

THE PRICING OF INSURER DEMUTUALIZATION INITIAL PUBLIC OFFERINGS

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ABSTRACT

This article examines the pricing of the initial public offerings (IPOs) that follow insurance company demutualizations. Insurers that convert from mutual to stock form typically cite the need for capital as a key motivation. Given that capital adequacy is a primary regulatory objective for insurers, one would expect that for a given number of shares to be sold, these firms would price their offerings to maximize proceeds. However, the vast literature on IPO pricing suggests various theories as to why it may be in the issuing firm's best interest to underprice its offering. By examining the initial and long-run stock returns for these conversion IPOs, the existence and degree of underpricing, as characterized by large initial returns, can be determined. It is observed that on average demutualization insurer IPOs post significantly higher first-day returns than nondemutualization insurer IPOs. These gains would accrue to the initial investors and to those policyholders who receive compensation in the form of shares in the newly created stock insurer. Attractive returns are sustained for both groups of insurers during the first few years after IPO.

INTRODUCTION

In the insurance industry, ownership structure changes from mutual to stock have occurred for many years; only in recent demutualizations have insurers systematically issued an initial public offering (IPO) of common stock. A primary objective given by insurers for undergoing a conversion is access to capital. The funds raised by the IPO may be used to help the firm stay competitive or allow the insurer to expand by engaging in new opportunities.

The two main organizational forms in the insurance industry are mutual and stock, which differ in their ownership structure and capital-raising abilities. The policyholders of a mutual insurer collectively own the firm. Ownership rights are granted

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upon policy purchase and end upon policy termination. Stock insurers have distinct customer and shareholder bases although there could be some overlap of these two groups through separate transactions. A stock insurer can attract capital through a variety of equity and debt offerings whereas a mutual insurer, by statute, is restricted in this aspect. Mutual firms can only increase their capital base through retained earnings or the issuance of surplus notes, a highly subordinated debt security (Dumm and Hoyt, 1999). The desire for both additional capital and future ease of raising funds has induced many mutual insurers, over time, to convert to stock charter (Murray, 1998; Carroll and DeRegnacourt, 2000; Seol, 2001; Boselovic, 2001).

Although not all demutualizations result in an IPO, for a mutual insurer to execute such an offering, it must first convert to stock form. By statute, if a firm fully demutualizes, the mutual's policyholders must be given some form of compensation for this organizational change since they are relinquishing their ownership interests. Typically, these policyholders are given shares in the newly converted firm whereas in some states, they are granted priority subscription rights in the offering. Thus, after the conversion and IPO, insurers could have a significant number of policyholder/shareholders. With the conversion and offering, the insurer simultaneously compensates these policyholders as well as generates new capital. Prior studies document access to capital as a key motivation for undergoing demutualization (McNamara and Rhee, 1992; Cagle, Lippert, and Moore, 1996; Carson, Forster, and McNamara, 1998; Mayers and Smith, 2002, 2004; Remmers, 2003; Viswanathan and Cummins, 2003).

Across various industries, it may be expected that firms that issue offerings aim to maximize their proceeds. A vast literature exists, however, that documents the underpricing of IPOs across industries, characterized by large initial returns (Ibbotson and Ritter, 1995; Ritter and Welch, 2002). These gains, which could have accrued to the issuing firm had it set its offer price higher, would instead be received by the initial stockholders, hence the term underpricing. By examining the returns for insurer demutualization IPOs, it will be investigated whether the performance of these IPOs behaves similarly. This will provide information on how the stock-receiving policyholders fared in the conversion. Large initial stock returns would enrich both these policyholders and initial investors. In addition, sustained positive stock returns suggest a favorable market response to the issue and the firm's prospects. In Akhigbe, Borde, and Madura (1997), seasoned equity and debt offerings by insurers are observed to receive positive market reactions. In this article, the market response to initial equity offerings by insurers will be analyzed.

This article examines the short-run and long-run performance of twenty-four demutualization IPOs that occurred during the period 1986–2001. The starting year represents the time of Unum's demutualization and IPO, deemed to be the pioneer for the wave of conversion IPOs that followed in both the life–health and property–liability industries (Banham, 1998; Carroll and DeRegnacourt, 2000). The ending year coincides with Prudential's December 2001 demutualization, considered to be the final conversion to occur during this wave (Gold, 2002; Stein, 2002). The stock performance for these demutualization IPOs is compared to the performance of ninety-five nondemutualization-related IPOs by insurers over the same time period.

The article is structured as follows. The next section begins with a discussion of the two main methods of insurer conversion to stock form. Also briefly discussed is the

IPO process. The following section presents a literature review on IPO underpricing. The theories developed are based on asymmetric information among the stakeholders: the issuing firm, the investment bank/underwriter, and the investors. For conversion IPOs, an additional stakeholder group should be considered, the mutual's policyholders; this leads into a discussion of hypotheses on the underpricing of demutualization IPOs. The data and analysis are then presented with a discussion of the results. Conclusions about insurer underpricing end the article.

INSURERS AND RAISING CAPITAL

The two main methods of conversion to stock charter are full demutualization and partial demutualization, which is also known as mutual holding company (MHC) conversion. As explained in Viswanathan and Cummins (2003), in a full demutualization, typically, a stock insurance company and a stock holding company are formed and the mutual would cease to exist. Compensation must be distributed to eligible policyholders because their membership interests in the mutual have been terminated. This compensation could be in the form of cash, policy credits, or shares in the newly created stock holding company. In several states, a different form of compensation, nontransferable subscription rights, can be granted. In a MHC conversion, both a stock insurance and stock holding company are formed as well as a MHC that is the ultimate parent of this group. Just as in a full demutualization, in this partial demutualization, the insurance contracts transfer to the stock insurer. However, the major difference is here: the membership interests of the policyholders transfer to the MHC. Since the collective ownership of the policyholders has not been extinguished, no compensation is given to them. The intermediate stock holding company could issue an IPO; however, the MHC remains its majority-holding parent.

In a full demutualization, if the converting mutual must distribute compensation to eligible policyholders, the insurer's surplus must be allocated among them. The vast majority of demutualization statutes, rather than prescribe particular formulas on how the surplus should be divided, only require that the allocation be "fair and equitable." Specific formulas, though, have been developed and deemed acceptable to regulators. The commonly used formulas for property-liability and life-health demutualizations are explained in more detail in the Appendix. Both formulas share the feature that the allocation due to a particular policyholder is commensurate to how much the policyholder has contributed to the firm's surplus.

To facilitate the vote on the proposed demutualization, the insurer mails each policyholder the plan of conversion, detailing the benefits of reorganizing to stock form along with financial information about the firm. After policyholders and regulators approve the plan of conversion, the demutualization becomes effective and any planned IPO is executed. For full demutualizations, the offerings typically occur at the time the conversion becomes effective; in MHC conversions, firms have more flexibility on when to issue the IPO (Viswanathan and Cummins, 2003). The insurer, with the aid of its investment bank/underwriter, must decide how many shares to issue beyond the amount it must distribute to policyholders as compensation. Investors would submit their purchase orders to the underwriter. If the offering were oversubscribed, the underwriter, at its discretion, would decide how shares are allocated among the interested investors; however, some demutualization IPOs specify that policyholders are to be given priority in the allocation (Panko, 2000; Aggarwal, Prabhala, and Puri, 2002; Ljungqvist and Wilhelm, 2002).

A market for the firm's stock is created when the IPO is launched and policyholders who received their demutualization compensation in the form of shares would experience the subsequent price changes. In several recent demutualizations, insurers have structured the cash and policy credit compensation option to allow policyholders to benefit from any initial price runup in the stock. In John Hancock's 2000 conversion, policyholders awarded cash or policy credits received an amount based on the greater of the initial stock offer price or the average stock price over the first twenty trading days, subject to a maximum of 120 percent of the offer price. A similar provision, with a 110 percent of offer price maximum, was in force during Anthem Healthcare's 2001 demutualization.

IPOs AND UNDERPRICING

A wealth of research has been devoted to studying IPOs and their subsequent short-run and long-run stock performance.¹ Evidence of large initial returns to IPOs, also known as underpricing, has been extensively documented and observed across time (Ibbotson, 1975; Ritter, 1984; Carter and Manaster, 1990; Ritter, 1991; Cagle and Porter, 1997; Cox and Roden, 1999). Underpricing is calculated as the percentage change from the offer price of the stock to its price at the end of the first trading day (Ibbotson, 1975). An issuing firm sells shares at some predetermined offer price and if there is a strong, positive price change during the first day, that gain would accrue to initial stockholders, those investors who purchased shares at the offer price. The issuing firm would be deemed to have underpriced its IPO because in that first day the market could have borne a higher offer price. It seems puzzling that the issuing firm would not seek to price the issue closer to its true value. The firm would receive the offer price while large initial returns would accrue to the initial investors. The theories discussed below attempt to explain why underpricing is found in a vast majority of IPOs. In this article, just as in other IPO studies, the terms underpricing and initial returns are used interchangeably.

