

THE INTRA-INDUSTRY EFFECTS OF LIFE INSURANCE COMPANY DEMUTUALIZATION

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ABSTRACT

We examine the impact of demutualization announcements by 13 life insurance companies during 1996-2000 on the value of existing stock-owned life insurance companies and companies in other segments of the insurance industry. Demutualization announcements are associated with negative stock price reactions in the days around the announcement, and with larger and positive stock price reactions in the days following announcement. Overall, the results support the contention that life insurance company demutualizations signal favorable future industry conditions and/or increased likelihood of future acquisitions for all segments of the insurance industry. Active-minded investors may use these results to develop alpha-generating investment strategies.

JEL classifications: G22; L22; L89

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I. INTRODUCTION

The life insurance industry and banking industry share a common dichotomy of organizational forms whereby some companies organized as mutually-owned firms, “mutuals,” (owned by policyholders or account holders) and others organized as stock-owned firms, (owned by shareholders) coexist in the industry. Competitive pressures, access to capital markets, limited liability, and regulatory changes in the banking industry have led many mutually-owned banks to convert to stock-owned companies. More recently this phenomenon has been exhibited in the insurance industry, with several mutually-owned life insurance companies undergoing conversion into stock-owned companies. This demutualization presents research opportunities to better understand the causes and consequences of the change in organizational form. We examine one dimension of the demutualization of life insurance companies—the intra-industry effects.

Demutualization of a life insurance company may signal future growth for the industry as a whole, leading to increased stock valuations for competitors in the industry—the *information effects* hypothesis. Conversely, demutualization may signal that the firm is moving to a stock-owned form to raise additional capital for growth and better competitive position within the industry, leading to reduced stock valuations for existing competitors in the industry—the *competitive pressure* hypothesis. A better understanding of these effects will provide useful information to investors and managers seeking to evaluate the impact of organizational structure changes on the value of firms in the insurance industry.

We examine two relevant research questions. First, do life insurance company demutualizations impact the value of competing stock-owned life insurance companies? And second, do life insurance company demutualizations impact the value of stock-owned companies

in other segments of the insurance industry? With regard to the first research question, we find a statistically significant negative announcement effect around the event date, consistent with the *competitive pressure* hypothesis, and larger positive announcement effects in periods up to 30 days subsequent to the event date, consistent with the *information effects* hypothesis. With regard to the second research question, we also find a statistically significant negative announcement effect around the event date, consistent with the *competitive pressure* hypothesis, and larger positive announcement effects in periods up to 30 days subsequent to the event date, consistent with the *information effects* hypothesis.

Taken together, these results indicate that there is significant information contained in demutualization announcements by life insurance companies. This information affects both stock-owned competitors in the life insurance industry and firms in other segments of the insurance industry in a similar fashion. The results are consistent with both the *competitive pressure* and *information effects* hypotheses. Given the larger and longer-term nature of the positive announcement effects, the results are more supportive of the *information effects* hypothesis. Life insurance company demutualizations signal favorable future industry conditions and/or increased likelihood of future acquisitions for all segments of the insurance industry.

These results also have implications for active investors seeking alpha-generating return strategies around life insurance demutualizations. Given the short-term negative stock-price reaction followed by the longer-term positive response, active investors can generate positive abnormal returns by longing publicly traded firms in the insurance industry following a demutualization announcement by a life insurer.

The remainder of the paper is organized as follows. In Section II we provide a summary of the relevant literature and the objectives of this research. In Section III we describe the sample and research method. Section IV contains the empirical results. In Section V we provide a summary and conclusion.

