

INCENTIVES FOR MANAGING ACCOUNTING INFORMATION: PROPERTY-LIABILITY INSURER STOCK-CHARTER CONVERSIONS

David Mayers
Clifford W. Smith, Jr.

ABSTRACT

Incentives to manage accounting information are examined within 63 property-liability insurance company conversions from mutual ownership to common stock charter. In the conversion process, policyholders' embedded equity claims must be valued. Since mutuals have no separately traded equity, accounting numbers are a critical input in this valuation. Incentives for surplus management vary across firms; the strongest evidence of surplus management is observed among firms where the mutual's executives become the firm's principal stockholders following conversion. The evidence suggests that converting firms manage accounting information primarily by adjusting liabilities and selectively establishing investment losses—not by altering claims settlement policy.

INTRODUCTION

In this article, incentives to manage accounting information established when property-liability insurance companies convert from mutual ownership to common stock charter are investigated. These incentives exist because the conversion process requires valuation of the mutual policyholders' embedded equity claims and accounting numbers are critical inputs in this estimation. For example, Binning (1971) asserts, "The determination of the dollar value of policyholder equity must take into consideration many factors, but it must begin with the surplus to policyholders [total admitted assets minus total liabilities] shown on Page 3 of the last annual statement of the company."

Economic theory suggests that accounting management is more likely: the greater its expected benefits, the more concentrated and homogeneous the group that benefits, the larger, more heterogeneous, and more difficult to organize the group on which costs are imposed, and the less effective the available control mechanisms. (Results

David Mayers is the Philip L. Boyd Chair in Finance, A. Gary Anderson Graduate School of Management, University of California, Riverside, CA 92521. Clifford W. Smith, Jr., is Louise and Henry Epstein Professor of Business Administration, W. E. Simon Graduate School of Business Administration, University of Rochester, NY 14627.

from existing studies of accounting management generally are consistent with these predictions, see the Appendix.) Incentives for accounting management are not homogeneous across the sample of 63 converting insurance companies; specifically, the sizes of the expected benefits and the concentration and homogeneity of the groups that benefit vary. Methods of identifying these sample differences are discussed below.

For several reasons the analysis of insurer stock-charter conversions has the potential to expand the profession's understanding of incentives for management of accounting information. First, these transactions are material events for converting insurance companies. Moreover, the nature of regulation in this industry implies this sample is more homogeneous than in most studies of accounting management. These factors suggest that the tests have power.

Second, examining alternative methods of surplus management can provide insights into the relative costs of changing various firm policies. There are at least three ways an insurer can manage surplus: (1) by adjusting estimated liabilities, (2) by trading assets (for example, realizing losses but not gains within its bond portfolio), and (3) by altering claims settlement policy (for instance, accelerating selected loss payments by offering more liberal settlements). Thus, alternative methods of managing surplus involve not just accounting policy, but investment or operating policies, as well.

Third, unlike most events previously examined for evidence of accounting management, in conversions the management of balance-sheet magnitudes—especially surplus—is expected to be more important than management of earnings or other income-statement variables. This expansion of the range of observations on accounting management should increase the profession's ability to distinguish among various factors that explain such behavior.

Finally, these transactions allow better identification of the role of regulation in limiting management of accounting information. Insurance is among the more regulated industries. This industry generally has less discretion under statutory accounting principles than that allowed unregulated firms under generally accepted accounting principles. Moreover, conversion to stock charter requires specific approval by the state insurance commissioner.¹ Observing accounting management under these circumstances would provide persuasive evidence against the proposition that accounting management can be eliminated by more regulation.

This article is organized as follows. In "Stock-Charter Conversions," hypotheses are developed about incentives for accounting management in the process of conversion of a mutual insurance company to a common stock charter. Next, the data is described. Evidence from hypothesis tests is presented in "Evidence." The conclusions are summarized in the last section.

STOCK-CHARTER CONVERSIONS

Stock-charter conversions are transactions in which an insurance company converts from mutual ownership to common stock charter.² In this section, several

¹ Further, certain adjustments—for example, changing claims settlement policy or reserves—have tax implications and thus also imply oversight by the Internal Revenue Service.

² See the Appendix for a description of conversion methods and a summary of the major differences between common stock and mutual companies.

nonmutually exclusive incentives for conversion to stock charter as well as their associated incentives for accounting management are identified. Conversion hypotheses are labeled the *operating-efficiency*, *growth*, and *private-benefits* hypotheses. Focus then shifts to how one might distinguish among the alternative explanations to identify evidence of accounting management.

Incentives for Conversion to Stock Charter

Operating Efficiency. Mayers and Smith (1988, 1994) argue that different ownership structures offer comparative advantages in specific activities.³ If a company undertakes activities for which its ownership structure is ill-suited, it faces a cost disadvantage and thus has an incentive to convert. This is labeled the *operating-efficiency hypothesis*. For example, by converting, the firm can increase efficiency through added flexibility in compensating the firm's executives. Specifically, stock options, stock appreciation rights, restricted stock, and phantom stock are infeasible for compensating mutual executives and for controlling owner-executive incentive conflicts.

Growth. A mutual's less effective access to capital markets (its inability to sell equity claims) places greater limits on growth. For instance, solvency regulations that stipulate minimum reserve and surplus requirements can impose binding constraints for mutual insurers. Limitations on growth are also imposed by other market institutions—solvency information from rating agencies affects premiums the firm receives for its policies as well as costs of its capital-market operations.

These limitations on growth are expected to be especially important in two cases: (1) where the firm has material growth opportunities because of new or expanding markets and (2) where the firm is facing financial distress or operating difficulties (specifically, a firm experiencing such problems might require additional capital to satisfy regulatory requirements and continue in business). By converting its charter, the firm obtains greater access to capital markets, thereby relaxing these constraints. This is labeled the *growth hypothesis*.⁴

Private Benefits. Conversion can provide private benefits to executives. Effective control of the property rights to the residual income of mutual insurance companies is a contentious issue.⁵ Evidence suggests some executives enjoy special benefits within mutual companies—for instance, the ability to appoint one's heirs to executive positions (see Nicols, 1967). But executives without heirs who are both qualified for and interested in such positions might prefer to convert their firm to a common stock charter and thereafter liquidate their claims. This is labeled the *private-benefits hypothesis*. Management of accounting numbers provides potentially

³ Other works that discuss the implications of ownership structure in the insurance industry include Pottier and Sommer (1997), Wells, Cox, and Gaver (1995), and Lamm-Tennant and Starks (1993).

⁴ Butler, Cui, and Whitman (2000) report survey evidence that supports the operating efficiency and growth hypotheses.

⁵ For example, Hetherington (1969) and Kreider (1972) argue that mutuals are effectively controlled by entrenched incumbent executives; Anderson (1973) disagrees.

important flexibility to affect expected payoffs to executives. Thus, the nature of the executives' property rights and how they are altered through the conversion process is an important aspect of these transactions.

Accounting Management Incentives in Charter Conversions

Conversion regulations require compensation to policyholders for the value of their embedded equity. The firm's accounting statements are important in valuing this claim. For example, Tillman (1985) says, "States that permit conversion either have produced a standardized valuation formula or have deferred to outside professionals, who frequently follow a similar valuation approach. These approaches are derived from the statutory policyholder's surplus at the date of conversion. . . ." Specifically, Kelley (1979) reports that in both the Western Mutual and Iowa Kemper conversions, the value of policyholders' equity was based on policyholder surplus adjusted for unearned premiums, nonadmitted assets, and estimated expenses related to the conversion. Thus, executives who manage reported accounting numbers by lowering surplus can affect a critical input to the valuation process, thereby potentially reducing the fraction of firm value allocated to policyholders.

Reducing value allocated to policyholders allows additional value to be allocated to others—notably, the executives themselves. Executives can capture private benefits directly by obtaining equity in the converting firm on favorable terms, or through side payments from other parties that would like to obtain control. This is called the *surplus-management hypothesis*. Before conversion, executives could reduce surplus by: (1) increasing reserves for losses; (2) establishing losses, but leaving gains unrecognized in the firm's bond portfolio;⁶ or (3) selectively accelerating claims settlement by offering more liberal terms, hence reducing operating income.⁷ The data are examined for evidence of such accounting management.

There are, of course, mechanisms to limit accounting management within the conversion process. Potentially important mechanisms are state regulatory requirements and policyholders' voting rights (in most conversions, policyholders must approve the transaction). Yet, if the firm has many policyholders, none may have incentives to monitor the process carefully. The state insurance commissioner is in a position to internalize free-rider problems among policyholders and control incentives to engage in accounting management. But there are reasons that regulatory oversight might not be effective in limiting surplus management. Regulatory oversight of surplus management normally focuses on solvency—commissioners thus typically focus on limiting overstatement. Additionally, although these events are quite visible, they are infrequent and the regulatory oversight decentralized so that any given insurance commission is likely to have only limited experience with conversions. Thus the potential for accounting management might remain.

⁶ While insurers are required to mark their stockholdings to market, investment-grade bonds are carried at historical cost. For this sample of insurers, stock holdings average 9.4 percent of the asset portfolio; whereas, bonds average 53.5 percent. Other major asset categories carried at historical cost, and their averages, are: cash, 19.0 percent; premium balances due, 7.5 percent; mortgage loans, 4.5 percent; and real estate, 1.8 percent.

⁷ For example, by paying off claims where the loss and expenses are greater than the prior estimates used in assessing the firm's liabilities.

Another potentially important constraint limiting accounting management is the desire to maintain access to capital markets. This constraint should be most effective if the firm plans a concurrent public equity offer. Yet public offers are rare in the sample of converting insurers; associated capital infusions generally occur through private equity offers. In such transactions, proprietary information can be provided to potential qualified (generally sophisticated) investors with contractual assurances that this information will be kept in confidence.

Distinguishing Between Growth and Surplus Management

Three nonmutually exclusive incentives for conversion are identified: growth, operating efficiency, and private benefits. The ability to examine the operating-efficiency hypothesis is limited; there are no good instruments that would allow testing the predictions about which firms convert for this reason. The surplus-management hypothesis identifies a mechanism through which managers potentially capture private benefits in the conversion process. Thus, the empirical analysis focuses on the growth hypothesis and the surplus-management hypothesis—each can be examined with available accounting information.

McNamara and Rhee (1992) (in an examination of life insurer conversions) and Cagle, Lippert, and Moore (1996) (who examine property-liability insurer conversions) contrast the operating efficiency and private benefits hypotheses—their experiments attempt to discern the dominant explanation.⁸ But an important assumption underlying their experiments is that accounting numbers maintain a constant mapping on the underlying economic variables for years surrounding the conversion event. This analysis differs in that potential changes in this mapping are considered—changes that are a result of managerial influence.