Prior Studies

The basic theme of the various hypotheses explaining underpricing is asymmetric information among the three major stakeholders in an IPO: the issuing company, the investment banker/underwriter, and the investors. Initially suggested by Ibbotson (1975) and expanded on in Tinic (1988), underpricing and the subsequent gains that accrue to investors act as "insurance against legal liability" for both the banker involved in the transaction and the issuing company. When pricing the offering, the banker must invest in information gathering and analysis before establishing the offer price. A strong incentive exists to overprice the offering so that the banker and issuing firm receive the extra proceeds. However, investors in the IPO would subsequently realize a decline in the value of their holdings after the stock begins trading and the price settles toward its true value. Since investors have the right to sue any and all parties who were a party to the offering and signed off on the registration of securities, the financial consequences of such lawsuits as well as the potential damage to reputation could be overwhelming.² Thus, firms would rather underprice their issues to guard against such legal proceedings.

¹ See Ibbotson and Ritter (1995) and Ritter and Welch (2002) for comprehensive surveys of the IPO literature.

² As per the Securities Act of 1933, discussed in Tinic (1988).

Information acquired and produced by the investment banker/underwriter during the IPO creates value. In Baron (1982), the information held by the banker is superior to that of the issuing firm. Because firms cannot perfectly monitor the efforts of the banker, offer prices may be set lower, resulting in underpricing. When firms face greater uncertainty about the value of its issue, the demand for the banker's participation increases. Information asymmetry between the investment banker and the issuing firm is argued to lead to underpricing. However, underpricing is also found in the IPOs for thirty-eight investment banks that went public, suggesting that other factors also influence first-day returns (Muscarella and Vetsuypens, 1989). Both Hanley and Wilhelm (1995) and Aggarwal, Prabhala, and Puri (2002) investigate the allocations of IPOs and observe that institutional investors dominate IPO subscriptions. These authors suggest that these large, influential clients may be favored in these allocations for their contribution to information gathering and possible exchange of private information.

Beatty and Ritter (1986) suggest that in equilibrium, investment bankers should underprice any offerings they are participating in to maintain their reputation. However, a delicate balance must be found; if they underprice too much, they risk losing the future business of issuers and if they underprice too little, investors will be dissatisfied. Beatty and Ritter (1986) also argue that greater *ex ante* uncertainty about a firm's value will result in higher expected underpricing. Such pricing would be demanded by the investors to keep them satisfied.

The choice of underwriter could act as a signal of quality, as also argued in Carter and Manaster (1990), who suggest that the reputation of the underwriter influences the level of underpricing. Underwriters use their expertise to assess the riskiness of the issue as well as estimate various financial indicators of the firm and set the offer price. Prestigious underwriters would prefer representing low-risk firms because of the greater potential accuracy of these estimates. These low-risk firms would be willing to pay the higher fees for prestigious underwriters because the corresponding higher offer price could justifiably be demanded. Thus, there would be a lower level of underpricing for these issues because the choice of underwriter acts as a positive signal of firm riskiness. IPOs marketed by less prestigious underwriters would exhibit higher levels of underpricing. Carter and Manaster (1990) develop a unique measure to assess the level of underwriter prestige.³ Examining a set of IPOs from 1979 to 1983, they indeed find that the more prestigious the underwriter, the lower the initial runup

³ In this labor-intensive process, the authors examine the tombstone announcements of each offering. These announcements, published in the *Investment Dealer's Digest* or the *Wall Street Journal*, declare the future sale of the security as well as list the various investment bankers involved in the offering. The bankers listed at the top of the announcement, and possibly in larger font size, would be the lead underwriters and thus be considered more prestigious than those listed lower. Rankings are given to each underwriter based upon where they are listed in the announcement. These rankings get reevaluated and revised after each subsequent announcement is examined. A scale of 1–9 is devised with 9 signifying a most prestigious underwriter. Carson and Manaster (1990) compile these rankings using 501 offerings from the period 1979 to 1983 to compute their metric of underwriter reputation, the Carter–Manaster measure. Carter, Forster, and McNamara (1998) update the rankings in Carter and Manaster (1990) using IPO data through 1991. Loughran and Ritter (2004) further update this set of rankings using IPO data through 2003; they offer a slight modification of the Carter–Manaster measure that overcomes any bias toward penny-stock underwriters.

in price. Interestingly, this relation is observed to have reversed in IPOs from the 1990s onward (Carter, Dark, and Piwowar, 2004; Loughran and Ritter, 2004). Issuing firms during this period are found to be riskier on the whole. In addition, Loughran and Ritter (2004) argue that the top management and venture capital backers of issuing firms may choose to allow their issues to be underpriced so that they can be rewarded individually with priority allocations in other hot IPOs.

In addition to large average one-day runups in price, IPOs are also found to exhibit long-term underperformance (Aggarwal and Rivoli, 1990; Ritter, 1991; Loughran and Ritter, 1995; Carter, Dark, and Singh, 1998). For the group of firms examined in Ritter (1991), which spans various industries, negative abnormal returns are observed during the three years after issue. Such a reversal in performance could signify initial overoptimism about the firm's prospects. Carter, Dark, and Singh (1998), continuing on the Carter and Manaster (1990) underwriter reputation theme, also find underperformance in the three-year period after IPO issuance. They observe that the offerings by more prestigious underwriters result in lower underperformance. Initial offer prices were set closer to the true value of the stock, reflecting the greater expertise of these underwriters as well as their desire to maintain their reputation.

Although higher mean initial performance is found in many IPO studies, the degree of underpricing does vary across time. Ritter (1991) suggests that investors are eager to infuse capital into industries at times of fads, thus driving up initial prices. Another argument suggests that investment banks would underprice to create excess demand for an issue that could garner them praise and attention as well as future business from these investors. Such excess demand could fuel the creation of a "hot issue" market (Shiller, 1990). During the hot issue market of 1980, mean initial returns to IPOs were much higher than in previous years (Ritter, 1984). It was found that issues from one particular industry, natural resources, were driving this result, suggesting both a cyclical effect, and, as Ritter (1991) observed, a fad. The Internet boom of the late 1990s, attracting much capital, could also be considered a fad with mean initial returns in 1999–2000 reaching 65 percent (Loughran and Ritter, 2004). The heavy insurer demutualization IPO activity in the 1990s could also be considered a fad.

Banking Demutualization IPOs

The banking industry, similar to insurance, experienced a wave of ownership structure changes; a large number of thrifts and savings & loan associations (S&Ls) have demutualized over the past few decades. Typically for these conversions, a subscription rights offering is performed, however, unlike in insurance, regulation does not require that surplus, in the form of shares or cash, be allocated to customers. In the offering, depositors, employees, and executives of the financial institution would have priority in the subscription. Masulis (1987) observes large initial returns to the IPOs of converted S&Ls.

Cagle and Porter (1997) examine the IPOs of converting thrifts to investigate whether their executives enjoy initial windfall gains from the IPOs. Indeed, the authors find significant one-day returns, an average of 7 percent; however, this observation is not unique to the demutualized banking institutions. As compared to other banking institution IPOs and controlling for *ex ante* uncertainty and underwriter reputation, these two groups of firms are found to exhibit similar levels of underpricing.

Investigating the thrift conversions from a later time period than that of Cagle and Porter (1997), Cox and Roden (1999) also observe significant initial returns which are sustained during the one year after issue. This result is markedly different from the long-run underperformance found in other studies (Ritter, 1991; Loughran and Ritter, 1995). The authors suggest that these conversion IPOs are deliberately underpriced. During the 1988–1997 time period studied by Cox and Roden (1999), regulation was tightened on these conversions, in order to prevent enrichment by insiders. It is observed that underpricing decreased subsequent to these regulations. Alli, Yau, and Yung (1994) argue that problems of asymmetric information, thus underpricing, should be lessened in banking IPOs due to the highly regulated nature of this industry. As compared to the IPOs of nonfinancial institutions, they indeed find lower levels of underpricing for banking IPOs as a whole. Driving these results are the significantly lower levels of underpricing of the non-S&L conversion IPOs. Alli, Yau, and Yung (1994) suggest that S&L conversions are priced to provide large initial gains whereas for nonconversion IPOs, the regulatory impact reduces *ex ante* uncertainty, thus the lower initial returns.