II. LITERATURE REVIEW AND TESTABLE

The life insurance industry exhibits a dichotomy of organizational forms whereby some companies are organized as mutually-owned firms, owned by policyholders, and other firms are organized as stock-owned companies, owned by shareholders. A recent report by Optima (2000) notes that the life insurance industry is rapidly changing due to increased competition, falling regulatory barriers, globalization, the Internet, demographics, and a shift in product demand. In response to these changes, many insurance companies are moving to demutualize in response to increased competition and a drive to become more efficient. Demutualization and future growth opportunities have also been facilitated by the passage of the Gramm-Leach-Bliley Act in 1999. The phenomenon has recently extended to the Japanese market with an announcement by Mitsui Mutual that it would convert to stock ownership in April 2004; see AFX (2003).

Demutualization brings with it numerous advantages and disadvantages. Advantages include: increased management accountability, discipline from the capital markets, increased access to capital for internal growth and acquisitions, and increased access to the managerial labor market. Disadvantages include: high conversion costs, policyholders may pay more for policies, increased agency costs, and short-term pressures from Wall Street. Smith and Stutzer (1995) note that information asymmetries and agency problems offer possible explanations for the organizational choice of insurance companies. They argue that informational asymmetries

do more to explain the kinds of contracts offered by mutuals than do agency problems. Spiller (1972), Spiller (1973), and Newmann (1973) examine ownership and performance of stock and mutual life insurance companies. They find that stock-owned life insurance companies perform better than mutually-owned companies. This is consistent with Williamson's (1963) *expense preference* hypothesis, in that mutual company management may operate to enhance perquisite compensation or otherwise engage in inefficient activities. Mutual company managers, less subject to monitoring and control by the market and by stockholders, will be less effective in minimizing costs; see Boose (1991) and Kroll, Wright, and Theerathorn (1993).

In demutualization announcements, companies typically list access to capital as a primary motive; see Bailey (1995), Goldstein and Avril (1998), and Dauer (1998). Empirical evidence that the need for capital and opportunity to control free cash flow motivate life-insurance company demutualizations is provided by Cole, McNamara, and Wells (1995), Carson, Foster, and McNamara (1998), and Butler, Cui, and Whitman (2000). Viswanathan and Cummins (2003) find significant support for the *access to capital* hypothesis among both life-health and property-liability insurers that have demutualized since 1981.

Demutualization has also been a topic of study in the banking industry. Masulis (1987) finds that conversion from a mutual savings bank to a stock-owned savings bank results in abnormal returns to shareholders. Jordan, Verbrugge, and Burns (1988) report similar results, finding that demutualizing thrifts tend to post abnormally high returns in the days following their IPOs. Carhill and Hasan (1997) find that over the long run, thrifts that demutualize experience poor performance that is driven primarily by the increased operational costs of stock-owned firms. Carter and Stover (1990) find that demutualization of savings and loans has little impact on managerial behavior.

Demutualizations impact a variety of factors of interest to individual investors and financial services professionals. Existing studies of demutualization, in either banking or insurance, do not examine the impact of demutualization on the competitive landscape of the relevant industry. In this paper, we examine the intra-industry effects of demutualization in the life insurance industry. We examine two relevant research questions. First, do life insurance company demutualizations impact the value of existing stock-owned life insurance companies? And second, do life insurance company demutualizations impact the value of existing stock-owned companies in other segments of the insurance industry?

There is a literature that examines the intra-industry effects of acquisition decisions. This methodology can be employed to study the issue at hand. For example, Bittlingmayer and Hazlett (2000) examine the response of the stock prices of Microsoft's competitors to the announcement of antitrust enforcement actions against Microsoft. They find that the competitors experience negative stock price reactions to the enforcement actions against Microsoft, casting doubt on the notion that Microsoft's actions are anticompetitive. Akhigbe and Martin (2002) examine whether acquisitions by Microsoft Corporation affect the stock prices of competitors in the computer industry. They report mixed results, depending on the business line of the acquisition.