The growth hypothesis implies that constraints on growth motivate conversion; if this were all that were to occur in these transactions, accounting numbers simply would reflect circumstances of converting firms. Statutory accounting principles require that revenues be accounted for on an accrual basis (initially new sales are treated as a liability—not revenues). Thus growth initially increases both assets and liabilities, leaving surplus unchanged; hence growth mechanically reduces the ratio of surplus to assets.

The surplus-management hypothesis recognizes the incentive in conversion to understate surplus to reduce the estimated value of the embedded equity, thereby reducing compensation to policyholders. Note that the growth and surplus-management hypotheses are not mutually exclusive—both are potentially important in explaining aspects of accounting numbers reported by converting firms. Yet because these hypotheses are not mutually exclusive, care must be exercised in attempting to distinguish between them. To identify evidence of surplus management, one must account for the mechanical association between surplus to assets and growth. Because of these

⁸ These authors refer to the private benefits hypothesis as the expropriation hypothesis. McNamara and Rhee argue their results support the operating efficiency hypothesis; whereas, Cagle, Lippert, and Moore interpret their evidence as suggesting that neither hypothesis is true; i.e., “that conversions are a ‘neutral mutation’ resulting from a change in marketing strategy.”

concerns (which are similar to those discussed by Jones, 1991), the normal relation between growth and surplus to assets is estimated and surplus management is attributed only to the residual.

In stock-charter conversions, firms' executives have concentrated interests and material input into structuring the transaction. They thus appear well positioned to capture part of any gain from undercompensation of policyholders. For this reason, this analysis focuses on the firm's ownership structure immediately following conversion.

To affect compensation offered to policyholders, surplus management must occur prior to establishing the appropriate level of policyholder compensation in the conversion. But, if executives concentrate surplus-management efforts only at this date, the likelihood of detection is higher, it is more likely to be undone in the valuation, and the expected impact on policyholder compensation is reduced. Thus, surplus management should occur over periods preceeding conversion. Given regulation, the costs of understating surplus are roughly proportional to the length of time over which surplus is understated, and the expected benefits of surplus management depend on the probability of successfully converting. These considerations limit the period preceding conversion over which surplus management should be observed. Following the setting of policyholder compensation, regulatory-solvency and capital-market concerns should lead to increases in surplus. Thus, the accounting management hypothesis implies reversals in reported surplus.

In "Incentives for Conversion to Stock Charter" two cases are highlighted in which the growth hypothesis is expected to be important—where the industry is undergoing rapid growth and where the firm is experiencing financial or operating difficulties. These cases should be correlated with the firm's emerging ownership. Converting firms facing substantial growth opportunities are more likely to offer attractive investment opportunities to the firm's executives and thus emerge from the conversion with the firm's managers in control. Converting firms experiencing operating difficulties are more likely to require capital infusions from outside and hence emerge as either widely held or controlled by other firms. Moreover, if the firm is experiencing operating difficulties, surplus is likely to be impaired and thus the opportunity for further discretionary reductions in surplus are likely to be limited.

Finally, the extent to which firms reduce surplus by recognizing losses but not gains in bond portfolios, accelerating payment of selected underwriting losses, or increasing reserves is examined. This evidence provides insights into the relative costs of adjusting the firm's asset management, claims settlement, and accounting policies.

DATA

An investigation of *Best's Insurance Reports: Property-Casualty* identifies 63 property-liability insurance companies that: (1) are U.S. companies, (2) have data other than the fact of conversion available in *Best's* (of the 63 firms, three have two years of data and two have three), (3) have converted from mutual to stock charter between 1925 and 1988, and (4) have at least 5 years between dates of incorporation and conversion (see Table A3 in the Appendix). The sample is clustered both in time and geographically. Approximately 30 percent of the conversions occur in the 1960s, and again in the

1980s, with 17 percent in the 1970s.⁹ Thus, across the sample period conversions have become more frequent. Illinois has the largest concentration of conversions (13) and Ohio is second (6).

Year 0 contains data from the end of the year in which the conversion occurs. Data from *Best's* beginning 10 years prior to conversion and continuing through 10 years beyond (or until the firm disappears) is collected; thus, the conversion file extends from years -10 to $+9$. Most results are reported over years -4 to $+4$ to economize on table sizes. The following accounting data is gathered from *Best's*:

Total admitted assets: statutorily approved assets. This is a measure of firm size. Total admitted assets is used for selecting matching firms. Annual percentage change in total admitted assets is a measure of asset growth.

Total liabilities: the company's fixed claims.

Direct premiums written: an insurance company's sales. This is an alternate measure of size. Annual percentage change in direct premiums written is a measure of growth.

Net premiums written: direct premiums written plus payments received for reinsurance assumed less payments made for reinsurance ceded.

Underwriting profit: premiums earned less underwriting expenses and losses.

Investment gain: the profitability of the company's asset portfolio: total investment gains less expenses, which includes realized gains and losses as well as interest and dividend income.

Surplus: total admitted assets minus total liabilities. This is a measure of coverage afforded policyholders.

Matching Samples. The above data also are collected for matching mutual and stock samples. The matching mutual sample is obtained by examining *Best's* in the year of first available data for each converting firm and selecting the firm closest in size (total admitted assets) from among the next 10 listed mutuals (alphabetically). The same procedure is followed for the matching stock sample, except that firms are selected based on the year of conversion (or the year of first available data if later). In 12 cases where the first available data are from the conversion year or later, no matching mutual is identified. Data for matching mutuals and stocks are collected until year $+9$ or until the firm disappears from *Best's*.

Sample Description. Mean total admitted assets for converting mutuals at the end of year 0 is \$53.7 million; the median is \$13.6 million. (These summary statistics are price-level adjusted to 1995 dollars.) Sizes of converting companies and matching mutuals are indistinguishable based on either Kruskal-Wallis (K/W) or *t*-tests. Matching stocks are marginally smaller than converting companies at the end of the conversion year (mean = \$28.1 million). Sample sizes are not constant through event time. Firms are

⁹ The remainder of the distribution has 2 percent in the 1920s and 10 and 11 percent in the 1940s and 1950s, respectively.

delisted from *Best's* because of merger or insolvency. Further, data for the period before conversion are more limited than for the postconversion period, with only 41 converting-firm data series extending back to year -5 . There is a noticeable jump in the size of the converting mutual sample at year 0—the conversion year is frequently the first year of coverage by *Best's*.¹⁰ (Note that the method for selecting matching mutuals implies a potential survival bias in the converting sample relative to the matching-mutual sample over years prior to the conversion. Some matching mutuals disappear from *Best's* prior to the conversion year, while by construction, all of the converting mutuals survive to conversion.)

Ownership after Conversion. The *History* and *Management* sections of the first *Best's* after conversion are used to classify ownership of successor companies. Firms are classified as closely-held if *Best's* indicates that at least 50 percent of its stock is held by either an individual, a small group (like officers and directors), or another firm. This classification is reported in Table A3 of the Appendix; whether companies are widely or closely held and who the owners are also is denoted. This ownership distribution is noteworthy. Of the sample firms, 51 are classified as closely held and nine as widely held (insufficient information precludes classifying three firms). Closely held firms are classified further as management controlled (20) or not (31). For management-controlled firms, former mutual executives are identified as holding majority share ownership either directly or through another entity (for example, an insurance agency) after conversion. The remaining closely held companies are owned by mutual insurance companies (13), and by various corporations or associations (18).

Information in *Best's* indicates that public offers of shares by the new stock companies are rare. For example, only one reference to a public offering around the date of conversion is found. (This aspect of the process appears to differ materially from that of savings and loan charter conversions—see Masulis, 1987.) Yet private placements are frequent. *Best's* reports new capital obtained from either a small group of individuals (like the executives) or another firm for 53 of the 63 firms in the sample.

EVIDENCE

The growth and surplus-management hypotheses now are examined.

Growth Hypothesis

Sales and Asset Growth. Conversion to stock charter reduces constraints on growth by providing the firm greater access to capital markets. Tables 1 and 2 contain year-by-year comparisons of percentage changes in total admitted assets and percentage changes in direct premiums written, respectively. Comparing converting companies with matching mutuals indicates substantial abnormal growth in direct premiums written that begins the year following conversion, and continues through the fourth year beyond conversion. This is reflected in significant differences in both means (years: $+1$ and $+3$) and distributions (years: $+1$ through $+4$). This sales growth

¹⁰ Statements about relative sizes of converting firms and matching mutuals and stocks are unchanged when the sample is restricted to include only firms with data available over the -4 - to $+4$ -year period.

TABLE 1
Summary Statistics for Percentage Changes of Total Admitted Assets for Years Surrounding Conversion to Stock Charter for a Sample of 63 Property-Liability Insurance Companies Over the Period 1925–1988. Statistics Are Compared With Those of Samples of Mutual and Stock Firms Matched by Size and Time

Year	Converting Mutuals			Matching Mutual Companies					Matching Stock Companies					Converting Mutuals		
	Mean (std. dev.)	Median (n)		Mean (std. dev.)	Median (n)	Tests: K/W <i>t</i> -test, <i>p</i> -values	Mean (std. dev.)	Median (n)	Tests: K/W <i>t</i> -test, <i>p</i> -values	Mean (std. dev.)	Median (n)	Tests: K/W <i>t</i> -test, <i>p</i> -values		Mean (std. dev.)	Median (n)	
–4	0.146 (0.203)	0.107 (42)		0.100 (0.103)	0.100 (36)	0.5953, 0.2279								0.217, 0.253 (11)	0.120, 0.093 (31)	
–3	0.104 (0.198)	0.110 (42)		0.101 (0.130)	0.100 (35)	0.9266, 0.9462								0.139, 0.144 (11)	0.091, 0.093 (31)	
–2	0.194 (0.324)	0.134 (43)		0.149 (0.197)	0.114 (38)	0.6771, 0.4557								0.434, 0.261 (11)	0.111 ^a , 0.098 ^a (32)	
–1	0.163 (0.316)	0.081 (43)		0.064 (0.130)	0.045 (38)	0.1821, 0.0747								0.392, 0.341 (11)	0.084 ^a , 0.075 ^a (32)	
0	0.343 (0.801)	0.148 (45)		0.085 (0.097)	0.057 (38)	0.0052, 0.0520								0.734, 0.485 (14)	0.167 ^a , 0.125 ^a (31)	
+1	0.219 (0.302)	0.142 (58)		0.099 (0.086)	0.099 (36)	0.0641, 0.0221	0.133 (0.225)	0.099 (56)	0.1062, 0.0853	0.133 (0.225)	0.099 (56)	0.1062, 0.0853		0.349, 0.249 (19)	0.156 ^a , 0.099 ^a (39)	
+2	0.196 (0.223)	0.147 (59)		0.093 (0.111)	0.089 (35)	0.0133, 0.0118	0.157 (0.177)	0.142 (57)	0.3739, 0.2992	0.157 (0.177)	0.142 (57)	0.3739, 0.2992		0.297, 0.289 (20)	0.145 ^a , 0.140 ^a (39)	
+3	0.192 (0.207)	0.172 (59)		0.088 (0.087)	0.091 (34)	0.0056, 0.0066	0.174 (0.310)	0.119 (54)	0.2799, 0.7061	0.174 (0.310)	0.119 (54)	0.2799, 0.7061		0.193, 0.102 (21)	0.192, 0.203 (38)	
+4	0.233 (0.649)	0.130 (53)		0.100 (0.104)	0.113 (28)	0.1706, 0.2872	0.188 (0.217)	0.146 (49)	0.3365, 0.6474	0.188 (0.217)	0.146 (49)	0.3365, 0.6474		0.183, 0.164 (19)	0.260, 0.110 (34)	

^aSignificantly different from management control firms at the 0.05 level or better.

