

The Performance of Insurance Initial Public Offerings

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Introduction

The rapidly consolidating and converging global insurance market has created an environment in which stiff competition for capital has led many insurers to the initial public offer marketplace. Many of the largest mutual insurers, including Metropolitan Life, John Hancock Mutual Life Insurance Co., have chosen this route within the last few years. Private insurers are also attracted to the public equity market for capital to expand existing operations, to develop new lines of business, and to compete with other financial services providers.

Insurance executives claim that converting to a publicly traded company strengthens the institution by increasing current capital, improving future access to capital markets. In addition, it is expected that the performance of the company to improve due to increased scrutiny by stockholders who have a vested interest in superior performance. Finally, the existence of common stock allows the firm to offer stock option plans to attract talented management and facilitates consolidations and acquisitions. The academic literature in general shows that, compared to market benchmarks, IPOs show significantly poor long-run post-IPO performance. Analyzing the source of this underperformance can be problematic due to differences in operating structures among industries. The insurance industry provides an opportunity to extend the literature by studying IPOs from a less-known industry. It is difficult for potential investors to accurately assess the assets and liabilities of insurance companies. The problem of informational asymmetry may further contribute to the underperformance of insurance companies' initial public offerings.

This study evaluates the stock return performance of insurance companies that made initial public offerings during the period 1997-2002. The paper is organized as follows, Section II discusses prior research, section III explains the methodology and data and section IV summarizes the main findings along with concluding remarks.

Previous Research

The academic literature on initial public offerings (IPOs) has focused on two market anomalies: under-pricing of initial offer and long run underperformance of stocks following the IPO. Ritter (1991) showed and cited other research showing general underperformance in the long-run. Ritter's explanation for the long-run under-performance of IPOs is that the first after market price is too high. Investors tend to be optimistic over the earning potential of companies that go public ("hot" market phenomenon). However, in Ritter's study, the financial institution industry, (defined by three digit SIC codes which included mostly savings banks and savings and loan associations) produced a three year holding period total return of 128%. Unfortunately, in Ritter's study, there were not enough insurance IPO's to

be analyzed as a separate industry. These results show the dispersion of long run performance for initial public offerings.

Ritter and Welch (2002) consider evaluation of long-run performance one the more controversial issues related to initial public offerings. Market efficiency arguments depend on market adjusting methodologies and compensation for biases like requiring a rebalancing of index portfolios. They advise caution because processes for matching firms can produce unusual returns (like an outlier of a three-year compound return of 6,300 percent) or multifactor regressions that produce odd results.

As most studies on IPOs dealt with non-financial firms, few studies analyzed the insurance industry. Yu, Lin, Wang and Feldhaus (2004) analyze IPO under-pricing of property and liability insurance companies. The authors find less under-pricing during capacity constrained-periods following catastrophic loss events. Viswanathan (2005) looks at part of the insurance industry that goes through demutualization through the process of a public stock offering. Her focus is on the wealth effect on policyholders from the process of demutualization and not on the long-run performance of insurance IPOs.

Still, the appeal of studying long run performance of initial public offers persists because as Ritter (1991) said, "from an investor's viewpoint, the existence of price patterns may present opportunities for active trading strategies to produce superior returns."

Methodology and Data

To be included in our sample, the issuing firm must be in the industry defined by SIC codes 6311, 6321, 6324, 6331, 6351 and 6361, excluding reinsurance companies, at the time of the initial security offering. Some firms that are currently in these industry codes were not at the time of their first stock offering. When using the CRSP database, both the current SIC code and the historical SIC code are available. The historical SIC code is the correct code to use for classifying IPO's in the insurance industry.

For example, when Berkshire Hathaway (current SIC code of 6311) made their initial public offering on the 14th of October, 1976, it was in SIC code 6711. Later, on November 29, 1998, Berkshire Hathaway was in SIC code 6331 when it offered a new class of common stock, however this was not an initial public offering by that company. As a result, neither of Berkshire Hathaway's stock offers were included in the sample.

Another related example is that of Travelers Property Casualty Corp New which made two stock offerings, the first on March 22, 2002 and the second on August 21, 2002. The first is included in the sample, but the second is not.

From January 1, 1973 to December 31, 2002, we initially found 108 new stock offerings in SIC codes 6311, 6321, 6324, 6331, 6351 and 6361. We excluded twelve reinsurance companies and nine companies with missing observations. Our final sample is of 87 firms with full information in the CRSP dataset, as shown in Table I. The table shows that the number of insurance IPOs has been increasing over time. In the 1980s and in the 1990s twenty four and thirty eight insurance companies went public respectively. The higher number of insurance IPOs in the 1990s may signal the desire of insurance companies to capitalize on the high returns prevailing in the equity market.