Following Akhigbe and Martin (2002) we posit two potentially offsetting effects of intra-industry effects in response to demutualizations of life insurance companies. The *information effects* hypothesis posits that demutualizations signal favorable future industry conditions and/or the increased likelihood of future acquisitions in the industry [see also Song and Walkling (2000)]. Favorable industry conditions would benefit all life insurance companies, leading to a positive stock price reaction for existing stock-owned companies. The *competitive pressure*

hypothesis posits that industry rivals will be negatively impacted by demutualizations if the conversion provides the former mutually-owned company a more efficient organizational form, increased access to capital, and increased competitiveness in the industry [see also Akhigbe and Martin (2000)].

The increased capital provided to life insurance companies from demutualization may also allow these firms to expand into other segments of the insurance industry. Announcements of demutualization by life insurers then may also signal information effects or competitive pressure to these other segments of the insurance industry.

III. DATA AND METHODOLOGY

III.1. DATA

We obtain a sample of demutualized life insurance companies by performing a search on Lexis/Nexis. We search for “demutualization” and “stock conversion” for the period 1996 through 2000. We focus on a relatively short and recent period that was characterized by increased competition, falling regulatory barriers, globalization, expanded use of the Internet, demographic changes, and a shift in product demand; see Optima (2000). This period allows us to examine the intra-industry effects of demutualizations during a short period of homogeneous industry conditions. The event date is defined as the date that the demutualization is first mentioned in the *Wall Street Journal*, or on Lexis/Nexis if not mentioned in the *Wall Street Journal*. The results of the search are summarized in Table 1. We find 13 life insurance companies that demutualized during this period with data available on CRSP and with announcement dates available either in the *Wall Street Journal* or on Lexis/Nexis.

Insert Table 1 about here

To examine the structure of the insurance industry, we gather data on competitors in the life insurance (SIC 6311) industry and in other segments of the insurance industry: accident and health (SIC 6321), hospital and medical service plans (SIC 6324), fire, marine and casualty (SIC 6331), surety (SIC 6351), title (SIC 6361), and insurance carriers (SIC 6399). A listing of all firms in the life insurance industry (primary SIC code 6311), with data available on Compustat, is contained in Table 2, along with data on total assets, net sales, and market capitalization for the year ended 2000. The result is a total of 54 companies, twelve of which demutualized in the 1996 to 2001 period and 42 stock-owned life insurance companies that existed prior to 1996.²

Insert Table 2 about here

Descriptive statistics on the demutualizing companies, the existing stock-owned companies, and the combined group are shown in Table 3. The twelve demutualizing companies have sales ranging from \$813 million to \$42,544 million. The 42 existing stock-owned companies have sales ranging from \$5 million to \$94,251 million. The twelve demutualizing companies have mean sales of \$12,558 million and median sales of \$8,150 million. The 42 existing stock-owned companies have mean sales of \$7,082 million and median sales of \$490 million. Overall, the demutualizing companies are larger than the existing stock companies, but the difference in means is not statistically significant.

Insert Table 3 about here

III.2. METHODOLOGY

To test the *information effects* and *competitive pressure* hypotheses, we compute cumulative abnormal returns for the stock-owned life insurance companies and the other stock-

² Only twelve demutualizing firms are shown here because Summit Life Corp. does not have data available on Compustat, but is included in the sample because it does have data on CRSP.

owned insurance companies around the announcement dates of the demutualizations. We use the standard event study methodology of Brown and Warner (1985) to compute the daily excess returns. We use a two-step procedure to compute the average daily abnormal returns with stock price data from CRSP.

First, we estimate the parameters of a single-factor market model for each firm. We use the returns for days -255 to -46 to estimate each firm's alpha and beta coefficients. As is standard in applying event-study methodology, we utilize an estimation period of approximately 200 trading days of returns. To limit the possibility of any estimation bias, we stop the estimation period at day -46, well in advance of the accumulation period.