Hypotheses for Insurer Demutualization IPOs

A major focus of insurance regulation is on capital adequacy. Based on this objective, one would expect that insurers who issue IPOs seek to maximize their proceeds. Since insurers face a higher level of regulatory monitoring than firms in most other industries, continual capital adequacy is a key objective for them. Given that these demutualizing insurers have publicly stated that they require capital to remain competitive, one would expect that with this IPO opportunity, they would seek to raise as much capital as reasonably possible. However, the theories discussed in the previous section on how asymmetric information fuels underpricing could also be applied to insurance company IPOs. The strategic gains from short-term underpricing could outweigh the capital maximization goal. These considerations could be magnified in insurer demutualization IPOs.

Although the IPO process is relatively standardized for firms in different industries, a demutualized insurer's IPO is unique in the activities that occur prior to its issue. Valuations, surplus allocation, if required, and policyholder/regulatory approval must occur prior to the effective reorganization date, all of which could take up to two years. The distinct principal-agent considerations that arise in a demutualization could have implications on the pricing of the IPO.

Although policyholders do not vote specifically for the mutual insurer to issue an IPO, they must vote for the demutualization. Only upon the insurer's successful conversion can it then execute its offering. Thus, a positive policyholder vote is required. As was discussed above, in most states, the converting firm is required to distribute surplus to the policyholders to compensate them for surrendering their membership interests. Compensation is mainly given in the form of shares in the newly formed stock company. When setting the price, if the insurer underprices its shares, large initial returns accrue to these policyholders and to the initial investors. Ibbotson (1975) regards this gain as "leaving a good taste in their mouth." Policyholders would become satisfied with the reorganization and more inclined to remain customers of this firm, thus this *policyholder wealth redistribution* motive could drive underpricing. If the value

of their holdings declines after conversion, policyholders may feel that the insurer has lost financial strength, which could then possibly steer both current and future customers away.

In the timeline of a demutualization, typically, the board of directors publicly announces that the insurer plans to convert to stock form. Given the experience of past demutualizations, insurers may need up to two years to complete the required tasks for the conversion. Thus, interested policyholders and potential investors are given much advance notice of any intended IPO. According to the surplus allocation formulas used in property-liability and life-health conversions, compensation to policyholders is commensurate with the amount of premiums paid. Institutional policyholders typically would pay much more in premiums than the average individual policyholder. These customers could include a company purchasing property insurance on its buildings and its contents or another company buying group health insurance for its employees. For the insurer, retention of these large policyholders is a key objective due to the magnitude of premiums they generate. These institutional policyholders may also seek to participate in the IPO, acquiring shares in addition to what they are granted in the conversion. For these reasons, the demutualizing firm is expected to underprice its issue, which would make positive initial returns more likely for these influential policyholders.

It can be argued that any positive amount of compensation would induce policyholders to vote yes for the conversion and make them satisfied, since if the company remained a mutual, they would not have received any of this value. However, policyholders become aware during the voting process that they hold membership interests in the insurer, which get extinguished with the demutualization. Whether they receive stock as compensation or purchase stock through the granting of subscription rights, if the value of these shares decreases after demutualization, policyholders may deem the conversion to be detrimental to the firm. Policyholders could feel cheated by this reorganization and could act upon this disgruntlement through lawsuits against the insurer. As per insurance statute, the board of directors and management have a fiduciary duty to policyholders to properly execute a demutualization. Their responsibility, to both stock-receiving policyholders and outside investors, increases if they decide to issue an IPO because they then become bound by securities laws also. Thus, following Tinic (1988), to minimize the *potential for legal liability*, it is anticipated that the IPOs of demutualized insurers will be underpriced.

During the demutualization wave, announcements of intended conversions garnered much media attention due to both their impact on potentially millions of policyholders and the uniqueness of such an organizational structure change. Such coverage continued to the firms' IPOs, thereby generating essentially free publicity for these insurers. Pricing its issue at its true market value will, of course, generate greater proceeds than if the issue was underpriced. However, the *positive media attention* generated when firms post large first-day increases provides the converted insurer with valuable marketing. A strong stock price increase could be interpreted as a sign of greater financial strength. This could, in turn, create goodwill and potentially attract new customers to the firm. With respect to media attention, how the IPO is received in the days after issue gets widely publicized whereas its stock performance several years after issue typically does not.

DATA AND ANALYSIS

To investigate the potential underpricing of demutualization IPOs, property–liability and life–health conversions that occurred during the period 1986–2001 are identified. This starting year represents Unum’s conversion that, as stated before, is regarded as the pioneer in the recent demutualization IPO trend. The steady stream of conversions eased with Prudential in December 2001.⁴ Demutualizations are identified using *Best’s Insurance Reports, Property–Casualty* (2003) and *Best’s Insurance Reports, Life–Health* (2003). To determine which converted insurers also issued an IPO, the company history listed in *Best’s Insurance Reports* is examined. Halverstadt (1998), Fox-Pitt, Kelton (1998), and searches in the *Wall Street Journal* also provide confirmation of the offering. A total of twenty-four demutualization IPOs form our sample. Table 1 lists these firms and their corresponding first day of trading.

As seen in this list, the conversion wave began slowly, and then picked up momentum in 1995. For these insurers, daily stock price and holding period returns are obtained from the Center for Research in Security Prices (CRSP) tapes. Initial and long-run returns will be constructed from these data.

The magnitude of initial returns signifies the degree of underpricing in demutualization IPOs and the corresponding market reaction. Alternatively, it could just represent how insurance company IPOs as a whole during this period were priced and received. To investigate whether the market reaction toward conversion IPOs is unique, their stock returns will be compared to the returns for insurers that issued IPOs not as a result of demutualization. Using the Securities Data Company (SDC) New Issues database and searching IPOs of common stock during the same period 1986–2001, firms classified under insurance Standard Industry Classification (SIC) codes are identified.⁵ The group of demutualized insurers covers life–health and property–liability firms, including medical malpractice. To match this scope of business operations, from the firms identified in the SDC database, reinsurers, surety bond, and mortgage insurers are deleted to create the final sample of ninety-five nondemutualization insurer IPOs.⁶ Data on offer prices, proceeds, lead underwriter, and other details of the offering are obtained from the SDC database and from prospectuses for both samples of insurers. CRSP daily stock returns for the control sample as well as various market indices are also gathered for the appropriate time periods.⁷

⁴ Investigating the extent of demutualization IPO activity after 2001, it is found that there were no demutualization IPOs in 2002 and one in 2003. Mercer Mutual demutualized in 2003 and issued its IPO in December 2003. This firm began the conversion process in 1997; however, policyholders rejected its first Plan of Demutualization in March 1999. Policyholders approved Mercer’s revised Plan of Demutualization in 2003. This firm is not added to the sample because its IPO occurred a full two years after the end of the demutualization wave; this wave of capital activity remains the focus of this article.

⁵ SIC codes 6311, 6321, 6324, 6331, 6351, which span the SIC codes for our sample of demutualized insurers: property–liability and life–health, including medical malpractice.

⁶ A total of thirteen firms were deleted using this criterion.

⁷ The operating histories for both groups of insurers are examined. In both groups, although a range of operating histories exists, there are no startups in either group.

TABLE 1

Insurer Demutualizations with IPOs, 1986–2001

Insurer	First Day of Trading
UNUM Corporation	11/06/86
Mutual Assurance	09/04/91
Equitable Companies	07/16/92
Allmerica Financial Corporation	10/11/95
Guarantee Life Companies	12/20/95
RISCORP	02/29/96
Farm Family Holdings	07/23/96
FPIC Insurance Group	08/01/96
AmerUs Life Holdings	01/29/97
SCPIE Holdings	01/30/97
Trigon Healthcare	01/31/97
Old Guard Group	02/19/97
MONY Group	11/11/98
StanCorp Financial Group	04/16/99
MEEMIC Holdings	07/02/99
NCRIC Group	07/29/99
MIIX Group	07/30/99
John Hancock Financial Services	01/27/00
MetLife	04/05/00
American Physicians Capital	12/08/00
Phoenix Companies	06/20/01
Principal Financial Group	10/23/01
Anthem	10/30/01
Prudential Financial	12/13/01

Table 2 presents the distribution of IPOs and aggregate gross proceeds by year for both demutualization and nondemutualization IPOs. A large amount of capital was raised in the years 2000 and 2001, during which the conversions of mammoth life–health firms such as John Hancock, MetLife, and Prudential occurred.

