MERGER ACTIVITY IN THE INSURANCE INDUSTRY

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Abstract. The great pace of merger activity that has involved financial institutions in recent years has attracted quite an interest. With this paper we contribute to the understanding of the benefits and performance measures of mergers among the insurance companies. The prevalence of financial synergies is the main motive for merger and acquisition activity in the insurance industry. The investigation into financial synergies focuses on solvency, liquidity and leverage issues. Also, we employed a match-pair research to analyze the pre-merger performance and the effects of merger on performance of the sample of acquired firms.

Key Words: insurance companies, mergers, financial synergies, performance measures

INTRODUCTION

A business combination may take the form of either a merger or a consolidation. A merger is defined as a combination of two or more companies in which the resulting firm maintains the identity of the acquiring company. In a consolidation, two or more companies are combined to form an entirely new entity. A consolidation might be utilized when the firms are of equal size and market power. For the purpose of this paper, the primary emphasis will be on mergers, with special consideration of the benefits of merger activities for the insurance industry.

Corporations may seek external growth through mergers in order to achieve risk reduction, improve access to the financial markets through increased size, or obtain tax carry-forward benefits. A merger may also expand the marketing and management capabilities of the firm and allow for new-product development. The motives for mergers are both financial and non-financial in nature (7, 588). Merger activities allow the acquiring firm to enjoy a potentially desirable portfolio effect by achieving risk reduction while perhaps maintaining the firm's rate of return. Risk-averse investors may than discount the future performance of the merged firm at a lower rate and thus assign it a higher valuation.

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than was assigned to the separate firms. The second financial motive is the improved financing posture that a merger can create as a result of expansion in size. Larger firms may enjoy greater access to financial markets and thus be in a better position to raise debt and equity capital. Greater financing capability may also be inherent in the merger itself. This is likely to be the case if the acquired firm has a strong cash position or low-debt-equity ratio can be used to expand borrowing by the acquiring company. The final financial motive is the tax loss-carry-forward that might be available in a merger if one of the firms has previously sustained a tax loss.

The non-financial motives for mergers include the desire to expand management and marketing capabilities as well as the acquisition of new products. Particularly popular industries in the latest merger movement have been companies dealing with entertainment, retail, food products, and financial services.

While mergers may be directed towards horizontal integration (that is, the acquisition of competitors) or vertical integration (the acquisition of buyers or sellers of goods and services to the company), antitrust policy generally precludes the elimination of competition (19, 317-327). For this reason, mergers are often with companies in allied but not directly related fields. The pure conglomerate merger of firms in totally unrelated firms is still undertaken, but less frequently than in the past.

Perhaps the greatest management motive for a merger is the possible synergistic effect. Synergy is said to take place when the whole is greater than the sum of the parts. This "2+2=5" effect may be the result of eliminating overlapping functions in production and marketing as well as meshing together various engineering capabilities. In terms of planning related to mergers, there is often a tendency to overestimate the possible synergistic benefits that might accrue.

Most of the academic discussions have revolved around the motives of the acquiring firm that initiates a merger. Likewise, the selling stockholders may be motivated by a desire to receive the acquiring company's stock - which may have greater acceptability or activity in the marketplace than the stock they hold. Also, when cash is offered instead of stock, this gives the selling stockholders an opportunity to diversify their holdings into many new investments. The selling stockholders generally receive an attractive price for their stock that may well exceed its current market or book value. In addition, officers of the selling company may receive attractive post merger management contracts as well as directorships in the acquiring firm. In some circumstances, they may be allowed to operate the company as a highly autonomous subsidiary after the merger. The final motive of the selling stockholders may simply be the bias against smaller businesses that has developed in this country and around the world. Real clout in the financial markets may dictate being part of a larger organization. These motives should not be taken as evidence that all or even most managers of smaller firms wish to sell out - a matter that we shall examine further when we discuss negotiated offers versus takeover attempts.