TABLE 2
Summary Statistics for Percentage Changes of Direct Premiums Written for Years Surrounding Conversion to Stock Charter for a Sample of 63 Property-Liability Insurance Companies Over the Period 1925–1988. Statistics Are Compared With Those of Samples of Mutual and Stock Firms Matched by Size and Time

Year	Converting Mutuals			Matching Mutual Companies			Matching Stock Companies			Converting Mutuals		
	Mean (std. dev.)	Median (n)	Tests: K/W <i>t</i> -test, <i>p</i> -values	Mean (std. dev.)	Median (n)	Tests: K/W <i>t</i> -test, <i>p</i> -values	Mean (std. dev.)	Median (n)	Tests: K/W <i>t</i> -test, <i>p</i> -values	Management Control	Mean, Median (n)	Other Mean, Median (n)
–4	0.194 (0.465)	0.088 (31)	0.062 (0.160)	0.055 (31)	0.055 (31)	0.1977, 0.1400				0.488, 0.220 (6)	0.124 ^b , 0.071 (25)	
–3	0.094 (0.299)	0.071 (31)	0.102 (0.164)	0.088 (31)	0.088 (31)	0.3209, 0.8864				0.223, 0.039 (6)	0.063, 0.071 (25)	
–2	0.131 (0.277)	0.073 (33)	0.125 (0.362)	0.055 (35)	0.055 (35)	0.7266, 0.9381				0.483, 0.377 (6)	0.053 ^a , 0.060 ^a (27)	
–1	0.077 (0.237)	0.053 (34)	0.048 (0.162)	0.054 (34)	0.054 (34)	0.8062, 0.5584				0.128, 0.074 (6)	0.067, 0.053 (28)	
0	0.054 (0.417)	0.058 (38)	0.089 (0.125)	0.055 (35)	0.055 (35)	0.4139, 0.6362				0.203, 0.118 (9)	0.007, 0.035 (29)	
+1	0.856 (1.949)	0.230 (48)	0.080 (0.144)	0.087 (33)	0.087 (33)	0.0008, 0.0254	0.208 (0.526)	0.147 (44)	0.0209, 0.0354	1.111, 0.516 (14)	0.752, 0.188 ^b (34)	
+2	0.287 (0.761)	0.186 (54)	0.1033 (0.112)	0.099 (34)	0.099 (34)	0.0449, 0.1671	0.432 (1.329)	0.157 (48)	0.8223, 0.4926	0.180, 0.190 (18)	0.336, 0.186 (36)	
+3	0.306 (0.480)	0.208 (54)	0.084 (0.114)	0.087 (33)	0.087 (33)	0.0003, 0.0107	0.303 (1.050)	0.130 (44)	0.0820, 0.0860	0.225, 0.226 (19)	0.350, 0.201 (35)	
+4	0.183 (0.335)	0.198 (47)	0.099 (0.111)	0.114 (28)	0.114 (28)	0.0855, 0.2027	0.828 (3.925)	0.181 (40)	0.9828, 0.2646	0.172, 0.248 (17)	0.189, 0.130 (30)	

^aSignificantly different from the management control firms at the 0.05 level or better.

^bSignificantly different from the management control firms at the 0.10 level or better.

appears to follow similar abnormal growth in total admitted assets. There is significant abnormal asset growth beginning in the conversion year and extending through year +3.

When matching stocks are used for comparison, evidence of abnormal growth is less pronounced. Evidence of asset growth is observed only for the first year after conversion (not extending through year +3 or +4). Although there is some evidence of premium growth extending through year +3, the evidence is weaker. This pattern suggests that conversions are more likely during periods of industry growth. In such circumstances, mutuals grow at slower rates than stocks (presumably, because of their more restricted access to capital); hence benefits of converting are particularly high.

Ownership and Growth. Tables 1 and 2 also provide comparisons between converting mutuals classified as management-controlled and the other converting firms. Management-controlled firms experience higher growth rates in admitted assets with significant differences in both means and distributions over years -2 through +2. For instance, in the conversion year the median management-controlled firm increases admitted assets by 48.5 percent, compared to 12.5 percent for the median of the other firms. There also is some evidence that suggests higher premium growth for management-controlled firms. This evidence is less uniform and more difficult to interpret than the asset-growth evidence (smaller sample sizes contribute—only six firms have sufficient data to calculate premium growth over years -4 through -1). Point estimates of means and medians are larger for management-controlled firms over years -2 through +1; differences are significant in years -2 and +1.¹¹

Thus, evidence of premium growth appears to follow asset growth for the conversion sample. This growth begins with an infusion of capital at conversion. For the entire sample, premium growth is significant only following conversion; for management-controlled firms, it also is significant prior to conversion. This relation is examined in more detail with an untabulated regression of growth in direct premiums written for year +1 on growth in total admitted assets for year 0 plus dummy slope and intercept variables indicating management-controlled firms. This regression provides no evidence of a positive association between premium growth for year +1 and asset growth in the conversion year for management-controlled firms (p -value = 0.93).

¹¹ Note two points: First, the growth hypothesis suggests that abnormal growth should occur in years surrounding conversion; this hypothesis does not imply that there should be significant differences in growth rates in specific years. Perhaps testing cumulative differences would be more appropriate, but this is difficult to implement because of the changes in the sample observations from year to year. Second, because the management-controlled firms are smaller (median = \$1.8 million) than the other firms (median = \$16.7 million), one might surmise the higher growth rates relate to firm size and not ownership differences. The growth rates in assets and direct premiums written are regressed (year-by-year) on the log of admitted assets and an indicator variable for the management-controlled firms. The asset-growth regressions always indicate management control is significant but not size (over years -2 through +2). The premium growth regressions (estimated over years -2 through +1) indicate that both variables are insignificant in all years except -2 where the management-control variable is significantly positive but firm size is insignificant.

There is only weak evidence of an association for other converting firms (p -value = 0.19).

The evidence is consistent with the hypothesis that charter conversion facilitates the acquisition of capital and relaxes constraints on growth imposed by the mutual firm. But without examining financial or operating performance, this evidence cannot separate the two cases mentioned above—where the industry is undergoing rapid growth versus where the firm is experiencing financial or operating difficulties (this evidence is reported below in “Methods of Surplus Management”). Evidence for management-controlled firms appears more consistent with rapid growth. For these firms, higher growth in assets and premiums begin prior to conversion. Perhaps they are reducing operating margins and growing faster while expecting capital infusions accompanying conversion. In this case, deterioration of financial ratios would be forecast to be temporary and thus of less concern to executives and regulators. Also, these firms might anticipate less involvement with outside sources of funding—primary suppliers of additional capital at conversion are officers and directors of the former mutual companies.¹²

Surplus-Management Hypothesis

The basis for policyholder compensation is generally the insurer’s surplus, “after deducting contributed or borrowed surplus funds, plus a reasonable present equity in its reserves and in all nonadmitted assets.”¹³ Thus prior to conversion, executives have an incentive to understate surplus and attempt to reduce value allocated to policyholders.

Surplus. Table 3 reports evidence on surplus around conversion. This evidence shows the ratio of surplus to total admitted assets is lower for converting firms than matching mutuals in years before conversion. This difference is most pronounced at year -1 . There also is evidence that ratios are lower compared to matching mutuals following conversion. The average difference rises from -7.8 for the 3 years before conversion to -3.2 for the 3 years following conversion.

The first differences in the ratios also are examined (untabulated). There is a significant decline in the ratio of surplus to assets in the year before conversion that is similar for both management-controlled and other firms, (4% for the management-controlled firms and 4.8% for other firms). But there is another significant decline at year -3 (an average of 3.8 percent) that occurs only for management-controlled firms. This earlier reduction in surplus to assets coincides with high sales growth. There also is a smaller increase following conversion for management-controlled firms. This evidence is consistent with two basic interpretations: surplus management and growth.

¹² See the Appendix where postconversion ownership is described for the sample. Outside funding for the other-than-management-controlled firms generally come through private equity offers; sources include the Prudential, Lumbermans, and the W. R. Berkeley Corp., as examples.

¹³ From the statutory authority of the State of Alabama, §27-27-44, authorizing conversion from mutual to stock charter.

TABLE 3
 Summary Statistics for the Surplus (Total Admitted Assets – Total Liability)/Total Admitted Assets) for Years Surrounding Conversion to Stock Charter for a Sample of 63 Property-Liability Insurance Companies Over the Period 1925–1988. Statistics Are Compared With Those of Samples of Mutual and Stock Firms Matched by Size and Time

Year	Converting Mutuals			Matching Mutual Companies				Matching Stock Companies				Converting Mutuals		
	Mean (std. dev.)	Median (n)		Mean (std. dev.)	Median (n)	Tests: K/W <i>t</i> -test, <i>p</i> -values		Mean (std. dev.)	Median (n)	Tests: K/W <i>t</i> -test, <i>p</i> -values		Mean, Median (n)	Mean, Median (n)	Other
–4	35.4 (17.7)	31.6 (41)		39.3 (14.4)	36.9 (37)	0.1482, 0.2923						36.4, 39.3 (11)	35.0, 30.3 (30)	
–3	34.4 (16.9)	31.15 (42)		40.8 (14.6)	37.3 (39)	0.0140, 0.0754						32.6, 30.5 (11)	35.0, 31.7 (31)	
–2	35.13 (18.4)	31.8 (42)		40.8 (15.4)	39.8 (40)	0.0403, 0.1448						33.5, 32.8 (11)	35.9, 31.5 (31)	
–1	30.9 (18.6)	26.7 (45)		42.1 (14.0)	41.4 (38)	0.0003, 0.0032						30.5, 30.2 (14)	31.1, 24.4 (31)	
0	38.9 (23.2)	30.7 (57)		41.3 (14.5)	40.4 (38)	0.0627, 0.5805		50.1 (25.9)	51.1 (59)	0.0088, 0.0157		33.7, 30.7 (19)	41.6, 31.8 (38)	
+1	35.7 (18.3)	31.1 (58)		40.5 (14.5)	40.8 (36)	0.0465, 0.1909		48.5 (21.5)	48.1 (58)	0.0007, 0.0008		29.7, 25.7 (20)	38.8, 34.2 (38)	
+2	37.4 (17.9)	36.3 (60)		39.7 (14.3)	39.4 (35)	0.2767, 0.5214		46.3 (21.2)	43.4 (59)	0.0134, 0.0146		35.3, 33.3 (21)	38.5, 36.6 (39)	
+3	35.6 (17.5)	31.4 (58)		39.2 (13.1)	39.2 (34)	0.0806, 0.2984		45.2 (13.1)	41.2 (54)	0.0123, 0.0125		33.6, 27.7 (21)	36.8, 33.2 (37)	
+4	33.1 (16.0)	29.9 (52)		38.6 (14.0)	40.8 (28)	0.0528, 0.1315		44.0 (19.5)	43.4 (49)	0.0028, 0.0026		30.7, 27.9 (19)	34.5, 30.4 (33)	