Initial Returns

The first-day raw return for firm i is computed as follows:

$$R_{i,1} = \left(\frac{\text{First trading day closing price} - \text{offer price}}{\text{offer price}} \right). \quad (1)$$

To examine whether the degree of price change reflects the reaction to the firm or just market conditions during that day, the corresponding market-adjusted first-day return is also calculated.

$$R_{i,1}^M = R_{i,1} - R_{M,i,1}, \quad (2)$$

where $R_{M,i,1}$ denotes the market-adjusted one-day return on firm i 's first day of trading. In Table 3, the mean first-day raw returns by year are presented. Also listed are the

TABLE 2

Distribution and Gross Proceeds of Insurer Initial Public Offerings

Year	Demutualization IPOs		Nondemutualization IPOs	
	No. of IPOs	Aggregate Gross Proceeds, \$ Millions	No. of IPOs	Aggregate Gross Proceeds, \$ Millions
1986	1	561.5	21	672.7
1987	0	—	6	73.4
1988	0	—	1	4.6
1989	0	—	0	—
1990	0	—	4	103.8
1991	1	11.8	11	1130.7
1992	1	315.0	10	756.2
1993	0	—	21	4257.3
1994	0	—	6	749.5
1995	2	217.3	6	344.9
1996	3	181.3	4	1000.2
1997	4	313.2	2	566.1
1998	1	223.3	1	9.4
1999	4	377.0	0	—
2000	3	4100.3	0	—
2001	4	6725.8	2	120.4
Total	24	13026.5	95	9789.2
Mean proceeds		542.77		103.04

Note: Gross proceeds for the U.S. market, not including overallotment options exercised by the underwriters.

mean market-adjusted returns using the CRSP NYSE-AMEX-Nasdaq value-weighted index with distributions to proxy the market.

As Table 3 reports, a strategy of investing in these twenty-four converted insurer IPOs at the offer prices would have provided a mean first-day return of 15.08 percent, which is significantly greater than 0.⁸ Although individual first-day returns are not reported here, it is found that twenty-three of the twenty-four demutualization IPOs exhibit a positive first-day performance, gains which would accrue to both the initial investors and the stock-receiving policyholders. Across the ninety-five nondemutualization IPOs, a mean first-day return of 7.30 percent is achieved. These results suggest that insurance company IPOs as a whole during the period 1986–2001 were underpriced. These gains to initial stockholders could have been received by the issuing firm had it set its offer price higher. In studies on banking conversion IPOs, large initial returns are also observed (Masulis, 1987; Alli, Yau, and Yung, 1994; Cagle and Porter, 1997).

⁸ Of the twenty-four Demutualization IPOs, twenty-two offerings occurred after its insurer's full demutualization and two (AmerUs and NCRIC) occurred after mutual holding company conversions. The mean first-day return for the twenty-two full demutualization IPOs is 15.37 percent and the mean first-day return for the two MHC IPOs is 11.97 percent.

TABLE 3
Raw and CRSP-Adjusted First-Day Returns of Insurer IPOs

Year	Average First-Day Return %		Average CRSP-Adjusted First-Day Return %	
	Demutualized IPOs	Nondemutualized IPOs	Demutualized IPOs	Nondemutualized IPOs
1986	9.80	4.63	10.02	4.61
1987	—	3.40	—	3.26
1988	—	6.00	—	5.17
1989	—	—	—	—
1990	—	1.25	—	1.15
1991	26.92	8.71	27.46	8.55
1992	1.39	8.64	1.29	8.59
1993	—	5.36	—	5.39
1994	—	4.88	—	4.82
1995	16.39	21.19	16.32	21.09
1996	7.09	6.18	7.23	6.05
1997	27.47	21.39	27.00	21.89
1998	19.68	0.00	20.32	−1.22
1999	25.80	—	26.26	—
2000	2.55	—	1.68	—
2001	7.35	22.90	8.02	22.96
Median	13.34*	5.71	13.11*	5.69
Mean	15.08	7.30	15.15	7.24
<i>t</i> -Statistic	2.38*		2.40*	
<i>N</i>	24	95	24	95

Note: The Mann–Whitney U-test is used to compare each median for the demutualization IPOs and nondemutualization IPOs. *t*-statistics test for differences between each mean return for the demutualization IPOs and the nondemutualization IPOs.

*Significance at the 0.05 level.

Comparing the two groups of insurers, on both a raw and market-adjusted basis, as Table 3 presents, demutualized insurers experience a significantly higher mean first-day return than nondemutualized insurers. Even on a market-adjusted basis, the one-day gains from demutualization IPOs average approximately 15 percent. This could be a result of converted insurers aiming to redistribute wealth to policyholders. It can also be interpreted as a move to gain media attention and reduce potential liability. These higher initial returns signify a market response more enthusiastic toward demutualization. The median returns are also found to be significantly higher for the group of demutualized insurers. By examining returns over the three-year period following issue, it will be investigated whether these high initial returns are sustained in the long run or if initial overoptimism has driven the increase in stock price.

As an alternative to the CRSP Index as the benchmark, the SNL Securities Insurance Company Index is also considered. Although the CRSP Index contains all NYSE-AMEX-Nasdaq firms, the SNL Index consists of just the publicly traded insurers. This value-weighted index with distributions was created in January 1992 and has been

tracked daily since. As a comparison of both market indices, Table 4 presents the raw and both market-adjusted returns for the period 1992–2001.

It is found that for each year, the mean adjusted returns using either market index are quite close. For both the demutualization and nondemutualization IPOs, the average CRSP-adjusted return is not statistically different from the average SNL-adjusted return. Using the SNL Index would require that the two conversions prior to 1992 be excluded. It is preferable to study the entire sample of demutualization IPOs, thus the CRSP Index will be used in the regression analysis below to proxy the market.

First-day returns are further examined in Table 5. Mean returns are calculated for the total group of insurers and then separately for demutualized and nondemutualized firms, stratified by gross proceeds inflated to 2001 dollars. Across all firms, a mean return of 8.87 percent is found. As Table 5 shows, the offering sizes for nonconverted insurers fall in the lower ranges although converted insurers constitute a major proportion of the huge IPOs. A monotonic relation between offer size and initial return is not observed. Although the amount of proceeds in an offering is hypothesized to affect the magnitude of the initial returns, it is anticipated that other market- and firm-specific characteristics also influence first-day returns.

Long-Run Returns

The IPO literature documents large initial returns followed by long-term underperformance (Aggarwal and Rivoli, 1990; Ritter, 1991; Loughran and Ritter, 1995). Such a reversal is argued to be the result of initial exuberance about the issue. With time, the stock price settles toward its true value.

Table 6 reports mean raw returns for each portfolio across various holding periods. Following Ritter (1991), the aftermarket begins at the end of the first trading day, thus returns from the second trading day onward. This would represent the returns gained by investors who are not able to purchase at the offer price. Following Ritter (1991), the aftermarket begins at the end of the first trading day, thus incorporating returns from the second trading day and onward. The total aftermarket holding return is calculated as

$$\text{TAR}_{i,n} = \left(\prod_{t=2}^{n+1} (1 + R_{i,t}) \right) - 1, \quad (3)$$

where $R_{i,t}$ denotes the total return on day t and n represents the number of days in the aftermarket holding period.⁹

In Panel A, raw returns are calculated using various aftermarket lengths. Across all of the aftermarket periods, mean returns for both sets of insurers are positive. It is observed that demutualization IPOs return an average of 5.32 percent in the first month of aftermarket trading. After one year, these IPOs have gained a mean of almost

⁹ $R_{i,t} = \frac{(P_{i,t} + D_{i,t}) - P_{i,t-1}}{P_{i,t-1}} - 1$, where $P_{i,t}$ and $D_{i,t}$ denote day t 's closing price and dividend, respectively, for firm i . For the various aftermarket holding periods, returns are calculated for the $\min(n, \text{delisting date})$.

TABLE 4
Raw and Market-Adjusted First-Day Returns of Insurer IPOs, 1992–2001

Year	Average First-Day Return %		Average CRSP-Adjusted First-Day Return %		Average SNL-Adjusted First-Day Return %	
	Demutualized IPOs	Nondemutualized IPOs	Demutualized IPOs	Nondemutualized IPOs	Demutualized IPOs	Nondemutualized IPOs
1992	1.39	8.64	1.29	8.59	1.40	8.49
1993	–	5.36	–	5.39	–	5.34
1994	–	4.88	–	4.82	–	4.46
1995	16.39	21.19	16.32	21.09	16.20	20.94
1996	7.09	6.18	7.23	6.05	7.07	6.15
1997	27.47	21.39	27.00	21.89	26.80	21.84
1998	19.68	0.00	20.32	–1.22	20.35	–0.53
1999	25.80	–	26.26	–	25.80	–
2000	2.55	–	1.68	–	2.16	–
2001	7.35	22.90	8.02	22.96	7.87	22.76
Mean	14.79	9.01	14.82	8.99	14.72	8.90
<i>t</i> -Statistic	1.60*		1.61*		1.62*	
<i>N</i>	22	52	22	52	22	52

Note: *t*-statistics test for differences between each mean return for the demutualization IPOs and the nondemutualization IPOs.
*Significance at the 0.10 level.