Second, we compute the abnormal return on day t as:

$$AR_t = \frac{1}{N} \sum_{i=1}^N AR_{it} \quad (1)$$

where,

N = the number of observations,

$AR_{it} = R_{it} - \alpha_i - \beta_i RM_t$,

R_{it} = the daily return for firm i on day t

α_i, β_i = parameters of the market model estimated over days -255 to -46 and

RM_t = the daily return on the CRSP equally-weighted index (including dividends)
on day t .

Cumulative abnormal returns (CAR) are computed as:

$$CAR_{t_1, t_2} = \sum_{t=t_1}^{t_2} AR_t \quad (2)$$

where,

t_1 = the first day of the accumulation period, and

t_2 = the last day of the accumulation period.

We test the abnormal returns for statistical significance using a Z-statistic as described in Mikkelsen and Partch (1988). The Z-statistic is computed as:

$$Z = \frac{1}{\sqrt{N}} \sum_{i=1}^N \left[\frac{\sum_{t=t_1}^{t_2} AR_{it}}{\sqrt{\text{Var} \sum_{t=t_1}^{t_2} AR_{it}}} \right] \quad (3)$$

The denominator is the square root of the variance of the cumulative abnormal return of firm i .

This variance is defined as:

$$\text{Var} \left(\sum_{t=t_1}^{t_2} AR_{it} \right) = V_i^2 \left[T + \frac{T^2}{ED} + \frac{\sum_{t=t_1}^{t_2} (RM_t - \overline{RM})^2}{\sum_{j=1}^{ED} (RM_j - \overline{RM})^2} \right] \quad (4)$$

where,

V_i^2 = the residual variance of firm i 's market model regression,

T = the number of days in the accumulation period ($t_2 - t_1 + 1$),

ED = the number of days in the period used to estimate the market model, and

\overline{RM} = the mean market return in the estimation period.

IV. RESULTS

In this section we present our results on the impact of life insurance company demutualization announcements on the value of stock-owned firms in the life insurance industry and on firms in other segments of the insurance industry. We find a negative and significant short-term announcement effect, offset by a larger long-term announcement effect. The results support both the *competitive pressure* and *information effects* hypotheses for both the life insurance industry and for the other segments of the insurance industry. Overall, the results are more supportive of the *information effects* hypothesis.

IV.1. IMPACT OF DEMUTUALIZATIONS ON OTHER STOCK-OWNED LIFE INSURERS

The event study results for the impact of life insurance company demutualizations on stock-owned competitors in the life-insurance industry are summarized in Table 4. Table 4 shows cumulative abnormal returns for several event windows. The results are shown for three long pre-event windows: (-30,-5), (-20,-5), (-10,-5); two short event windows: (-2,2), (-1,1); and six long post-event and event windows: (1,10), (1,20), (1,30), (-1,10), (-1,20), (-1,30).

Insert Table 4 about here

The announcement effects for the periods leading up to the demutualization announcement are not statistically different from zero. The announcement effect immediately around the announcement of demutualization (-1,1) is -0.65% statistically significant at the 5% level. The announcement effects for the longer periods subsequent to announcement (1,10), (1,20), and (1,30) are 0.67%, 2.30%, and 2.28% respectively, statistically significant at the 5%, 1%, and 1% levels respectively. Considering both the event-date and long-window post-event effects, the abnormal returns for windows (-1,10), (-1,20), and (-1,30) are 0.17%, 1.80%, and

1.78% respectively. The results for the first window are not statistically significant, while those for the two longer windows are significant at the 1% and 5% levels respectively.

The result showing a statistically significant negative announcement effect around the event date is consistent with the *competitive pressure* hypothesis, whereby demutualizing companies with a new organizational structure and increased access to capital lead to increased industry competition. The larger positive announcement effects in periods up to 30 days subsequent to the event day are consistent with the *information effects* hypothesis, whereby demutualization signals favorable future industry conditions and/or increased likelihood of future acquisitions in the industry. The overall reaction is also consistent with the *information effects* hypothesis.