Growth and Surplus. To assess the importance of growth as an explanation for the surplus reduction, pooled cross-sectional and time-series regressions are estimated (untabulated) of the first difference in surplus on the first difference in direct premiums written, where both variables are scaled by beginning-of-year-total admitted assets. Dummy variables indicating event years around conversion (i.e., -3 , -2 , -1 , 0) are included. The dummy variable coefficients for years -1 and 0 are reliably negative and positive, respectively (p -values < 0.001), indicating the abnormal surplus change over the year prior to conversion is not explained by growth in premiums.¹⁴

Thus the reduction in surplus to assets does not appear to be explained by a mechanical association between surplus to assets and growth. It still might be attributed to firms having operating problems, but as the arguments presented above imply, and as the evidence is suggesting, this is more likely an explanation for firms that seek capital infusions from outside—those that are classified as other than management-controlled.

Methods of Surplus Management

Elements of policyholders' surplus are decomposed to identify more accurately the components of surplus reductions that are discretionary. First, investment and underwriting gains are examined; in both, executives have discretion in when they recognize losses and gains. Then changes in liabilities are examined. Policyholders' surplus can be affected through adjustments to items such as estimated losses and expenses.

Findings include: (1) significant underperformance in investment returns by management-controlled firms, but normal investment performance for other converting firms; (2) normal underwriting experience for management-controlled firms, but abnormally poor underwriting experience for other firms; (3) positive discretionary components of firm's liabilities prior to and in the year of conversion; and (4) weak evidence that discretionary components are larger in management-controlled firms. These results suggest two things.¹⁵ First, evidence from management-controlled firms appears more consistent with the surplus-management hypothesis whereas the evidence from the other than management-controlled firms appears more consistent with the growth hypothesis. Second, firms manage accounting numbers by adjusting reserves and by managing realized investment returns—not by changing the firm's claims-settlement policy.

Investment Returns. Table 4 reports evidence on investment returns (investment gain scaled by assets at the beginning of the year). The evidence from the overall conversion

¹⁴ Regressions including lagged first differences in direct premiums written and separate year indicators for management-controlled firms also are estimated. Lagged first differences are marginally significant; separate indicators are never significant. Thus, the reduction in surplus for management-controlled firms at year -3 is explained by growth in direct premiums written. (Regressions use White-corrected standard errors.) This and other pooled regressions also are estimated using generalized least squares (GLS) that allows for autocorrelation in the residuals, as well as heteroskedasticity. Results in these sensitivity checks are qualitatively the same as those presented.

¹⁵ Because of the limited sample and other data constraints, there are understandable concerns about power. Yet since significant results are observed in each sub-sample, the tests arguably have reasonable power.

TABLE 4
 Summary Statistics for Investment Returns on Assets (Investment Gain Scaled by Assets at the Beginning of the Year) for Years Surrounding Conversion of Stock Charter for a Sample of 63 Property-Liability Insurance Companies Over the Period 1925–1988. Statistics Are Compared With Those of a Sample of Mutual Firms Matched by Size and Time

Year	Converting Mutuals		Matching Mutual Companies			Converting Mutuals		
	Mean (std. dev.)	Median (n)	Mean (std. dev.)	Median (n)	Tests: K/W <i>t</i> -test, <i>p</i> -values	Management Control		Others
						Mean, Median (n)	Mean, Median (n)	
–4	0.042 (0.033)	0.036 (38)	0.054 (0.056)	0.042 (36)	0.3292, 0.2140	0.042, 0.023 (10)	0.042, 0.039 (28)	
–3	0.043 (0.035)	0.043 (38)	0.048 (0.039)	0.042 (35)	0.7331, 0.4845	0.014, 0.019 (10)	0.053 ^a , 0.054 ^a (28)	
–2	0.052 (0.034)	0.049 (39)	0.057 (0.034)	0.056 (38)	0.3372, 0.4469	0.031, 0.021 (10)	0.059 ^a , 0.056 ^a (29)	
–1	0.038 (0.036)	0.040 (37)	0.034 (0.036)	0.035 (38)	0.8031, 0.6903	0.025, 0.020 (10)	0.043, 0.044 ^a (27)	
0	0.036 (0.056)	0.033 (38)	0.049 (0.049)	0.047 (38)	0.2454, 0.2427	0.043, 0.033 (13)	0.032, 0.031 (25)	
+1	0.049 (0.041)	0.042 (49)	0.059 (0.074)	0.041 (36)	0.8132, 0.4005	0.040, 0.035 (17)	0.054, 0.052 (32)	
+2	0.050 (0.033)	0.046 (53)	0.056 (0.035)	0.055 (35)	0.1509, 0.3766	0.045, 0.034 (19)	0.052, 0.052 (34)	
+3	0.039 (0.067)	0.049 (52)	0.057 (0.036)	0.062 (34)	0.0652, 0.1459	0.015, 0.024 (19)	0.053 ^b , 0.053 ^b (33)	
+4	0.051 (0.029)	0.048 (47)	0.046 (0.029)	0.047 (28)	0.9484, 0.5289	0.042, 0.045 (17)	0.056, 0.054 (30)	

^aSignificantly different from the management control firms at the 0.05 level or better.

^bSignificantly different from the management control firms at the 0.10 level or better.

sample does not support the surplus-management hypothesis—mean and median ratios for these firms are similar to those for matching mutuals. However, focusing on just the management-controlled firms provides evidence consistent with surplus management. Starting three years prior to conversion, management-controlled converting mutuals report significantly lower investment earnings than other converting firms or the matching mutuals. This significantly lower return continues through year -1 . There also is weak evidence of lower investment earnings in year $+3$.

Since these investment results simply could reflect poor financial performance (interest rates and stock returns vary across the sample period, and management-controlled firms differ from other firms—they operate in fewer lines of business and their investment portfolios differ), other potentially important factors must be controlled. Pooled cross-sectional and time-series regressions (untabulated) are estimated. Investment returns are regressed on a series of indicator variables for management-controlled firms, the year of conversion, event years (i.e., -1 , -2 , and -3), and a variable that interacts management control and event years. While the coefficient on the management-control variable is an insignificant 0.003 , the coefficient on the interaction between event years and management control is a significant negative 1.3 percent (p -value = 0.039 —regression t -statistics are calculated with White-corrected standard errors). The coefficient on the event-year indicator variable is an insignificant 0.002 , but an F test of whether the sum of these two variables differs from zero is significant (p -value < 0.01). Thus, after controlling for ownership differences and year of conversion, significant under-performance in investment returns is found for management-controlled firms. Since incentives to manage surplus should be stronger within this set of firms, this investment-return evidence appears consistent with surplus management.

To provide perspective on potential understatements, assume there is no discretionary accounting management ongoing within other converting firms' asset portfolios. The sum of the differences in asset portfolio performance between management-controlled firms and other firms over years -3 through -1 is -3.9 percent. The total drop in surplus over the same period (from year -4 through -1) for management-controlled firms is approximately 9 percent of assets. In this case, understatement through management of the firm's asset portfolio would appear to represent an important component of surplus reduction.

Underwriting Returns. Table 5 reports evidence on underwriting return on assets (underwriting profit scaled by beginning of year assets). This evidence is consistent with surplus management: in years 0 and -1 , performance is lower for converting companies than for matching mutuals. There is no difference between underwriting experiences of management-controlled firms and matching mutuals, but there is a difference comparing management-controlled firms with other converting companies. Thus, evidence for poor underwriting experience is within the other converting mutuals—not the management-controlled firms. Since incentives to manage surplus should be weaker within the other converting mutuals and stronger within the set of management-controlled firms, this evidence of lower underwriting returns appears more consistent with the operating-difficulties case of the growth hypothesis than with the surplus-management hypothesis.

TABLE 5 Summary Statistics for Underwriting Return on Assets (Underwriting Profit Scaled by Assets at the Beginning of the Year) for Years Surrounding Conversion of Stock Charter for a Sample of 63 Property-Liability Insurance Companies Over the Period 1925–1988. Statistics Are Compared With Those of a Sample of Mutual Firms Matched by Size and Time

Year	Converting Mutuals			Matching Mutual Companies			Converting Mutuals		
	Mean (std. dev.)	Median (n)	Mean (std. dev.)	Median (n)	Tests: K/W <i>t</i> -test, <i>p</i> -values	Converting Mutuals			
						Management Control	Others		
						Mean, Median (n)	Mean, Median (n)		
-4	0.001 (0.080)	0.003 (39)	0.024 (0.077)	0.023 (36)	0.1935, 0.4070	0.024, 0.001 (11)	0.024, 0.001 (11)	-0.005, 0.002 (28)	
-3	0.010 (0.074)	-0.001 (39)	0.023 (0.072)	0.028 (35)	0.5035, 0.6661	0.037, 0.023 (11)	0.037, 0.023 (11)	-0.001, -0.002 (28)	
-2	0.004 (0.109)	-0.003 (40)	0.012 (0.148)	0.009 (38)	0.3667, 0.9418	0.049, 0.035 (11)	0.049, 0.035 (11)	-0.014, -0.008 (29)	
-1	-0.007 (0.117)	-0.007 (40)	0.034 (0.101)	0.024 (38)	0.0384, 0.1951	0.090, 0.047 (11)	0.090, 0.047 (11)	-0.044 ^a , -0.030 ^a (29)	
0	-0.045 (0.156)	-0.035 (44)	0.019 (0.089)	0.006 (38)	0.0406, 0.0802	-0.008, 0.005 (14)	-0.008, 0.005 (14)	-0.063, -0.040 (30)	
+1	-0.061 (0.186)	-0.026 (54)	0.004 (0.071)	0.007 (36)	0.0142, 0.0799	-0.013, -0.015 (18)	-0.013, -0.015 (18)	-0.085, -0.026 (36)	
+2	-0.017 (0.090)	-0.012 (57)	0.004 (0.072)	0.005 (35)	0.2102, 0.3887	-0.006, -0.010 (20)	-0.006, -0.010 (20)	-0.030, -0.013 (37)	
+3	-0.036 (0.123)	-0.024 (57)	0.011 (0.062)	0.008 (34)	0.0296, 0.0806	-0.023, -0.028 (21)	-0.023, -0.028 (21)	-0.044, -0.023 (36)	
+4	-0.018 (0.099)	-0.013 (53)	0.025 (0.077)	0.024 (28)	0.0461, 0.1170	0.004, -0.006 (19)	0.004, -0.006 (19)	-0.030, -0.022 (34)	

^aSignificantly different from the management control firms at the 0.05 level or better.