TABLE 5
First-Day Returns Categorized by Gross Proceeds

\$ Proceeds (in Millions)	All IPOs		Demutualization IPOs		Nondemutualization IPOs	
	Average First-Day Return %	N	Average First-Day Return %	N	Average First-Day Return %	N
4.0–79.9	9.55	77	23.46	9	7.71	68
80.0–299.9	7.04	24	14.72	7	3.87	17
300.0–799.9	9.80	9	1.39	1	10.85	8
800.0–2600.0	6.98	9	6.62	7	8.21	2
All (mean)	8.87	119	15.08	24	7.30	95

Note: Gross proceeds are inflated to 2001 dollars using the GDP Deflator Index.

TABLE 6
Aftermarket Performance of Insurer IPOs

Aftermarket Period	Demutualized IPOs	Nondemutualized IPOs	t-Statistic
Panel A: Mean returns for the Aftermarket Period			
1 Month	5.32	0.00	2.30**
2 Months	9.53	3.55	1.86**
3 Months	8.27	5.63	0.64
6 Months	20.24	7.71	1.85**
12 Months	34.99	16.89	1.49*
24 Months	54.34	20.02	2.15**
36 Months	63.31	43.10	0.93
Panel B: Mean returns for the Aftermarket Period plus first day			
1 Month	20.77	7.62	3.52***
2 Months	25.30	11.48	3.40***
3 Months	23.95	13.76	2.05**
6 Months	37.20	16.25	2.71***
12 Months	53.06	25.72	2.14**
24 Months	74.85	28.61	2.70***
36 Months	84.30	53.73	1.29

Note: t-statistics test for differences between the mean returns for the demutualization IPOs and the nondemutualization IPOs.

*, **, *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively.

35 percent, which keeps increasing with time. After three years, conversion-related IPOs reward its aftermarket investors with a 63.31 percent average return. The returns on nondemutualization IPOs also grow with time. A portfolio of these insurer IPOs would experience a 16.89 percent aftermarket return after one year and 43.10 percent after three years. As depicted in Table 6, for both sets of insurers, a reversal from strong initial returns is not observed. Comparing the mean returns for both sets of insurers, it is found that for most of this three-year aftermarket time period, returns on conversion IPOs are significantly greater than the corresponding returns on nonconversion IPOs.

For Panel B, long-run raw returns are calculated but now with the first trading day's return compounded in.¹⁰ Thus, the time period corresponding to the demutualization one-month aftermarket average return is twenty-two trading days, the first trading day plus twenty-one days in the aftermarket and similarly for the rest of the time periods. For the converted insurers, the full one-month return averages 20.77 percent. As compared to the corresponding average return of 5.32 percent in Panel A, it is observed that much of this almost 21 percent return comes from the huge runup in price on the first trading day. For demutualization offerings, initial shareholders would enjoy an average return of approximately 75 percent after two years and 84.30 percent after three years. Initial investors in the nondemutualization IPO portfolio would receive an attractive 53.73 percent return after three years. For both sets of insurers, strong aftermarket stock gains are supplemented by large first-day runups in price.

Across almost all aftermarket periods, the demutualization mean return is significantly higher than the corresponding mean return for nondemutualizations, lending support to the policyholder wealth redistribution motive. However, it should be noted that since most of the demutualization IPOs were issued during 1995–2001, the corresponding aftermarket periods for these firms occur during a boom period for the stock market. Indeed, comparing aftermarket returns for those insurers who issued IPOs during 1995–2001, the mean aftermarket returns for demutualization and nondemutualization firms are still substantial but not statistically different from each other. It is noted though that across time, for both groups of insurers, high initial returns are not followed by long-run underperformance, suggesting that other factors drive how the IPO performs, not initial overoptimism.

Mayers and Smith (1986) examine the financial characteristics of a group of stock life insurance companies that mutualized. In the process, stockholders would be paid cash to relinquish their shares. It is observed that these stockholders were highly compensated at the time of mutualization, receiving an average premium of 57 percent over the stock price. It is interesting to note that shareholders have received positive value during demutualization and during mutualization.

Regression Analysis

All Firms. It is argued that demutualization IPOs will exhibit greater levels of underpricing than nondemutualization IPOs. Indeed, as the univariate tests presented above show, across the 1986–2001 time period, offerings for converted insurers do demonstrate higher mean initial returns. To further investigate the factors that impact the magnitude of first-day returns for insurer IPOs, the following equation will be estimated using ordinary least squares (OLS) regression on the sample of 119 IPOs:

$$\text{First-day return} = f(\text{demutualization, prior market return, Internet boom, proceeds, standard deviation of aftermarket returns, underwriter reputation, life, T-bill}). \quad (4)$$

For this group of insurers, it is anticipated that being a demutualized firm will have a significant positive impact on the first-day return. Whether the effect of this factor

¹⁰ Returns in Panel B result from the formula: $(1 + R_{i,1}) * (1 + \text{TAR}_{i,t}) - 1$.

remains after considering the impact of other influences will be investigated. Such influences are translated into the control variables listed in Equation (4) and discussed here. The *demutualization* dummy variable takes on the value of one for each of the twenty-four converted insurers.

How the market is performing in the days prior to a firm's IPO could impact its first-day stock price. Loughran and Ritter (2002) observe the strong influence of market movement in the weeks prior to issue on the first-day return. These initial returns tend to be higher after periods of market rises and lower after periods of market decline. Although it is expected that firm-specific characteristics have the greatest impact on how the new issue is received, such reactions could be magnified by current market conditions. The impact of market momentum is captured in the *Prior market return* variable, which, following Loughran and Ritter (2002), is measured as the mean daily return on the CRSP NYSE-AMEX-Nasdaq Index for the fifteen trading days prior to the firm's issue. It is anticipated that for these insurer IPOs, the initial return will be higher following positive market returns.

During the Internet boom of 1999 and 2000, mean initial returns for IPOs were substantially greater than what was observed in previous years. Capital was infused into the market at a record pace, especially into technology firms. High market exuberance during that period created a welcoming atmosphere for new issues, beyond what could be explained by firm-specific characteristics (Ljungqvist and Wilhelm, 2003). These technology firms posted huge first-day returns on average. How coming to market during the dot-com era affected these insurers will be examined. The *Internet boom* variable takes on a value of 1 if the insurer IPO took place during 1999 or 2000.

As previous studies have shown, the level of initial returns is influenced by the size of the IPO (Cagle and Porter, 1997; Carter, Dark, and Singh, 1998; Cox and Roden, 1999). As Carter, Dark, and Singh (1998) argue, larger offerings are typically executed by "more established" firms, thus the riskiness and information asymmetry associated with the issue would be lessened. This larger size would allow a greater number of investors to participate, thus a firm willing to open itself up for greater scrutiny is expected to exhibit lower risk. Correspondingly, such firms could justify pricing their offering closer to its true value, thus maximizing its proceeds. This effect of size is captured in the *Proceeds* variable, which measures the natural logarithm of gross proceeds, as inflated to 2001 dollars using the GDP Deflator Index. It is anticipated that offer size will have a negative impact on initial returns. The impact of riskiness and *ex ante* uncertainty is also captured in the *Standard deviation of aftermarket returns* variable, measured as the standard deviation of returns during the trading days two through twenty (Ritter, 1984; Alli, Yau, and Yung, 1994). As with other IPOs, dramatic price changes are expected in the first trading day. Strong ripples in the stock price in the days after suggest persistent uncertainty regarding the firm's value in the short run. Greater aftermarket volatility is expected to be associated with higher initial returns, as the market determines the true value for the firm.