**MERGER ACTIVITIES IN EU AND US INSURANCE INDUSTRY**

Perhaps the most important development in the financial services market of the past two decades is the integration of the financial services sector. Deregulation, advances in communications and information technology, and economic forces have led to the break-
down of the “firewalls” that traditionally separated financial intermediaries such as commercial banks, thrift institutions, investment banks, mutual fund companies, and insurance companies. The European Union gradually deregulated the financial services sector through a series of banking and insurance directives, culminating in the virtual deregulation of financial services (except for solvency) in the Second Banking Coordination Directive, implemented in the early 1990s, and the Third Generation Insurance Directives, implemented in 1994.

The objective of the banking insurance directives was to create a single European market in financial services. The introduction of Euro in 1999 also profoundly changed the economic landscape for financial services firms in the European market. European deregulation in insurance was particularly important, because insurers had traditionally been limited to operating within specific European countries, with little or no price competition and cross-border transactions mainly limited to reinsurance and some types of commercial coverage.

The Third Insurance Directives introduced true price and product competition in European retail insurance markets for the first time in both life and non-life insurance. The result of deregulation and other economic drivers of financial sector integration has been an unprecedented wave of mergers and acquisitions (M&As) of European financial institutions. From 1990 to 2002 there were 2,595 M&As involving European insurers of which 1,669 resulted in a change in control. Transactions occurred both cross-border (across national boundaries) and within-border as well as cross-industry (e.g., involving insurers and banks) and within-industry. The consolidation has dramatically changed the structure of insurance markets in most European countries and has led to lower prices in most European national insurance markets (29, 1-54).

Over the last decades, the insurance industry in the US experienced a large number of merger and acquisition (M&A) transactions. The economic rationales for these operations in the US insurance industry include the insurers' will to increase their geographical reach, their products' range (2, 2493-2519) and benefit from scale and scope economies (11, 325-357). Furthermore, insurers could have initiated these transactions in order to benefit from financial synergies (8, 563-595) or reduce the riskiness and/or improve the amount/timing of their cash flow streams (13, 1-48).

According to Thomson Financial, M&A transactions in the US insurance industry over the 1990-2001 period account for the third of the transactions worldwide in terms of number (639 compared to 2101), and for almost 45% in terms of value (218.1$ US billion compared to 480.8$ US billion). Interestingly, the US insurers do not limit their M&A activity to the domestic market, and engage more and more often in cross border operations, enhancing a worldwide consolidation movement in the insurance industry.

THE LITERATURE OF MERGER ACTIVITIES AMONG INSURANCE COMPANIES

There have been few market value studies of European financial sector M&As of any kind. The leading study of European bank mergers, Cybo-Ottone and Murgia (10, 831-859) analyzed merger transactions in 13 European countries over the period 1988-1997. In their sample, either the target or the acquiring firm had to be a bank. Based on 54 deals that involved a change in control, they found significant market value gains for within-
country, bank-to-bank acquisitions, and for transactions where banks acquired insurance companies. However, they did not find market value gains for cross-border transactions or transactions involving banks and securities firms. Lepetit, et al. (23, 1-36) study the market value effects of European bank mergers over the period 1991-2001 and find market value gains for geographically focusing and activity diversifying mergers. The U.S. bank merger study by Delong (16, 221-252), finds that bank mergers that are activity and geographically focusing create value but that diversifying mergers do not create value.

The valuation effects of mergers in the insurance industry have not received adequate scrutiny in the literature, though insurance companies have been quite active in the consolidation process. For example, Berger (6, 135-194) shows that over 1985-1997, consolidation in the insurance industry accounted for 18.9% of the financial intermediaries merger activity in the U.S. and 18.6% in European domestic deals. Insurance companies appear to be more active in international mergers. For example, acquisitions of US insurance companies by non-US insurance companies represent 37% of all international acquisitions concluded by non-US financial institutions. The percentage increases to 44% if we consider intra-Europe acquisitions, while acquisitions of European insurance companies by non-European insurance companies reached 33% of all transactions concluded outside their domestic market by non-European financial institutions.