IV.2. IMPACT OF DEMUTUALIZATIONS ON FIRMS IN OTHER SEGMENTS OF THE INSURANCE INDUSTRY

The event study results for the impact of life insurance company demutualizations on companies in other segments of the insurance industry are summarized in Table 5. Table 5 shows cumulative abnormal returns for several event windows. The results are shown for three long pre-event windows: (-30,-5), (-20,-5), (-10,-5); two short event windows: (-2,2), (-1,1); and six long post-event and event windows: (1,10), (1,20), (1,30), (-1,10), (-1,20), (-1,30).

Insert Table 5 about here

The announcement effects for the periods leading up to the demutualization announcement are not statistically different from zero. The announcement effect immediately around the announcement of demutualization (-2,2) is -0.41%, statistically significant at the 1% level. The announcement effect for the longer periods subsequent to announcement (1,10),

(1,20), and (1,30) are 0.85%, 2.33%, and 2.57% respectively, statistically significant at the 5%, 1%, and 1% levels respectively. Considering both the event-date and long-window post-event effects, the abnormal returns for windows (-1,10), (-1,20), and (-1,30) are 0.68%, 2.15%, and 2.39% respectively. The results for the first window are not statistically significant, while those for the two longer windows are significant at the 1% level.

These results for other segments of the insurance industry are similar to the results for the life insurance industry. The period immediately around the demutualization announcement shows a negative stock price reaction, consistent with the *competitive pressure* hypothesis. The larger positive announcement effect in periods up to 30 days subsequent to the event day is consistent with the *information effects* hypothesis, whereby demutualization signals favorable future industry conditions and/or increased likelihood of future acquisitions in these other segments of the life insurance industry. The overall reaction is also consistent with the *information effects* hypothesis.

Taken together, the results show that there is significant information contained in demutualization announcements by life insurance companies. This information affects both stock-owned competitors in the life insurance industry and firms in other segments of the insurance industry in a similar fashion. The results are consistent with both the *competitive pressure* and *information effects hypotheses*. Given the larger and longer-term nature of the positive announcement effects, the results are more supportive of the *information effects* hypothesis. Life insurance company demutualizations signal favorable future industry conditions and/or increased likelihood of future acquisitions for all segments of the insurance industry.

V. SUMMARY AND CONCLUSION

The conversion of mutually-owned life insurance companies to stock-owned companies is a relatively recent phenomenon that represents an opportunity to better understand the causes and consequences of conversion along many dimensions. We examine one dimension of the demutualization of life insurance companies, the intra-industry effects. We examine two relevant research questions. Do life insurance company demutualizations impact the value of competing stock-owned life insurance companies? And, do life insurance company demutualizations impact the value of stock-owned companies in other segments of the insurance industry? We test two competing hypotheses of demutualization—the *information effects* hypothesis and the *competitive pressure* hypothesis.

We find that demutualization announcements are associated with a negative stock price reaction around the time of announcement for both existing stock-owned life insurance companies and for stock-owned companies in other segments of the insurance industry. This is consistent with the *competitive pressure* hypothesis. We find larger positive wealth effects for both groups of firms in the post-announcement period going out 30 days after the announcement. This is consistent with the *information effects* hypothesis. Overall, the results show that there is significant information contained in demutualization announcements by life insurance companies. Given the larger and longer-term nature of the positive announcement effects, the results are more supportive of the *information effects* hypothesis. Life insurance company demutualizations signal favorable future industry conditions and/or increased likelihood of future acquisitions for all segments of the insurance industry.

Active-minded investors may use these results to develop alpha-generating return strategies around life insurance demutualizations. Given the short-term negative stock-price

reaction followed by the longer-term positive response, active investors can generate positive abnormal returns by longing publicly traded firms in the insurance industry following a demutualization announcement by a life insurer.