An issuing firm typically engages the services of an investment banker/underwriter to bring its new issue to market. It relies on the underwriter's experience and expertise in attracting investors and conveying the firm's value to the market. As prior studies have argued, choice of underwriter could affect how the market receives the new issue (Baron, 1982; Beatty and Ritter, 1986; Benveniste and Spindt, 1989; Carter

and Manaster, 1990). More prestigious underwriters would prefer to bring lower risk issues to market because their estimates of firm value would be more accurate. These low-risk firms would be willing to pay the higher fees for these underwriters because then, a higher offer price could justifiably be demanded. Thus, more prestigious underwriters would be associated with lower initial returns. Interestingly, Carter, Dark, and Piwowar (2004) and Loughran and Ritter (2004) observe that for IPOs issued during the 1990s, prestige and initial returns become positively related, due in part to the increased riskiness of firms and the book-building motivations for underwriters. These studies examine IPOs that span various industries. As we are just focusing on insurer IPOs, the choice of underwriter for this highly monitored industry will be investigated. For each firm, the name of the lead underwriter(s) for its issue is obtained and its reputation level is assigned using the Carter–Manaster measure, developed in Carter and Manaster (1990) and updated in Loughran and Ritter (2004).¹¹ This variable, *Underwriter reputation*, ranges from 1 to 9, with 9 representing the most prestigious underwriters.

The primary line of business for the insurer is expected to impact how the market receives this new issue and views how the proceeds will be used. Over the time period under consideration, sufficient capital became increasingly important for life–health insurers as they sought to remain competitive with banks and mutual fund companies, who began selling annuities and other investment products to attract dollars that may have traditionally been directed toward cash value life insurance (Carow, 2001). The proceeds generated by the offering could meet the liquidity needs generated by these products. For property–liability insurers, forecasting future insured events in size and scope is inherently more challenging, thus adequate capital allows the firm to better meet its obligations (Akhigbe, Borde, and Madura, 1997). Funds raised from the IPO would also permit the firm to engage in writing riskier lines of business, which could in turn generate higher profits. The need for capital is, of course, unique to the business operations for the firm. Across life–health and property–liability firms, it cannot be easily determined which capital requirements are more compelling. By including the variable *Life*, which takes on a value of 1 for SIC-classified life–health firms, the market valuation effect by line of business will be examined. The variable *T-bill*, which is the three-month Treasury bill rate in effect on the date of IPO, is included in the model as a measure of economic conditions at the time of issue. Brau, Francis, and Kohers (2003) suggest that this rate proxies the cost of debt that an issuing firm would face in the decision on whether to go public; this interest rate could also influence how the IPO is priced.

Demutualized Firms. The above analysis examines the impact of various factors on the stock offerings for the cross-section of demutualization and nondemutualization insurers. However, the demutualized firms were also required to perform a host of

¹¹ Several firms have two or three lead underwriters listed. For these firms, its *Underwriter reputation* measure is the average of their corresponding underwriters' reputation levels. The methodology used by Carter and Manaster (1990) in setting underwriter reputation levels is described in more detail in footnote 7. To summarize, IPO announcements are examined; the placement of the underwriter on the announcement determines its reputation level. This reputation level for each underwriter gets revised upon examining each subsequent announcement. The higher the placement, the more prestigious is the underwriter.

tasks in conjunction with the conversion. Regulators and other stakeholders, such as policyholders, monitored the results of these activities. Various factors that influence initial returns for both sets of insurer IPOs are proposed. By examining the conversion offerings separately, however, it can be determined whether the additional agency costs associated solely with demutualization IPOs and conveyed in those factors argued above affect stock performance. Equation (5) will be estimated across just the twenty-four demutualization offerings.

$$\text{First-day return} = f(\text{policyholder share proportion, prior market return, Internet boom, proceeds, standard deviation of aftermarket returns, underwriter reputation, life, T-bill}). \quad (5)$$

An additional demutualization-specific variable is included, *Policyholder share proportion*. As discussed in a previous section, depending on the state and method of conversion, an insurer may be required to give compensation to policyholders in exchange for them relinquishing their ownership of the mutual. This compensation is typically in the form of shares in the new stock firm. By examining the prospectus for these twenty-four insurers, it is determined that in seventeen conversions, insurers distributed shares to policyholders at the time of the IPO.¹² Table 7 lists the corresponding number of shares given to policyholders as well as the number of shares issued in the IPO. These figures are obtained from the prospectuses, annual reports, or directly from the insurer.

In Prudential's conversion, policyholders were compensated with 456.3 million shares, whereas the firm issued an additional 110 million shares in its offering, thus approximately 81 percent of these total shares was directed toward customers. Thus, the level of policyholder ownership at the time of IPO can be estimated as the ratio of number of policyholder shares to the sum of IPO shares and policyholder shares. This may not be a perfect measure of policyholder ownership since these customers also could purchase IPO shares, the amount of which cannot be determined.¹³ However, this variable is expected to convey information on whether the issuing firm prices its issue differently depending on the magnitude of ownership directed toward policyholders in conjunction with the demutualization. It is anticipated that for offerings with a higher percentage of policyholder share distributions, initial returns will be higher because of a policyholder wealth redistribution motive.

¹² AmerUs and NCRIC issued IPOs after a MHC conversion, thus no compensation is required to be given to policyholders. Old Guard, MEEMIC, and American Physicians Capital followed a subscription rights approach for their IPOs as per the insurance statute in their respective states of domicile. In RISCORP's conversion, policyholders voted to approve the demutualization plan, which did not provide for any compensation to them, thus none was given. FPIC converted from reciprocal to stock form in 1986 and distributed shares; however, the firm was not publicly traded until 1996. This variable focuses on policyholder distribution at the time of IPO.

¹³ In Table 7, the number of shares issued in the IPO does not include any overallotment options given or any amounts sold in simultaneous subscription offerings to participating policyholders, directors, and employees. This subscription offering data is not available for all of these firms listed.

TABLE 7

Insurer Demutualizations with Policyholder Share Distributions

Insurer	Number of Shares Issued in IPO (in Millions)	Number of Shares Given to Policyholders at the Time of IPO (in Millions)	Policyholder Share Proportion
UNUM Corporation	22.01	20.49	0.4821
Mutual Assurance	0.90	4.91	0.8452
Equitable Companies	43.50	25.60	0.3705
Allmerica Financial Corporation	11.00	37.50	0.7732
Guarantee Life Companies	2.88	7.07	0.7109
Farm Family Holdings	2.47	2.24	0.4752
SCPIE Holdings	2.00	9.99	0.8333
Trigon Healthcare	17.83	24.48	0.5786
MONY Group	11.25	34.30	0.7530
StanCorp Financial Group	13.92	18.72	0.5735
MIIX Group	3.00	12.67	0.8085
John Hancock Financial Services	102.00	212.80	0.6760
MetLife	202.00	494.47	0.7100
Phoenix Companies	48.80	56.20	0.5352
Principal Financial Group	100.00	260.60	0.7227
Anthem	48.00	54.86	0.5334
Prudential Financial	110.00	456.30	0.8058

Note: Policyholder share proportion = number of shares given to policyholders at the time of IPO/(number of shares issued in IPO + number of shares given to policyholders at the time of IPO).

Tables 8 and 9 present descriptive statistics for the variables to be used in the OLS regressions. As Table 8 shows, the mean first-day return for the entire sample of 119 firms is 8.87 percent, suggesting a strong market response to insurer IPOs in general. The initial return ranges from -17 to 60 percent. As demonstrated by the average underwriter reputation of 7.83 out of 9, insurers are utilizing the services of more prestigious investment banks/underwriters in bringing their issue to market. Life-health firms constitute slightly more of the sample. Six percent of firms executed their IPOs during the Internet boom years of 1999 and 2000 and as Table 2 reports, this translates into the seven demutualization offerings during those years.

In Table 9, summary statistics are presented for each of the insurer samples. As previously reported in Table 3, nonconversion offerings average 7.30 percent initial returns whereas conversion offerings gain an average of approximately 15 percent. Demutualizing insurers direct an average of 45 percent of their stock toward policyholders. As stated above, all seven of the IPOs issued during the Internet boom era were demutualization offerings.

The prestige level of the underwriters bringing demutualization IPOs to market is significantly higher than for their nondemutualization counterparts. Converting mutuals

TABLE 8
Descriptive Statistics on Insurer IPOs

Variable	Insurer IPOs (N = 119)			
	Mean	Standard Deviation	Minimum	Maximum
First-day return	8.87%	11.15%	-17.42%	60.00%
Demutualization (1 if demutualized insurer)	0.202	0.403	0	1
Prior market return	0.07%	0.19%	-0.54%	9.52%
Internet boom (1 if IPO year = 1999 or 2000)	0.059	0.236	0	1
Proceeds	17.909	1.466	15.348	21.668
Standard deviation of aftermarket returns	0.025	0.013	0.005	0.095
Underwriter reputation	7.836	1.595	1.000	9.000
Life (1 if firm is classified as life-health)	0.571	0.497	0	1
T-bill	0.046	0.014	0.017	0.080

TABLE 9
Descriptive Statistics on Demutualization and Nondemutualization IPOs

Variable	Demutualization IPOs (N = 24)			Nondemutualization IPOs (N = 95)	
	Mean	Standard Error	t-Test	Mean	Standard Error
First-day return	15.08%	3.13%	*	7.30%	0.95%
Prior market return	0.07%	0.05%		0.07%	0.02%
Internet boom (1 if IPO year = 1999 or 2000)	0.292	0.095	**	0	0
Proceeds	18.906	0.367	**	17.658	0.129
Standard deviation of aftermarket returns	0.024	0.002		0.025	0.001
Underwriter reputation	8.333	0.248	*	7.711	0.170
Life (1 if firm is classified as life-health)	0.625	0.101		0.558	0.101
T-bill	0.045	0.002		0.046	0.002
Policyholder share proportion	0.449	0.069	**	0	0

Note: t-statistics test for differences between the mean values of each variable for the demutualization IPOs and the nondemutualization IPOs.