Liability Management: Reserves. An insurer can manage its surplus by adjusting its liabilities. A major component of an insurer's liabilities are reserves; reserves include estimates of losses and expenses that executives know have occurred and estimates of losses and expenses that are presumed to have occurred but are not yet reported. The bases for such estimation allow discretion.¹⁶

To identify effects of accounting management, the discretionary (or abnormal) component of the converting firms' annual changes in total liabilities are estimated. The discretionary component is defined as the difference between the actual change and that predicted by a cross-sectional regression. Annual cross-sectional regression models are estimated for years surrounding the conversion year using data from matching mutuals (through year 0) and matching stocks (year +1 and beyond). The change in total liabilities is regressed on the change in net premiums written and the log of total admitted assets. Changes in liabilities and premiums are annual first differences scaled by beginning-of-year assets. Size is included in the regressions because smaller firms that offer more specialized, higher-service policies should have higher administrative expenses; their expected losses and, therefore, their reserves per dollar of premium income will be lower. Results of OLS estimation suggest the chosen variables are reasonable predictors; these regressions (untabulated) have an average adjusted R^2 of 0.60, with minimum and maximum of 0.38 and 0.82, respectively.¹⁷

Table 6 contains mean and median estimates of the discretionary component of the changes in total liabilities for years surrounding conversion. The estimates indicate this abnormal component is significant in years -1, 0, and +1. The important time for managing accounting information is prior to completion of conversion. Thus, the -1 and 0 years are particularly important for the surplus-management hypothesis. The significant negative abnormal liability change in year +1 (as discussed further below) is consistent with a reversal of the year -1 and 0 abnormal changes.¹⁸

Large positive mean and median estimates (9.6 and 6.7 percent of assets, respectively) for year -1 also are significant when compared with estimates in other years

¹⁶ The liability from unexpired contracts is the unearned premium reserve. Although currently it is calculated using a standard formula (suggesting little room for discretion), there apparently has been discretion exercised in this calculation historically. Protective Fire and Casualty reports in *Best's*: "The underwriting account for 1957, established on the statutory basis, developed a loss of \$133,989, an amount equal to about 44% of the recorded earned premiums. This magnified deficit marked new reserves to cover unearned premiums. Such reserves are now maintained on the 100% basis. This compares with 64% reserves set up at the 1956 year end." Current rules in all states require unearned premium reserves to be maintained on the "100% basis." The required calculation is equal to the premium on the contract times the fraction of the policy period that is unexpired.

¹⁷ To examine robustness, regressions are estimated that include the squared change in net premiums written to capture potential nonlinearities (for example, because new policies are expected to generate reserves at a higher level than old policies). Pooled time series and cross-sectional models and various robust methods also are tried. Since alternative specifications do not change the major qualitative results, only the simpler model results are reported.

¹⁸ The mean estimate for year 0 is overstated slightly. Year-end reports following conversion can include undistributed surplus due to policyholders under the terms of conversion as a new liability. In the sample, five firms have such an allocation. Subtracting these values reduces the mean discretionary component from 8.8 to 7.6 percent.

TABLE 6

Summary Statistics for Estimated Abnormal Changes in Total Liabilities (Scaled by Assets at the Beginning of the Year) for Years Surrounding Conversion to Stock Charter for a Sample of 63 Property-Liability Insurance Companies Over the Period 1925–1988. The Abnormal Change in Liabilities is the Difference Between the Actual Change and the Expected Change from a Benchmark Model. The Change in Total Liabilities Benchmark Model Is Estimated Using the Matching Mutuals (Matching Stocks From Period One on) and Annual Ordinary Least Squares Cross-Sectional Regressions

Year	Estimated Abnormal Liability			Tests:	Management Control Subsample	
	Mean	Median	Std. Dev.	Sign Rank (<i>t</i> -test, <i>p</i> -values)	Management Control (Mean, Median (n))	Other (Mean, Median (n))
–4	0.035	–0.004	0.148	0.8088, 0.1441	0.077, 0.071 (11)	0.019, –0.008 (29)
–3	0.003	0.004	0.099	0.7675, 0.8594	0.002, 0.009 (11)	0.003, –0.001 (29)
–2	–0.047	–0.014	0.184	0.3409, 0.1123	–0.145, –0.057 (11)	–0.011 ^a , –0.009 (30)
–1	0.096	0.067	0.152	0.0001, 0.0002	0.103, 0.089 (11)	0.093, 0.054 (30)
0	0.088	0.039	0.300	0.0460, 0.0584	0.230, 0.105 (14)	0.021 ^a , 0.019 ^a (30)
+1	–0.068	–0.065	0.133	0.0001, 0.0001	–0.048, –0.058 (18)	–0.078, –0.065 (39)
+2	–0.013	–0.019	0.151	0.1028, 0.5291	0.040, –0.010 (19)	–0.040, –0.036 (37)
+3	0.022	0.020	0.108	0.3157, 0.1319	0.026, –0.021 (20)	0.020, 0.026 (36)
+4	0.087	–0.002	0.648	0.8130, 0.3449	–0.017, –0.023 (18)	0.146, –0.001 (32)

^aSignificantly different from the management control firms at the 0.05 level or better.

(excluding year 0)—using the Kruskal-Wallis test, *p*-values are always less than 0.01. Evidence is not as strong using the two-sample *t*-test (*p*-values are less than 0.01 for all years except –4 and +4, where they are 0.07 and 0.92, respectively)—but the *t*-test is less reliable in the presence of outliers. The abnormal components also are tested for differences across time. Abnormal liability changes from 1969 and earlier are compared with those from 1970 and later for years 0, –1, and +1. There are no significant differences with either the two-sample *t*-test or the Kruskal-Wallis test—the smallest *p*-value is 0.3027.

Table 6 also contains a comparison between management-controlled and other firms. There are significant differences, primarily in year 0,¹⁹ where the discretionary components are larger for management-controlled firms, but also in years –2 and –1. The Kruskal-Wallis test provides weak evidence suggesting discretionary components are larger for management-controlled firms in year –1 (*p*-value = 0.11); the *t*-test suggests discretionary components are smaller in year –2.

Liability Management: Losses Incurred. If firms manage surplus by overstating reserves for losses incurred, they must report higher losses as well. If they increase reserves beyond the firm's usual experience (based on net premiums written) then changes in

¹⁹ Significance is unaltered by subtracting allocations to liability of undistributed surplus due to policyholders in the five cases (see footnote 18). Mean estimates of abnormal liability changes are reduced to 20.8 and 1.4 percent for management-controlled firms and the remainder of the sample, respectively.

incurred losses and estimated discretionary components of the liability change should be correlated. Rather than surplus management, unusual loss experience might cause changes in estimated liabilities not captured by the predictive models and also produce a positive correlation. This unusual-loss hypothesis would be more credible if unusual losses precede the start of the conversion process—if after incurring unusual losses, firms convert. Since the evidence suggests the opposite (given a conversion planning horizon of at least 2 or 3 years) support for this hypothesis is weak.²⁰

Data are collected on converting firms' incurred losses (that include adjustment and underwriting expenses). The sensitivity of discretionary components to firms' loss experience is then examined in a pooled cross-sectional and time-series regression estimated over years -5 to $+4$, with a total of 386 firm-year observations:²¹

$$\begin{aligned} \Delta \text{tot liab} = & -0.014 + 0.084 \text{ yr dum} + 0.003 \text{ mgt cntl} + 0.003 \Delta \text{loss} \\ & (-2.30) \quad (3.10)^b \quad (-0.14) \quad (0.03) \\ & + 0.019 \text{ yr dum} * \text{mgt cntl} - 0.473 \text{ yr dum} * \Delta \text{loss} \\ & (0.29) \quad (-1.94) \\ & - 0.155 \Delta \text{loss} * \text{mgt cntl} + 1.076 \text{ yr dum} * \text{mgt cntl} * \Delta \text{loss}. \\ & (-1.06) \quad (3.95)^b \end{aligned}$$

The dependent variable ($\Delta \text{tot liab}$) is the estimated discretionary component. Independent variables are an indicator variable for year -1 or 0 (yr dum), an indicator variable for management control (mgt cntl) and the annual change in incurred loss (Δloss). (The change-in-loss variable is the annual first difference scaled by assets at the beginning of the year.) The regression includes variables interacting all the variables with the change in loss and with the interaction of the change in loss and management control.

The year dummy and change-in-loss interaction is insignificantly negative, but the year dummy interacting with management control and the change in loss is significantly positive. Further, the sum of these two coefficients is significantly positive (p -value < 0.01). Thus, estimated abnormal changes in total liabilities are correlated with firms' changes in incurred losses over the year of conversion and the year prior, but only for management-controlled firms. There is no evidence supporting a positive

²⁰ See, for example, the evidence in Tables 1–4. *Best's* has been searched (for years before conversion) for information about when the conversion process begins. Only one company history explicitly provides such information: the Empire Mutual Insurance Company reports their "plan of demutualization" was adopted on December 20, 1985—2 years before conversion. The *Wall Street Journal* also has been searched. Only seven articles about the converting companies have been found over the year of conversion and three previous years. Three of these articles discuss the conversion—two report completion and one policyholder approval during the conversion year.

²¹ The regression adjusted R^2 is 0.23. The t -statistics (in parentheses) are calculated with White-corrected standard errors and the superscript b indicates significance at the 0.05 level or better. Also, the data for this experiment was collected subsequent to the initial data gathering and extends only from year -5 to $+4$.

correlation for the remaining firms, nor any evidence supporting a positive correlation in other years for either group of converting firms.

Changes in incurred losses in year -1 and 0 also are examined and compared with the incurred losses in the years that follow. The mean changes in incurred loss (scaled by beginning-of-year assets) for management-controlled firms in years -1 and 0 and the post years are 21.2 and 12.0 percent, respectively (two-sample t -test p -value = 0.25). These compare with 3.6 and 4.2 percent for the other firms over the same years (two-sample t -test p -value = 0.78). So, changes are weakly larger for management-controlled firms in the year of and the year before conversion. The evidence suggests management-controlled firms adjust reserves in the process of managing surplus, but there is no similar evidence for the other converting firms.