To our knowledge, previous studies on insurance companies mergers include Cummins (11, 325-357), Chamberlain and Tennyson (8, 563-595), BarNiv and Hathorn (4, 89-113), Floreani and Rigamonti (17, 1-40). Cummins considers efficiency effects in merging activities for insurance companies. BarNiv and Hathorn examine whether insurance merger targets end to be firms that are financially distressed. They find this to be true for twenty to forty-six percent of mergers in the period from 1985 to 1992. In order to isolate mergers for financial synergies that are motivated by information asymmetries rather than regulatory pressures, their study omits transactions in which the target firm was in receivership prior to merger, and all transactions in which the target firm has merged into the acquirer or retired following merger.

Chamberlain and Tennyson in their article investigate the prevalence of financial synergies as a motive for merger and acquisition activity in the property-liability insurance industry. Their hypotheses were tested via analysis of accounting ratios of acquisitions targets in the period from 1980 to 1990 in relation to those of non-acquired firms of similar characteristics, and via analysis of acquisition characteristics. The hypothesis that financial synergies are a motive for mergers following negative industry capital shocks receives strong support.

The authors Floreani and Rigamonti in their article "Mergers and Shareholders' Wealth in the Insurance Industry" examined 56 merger deals that occurred over the period between 1996 and 2000 and they tried to address the question of why mergers on average do not seem to create value for bidder shareholders. In order to detect the valuation effects of the acquiring firms, they select sample, according to the relative importance of the deal for the bidder, as measured by the ratio between the value of the deal and the market value of the acquiring firm. In sharp contrast to previous literature on financial mergers, they found that bidder shareholders increase their wealth. Besides, the abnormal returns tend to be larger the greater the impact of deal value on bidder value. It seems then plausible that mergers in the insurance industry are mainly motivated by synergistic reasons rather than by management self-interest. In fact, when they tried to detect the driving fac-
tors of abnormal returns, they found that deals in which both merging partners are either reinsurance or life insurance companies tend to be more value-enhancing. Most peculiar is the fact that mergers within national European boundaries are not perceived as a value-increasing event for the bidder shareholders. That contrasts with previous evidence on banks, suggesting that domestic deals tend to benefit more their shareholders. The deregulation of the European market, the creation of the European Union as well as social security and private pensions reforms design a future pan-European market. With respect to this, in-country acquisitions may be viewed as a defensive strategy and be punished by the market.

THE RATIONAL OF MERGER ACTIVITIES IN INSURANCE INDUSTRY

Perhaps the most frequently cited rationale for a takeover is economies of scale – firms expand to obtain optimal operating scale and thereby reduce average unit costs of production. The usual source of cost scale economies is the spreading of fixed costs over a broader output base. For insurers, important fixed costs include computer systems and software development costs. The actuarial, underwriting, and investment operations of insurers also have fixed cost components that can be sources of scale economies. Another source of scale economies that is expected to be particularly important for insurers is earnings diversification (11, 325-357).

The basic principle of insurance is "the law of large numbers," which holds that expected losses become more predictable as the size of the insured pool increases. Enhanced predictability implies that large insurers have less volatile earnings and thus need to hold less equity capital per policy underwritten, providing a potentially powerful source of cost reduction. Increasing underwriting diversification may also permit insurers to engage in higher risk, higher return investment strategies without increasing their costs of capital. Mergers often enable insurers to expand their pool of policyholders more rapidly than is usually possible through organic growth. If mergers permit firms to realize scale economies, the performance of the target and acquirer will be improved after M&A transactions. If firms seek scale economies through mergers, another prediction is that firms operating with increasing or constant returns to scale (IRS or CRS) are more likely to be takeover targets than firms operating with decreasing returns to scale (DRS), because DRS firms are already "too large" to be scale efficient. However, there is no special reason to believe that acquirers will be scale efficient. Size is an advantage in being an acquirer, and many large firms are not scale efficient (12, 1-38).