*, ** indicate significance at the 0.05 and 0.01 levels, respectively.

are choosing more prestigious underwriters perhaps so their potential for legal liability is eased by these underwriters' greater expertise. By law, the management of firms issuing IPOs has a fiduciary duty to their investors to properly execute the offering. However, demutualizing firms have additional responsibilities to their policyholders

in conjunction with the conversion. Thus, to minimize legal liability, these firms engage the services of more prestigious underwriters. It is noted, however, that while the mean reputation measure for demutualization IPOs is 8.33, the mean reputation measure for the nondemutualization IPOs is 7.71, which is not dramatically lower. Indeed, the market may not be able to differentiate much within these levels thus the *Underwriter reputation* measure for the regression models is modified as follows. An underwriter with a Carter–Manaster measure of 9 is now considered a prestigious underwriter and the corresponding *Underwriter reputation* variable takes on a value of 1 for these observations.¹⁴

Table 10 presents the results for the OLS regressions. Examining across the entire sample of 119 insurer offerings, it is observed that, after controlling for market conditions and firm-specific characteristics, demutualization IPOs exhibit significantly higher first-day returns.¹⁵ Such underpricing by these demutualized firms allow for wealth redistribution toward stock-receiving policyholders. Such initial gains make these customers more satisfied with the conversion and thus remain with the firm.

Significantly larger returns suggest that demutualizing firms wish to minimize after-market disgruntlement by policyholders and by investors. Because of their impact on potentially millions of policyholders, demutualizations have received much media attention. Indeed, recognizing this greater attention, converting firms would rather have positive returns reported to enhance their reputation.¹⁶

Across all IPOs, it is observed that market movement in the few weeks prior to issue has a significantly positive impact on first-day returns. The level of momentum and exuberance displayed by investors persists in how new issues are received. The magnitude of returns for life–health firms is not found to be significantly different from that of property–liability firms, as also observed in Akhigbe, Borde, and Madura (1997), who studied the market reaction to seasoned equity and debt offerings. Although both sets of firms have legitimate capital needs, market- and other firm-specific characteristics would suggest how their new issues are valued. The amount of the proceeds positively impacts the initial return, although this variable is not significant. The level of this variable conveys how established the issuing firm is, which would suggest lower uncertainty about the firm's value.

Underwriter reputation is found to have a significant impact on first-day returns. Those IPOs brought to market by the most prestigious underwriters are observed

¹⁴ There are fifteen demutualization IPOs and twenty-nine nondemutualization IPOs for which the revised *Underwriter reputation* measure takes on a value of 1.

¹⁵ The *Internet boom* variable is not included in the All IPOs regression due to its strongly significant relationship with the *Demutualization* variable. All seven of the IPOs that occurred during the Internet boom are conversion related.

¹⁶ A *Debt/assets* variable was constructed whereby the values of both debt and assets are measured either at the time of offering or the closest quarter preceding the IPO. Using the SDC database and electronic SEC filings, these data were available for seventy-four firms, twenty-one demutualized, and fifty-three nondemutualized. Adding this variable to the model, it is found that the initial returns for demutualized insurers are still significantly higher than for their nondemutualized counterparts and how the market is performing at the time of offer also significantly influences the return. The *Debt/assets* ratio is not found to be significant for this subsample of firms.

TABLE 10
OLS Regression Results for the First-Day Return

Variable	Dependent Variable: First-Day Return	
	All IPOs Estimate (SE)	Demutualization IPOs Estimate (SE)
Intercept	-0.065 (0.176)	0.682 (0.527)
Demutualization (1 if demutualized insurer)	0.086** (0.026)	
Prior market return	14.461** (5.077)	34.601* (13.311)
Internet boom (1 if IPO year = 1999 or 2000)		0.002 (0.081)
Proceeds	0.006 (0.009)	-0.026 (0.025)
Standard deviation of aftermarket returns	0.834 (0.777)	-2.161 (4.007)
Underwriter reputation	-0.049* (0.025)	-0.104 (0.082)
Life (1 if firm is classified as life-health)	0.005 (0.021)	-0.049 (0.100)
T-bill	0.121 (0.749)	1.026 (3.154)
Policyholder share proportion		0.080 (0.107)
N	119	24
Adjusted R-squared	0.120	0.219

Note: Standard errors are in parentheses.

*, ** indicate significance at the 0.05 and 0.01 levels, respectively.

to have a significantly lower level of underpricing. These underwriters, given their reputation, may be better able to set an offer price close to the true value and help their client maximize proceeds. Although the volatility of aftermarket returns has a positive relation with initial returns, this variable is not statistically significant. This provides only weak evidence that greater *ex ante* uncertainty is conveyed in the first-day returns. Cagle and Porter (1997) find that after controlling for *ex ante* uncertainty and underwriter reputation conversion, thrift IPOs and nonconversion thrift IPOs exhibit similar levels of underpricing. As shown in Table 10, converted insurer IPOs are significantly more underpriced than their nonconverted counterparts.¹⁷

¹⁷ The inclusion of a *Catastrophe* dummy variable was also considered. A list of the "Most Costly Catastrophes in the United States" and the "Most Costly Insured Catastrophes in the United States" was compiled using data from the Insurance Services Office and the Insurance Information Institute; this constituted twenty-two catastrophes. The variable, *Catastrophe*, takes on a value of 1 if the IPO occurred either in the same month or the next calendar month after a catastrophe. Adding this to the model, our results show, after controlling for all other factors, the occurrence of a catastrophe has no significant impact on the first-day return. The *Catastrophe* dummy variable is then modified to take on a value of 1 only for a property-casualty IPO that occurs either in the same month or the next calendar month. Again, the occurrence of a catastrophe has no significance on initial returns; results are available from the author.

The gains created by these large first-day returns could have accrued to the issuing firm had it set its offer price higher. The initial stockholders instead receive these gains, thus the firm is already maximizing value for the shareholder. Carson, Forster, and McNamara (1998), in their study of demutualizing firms, observe that these converting insurers have higher free cash flow. It could be argued that for those firms with higher free cash flow, underpricing is less of a financial issue. Although the agency costs between management and the stockholders is reduced as a result, underpricing could still represent an agency cost to the firm by creating a conflict with policyholders, especially those policyholders who did not receive any compensation during the conversion. These policyholders may view the large initial returns gained by the initial stockholders as wealth expropriation and could view the lesser amount of proceeds raised as reducing the guarantee that their insurance contractual obligations will be met as they arise.

To test for robustness, an ordered probit regression is also run. Following Aggarwal, Prabhala, and Puri (2002), the magnitude of the first-day return corresponds to some level of underpricing. For firm i , the dependent variable takes on a value of 0, if $R_{i,1} \leq 0$, denoting no underpricing, it takes on a value of 1 if $0 < R_{i,1} \leq 20$ percent, signifying moderate underpricing and a value of 2 for when $R_{i,1} > 20$ percent which would represent severe underpricing. The results are not reported here; however, the signs and the significance levels are similar to that presented in Table 10. Significantly higher levels of underpricing are found for demutualized firms. In addition, initial returns are strongly influenced by the performance of the market in the weeks prior to issue.

It is noted that the focus of the article is on IPO activity during the period 1986–2001 and correspondingly, the analyses here consider all of these observations. There are several years for which there are demutualization IPOs but no nondemutualization IPOs and vice versa. There are eight years for which there is both demutualization and nondemutualization IPO activity (1986, 1991, 1992, 1995, 1996, 1997, 1998, 2001). It is investigated whether similar results are found for this subsample given the greater correspondence of observations within years.¹⁸ Focusing on just these years, there are seventeen demutualization IPOs and fifty-seven nondemutualization IPOs. The same analyses are run on this sample of seventy-four firms. Although the tables of results are not reported in the article, it is observed that the mean initial return for these demutualization issues is significantly higher than the mean return for these nondemutualization issues. In the regression, it is found that after controlling for other factors, the conversion IPOs still post a significantly higher first-day return. In addition, the significant influence of the *Prior market return*, *Underwriter reputation*, and *Standard deviation of aftermarket returns* is observed.