The results suggest that life insurance company demutualizations do signal changes in the competitive structure of the life insurance industry and in other segments of the insurance industry. A better understanding of these effects will provide useful information to investors seeking to evaluate the impact of organizational structure on demutualizing life insurance companies and on competitors in the insurance industry. Future research should focus on better understanding the nature of these effects and their long-term consequences.

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TABLE 1
Demutualizing Life Insurance Companies

Companies announcing a demutualization during the period 1996-2000, determined by a Lexis/Nexis search. Companies are in the Life Insurance industry—Primary SIC code 6311. Date is the first mention of demutualization in the *Wall Street Journal* or on Lexis/Nexis. Companies have required data available on CRSP.

Demutualizing Company	Announcement Date	Source
AmerUs Group Co.	12/1/98	<i>Wall Street Journal</i>
Canada Life Financial Corp.	4/2/98	Lexis/Nexis
John Hancock Financial Services, Inc.	5/13/98	<i>Wall Street Journal</i>
Manulife Financial Corp.	1/21/98	<i>Wall Street Journal</i>
Metlife, Inc.	3/6/98	<i>Wall Street Journal</i>
MONY Group, Inc.	9/9/97	<i>Wall Street Journal</i>
Nationwide Financial Services	10/28/96	<i>Wall Street Journal</i>
Phoenix Companies, Inc.	4/2/00	Lexis/Nexis
Principal Financial Group, Inc.	3/3/00	<i>Wall Street Journal</i>
Prudential Financial, Inc.	2/12/98	<i>Wall Street Journal</i>
Prudential PLC	6/15/00	<i>Wall Street Journal</i>
Summit Life Corp.	10/19/98	Lexis/Nexis
Sun Life Financial Services of Canada,	1/28/98	Lexis/Nexis

Distribution by Year	Number	Percent
1996	1	7.7%
1997	1	7.7%
1998	8	61.5%
1999	0	0.0%
2000	3	23.1%
Total	13	100.0%

TABLE 2
Assets, Sales, and Market Capitalization of Life Insurance Companies
(Primary SIC Code 6311)

All life insurance companies with data on Standard & Poor's Compustat are shown. Companies shown in bold are those that demutualized during 1996-2000. (Note: Only twelve demutualizing firms are shown here because Summit Life Corp. does not have data available on Compustat, but is included in the sample because it does have data on CRSP.) Amounts, in millions of dollars, are for year ended 12/31/00.

Company Name	Sales	Assets	Market Cap.
AEGON NV	\$28,872.80	\$229,269.98	\$63,543.79
ALLSTATE LIFE INSUR CO/NY	\$317.56	\$3,502.51	na
AMERICAN INTERNATIONAL GROUP	\$45,972.00	\$306,577.00	\$296,047.88
AMERICAN NATIONAL INSURANCE	\$1,834.48	\$9,270.39	na
AMERICO LIFE INC	\$450.43	\$4,241.15	na
AMERUS GROUP CO -CL A	\$813.39	\$11,471.52	\$1,384.73
ANNUITY AND LIFE RE HLDGS	\$307.15	\$2,224.69	\$814.41
AXA -SPON ADR	\$94,250.83	\$445,569.50	na
CANADA LIFE FINL CORP	\$4,979.08	\$21,815.63	\$4,837.61
CITIZENS FINL CORP KY	\$31.30	\$135.54	\$28.69
CITIZENS INC	\$66.68	\$267.84	\$175.75
CONVERIUM HOLDINGS AG - ADR	\$2,150.50	\$8,321.30	na
COTTON STATES LIFE INSURANCE	\$41.51	\$211.30	\$72.97
DELPHI FINANCIAL GRP -CL A	\$512.89	\$3,440.01	\$1,291.84
ERIE FAMILY LIFE INS CO	\$111.94	\$1,020.34	\$166.20
FBL FINL GROUP INC -CL A	\$367.62	\$3,704.05	\$685.99
FINANCIAL INDS CORP	\$44.42	\$300.77	\$81.79
FIRST ALLIANCE CP/KY	\$4.48	\$21.09	na
GLOBAL PREFERRED HLDGS - REDH	\$30.04	\$56.62	na
GREAT AMERN FINL RESOURCES	\$824.30	\$7,975.90	\$1,178.58
GREAT-WEST LIFE & ANNUITY IN	\$3,164.62	\$27,897.39	\$260.25
GUARDIAN LIFE INS CO OF AMER	\$6,743.30	\$32,359.30	na
HANCOCK JOHN FINL SVCS INC	\$7,454.30	\$87,353.30	\$12,634.93
HARTFORD LIFE INSURANCE	\$3,447.00	\$138,835.00	na