Achieving economies of scope is another motivation often given for merger transactions. Cost scope economies can arise if a firm can reduce overall production costs by providing different types of products, rather than specializing. Examples include gains from exploiting shared resources such as customer lists, brand names, managerial talent, information technology, or customer service capabilities. Revenue economies of scope arise if customers prefer to deal with firms that provide several types of financial services due to reduced search costs and other factors that create preferences for "one-stop shopping." If the merger enable firms to achieve economies of scope, mergers that result in increased geographical or product line diversification are expected to lead to higher efficiency or productivity gains than focusing mergers.
Corporate control theory (e.g., 22, 21-48; 28, 7-20) argues that takeover is an efficient means to replace inefficient managers of target companies. The target firm may underperform either because its managers pursue their own interests at the expense of owners' interests or because they lack the knowledge and skills to maximize firm value. If managers of acquiring firms are more capable than those of acquired firms, they can improve the efficiency of targets. This theory predicts that poorly performing firms are more likely to be acquired and that the performance of targets will improve after takeover. Acquiring firms are also expected to gain from the takeover activity if they have the ability to bring operating synergy to the post-takeover entity.

On the other hand, there is some evidence in the insurance industry that acquirers might prefer efficient targets, especially firms that possess competencies in certain areas or product lines that could bring the acquiring insurers market power and more cost and revenue efficiency (11, 325-357). Therefore, we do not have a clear prediction on whether the targets are relatively more or less efficient than non-targets.

Mergers also can be motivated by financial synergies. Financial synergy theory argues that, with asymmetric information in financial markets, a firm with insufficient liquid assets or financial slack may not undertake all valuable investment opportunities (25, 187-221). In this case, the firm can increase its value by merging with a slack-rich firm if the information asymmetry between the two firms is smaller than that between the slack-poor firm and outside investors. Thus, takeover may be an efficient means to alleviate information asymmetries and achieve financial synergies. This theory predicts that firms in financial distress but with good investment opportunities are more likely to be involved in M&A activities, either as targets or as acquirers.

Raising capital from external capital markets can be difficult for financially distressed insurers, especially mutual or private stock companies with limited ability to raise new capital quickly. These insurers also face substantial transactions costs when raising new capital, due to information asymmetries. Outside investors generally have less information about the quality of an insurer's assets and the value of its reserve estimates for unpaid losses, especially for long-tail lines such as commercial liability insurance. Outside investors therefore may tend to charge a premium for investing in such insurers, making it unattractive to raise new capital from external capital markets (8, 563-595). If the information asymmetry between the acquiring firms and target insurers is less than the asymmetry between the targets and capital markets, financially sound firms will seek to acquire firms that are financially weak but have attractive growth opportunities. If the financial synergy between acquirers and targets dominates other motivations, we should find efficiency or productivity improvements for either the targets or combined firms.

The agency cost theory of mergers argues that takeover activity often results from acquiring firm managers' acting in their own self-interests rather than in the interests of the firm's owners (e.g., 28, 7-20). Managers may be motivated to increase their compensation by increasing the size of the firm through non-value enhancing mergers or engaging in "expense preference" behaviour by over-consumption of perquisites. Managers may also intentionally acquire businesses that require their personal skills in order to make it costly for shareholders to replace them. To the extent that mergers are primarily motivated by managerial self interest, they are unlikely to generate operating or financial synergies that lead to improvements in efficiency or productivity.
As explained in more detail below, many firms in the property-liability insurance industry are organized as insurance groups, where several subsidiaries are operated under common ownership and management. Unaffiliated single insurers with no group affiliation are also present in the industry. In general, the managers of target firms may resist takeover because of the threat to their job security. However, resistance is likely to be stronger among managers of unaffiliated firms than among managers of groups. The managers of an unaffiliated company face an uncertain future if their firm is acquired and thus are likely to be more resistant to takeover offers. Managers of groups, on the other hand, are more likely to view the purchase and sale of companies as important components of their strategic arsenal and as potentially enhancing rather than threatening their personal economic value. Thus, we hypothesize that unaffiliated firms are less likely to be targets of successful takeover attempts than companies that are part of insurance groups.