In Table II, we report monthly (21 trading days), average benchmark-adjusted return on three sets of stocks, a small-cap, a mid-cap and a large-cap. The benchmark-adjustment is firms' abnormal return over CRSP's NYSE/AMEX/NASDAQ value-weighted index. The associated t -statistic for each month is that month's average abnormal return (AR_t) times the square root of the number of securities in that set of stocks ($n_t^{1/2}$) divided by the cross-sectional standard deviation (S_t) of individual abnormal returns in that month,

$$t_t = AR_t * (n_t^{1/2}) / S_t.$$

In Table II, the series of cumulative abnormal returns from the initial month to a series of subsequent months is the sum over the interval of the monthly, average benchmark-adjusted returns on each of three sets of stocks. The associated t -statistic is defined similar to the previous one for each set of securities with the cumulative abnormal return for that month ($CAR_{1, m}$) and a standard deviation associated with the cumulative abnormal return (CS_t), where this is computed as $CS_t = (t * var + 2 * (t - 1) * cov)^{1/2}$ where var is the average of the monthly cross-sectional variances for that set and cov is the first-order autocovariance of the AR_t series for that set, as in Ritter (1991).

Results and Conclusion

In Table II, there are three sets of securities: small cap, mid cap and large cap. The small cap set of securities have a first day capitalization for each security of less than 111 million dollars, the mid cap set of securities have a first day capitalization of each security of between 111 million dollars and 650 million dollars and the large cap set of securities have over 650 million dollars in first day capitalization for each security. The three-year CAR for the small cap set is -7.86 percent which is not significant for that three-year period. For the mid cap set, the CAR is 6.46 percent which is also not significant. For the large cap set, the three-year CAR is 24.76 percent with a t -statistic of 2.54. This shows that a portfolio of securities with large capitalization outperformed securities with small to medium capitalization.

The continuous nature of this relationship between the three-year cumulative abnormal return and the initial capitalization was analyzed for the 87 individual securities using an ordinary least squares regression model. This regression used the natural log of the capitalization to adjust for skewness of the dollar value of the capitalization. This regression was significant with a p value of 7.56 percent (a F statistic of 3.24 for the model and a t statistic of 1.80 on the regression coefficient for the log of capitalization). The adjusted R^2 of this model was 2.53 percent. This shows that the relationship between the cumulative abnormal returns and the initial capitalization is continuous throughout the whole sample.

This paper finds an interesting pattern in returns from investing in initial public offerings of public equity for insurance companies with large market capitalization. This publicly known information that predicts future returns does not support the concept of market efficiency for the long-run performance of initial public offerings by insurance companies. This pattern may provide opportunities for active trading strategies in public equities of insurance companies to create superior returns for investors.

Table I**Distribution of Insurance Initial Public Offerings by Year, 1973-2002**

The number of total offers is based on the offering of initial securities by companies that are in standard industry classification codes 6311, 6321, 6324, 6331, 6351 and 6361 when the security is issued, excluding reinsurance companies, as found in the Center for Research in Security Prices US Stock Database. Capitalization is from the end of the first trading day, as reported by CRSP.

Year	No. of IPOs	Aggregate Capitalization \$ thousands
1973	1	98,481.50
1974	0	0.00
1975	2	19,640.38
1976	0	0.00
1977	3	146,893.25
1978	2	59,613.13
1979	0	0.00
1980	6	158,872.32
1981	1	97,325.00
1982	1	39,473.19
1983	1	7,656.25
1984	1	26,133.00
1985	6	2,674,096.19
1986	2	1,967,384.00
1987	3	927,780.75
1988	1	1,414.50
1989	1	196,822.50
1990	1	619,380.00
1991	5	2,003,363.75
1992	4	3,469,541.75
1993	7	17,350,937.38
1994	6	1,404,492.63
1995	2	356,417.50
1996	5	4,366,670.38
1997	4	4,464,666.50
1998	3	8,051,036.76
1999	2	6,232,586.50
2000	5	11,254,135.31
2001	8	15,734,972.56
2002	4	5,171,597.05
Total	87	86,901,384.03

Table II

Abnormal Returns for Insurance Initial Public Offerings by Capitalization, 1973-2002

Average benchmark-adjusted returns (AR_t) and cumulative average returns ($CAR_{1,t}$), in percent, with associated t -statistics for the 36 months (m) after going public, excluding the initial return, separated into three sets by first day capitalization (Small Cap, Mid Cap, and Large Cap). With 87 firms trading in each period, there are 29 firms in each set.