¹⁸ Thank you to the referee for this important point. Results from this analysis are available from the author. The mean nondemutualization returns during the years for which there are no corresponding demutualization IPOs are lower than the mean nondemutualization returns for the other years. Comparing the offering characteristics, it is found that the mean *Prior market return* is lower for the former group of firms. It is observed that the mean and median size of the offering is similar for both groups, thus suggesting that the size of the firm is similar. As observed in the regressions, how the market is performing at the time of the IPO does significantly influence the first-day return. Thus, these returns for the former group could be dampened by the colder market conditions at the time of issue.

The last column in Table 10 presents the regression results for the set of twenty-four demutualized firms, to detect the influence of various factors on just these conversion offerings.¹⁹ Just as in the estimation using both conversion and nonconversion IPOs, how the market is behaving prior to the issue again significantly affects how well the stock is received on the first trading day. Demutualized firms that issue higher offering sizes are found to exhibit lower initial returns corresponding to lower *ex ante* uncertainty about these firms; however, this evidence is not significant. For these converted insurers, the largest offerings were completed by some of the largest life–health firms in the United States, such as Prudential, MetLife, Unum, and John Hancock. Given the vast scope of these companies, *ex ante* uncertainty about its value and prospects would be lower. In addition, the reputation of these insurers would allow a higher offer price at the time of issue, thus serving to reduce underpricing. However, even with the offer prices chosen, all but one of the demutualized insurers enjoyed positive first-day returns. Because of the media attention placed on demutualization offerings, these firms would rather post strong initial returns.

The level of policyholder ownership at the time of the IPO positively influences the first-day return, but not significantly. Coming to market during the Internet boom has a positive but insignificant impact on stock performance. After controlling for other influences, these seven firms did not benefit dramatically from timing their IPO to hit during this particular period. However, issuing the offering following general periods of market rises does benefit the initial stockholders in the firm.²⁰

CONCLUSIONS

Conversion to stock form is a time-consuming process, however, one that has been chosen by a sizable number of insurers during the past few decades. Both regulators and policyholders seek to ensure that these firms continue to meet their obligations. In a full demutualization, policyholders receive compensation for this organizational structure change.

Issuing an IPO after a conversion creates an additional set of agency considerations since the insurer opens itself up to continual monitoring by the financial market and the SEC. In pricing its offering, the firm is argued to be motivated by considerations other than just maximizing proceeds. Through underpricing, initial investors and

¹⁹ As mentioned in footnote 12, FPIC converted to stock form in 1986 and issued its IPO in 1996. It could be argued that given the length of time between conversion and IPO, this firm belongs to the nondemutualization sample. To address this, FPIC was placed in the nonconversion group in a separate analysis at all of the *t*-tests and regressions were run again. The differences between these results and the results presented in this article are negligible.

²⁰ This result would suggest that management should time its offering to come to market following a hot period. However, given that the demutualization process can take up to two years, forecasting the time of a hot period would be difficult. We examined the proportion of “hot” trading days during our sample time period, defining hot to be a day in which the market return is greater than 1 percent; similarly a “hot” IPO is defined to be one in which the first-day return is greater than 1 percent. While 70 percent of the IPOs in our sample of 119 are hot, only 11 percent of the trading days are hot. Clearly, company and offering characteristics influence how the IPO is received, beyond whether the market is hot on that day.

share-receiving policyholders would enjoy large stock gains. Indeed, it is observed that after controlling for market- and firm-specific influences, initial returns for the IPOs of demutualized insurers are found to be significantly higher than the returns for their nondemutualization counterparts. These converted firms underprice their offerings by a greater degree. Capital that they could have attracted instead accrues to the initial stockholders. Those policyholders receiving shares would enjoy the corresponding gains and thus become satisfied with the conversion. Initial investors would also benefit from large initial returns, thus creating goodwill for the firm and reducing potential disgruntlement and legal liability.

Although almost all of the demutualization IPOs post a positive initial stock performance, conversion may not be the correct decision for all mutuals. A majority of the demutualized firms in this sample are also studied in Viswanathan and Cummins (2003), who find that as compared to firms that remain mutuals, the demutualized insurers are unique in certain aspects. Although financially solvent, converted property-liability insurers have significantly lower surplus-to-asset ratios whereas converted life-health insurers had significantly lower liquidity ratios. The market perhaps detects these capital needs for these otherwise financially strong firms and views their capital needs as legitimate. Firms that chose to remain mutual may not share these financial traits, thus may not be rewarded as well if they demutualized.

These high returns for insurer offerings are sustained in the long run, as opposed to the negative aftermarket performance found for IPOs in other studies. This would suggest underpricing of the IPO, rather than initial overoptimism that would get corrected over time. It must be acknowledged that within both sets of insurers, the detected underpricing may not be deliberate. Rather, these offerings could have been unintentionally mispriced. Since these firms were never publicly traded prior to the IPO, setting a market value may be difficult. Greater stock returns could indicate that the market values these insurers higher than what was anticipated by both their underwriters and these issuing firms. Regardless of what factors led to how the offering was ultimately priced, demutualization does enrich the policyholders compensated in the process.

APPENDIX

Eligible participating policyholders are divided into classes, based on line of business, various rating characteristics, and contract duration. Each large group policyholder would be its own class. All calculations are performed for each cohort as a group, rather than for each individual policyholder. If this surplus allocation procedure were to be executed for each policyholder, the already huge administrative costs would be further increased.²¹ Then, for a particular class, cash flows since contract onset are tracked. Premiums and investment income are summed, reduced by the class's corresponding claims and expenses. The accumulated value constitutes the class's past contribution to surplus. To determine the class's future contribution to surplus, expectations of future premium activity, lapse rates, claims, and expenses are estimated. The past and future contributions to surplus are then added together and the ratio of this sum to

²¹ Prudential had over 11 million eligible policyholders.

the aggregate sum of all classes' contributions represents this class's actuarial equity share of the total surplus distribution. Each policyholder in a particular class shares in this allotment equally. Using both past and future contributions raises the share allocated to newer policyholders and reduces that for longstanding policyholders. This approach recognizes the prospective contribution of current policyholders to the value of the insurer.

In property-liability demutualizations, an accepted and commonly used formula assigns surplus in proportion to the eligible policyholder's credited premiums over the three years prior to conversion.²² Credited premiums are gross premiums less returned premiums and dividends paid. An individual policyholder's claims experience is typically not considered in the allocation.

The surplus allocation procedure typically used in life-health insurer demutualizations is much more complex, involving extensive calculations. Each eligible policyholder's distribution consists of a fixed component and a variable component. Under the fixed component, all eligible policyholders receive the same amount of compensation to give up their voting rights.²³ In recent demutualizations, the aggregate value distributed under the fixed share component varied from 12 to 24 percent of the total distribution (Collins, 1999). Regulators also closely examine the proportion assigned to the fixed share component. They are concerned that all policyholders be treated fairly and equitably, that no one group subsidizes another. A 1987 report by the Society of Actuaries Task Force on Life Insurer Conversions analyzes various methods for determining the variable component. Following its recommendations, demutualizing insurers have awarded distributions based on each eligible policyholder's past and future contribution to surplus. This expectation of prospective cash flow recognizes that many current policyholders will contribute to the future value of the firm.

When compensating eligible policyholders for their membership interests, the firm may just distribute shares in the newly formed stock insurer, or if allowed by statute, offer other forms of compensation, the value of which equals the policyholder's allocation. In some demutualizations, policyholders could choose stock or receive 50 percent of the value in a cash payment, an approach introduced in UNUM's 1986 demutualization. This 50 percent penalty is imposed to prevent a potential run on the insurer's assets. In some states, however, stock or 100 percent of the value in cash must be offered.

First, the insurer must decide which policyholders are eligible to receive compensation. The board of directors chooses an eligibility date and typically states that policyholders with contracts in force on that date would receive compensation if the conversion becomes effective.²⁴

²² NAIC *Compendium of State Laws on Insurance Topics* (1998); Wisconsin's statute specifically requires using the five-year period prior to conversion.

²³ In some demutualizations, the fixed share was awarded for each *policy* in force.

²⁴ The statutes in some states require that current policyholders and all existing persons (those past policyholders who are still alive) who had been policyholders within the three years prior to conversion be eligible for compensation.

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