**Performance Measures of Mergers**

The objective of this paper is to show the importance of financial synergies in insurance merger and acquisition activities. Additionally or alternatively, value-enhancement through merger can arise from operating synergies—opportunities to improve firm performance. While operating and financial synergies are not mutually exclusive, mergers motivated primarily by financial synergies should exhibit different characteristics from those primarily motivated by operating synergies. In particular, mergers to achieve financial synergies should yield short run improvements to the target firm's solvency, liquidity and leverage positions; those motivated by operating synergies should be more likely to result in improvements to the target's net income and earning components. Of course, net income improvements will tend to improve solvency through their effect on retained earnings and additional capital may improve net income by increasing revenue or reducing reinsurance costs. However, factors such as dividend payments and capital infusions affect capitalization independently of net income and some components of net income (e.g., underwriting expenses and investment earnings) will not be affected by capital levels. Hence, in order to distinguish merger motives and to examine whether merger motives differ across different periods, two broad categories of performance measures are examined: those intended to measure financial synergies and those intended to measure operating synergies.

The investigation into financial synergies focuses on solvency, liquidity and leverage. Solvency is measured by the ratio of policyholder's surplus to assets. Policyholders' surplus is the excess of the value of the firm's assets over liabilities (net of initial capital paid in) and hence represents the firm's net worth. This ratio thus shows the percentage of assets which are not required for the payment of losses or other liabilities; the larger this ratio, the less likely the firm is to go bankrupt. The liquidity measure is intended to capture the ability of the company to pay off reserves and is calculated by dividing liquid assets (cash and marketable securities) by total reserves. If mergers relieve financial constraints, one would expect acquired firms to exhibit low values of the solvency and liquidity ratios, and for these measures to increase following mergers.

Two measures of leverage are analyzed, underwriting leverage and reserve leverage. Underwriting leverage is measured as premium revenues net of reinsurance transactions
relative to policyholders’ surplus. This ratio is inversely related to the capacity of firms to write additional business because new policies generate liabilities, which must be supported by surplus due to the limited liability of insurance companies. Hence, a high volume of premiums relative to surplus means that the capacity to write new business is low. Reserve leverage is measured as total loss and loss adjustments expense reserves relative to policyholders’ surplus. This ratio represents an insurer’s major unpaid obligations as a percentage of net worth, and is inversely related to the firm’s ability to bear loss shocks and errors in loss forecasting. If financial synergies are important determinants of mergers in the industry, one would expect acquired firms to be highly levered, and for leverage to decrease following merger. The percentage change in premium volume is also examined to provide additional insight into the leverage position of the firm. A high growth firm which is highly leveraged may be more favorably positioned over the long term than one which is highly leveraged despite low growth.

Finally, to provide more direct evidence on the relative importance of financial and operating synergies, some key sources of change in the policyholders’ surplus of the acquired subsidiaries are analyzed. The annual change in surplus results from net income, equity capital paid in, dividends paid and other adjustments including items such as foreign currency translations, changes in assets, unrealized capital gains and losses and treasury stock issues and repurchases.

**ANALYSIS OF MERGER CHARACTERISTICS**

A matched-pair research design is employed to analyze the pre-merger performance, and the effects of merger on performance, of the sample of acquired firms. Each acquired company’s performance is evaluated relative to the average performance of non-acquired subsidiaries which are of approximately the same size and which operate in the same line of business as the acquired subsidiaries. Since many insurance companies write policies in more than one of several sectors, the business sector for a given company-year is defined based on the sector with the most premiums written. Similarly, each acquired firm is assigned to one of the given benchmark cells based on its size and maximum sector of business three years before the merger; thus, the acquired company retains the same matched benchmark cell across all years analyzed. Finally, the appropriate benchmark cell performance measures are averaged for the three calendar years before and after the merger year (8, 563-595).

The effect of a merger on performance is detected by subtracting this three year averaged benchmark from the three-year average performance measure for the acquired company to form a benchmarked performance measure. Improvements in performance are detected by subtracting the pre-merger benchmark performance from the post-merger benchmarked performance. If the merger has no effect on performance, one would expect the change in benchmarked performance to be zero. More formally, let:

- \( a_{i,b} \) = the acquired subsidiary (i) performance, averaged three years before (b) the merger;
- \( b_{i,b} \) = the benchmark performance for subsidiary i, also averaged over the pre-merger (b) period.
- \( t \) = the year of acquisitions
\[ a_{t,b} = \text{the average of the target's ratio over years } t-3, t-2 \text{ and } t-1 \]
\[ b_{t,b} = \text{the main ratio for the target's benchmark set in each year } t-3, t-2 \text{ and } t-1 \text{ and then averaging these values} \]

The same procedure for years \( t+1, t+2 \text{ and } t+3 \) is undertaken to construct the post-merger performance measures \( a_{t,b} \) and \( b_{t,b} \).