m	Set A : Small Cap				Set B : Mid Cap				Set C: Large Cap			
	AR_t		$CAR_{1,t}$		AR_t		$CAR_{1,t}$		AR_t		$CAR_{1,t}$	
	%	t -stat	%	t -stat	%	t -stat	%	t -stat	%	t -stat	%	t -stat
1	0.30	0.11	0.30	0.12	3.44	1.86	3.44	1.71	-1.74	-0.92	-1.74	-1.07
2	0.42	0.22	0.72	0.20	-0.44	-0.29	3.00	1.06	0.60	0.33	-1.14	-0.50
3	-1.97	-0.98	-1.25	-0.28	2.51	1.55	5.51	1.58	-2.32	-1.60	-3.46	-1.23
4	0.02	0.01	-1.23	-0.24	2.24	1.34	7.75	1.93	3.37	1.17	-0.09	-0.03
5	0.79	0.42	-0.44	-0.08	1.85	1.09	9.60	2.14	0.16	0.08	0.07	0.02
6	-0.09	-0.04	-0.53	-0.08	0.21	0.13	9.81	1.99	4.86	2.24	4.93	1.24
7	2.50	1.53	1.97	0.29	0.31	0.22	10.12	1.90	3.14	2.00	8.07	1.88
8	-1.14	-0.54	0.83	0.11	3.14	1.59	13.26	2.33	1.19	0.68	9.26	2.02
9	0.10	0.04	0.93	0.12	-0.48	-0.29	12.78	2.12	1.03	0.75	10.29	2.11
10	0.75	0.44	1.68	0.20	1.07	0.55	13.85	2.18	0.15	0.11	10.44	2.03
11	-6.22	-1.96	-4.54	-0.53	0.75	0.46	14.60	2.19	-1.54	-0.96	8.90	1.65
12	1.07	0.51	-3.47	-0.39	0.67	0.46	15.27	2.19	1.82	1.38	10.72	1.91
13	1.08	0.53	-2.39	-0.25	-1.40	-0.57	13.87	1.91	0.68	0.32	11.40	1.95
14	-1.68	-0.99	-4.07	-0.42	2.47	1.52	16.34	2.17	1.68	1.55	13.08	2.15
15	-1.93	-0.76	-6.00	-0.60	-2.90	-1.84	13.44	1.73	1.84	1.08	14.92	2.37
16	-1.30	-0.59	-7.30	-0.70	1.80	1.06	15.24	1.90	-1.95	-0.82	12.97	2.00
17	-1.17	-0.57	-8.47	-0.79	1.24	0.70	16.48	1.99	-0.60	-0.37	12.37	1.85
18	4.85	1.58	-3.62	-0.33	-1.20	-0.69	15.28	1.79	1.61	1.15	13.98	2.03
19	-2.71	-1.87	-6.33	-0.56	2.14	1.52	17.42	1.99	0.76	0.62	14.74	2.08
20	-0.72	-0.40	-7.05	-0.61	0.81	0.61	18.23	2.03	1.27	0.86	16.01	2.21
21	-0.33	-0.13	-7.38	-0.62	-0.13	-0.09	18.10	1.97	0.20	0.13	16.21	2.18
22	-4.10	-0.93	-11.48	-0.94	1.47	1.08	19.57	2.08	1.62	1.40	17.83	2.34
23	4.31	0.91	-7.17	-0.57	-5.33	-2.32	14.24	1.48	-0.52	-0.40	17.31	2.23
24	1.92	0.56	-5.25	-0.41	0.96	0.51	15.20	1.54	-0.55	-0.28	16.76	2.11
25	-3.31	-1.06	-8.56	-0.66	2.60	2.10	17.80	1.77	2.33	1.97	19.09	2.35
26	-1.80	-0.92	-10.36	-0.78	-0.55	-0.31	17.25	1.68	0.06	0.05	19.15	2.32
27	-5.62	-2.57	-15.98	-1.18	-3.88	-1.69	13.37	1.28	1.39	1.07	20.54	2.44
28	1.30	0.43	-14.68	-1.07	1.49	0.69	14.86	1.40	-0.69	-0.57	19.85	2.31
29	0.92	0.37	-13.76	-0.98	2.54	1.35	17.40	1.61	1.16	0.64	21.01	2.41
30	4.20	1.55	-9.56	-0.67	-0.92	-0.45	16.48	1.50	2.09	2.05	23.10	2.60
31	3.70	1.94	-5.86	-0.40	-4.39	-1.09	12.09	1.08	-0.17	-0.13	22.93	2.54
32	2.91	1.50	-2.95	-0.20	-7.31	-2.12	4.78	0.42	-0.57	-0.36	22.36	2.44
33	3.47	0.86	0.52	0.03	0.87	0.41	5.65	0.49	0.12	0.13	22.48	2.41
34	-0.69	-0.43	-0.17	-0.01	1.48	0.72	7.13	0.61	2.59	1.46	25.07	2.65
35	-7.30	-1.90	-7.47	-0.49	-1.79	-0.88	5.34	0.45	-0.44	-0.24	24.63	2.57
36	-0.39	-0.16	-7.86	-0.50	1.12	0.33	6.46	0.54	0.13	0.09	24.76	2.54

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