1984 and recognizing a fresh-start adjustment are larger than insurers that did not make the change.

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[15] Cummins and Grace (1993) provide a more complete discussion of the provisions in the Tax Reform Act of 1986 that affected property-liability insurers.

The proxy for ownership control is significant at the 0.10 level such that insurers electing income-decreasing adjustments while recognizing a fresh-start tax benefit in 1984 are more widely-held (manager-controlled) than insurers not making income-decreasing adjustments. Differences in earnings between the two samples are not significant.

Conclusion

This article examined the association between income-increasing or -decreasing actions and factors hypothesized to initiate these accounting choices. Nonmandatory accounting changes are selected as income-increasing or -decreasing devices because they provide an observable action in which accounting choice adjusts income. Univariate tests are conducted independently on the income-increasing insurers and the income-decreasing insurers. Additional testing is performed for firms affected by a change in the 1984 tax law.

The univariate tests suggest an association between income-increasing behavior and earnings consistent with agency theory: insurers with earnings less than the industry average are more likely to exercise income-increasing discretionary accounting choices. The evidence does not support size and ownership control as incentives for income-increasing behavior. Insurers exercising income-decreasing choices are separated into groups and analyzed independently—those insurers exercising changes in accounting principles versus those insurers electing write-offs and reserve strengthening. The results suggest that, for insurers exercising write-offs and reserve strengthening, earnings growth, size, and ownership control are incentives for making income-decreasing accounting choices. The explanatory variables are related to the behavior in a manner consistent with the predictions. When controlling for the unique tax environment in 1984, invested assets—a proxy for size—and the ownership control proxy are significant in explaining differences between those insurers with fresh-start benefits and income-decreasing elections versus those insurers with fresh-start benefits not electing income-decreasing adjustments.

Although these results offer explanations for the incentives underlying insurers' accounting choices, limitations exist. First, although the variables are consistent with measures used in previous studies of accounting choice, the variables are imprecise proxies for the underlying constructs. The major area of accounting choice for the insurer involves the timing and recognition of realized gains and losses as well as setting policyholders' reserves. Simulating the consequences of these accounting choices requires more developmental work as well as more detailed data. Second, an income-smoothing test would be an alternative approach since accounting choice may be used to reduce earnings fluctuations rather than to maximize or minimize reported earnings. A model of income smoothing would need to be established. Despite these limitations, the results have implications for understanding the accounting choices available to the insurance manager. Future studies of smoothing may benefit from these results.

Appendix
Firms Included in the Sample

Aetna Life & Casualty
American Bankers Insurance
American Family Group
American General
American Heritage Life
American International
American National
AVEMCO Corp.
Belvedere
Capital Holding Corp.
Chubb Group of Insurance Companies
Cigna Group
Cincinnati Financial Corp.
CNA Insurance
Colonial Life and Acc.
CONESCO
Continental Corp.
Continental General
Farmers Insurance Group of Companies
FGIC Corp.
Fireman's Fund Insurance
First American Financial
First Executive Corp.
Foremost Corp. of America
Gainsco
GEICO Corp.
General Reinsurance
Hanover Insurance
Hartford Steam Boiler
Home Group
Independent Insurance
Integrated Resources
Jefferson Pilot Corp.
Kansas City Life
Kemper
Kentucky Central Life Insurance Company
Lamar Life
Laurentian Capital
Lawrence Insurance
Liberty Corp.
Lincoln National
Manhattan National Corp.
Merchants Group
Monarch Capital Corp.
National Western Life
Nationwide
Northwestern National Insurance
Ohio Casualty Group
Old Republic International
Orion
Progressive Insurance
Protective Life Corp.
Provident Life & Accident
Reliance Insurance
SAFECO
St. Paul Companies
Selective Insurance Group
Statesman Insurance
Stewart Information Services
Torchmark Corp.
Travelers
United Cos. Financial
Unum
U.S. Fidelity & Guaranty
USLICO Corp.
USLIFE Corp.
Washington National
Westbridge Capital
W. R. Berkely
Zenith National

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