Liability Management: Reserves for Conversion Expenses. There also could be an increase in liabilities due to reserves for conversion expenses. *Best's* reports only one firm, the Union Insurance Company, that establishes a reserve that might include anticipated conversion expenses. Yet, this entry is not included in their reported numbers in December of the year before conversion—only in the restated *pro forma* numbers reported after conversion the following May. Moreover, this reserve is only 0.4 percent of assets. It appears unlikely, therefore, that reserves for conversion expenses can explain the abnormal increases in liabilities that are documented for the years prior to conversion. (Note, however, that annual reports are not examined—only data extracted and published in *Best's*.)

Liability Management: Reversals. Significant negative abnormal liability changes in year $+1$ (in Table 6) also are important. A reversal of prior abnormal reductions is expected under the surplus-management hypothesis if there are costs of maintaining an understated surplus. Insurer solvency regulations impose potentially large regulatory costs for understating surplus. A reversal could also occur at year $+1$ if a year 0 addition of undistributed surplus to liabilities were later distributed to policyholders.

To test the reversal hypotheses, pooled cross-sectional and time-series regressions of discretionary components on one- and two-year lagged values (*disc comp* ($t - 1$) and *disc comp* ($t - 2$)) are estimated. Slope and intercept dummy variables are included that indicate both management-controlled firms (*management control*) and year $+1$ (*year dummy*). These regressions allow one to assess associations between year $+1$ and 0 and between year $+1$ and -1 for management-controlled and other firms, and use the rest of the sample for benchmarking.

The regression estimates are reported in Table 7. Two regressions are reported: regression (1) uses all the available firm-years of estimated discretionary components covering years -9 to $+9$ and regression (2) omits years -1 and 0 . This reduces the number of firm years from 552 to 471. Regression (2) serves as a sensitivity check, and also because the dropped years potentially have low signal to noise ratios for current purposes; hence, dropping them should increase precision.

These regressions show three things: (1) a negative association between the year $+1$ and -1 discretionary components for management-controlled firms (but not for other firms); (2) a negative association between year $+1$ and 0 discretionary components for

TABLE 7

Pooled Cross-Sectional and Time-Series Regressions of Estimated Discretionary Components of the Firm's Change in Total Liabilities for Years Surrounding Conversion to Stock Charter (Years -9 to $+9$) for a Sample of Property-Casualty Insurance Companies Over the Period 1925–1988. Explanatory Variables Are (1) Lagged Values of the Estimated Discretionary Component of the Change in Total Liabilities (*disc comp* ($t - 1$), *disc comp* ($t - 2$)), (2) an Indicator Variable Set Equal to One If the Year is $+1$ (*year dummy*), and (3) Interactions of These Variables With Another Indicator Variable That Equals One If the Prior Mutual-Management Team Are Majority Stockholders Subsequent to Conversion (*management control*)

Regression ^a	(1)	(2)
<i>Constant</i>	0.018 (2.16) ^b	0.003 (0.50)
<i>year dummy</i>	−0.080 (−4.10) ^b	−0.065 (−3.34) ^b
<i>year dummy * management control</i>	0.095 (1.26)	0.095 (1.26)
<i>disc comp</i> ($t - 1$)	−0.091 (−0.67)	−0.028 (−0.15)
<i>disc comp</i> ($t - 2$)	−0.266 (−0.95)	−0.312 (−0.97)
<i>disc comp</i> ($t - 1$) * <i>management control</i>	0.436 (2.78) ^b	0.381 (2.02) ^b
<i>disc comp</i> ($t - 2$) * <i>management control</i>	0.227 (0.66)	0.394 (0.98)
<i>disc comp</i> ($t - 1$) * <i>year dummy</i>	−0.286 (−1.89)	−0.349 (−1.81)
<i>disc comp</i> ($t - 2$) * <i>year dummy</i>	0.287 (0.97)	0.334 (0.99)
<i>disc comp</i> ($t - 1$) * <i>management control</i> * <i>year dummy</i>	−0.144 (−0.56)	−0.088 (−0.34)
<i>disc comp</i> ($t - 2$) * <i>management control</i> * <i>year dummy</i>	−0.740 (−1.80)	−0.906 (−2.00) ^b
Adjusted R^2	0.04	0.05
N (firm-years)	552	471
F	21.9	36.3

^aThe t -statistics are calculated with White-corrected standard errors.

^bSignificant at the 0.05 level or better.

all firms; and (3) a positive lag-1 correlation for the management-controlled firms during other years. These statements follow from appropriate F tests and are significant at better than the 0.05 level in at least one of the regressions.²² Finding (1) is consistent with the surplus-management hypothesis for management-controlled firms. Finding (2) is consistent with the surplus-management hypothesis or the elimination of a year 0 addition of undistributed surplus to liabilities for both management-controlled firms and the remaining firms. Finding (3) can be explained if management-controlled firms write more of their business in long-tailed lines.

Thus, there are significant positive discretionary components of firms' annual changes in total liabilities over the year of and the year prior to conversion to stock charter (years 0 and -1). There also is evidence that these discretionary components are

²² The F test for the first finding has a p -value of 0.0849 in regression (1) and 0.0429 in regression (2). The F test for the management-controlled firms for the second finding has a p -value of 0.0259 in regression (1) and 0.0839 in regression (2). The F tests for the remaining firms for the second finding and for the third finding are significant at better than the 0.05 level in both regressions.

larger in management-controlled firms. Further, for management-controlled firms discretionary components and the change in incurred losses are positively correlated, suggesting these firms manage surplus by overstating reserves. Finally, discretionary liability changes tend to be reversed over the year following conversion. These results are consistent with the surplus-management hypothesis; also the evidence is stronger where the incentives to manage the accounting numbers should be greater—in the management-controlled firms.

CONCLUSIONS

This analysis of 63 property-liability insurers that convert to common stock charter between 1925 and 1988 provides evidence of explicit management of accounting numbers. In years prior to conversion, these firms reduce reported surplus—an important input in the valuation of required compensation to policyholders.

The evidence is consistent with controlling managers having personal motives for promoting conversion. Stronger evidence in support of surplus-management is documented in firms that are classified as management controlled—where the mutual firm's managers are the new stock company's principal shareholders after conversion. The evidence further suggests that firms have more discretion (the costs are lower) in managing surplus by adjusting their liabilities and realizing investment returns than by changing claims settlement activities. One caveat is that management-controlled conversions are less frequent as a percentage of all conversions in the more recent years of the sample: in the 1970s and 1980s only 4 of 30 conversions are management controlled; whereas, in the previous three decades half of the conversions are management controlled.

There are other motives for conversion that are consistent with aspects of the data as well: converting firms experience growth in sales subsequent to conversion, suggesting that the broader range of capital sources available for stock companies is important. The evidence also suggests that some of the sample firms have underwriting problems. Thus, by enhancing the effectiveness of incentive compensation for executives or adding resources and expertise through a conversion-facilitated acquisition, conversion to stock charter can help avert potential insolvency problems.²³ Additional work is required to disentangle these potential explanations.

This analysis also has broader implications for accounting research. For example, in discussions of optimal accounting standards, discretion is generally recognized as producing both costs and benefits. On the one hand, the evidence indicates that some firms manage accruals in ways that increase the value of the firm.²⁴ Yet on the other, discretion also raises the possibility that managers might act opportunistically.²⁵ By examining accounting management associated with these transactions, one derives

²³ Petroni and Shackelford (1995) suggest an explanation—the mitigation of state tax and regulatory costs—for why conversion to stock charter before acquisition would be preferred to a straight merger.

²⁴ See Sweeney (1994), DeFond and Jiambalvo (1994), Moyer (1990), Petroni (1992), Jones (1991), Cahan (1992), Scholes, Wilson, and Wolfson (1992), and Guenther (1994).

²⁵ See Healy (1985), Guidry, Leone, and Rock (1998), DeAngelo (1988), Dechow and Sloan (1991), and Pourciau (1993).

a richer understanding of the feasibility of limiting accounting discretion through more restrictive accounting standards, more stringent oversight, or stricter regulation. The regulatory constraints imposed on this set of firms are generally much tighter than those imposed on—or even suggested for—industrial corporations: insurance is among the more regulated industries; these transactions require specific approval by state insurance commissioners; insurance accounting standards are generally less flexible than generally accepted accounting principles. Therefore, this evidence should sound a cautionary note about the ultimate effectiveness of either restrictive accounting standards or regulatory oversight in limiting firms' ability to manage accounting information.

APPENDIX

Accounting Management: Theory and Evidence

In this section selected studies of accounting management are reviewed to motivate characteristics that create incentives for such activities. (For a more comprehensive review of the accounting management literature see Healy and Wahlen, 1999.)

Benefits of Accounting Management. In studies of accounting incentives created by debt agreements, Sweeney (1994) and DeFond and Jiambalvo (1994) report evidence of earnings management by firms nearing default; Healy and Palepu (1990), and DeAngelo, DeAngelo, and Skinner (1994) find no evidence of earnings management by firms facing dividend reductions. These results are consistent with the proposition that defaults are more costly than dividend cuts.

Moyer (1990) reports earnings management through adjustments in loan loss reserves by U.S. banks associated with the administration of capital-adequacy regulations, yet Chen and Daley (1996) find little evidence of earnings management for their sample of Canadian banks. Unlike U.S. banks, Canadian banks use a 5-year averaging process to determine loan loss provisions. Hence managing earnings by adjusting loan loss provisions provides fewer benefits for Canadian banks.

Concentration of Benefits. The structure of bonus plans provides incentives for corporate executives to manage earnings in order to increase their bonus awards. Healy (1985) examines total accruals by 94 firms; Guidry, Leone, and Rock (1998) examine discretionary accruals for 177 business units of a large multinational corporation. Both report that total accruals are lower when the maximum bonus is exceeded and when the minimum bonus is not met; between these limits, accruals are higher.²⁶

Concentration of Costs. In most cases, costs of accounting management are imposed on large diffuse groups—owners, customers, debtholders, the government. Yet, in their

²⁶ Gaver, Gaver, and Austin (1995) and Holthausen, Larcker, and Sloan (1995) examine these incentives focusing on discretionary accruals at the firm level. They conclude the evidence appears more consistent with income smoothing.

analysis of labor union contract negotiations, Liberty and Zimmerman (1986) find no evidence that firms reduce reported earnings. This is consistent with the proposition that union members, because they share relatively homogeneous interests and already are organized, can pool resources at low cost to retain advisors with the requisite accounting expertise. Thus the likelihood of detection is greater and expected returns of engaging in accounting management are smaller.