CO			
ING GROEP NV -ADR	\$46,926.86	\$610,381.50	na
ING LIFE INS & ANNUITY CO	\$1,654.30	\$57,153.00	na
JEFFERSON-PILOT CORP	\$3,238.00	\$27,321.00	\$8,946.01
KANSAS CITY LIFE INS CO	\$472.91	\$3,646.26	\$466.59
LINCOLN NATIONAL CORP	\$6,851.89	\$99,844.06	\$10,834.42
MANULIFE FINL CORP	\$9,437.97	\$40,058.68	\$16,019.06
MAX RE CAPITAL LTD	\$451.32	\$935.50	na
MERRILL LYNCH LIFE INSUR CO	\$507.48	\$16,543.51	na
METLIFE INC	\$31,947.00	\$255,018.00	\$31,455.00
METROPOLITN MTG & SEC - CL A	\$171.42	\$1,252.93	na
MONY GROUP INC	\$1,251.80	\$24,575.30	\$2,902.67
NATIONWIDE FINL SVCS - CL A	\$3,170.30	\$93,178.60	\$6,830.35
NATL WSTN LIFE INS CO -CL A	\$292.72	\$3,697.96	\$360.93
NEW YORK LIFE INSURANCE	\$21,996.00	\$97,101.00	na
NORTHWESTERN MUTUAL LIFE INS	\$16,529.00	\$92,125.00	na
PHOENIX COMPANIES INC	\$2,898.60	\$20,313.20	na
PRESIDENTIAL LIFE CORP	\$284.46	\$2,982.43	\$781.35
PRINCIPAL FINANCIAL GRP INC	\$8,845.80	\$84,404.90	na
PROTECTIVE LIFE CORP	\$1,733.97	\$15,145.63	\$2,576.64
PRUDENTIAL FINANCIAL INC	\$26,544.00	\$272,753.00	na
PRUDENTIAL PLC -ADR	\$42,543.98	\$231,727.72	na
REINSURANCE GROUP AMER INC	\$1,725.74	\$6,061.86	\$2,020.92
SCOTTISH ANNUITY & LIFE HLDG	\$83.93	\$1,178.50	\$187.82
SOUTHERN SEC LIFE INS	\$10.63	\$77.13	\$7.68
STANDARD MANAGEMENT CORP	\$76.06	\$1,470.46	\$54.00
SUN LIFE FINL SVCS CDA INC	\$10,807.78	\$37,214.36	\$12,602.90
THRIVENT FINL FOR LUTHERANS	\$2,322.00	\$22,112.00	na
TORCHMARK CORP	\$2,515.89	\$12,962.56	\$5,741.27
UNITED TRUST GROUP INC	\$35.75	\$333.62	\$28.43
YADKIN VALLEY BK & TR CO	\$31.74	\$371.90	\$77.68

TABLE 3
Descriptive Statistics for Demutualizing and Existing Stock-Owned Life Insurance
Companies (Primary SIC Code 6311)

All life insurance companies with data on Standard & Poor's Compustat are shown. Only twelve demutualizing firms are shown here because Summit Life Corp. does not have data available on Compustat, but is included in the sample because it does have data on CRSP.) Amounts, in millions of dollars, are for year ended 12/31/00.