The acquired firm performance pre-merger is assumed to comprise a merger effect \((\mu_b)\), performance effects in the absence of the merger \((c_{t,b})\), and a firm specific error term \((\eta_{t,b})\),

\[ a_{t,b} = \mu_b + c_{t,b} + \eta_{t,b} \]

Also assume that the benchmark measures \( c_{t,b} \) with error,

\[ b_{t,b} = b_{t,b} + \varepsilon_{t,b} \]

The error components \( \eta_{t,b} \) and \( \varepsilon_{t,b} \) are assumed cross-sectionally and mutually independent. By differencing, the magnitude of the merger effect on performance is obtained, measured with error:

\[ a_{t,b} - b_{t,b} = \mu_b + \eta_{t,b} + \varepsilon_{t,b} \]

The effect of the merger on performance in the post-merger period is computed analogously, with \( a_{t,a} \) denoting target performance averaged over the post-merger period, \( b_{t,a} \) denoting benchmark performance averaged over the post-merger period. The estimate of \( \mu_a \), \((a_{t,a} - b_{t,a})\), is subtracted from the estimate of \( \mu_b \), \((a_{t,b} - b_{t,b})\), to calculate the change in performance due to the merger. It is then tested whether the paired differences and the change in paired differences are zero; this is equivalent to testing whether \( \mu_b \) and \( \mu_a - \mu_b \) are zero. Since the matched-paired differences in these accounting ratios tend to be skewed, standard parametric tests are inappropriate. Instead, the statistical significance of the paired differences is assessed using a sign test which examines whether there are equal numbers of positive and negative paired differences. This test requires only that the observations be independent and drawn from continuous distributions.

**CONCLUSION**

During the past decades, the insurance industry has experienced a wave of mergers and acquisitions. Traditionally, the insurance industry has been known for its high-cost distribution system and lack of price competition, but insurers are increasingly faced with more intensive competition from non-traditional sources such as banks, mutual funds, and investment firms. The increased competition has narrowed profit margins and motivated insurers to seek ways to reduce costs. Technological advances in sales, pricing, underwriting, and policyholder services have forced insurers to become more innovative; and the relatively high fixed costs of the new systems may have affected the minimum efficient scale in the industry.

These developments suggest that financial synergies and potential efficiency gains may provide a major motivation for the recent mergers and acquisitions in the insurance industry, enhancing the efficiency of the target firm and/or the combined post-merger entity.
The overall conclusion is that mergers and acquisitions in the insurance industry appear to be driven for the most part by economically viable objectives and have had a beneficial effect on efficiency in the industry. We expect to see more consolidation in the industry in the future because many insurers are burdened with costly agency distribution systems that in the long-run will lose out to non-traditional competitors. Furthermore, consolidation in the insurance industry will continue to be driven by the need to offset slowing revenue growth, compete in a converging financial services marketplace, cut costs, and achieve economies of scale.

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MERDŽER AKTIVNOST U INDUSTRIJI OSIGURANJA

Klime Poposki

Veliki napredak u aktivnostima vezanim za merdžere jeste uključivanje finansijskih institucija i stvaranje opštih interes za sve učesnike u tom procesu. U ovom radu čini se pokušaj davanja doprinosa razumevanju koristi i merenja performansi merdžovanja između osiguravajućih kompanija. Koristi od finansijske sinergije jesu glavni motiv za merdžere i akvizicije u sektoru osiguranja. Istraživanje unutar finansijske sinergije fokusira se na solventnost, likvidnost i finansijski leveridž. Takođe, primenjujemo tzv. "match-par" istraživanje da bi analizirali performanse i efekte pre i nakon preuzimanja posmatranih firmi

Ključne reči: osiguravajuće kompanije, merdžeri, finansijska sinergija, merenje performansi.