Control Mechanisms. All firms limit accounting management with internal control mechanisms like outside directors²⁷ and external mechanisms like audits by public accounting firms.²⁸ However in special cases, additional control mechanisms are used. For example, in the management buyouts examined by DeAngelo (1986) and initial public equity offers examined by Aharony, Lin, and Loeb (1993) and Friedlan (1994), investment bankers are engaged to express an independent opinion that an offer represents fair value. DeAngelo reports no evidence of earnings management, despite the prominent use of earnings capitalization models by investment bankers in assessing fair value. Aharony, Lin, and Loeb (1993) also find little evidence of accounting management. However, using a sample that includes more smaller offers, Friedlan offers evidence of accounting management, reporting that the evidence is generally confined to the smaller issues.²⁹

In some cases firms are monitored by government agencies. Jarrell (1979), Moyer (1990) and Petroni (1992) report accounting management by utilities, banks, and insurers—in spite of monitoring by industry-specific regulatory agencies. Jones (1991), who examines International Trade Commission cases, as well as Cahan (1992), who examines Justice Department and Federal Trade Commission cases, detect evidence of earnings management; both studies argue that firms use accounting management to reduce regulatory penalties. Finally, Scholes, Wilson, and Wolfson (1992) and Guenther (1994) document earnings management, despite oversight by the Internal Revenue Service. These results are reported in Table A1.

Stock Versus Mutual Ownership Structures

Mayers and Smith (1981) identify three important functions within any insurance company: (1) *the executive function*: performed by managers who decide how the firm is organized and administered; (2) *the owner function*: performed by parties who supply capital and retain claims to the residual income stream of the firm; (3) *the*

²⁷ Dechow, Sloan, and Sweeney (1996) examine 92 firms subjected to accounting enforcement actions by the SEC. They find that these firms are (1) more likely to have boards dominated by management, (2) less likely to have an audit committee, and (3) less likely to have an outside blockholder.

²⁸ Becker et al. (1998) provide evidence that discretionary accruals are smaller for firms audited by Big Six auditors. They suggest that this occurs because Big Six auditors are of higher quality than other auditors.

²⁹ IPO research finds that smaller issues are more likely to be underwritten by lower quality investment banks who are more likely to use best efforts rather than firm commitment contracts; thus these issues are less well bonded (see Smith, 1986).

TABLE A1
Summary of Accounting Management Studies

Study	Evidence of Accounting Management	Sample Size	Benefits Primarily Accrue to:	Costs Primarily Imposed on:	Special Control Mechanisms
Bonus Plans					
Healy (1985)	Yes	1527 firm years	Executives	Owners	—
Gaver, Gaver, and Austin (1995)	Yes	837 firm years	Executives	Owners	—
Holthausen, Larcker, and Sloan (1995)	Yes	443 firm years	Executives	Owners	—
Guidry, Leone, and Rock (1998)	Yes	179 business-unit years	Business-unit Managers	Owners	—
CEO Turnover					
DeAngelo (1988)	Yes	86 proxy contests	Incumbent Managers	Dissident Managers/ Owners	—
Dechow and Sloan (1991)	Yes	58 CEO departures	CEO	Owners	—
Murphy and Zimmerman (1993)	No	1063 CEO departures	CEO	Owners	CEO succession plan
Pourciau (1993)	Yes	73 CEO departures	CEO	Owners	—
Debt Agreements					
Healy and Palepu (1990)	No	126 firms	Stockholders	Debtholders	—
DeAngelo, DeAngelo, and Skinner (1994)	No	76 firms	Stockholders	Debtholders	—
Sweeney (1994)	Yes	130 firms	Stockholders	Debtholders	—
DeFond and Jiambalvo (1994)	Yes	94 firms	Stockholders	Debtholders	—

Corporate Transactions									
DeAngelo (1986)	No	64 management buyouts	Executives	Owners	Investment bankers				
Liberty and Zimmerman (1986)	No	105 union negotiations	Owners	Workers	Union				
Aharony, Lin, and Loeb (1993)	No	229 IPOs	Entrepreneurs	Investors	Investment bankers				
Friedlan (1994)	Yes	211 IPOs	Entrepreneurs	Investors	Investment bankers				
Regulatory Agencies									
Jarrell (1979)	Yes	90 firm years	Owners	Customers	Regulators				
Moyer (1990)	Yes	845 bank years	Owners	FDIC/Customers	Regulators				
Chen and Daley (1996)	No	108 bank years	Owners	FDIC/Customers	Regulators				
Petroni (1992)	Yes	1334 insurer years	Owners	Customers/ guarantee funds	Regulators				
Jones (1991)	Yes	23 import relief cases	Owners	Customers	Regulators				
Cahan (1992)	Yes	48 antitrust investigations	Owners	Customers	Regulators				
Tax Rate Changes									
Scholes, Wilson, and Wolfson (1992)	Yes	812 firms	Owners	Government	IRS				
Guenther (1994)	Yes	487 firms	Owners	Government	IRS				

customer function: performed by policyholders who pay premiums in return for a promise that they will receive stipulated indemnity payments if they incur specified losses. Common-stock and mutual companies combine these functions in different ways.

Common-Stock Companies. Within common-stock insurance companies, executive, owner, and customer functions can be completely separate. Separation facilitates specialization by individuals with a comparative advantage in performing these functions, thereby lowering costs. For example, both stocks and mutuals can obtain capital either from writing insurance contracts or by issuing debt subordinated to insurance claims and both can reduce their capital requirements through reinsurance. But only stock companies can sell shares. Thus, common-stock insurers have greater access to capital and hence face fewer constraints on growth.

While separating executive, owner, and customer functions provides benefits, separation also creates conflicts among various parties. Policyholders face incentive problems like those of lenders in credit markets. For example, stockholders have incentives to raise dividends financed through asset liquidation or borrowing (see Smith and Warner, 1979). Of course, in a competitive efficient market, rational policyholders anticipate such dysfunctional incentives and equilibrium policy premiums should reflect the estimated costs associated with these incentive problems. Therefore, if a firm can limit opportunities for expropriation, its policies should command higher premiums.

Mutual Companies. Within mutual insurance companies, the customer and owner functions are merged. However, property rights of mutual policyholders are more restricted than the sum of policyholder and stockholder rights in a stock company; for instance, mutual policyholders' ownership claims are inalienable.

An important benefit of the mutual form is that by merging owners and customers into a single class of claimholders, conflicts between owners and customers over dividend, financing, and investment policies are controlled. But this advantage of mutuals in controlling owner-customer problems is offset by less effective control of conflicts between owners and executives. For example, potentially important control mechanisms that can limit dysfunctional executive actions within common-stock firms are: (1) monitoring by capital markets: specifically by stock analysts, institutional investors, and other external blockholders (see Brickley, Lease, and Smith, 1994); (2) stock-based incentive compensation (see Smith and Watts, 1982; Mayers and Smith, 1992); and (3) the threat of a takeover (see Jarrell, Brickley, and Netter, 1988). Such control mechanisms are infeasible in mutuals because they lack separately traded equity claims.

Conversion Methods

The process of conversion from mutual to stock charter is constrained by state insurance statutes. Charter conversions are generally accomplished

TABLE A2

Statutory Authority for Insurance Company Conversions to Stock Charter

States that have adopted conversion statutes		
Alabama ^b	Arizona ^b	Arkansas
California	Delaware ^b	Florida ^b
Georgia ^b	Indiana ^c	Kansas ^b
Kentucky	Louisiana	Maine ^b
Maryland ^b	Michigan	Minnesota
Montana	Nebraska ^b	Nevada ^b
New Jersey ^a	New Mexico ^b	New York ^{b,c}
Ohio ^c	Oklahoma	Pennsylvania
South Carolina ^a	South Dakota	Tennessee ^b
Utah	Vermont ^b	Virginia
Washington	West Virginia ^b	Wisconsin ^c
Wyoming ^b		
States with no conversion statutes		
Colorado	Connecticut	District of Columbia
Illinois	Iowa	Massachusetts
Mississippi	Missouri	New Hampshire
North Carolina	North Dakota	Oregon
Rhode Island	Texas	
States prohibiting conversions		
Alaska	Hawaii	Idaho

^aStatute requires consent of all policyholders for conversion.

^bStatute requires super-majority voting either in quorum size (e.g., 3/4 of policy holders) or in percentage required for approval.

^cStatute requires Appraisal Committee for valuation.

through one of three methods: (1) straight conversion, (2) merger, or (3) bulk reinsurance.³⁰

Under a straight conversion, a mutual insurer converts to stock charter under a plan approved by the state insurance commissioner. Statutory authority for straight conversions has been enacted in many states (see Table A2); moreover, straight conversions can be completed in other states without specific statutory authority

Most state insurance codes specify procedures for insurance-company mergers, and these merger procedures can be employed to effect a conversion to stock charter. However, the use of this method appears most frequent in states without statutes permitting straight conversions. Typically, a stock insurer is organized for the specific purpose of becoming the successor to the mutual insurer. The merger is also subject to approval by the state insurance commissioner.

Under bulk reinsurance all the policies of the mutual company are reinsured and assumed by a stock insurer. Since only a corporate shell remains, the mutual then

³⁰ See also Fitzgerald (1973), Masella (1985), and Heller (1986).

TABLE A3
Property-Liability Insurance Company Conversions to Common Stock Charter, 1925–1988

Co. #	Successor Firm	Conv Date	Original Firm	Form. Date	Incorp State	Method of Conversion	Policy Holder Compensation	Ownership of Successor, Principal Owner(s)
01	The Atlas Casualty Co.	1925	Atlas Mutual Fire and Automobile Ins. Co.	1900	IN	–	–	Closely held, Atlas Underwriters, Inc.
02	California Compensation Ins. Co.	1944	Limited Mutual Compensation Ins. Co.	1933	CA	Conversion	–	Closely held*, Nathan L. Fairbairn Gen. Agency
03	Great Central Ins. Co.	1948	Great Central Mutual Ins. Co.	1903	IL	Merger	Cash	Closely held*, Great Central Agency, O & D, and Others
04	American Universal Ins. Co.	1948	American Motors Mutual Ins. Co.	1907	RI	Conversion	–	Closely held*, President (>50%)
05	Commercial Benefit Ins. Co.	1948	Commercial Benefit Ins. Co.	1908	AZ	Conversion	Stock	Widely held
06	Manhattan Casualty Co.	1949	Manhattan Mutual Automobile Casualty Co.	1906	NY	Bulk reinsurance	–	Closely held*, Management & small number of PH
07	LaSalle Casualty Co.	1949	LaSalle Mutual Casualty Co.	1911	IL	Bulk reinsurance	No	Closely held*, LaSalle Ins. Agency
08	Highway Casualty Co.	1950	Highway Mutual Casualty Co.	1912	IL	Merger	Cash	Closely held*, Officers & Directors
09	Mid-Continent Ins. Co.	1951	Automobile Dealers Mutual Ins. Co.	1912	MO	Conversion	–	Widely held, Automobile Dealers
10	Life Ins. Co. of North America	1953	North American Mutual Ins. Co.	1906	DE	Conversion	Insurance	Closely held*, Founder