Demutualizing Firms	Sales	Assets	Market Cap.
Number of firms	12	12	8
Maximum	\$42,543.98	\$272,753.00	\$31,455.00
Minimum	\$813.39	\$11,471.52	\$1,384.73
Mean*	\$12,557.83	\$98,323.68	\$11,083.41
Median	\$8,150.05	\$62,231.79	\$9,716.62
<hr/>			
Existing Stock-Owned Firms	Sales	Assets	Market Cap.
Number of firms	42	42	25
Maximum	\$94,250.83	\$610,381.50	\$296,047.88
Minimum	\$4.48	\$21.09	\$7.68
Mean*	\$7,082.33	\$54,711.89	\$15,857.27
Median	\$490.20	\$3,972.60	\$466.59
<hr/>			
All Firms	Sales	Assets	Market Cap.
Number of firms	54	54	33
Maximum	\$94,250.83	\$610,381.50	\$296,047.88
Minimum	\$4.48	\$21.09	\$7.68
Mean*	\$8,299.11	\$64,403.40	\$14,699.97
Median	\$1,609.02	\$12,217.04	\$1,178.58

* Differences in means are not statistically significant at the 10% level or better.

TABLE 4
Cumulative Abnormal Returns for Existing Stock-Owned Life Insurance Companies
(Primary SIC Code 6311) Around the Announcement of Demutualization by a Mutually-
Owned Life Insurance Company

Results are relative to first announcement of demutualization in either the *Wall Street Journal* or Lexis/Nexis for thirteen demutualization announcements occurring in 1996-2000. A market model is used to estimate abnormal returns.

Event Window	Number of Obs.	Mean Cumulative Abnormal Return	z-Stat.
Long-Window Pre-Event Returns:			
-30,-5	245	0.26%	-0.529
-20,-5	245	-0.56%	-1.608
-10,-5	245	-0.35%	-0.783
Short-Window Event-Date Returns:			
-2,2	245	-0.51%	-1.158
-1,1	245	-0.65%	-2.252**
Long-Window Post-Event and Event-Date Returns:			
1,10	245	0.67%	2.234**
1,20	245	2.30%	4.132***
1,30	245	2.28%	3.050***
-1,10	245	0.17%	1.260
-1,20	245	1.80%	3.364***
-1,30	245	1.78%	2.475**

*** Statistically significant at the 1% level

** Statistically significant at the 5% level

* Statistically significant at the 10% level

TABLE 5

Cumulative Abnormal Returns for Non Life Insurance Segments of the Insurance Industry (Primary SIC Codes 6321—Accident and Health, 6324—Hospital and Medical, 6331—Fire, Marine, and Casualty, 6351—Surety, 6361—Title, and 6399—Insurance Carriers) Around the Announcement of Demutualization by a Mutually-Owned Life Insurance Company

Results are relative to first announcement of demutualization in either the *Wall Street Journal* or Lexis/Nexis for thirteen demutualization announcements occurring in 1996-2000. A market model is used to estimate abnormal returns.

Event Window	Number of Obs.	Mean Cumulative Abnormal Return	z-Stat.
Long-Window Pre-Event Returns:			
-30,-5	1,014	0.62%	0.603
-20,-5	1,014	0.09%	-0.869
-10,-5	1,014	-0.38%	-1.403
Short-Window Event-Date Returns:			
-2,2	1,014	-0.41%	-3.281***
-1,1	1,014	-0.14%	-1.588
Long-Window Post-Event and Event-Date Returns:			
1,10	1,014	0.85%	2.221**
1,20	1,014	2.33%	6.192***
1,30	1,014	2.57%	4.905***
-1,10	1,014	0.68%	1.342
-1,20	1,014	2.15%	5.397***
-1,30	1,014	2.39%	4.329***

- *** Statistically significant at the 1% level
- ** Statistically significant at the 5% level
- * Statistically significant at the 10% level