11	Preferred Risk Ins. Co	1954	Preferred Risk Mutual Casualty Co.	1903	AR	Conversion	Closely held*, Management and Affiliated Persons
12	Protective Casualty Ins. Co.	1954	Protective Mutual Casualty Ins. Co.	1906	MO	Conversion	Closely held*, Insurance Management Co.
13	Protective Fire & Casualty Co.	1957	Protective Fire Ins. Co.	1897	NE	Bulk reinsurance	Closely held*, Protective Sales Dev. Corp.
14	Des Moines Life and Casualty Co.	1957	Des Moines Casualty Co.	1907	IA	—	—
15	Home Owners Ins. Co	1960	Home Owners Mutual Ins. Co	1911	IL	Conversion	Widely held
16	Time Ins. Co.	1961	Stanislas County Mutual Fire Ins. Co.	1901	CA	Conversion	Widely held
17	Farm & City Ins. Co.	1962	Farm & City Mutual Ins. Co.	1907	IA	—	Closely held, 5 Iowa Mutual Ins. Cos.
18	Green Mountain Ins. Co., Inc.	1962	Green Mountain Mutual Fire Ins. Co.	1910	VT	Conversion	Closely held, Merchants Mutual Ins. Co.
19	Safeway Ins. Co.	1962	Safeway Mutual Ins. Co.	1912	IL	Bulk reinsurance	Closely held*, Parrillo Family
20	National Motors Ins. Co.	1963	National Mutual Ins. Co. Of Maryland, Inc.	1905	MD	Conversion	—
21	New England Guarantee Ins. Co.	1963	State Mutual Ins. Co.	1898	VT	Conversion	Closely held, Union Mutual Fire Ins. Co.
22	Empire Ins. Co.	1963	Orange county Farmers Mutual Fire Ins. Co.	1898	CA	Conversion	Widely held

(Continued)

TABLE A3
(Continued)

Co. #	Successor Firm	Conv Date	Original Firm	Form. Date	Incorp State	Method of Conversion	Policy Holder Compensation	Ownership of Successor, Principal Owner(s)
23	Dairyland Ins. Co.	1965	Dairyland Mutual Ins. Co.	1907	WI	Conversion	Stock/Cash	Closely held*, President, Officers & Directors (>50%)
24	Great Lakes Ins. Corp. of WI	1966	Great Lakes Mutual Ins. Co.	1906	WI	Merger	-	Widely held
25	Casualty Ins. Co.	1966	Casualty Mutual Ins. Co.	1907	IL	Conversion	Cash	Widely held
26	Automobile Dealers Ins. Co.	1967	Automobile Dealers Mutual Ins. Co.	1901	OK	Conversion	-	Closely held, Southwestern Ins. Co.
27	Main Ins. Co.	1967	Main Mutual Ins. Co. of Illinois	1901	IL	Conversion	-	Closely held*, King Management Corp.
28	United Ohio Ins. Co.	1967	United Home Mutual Ins. Co.	1903	OH	Bulk reinsurance	-	Closely held, Ohio Mutual Ins. Assn. & 32 Farm Mutuals
29	Continental Western Ins. Co.	1968	Western Mutual Ins. Co.	1904	IA	Conversion	Stock	Closely held, Western Holding Corporation
30	Merit Ins. Co.	1968	Merit Mutual Ins. Co.	1912	IL	Conversion	-	Closely held*, Officers & Directors
31	United Founders National Ins. Co.	1969	United Founders Mutual Ins. Co.	1907	IL	Conversion	-	Closely held*, RLI Corporation
32	American Agricultural Ins., Co.	1969	American Agricultural Mutual Ins. Co	1907	IN	Merger	Stock	Closely held, American Farm Bureau Federation
33	Ambassador Ins. Co.	1969	Ambassador Mutual Ins. Co.	1909	IL	Conversion	-	Closely held*, 5 Directors & Officers (100%)

34	The Peninsula Ins. Co.	1972	The Peninsula Ins. Co.	1909	MD	Conversion	Stock/Cash	Closely held*, Seidel(Pres & Founder) & Allied Interests (95%)
35	Western States Ins. Co.	1973	Western States Mutual Ins. Co.	1902	IL	Conversion	Stock	Closely held, Westco Corp.
36	Union Ins. Co.	1973	Union Ins. Co.	1903	NE	Bulk reinsurance	Cash/Insurance	Closely held, W. R. Berkley Corp.
37	Iowa Kemper Ins. Co.	1973	Iowa Kemper Mutual Ins. Co.	1911	IA	Conversion	Cash	Closely held, Lumbermans Mutual Casualty Co.
38	Middlesex Ins. Co.	1974	Middlesex Mutual Ins. Co.	1826	MA	Conversion	-	Closely held, Century Insurance (mutual)
39	Citizens Ins. Co. of America	1974	Citizens Mutual Ins. Co.	1906	MI	Merger	Cash/Preferred Stock	Closely held, Hanover Ins Co(48% held by State Mutual Life)
40	Federal Kemper Ins. Co.	1974	Federal Mutual Ins. Co.	1907	IL	Merger	Cash	Closely held, Lumbermans Mutual Casualty Co.
41	Cincinnati Equitable Ins. Co.	1974	Cincinnati Equitable Ins. Co.	1826	OH	Conversion	Stock	Widely held
42	Tri-State Ins. Co. of Minn.	1974	Tri-State Mutual Ins. Co., Minn.	1902	MN	Bulk reinsurance	Cash/Insurance	Closely held, W. R. Berkley Corp.
43	Cadillac Ins. Co.	1978	Cadillac Mutual Ins. Co.	1912	MA	Conversion	-	Closely held*, Arlan's Agency Inc.
44	American Transportation Ins. Co.	1979	Transportation Mutual Ins. Co.	1912	MA	-	-	-

(Continued)

TABLE A3
(Continued)

Co. #	Successor Firm	Conv Date	Original Firm	Form. Date	Incorp State	Method of Conversion	Policy Holder Compensation	Ownership of Successor, Principal Owner(s)
45	Merchants and Manufacturers Ins. Corp.	1981	Merchants and Manufacturers Mutual Ins. Co.	1909	OH	-	-	Closely held, Sub Merchants & Mfg Fin. Corp (100%)
46	Beacon Ins. Co. of America	1981	Beacon Mutual Indemnity Co.	1910	OH	Merger	Preferred Stock	Closely held, Hanover Ins. Co
47	American Colonial Ins. Co., Inc.	1981	Home Service Mutual Ins. Co.	1912	AL	Conversion	-	Closely held*, Colonial Co.
48	Milbank Ins. Co.	1982	Milbank Mutual Ins. Co.	1892	SD	Conversion	Cash	Closely held, Royal Group, Inc.
49	American Commercial Liability Ins. Co.	1982	Mutual Ins. Co. of Grand Rapids	1908	MI	Conversion	-	Closely held, Am. Annuity Life Ins. Co.
50	Home-Owners Ins. Co.	1983	Home-Owners Mutual Ins. Co.	1904	MI	Merger	-	Closely held, Auto-Owners Ins. Co. (100%)
51	Worcester Ins. Co.	1983	Worcester Mutual Ins. Co.	1908	MA	Conversion	Cash	Closely held, Harleysville Mutual Ins. Co.
52	Unigard Security Ins. Co.	1984	Unigard Mutual Ins. Co.	1910	WA	Conversion	-	Closely held, John Hancock (mutual)
53	Utah Farm Bureau Ins. Co.	1984	Utah Farm Bureau Mutual Ins. Co.	1911	UT	Conversion	-	Closely held, FBL Fin. Services, Inc. (80%)
54	Exchange Ins. Co.	1985	Exchange Mutual Ins. Co.	1901	NY	Conversion	Stock	Widely held

55	Lake States Ins. Co.	1985	Lake States Mutual Ins. Co.	1908	MI	Conversion	–	Closely held, Am. Community Mutual Ins. Co.
56	Calmutual Ins. Co.	1985	California Mutual Ins. Co.	1912	CA	Conversion	–	Closely held, Kelly-Moore Paint Co.
57	Addison Farmers' Ins. Co.	1985	Addison Farmers' Mutual Ins. Co.	1912	IL	Conversion	–	Closely held, Crabbtree Capital Corp.
58	American West Ins. Co.	1986	Implement Dealers Mutual Ins. Co.	1906	ND	Conversion	–	Closely held, Western Hemisphere Holding Co.
59	Shelby Ins. Co.	1986	Shelby Mutual Ins. Co.	1880	OH	Conversion	Preferred Stock	Closely held, Alleghany Financial Corp.
60	Prudential—LMI Commercial Ins. Co.	1986	The Lumbermens Mutual Ins. Co.	1895	OH	Conversion	–	Closely held, Prudential Property Casualty Ins. Co. (mutual)
61	Atlas Ins. Co.	1986	Atlas Mutual Ins. Co.	1935	MO	Conversion	–	Closely held*, Management
62	Bankers Independent Ins. Co.	1987	Bankers Mutual Insurance Co. of MD	1936	MD	Conversion	–	Closely held, Maryland Diversified Corp.
63	Empire Ins. Co.	1988	Empire Mutual Ins. Co.	1925	NY	Conversion	Stock/Cash	Closely held, PHLC Corp.

*Management controlled—former mutual executives hold majority share ownership either directly or through another entity after conversion.

is liquidated. As with the other conversion methods, bulk reinsurance requires the approval of the state insurance commissioner.

Table A3 reports converting firms, conversion date, state of incorporation, method of conversion, policyholder compensation, and ownership of the successor.³¹

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³¹ Over the period of the study there also were 35 conversions by reciprocals, but these observations were excluded from the sample because of their different reserve-requirement accounting. Reciprocals are an ownership form similar to mutuals, however, there are potentially important differences between the two. Reciprocals are unincorporated without stated capital; mutuals are incorporated with stated capital and surplus. In a reciprocal, policyholders typically appoint an attorney-in-fact to operate the association; in a mutual the policyholders elect a board of directors to hire and monitor management. The reciprocal provides cooperative insurance; individual subscribers often have separate accounts in which they are required to accumulate reserves (frequently two to five times annual premiums) prior to eligibility for receipt of underwriting earnings. Beyond the reserves, the reciprocal frequently retains the option to levy an assessment on policyholders (see Reinmuth, 1967). One could test whether contractual differences such as separate policyholder reserve accounts more effectively control incentives to examine whether information production incentives differ between mutual and reciprocal stock-charter conversions. Unfortunately, the reciprocal data are too limited to allow meaningful comparisons.

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