OLIVER WYMAN REPORT

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INSURANCE RISK: THE NEXT FRONTIER

Disintermediation has been a major driving force of change in financial services for the last twenty-five years. Financial risk has been progressively transferred from the balance sheets of levered financial intermediaries to the portfolios of end investors in the capital markets. The process started with the asset classes in which risk was most transparent – high grade corporates and mortgages – and then progressed further down the transparency spectrum into consumer credit receivables and traditional commercial loans. The logic behind the trend is simple and compelling: risk finds its most economic price and most efficient holder through the capital markets.

Disintermediation is now approaching its next major frontier: insurance risk. Over the past several years the capital markets have developed several vehicles for insurance risk transfer: Chicago Board of Trade catastrophe (CAT) futures in 1992, (OTC) CAT Bonds and contingent surplus notes in 1994, and options and swaps in 1996. However, volume in these markets has been relatively slow to develop. There is currently considerable debate in the industry and academia over whether these markets will grow or whether the capital markets are fundamentally ill suited to absorb insurance risk. We believe that over time the capital markets will become primary holders of insurance risk, and that this unstoppable trend will lead to profound changes in the structure of both the primary insurance and reinsurance industries.

Motivations For Change

There are strong underlying motivations for further capital markets penetration into insurance, from various perspectives: insurers, reinsurers, investors, and regulators.

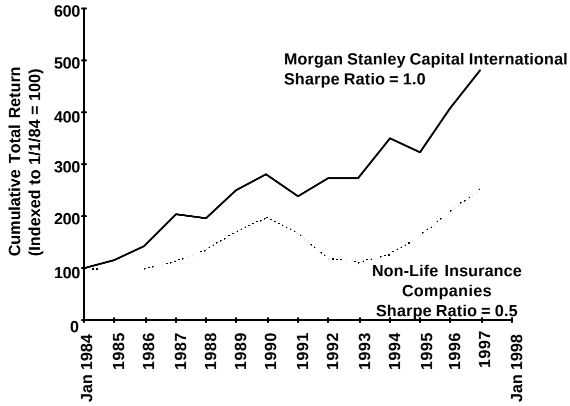
Primary insurers will face increasing pressure from their shareholders to improve the efficiency with which they deploy their capital. As illustrated in Exhibit A (see next page), over the past fifteen years shareholders in the property and casualty (P&C) industry have realized extremely weak risk-adjusted returns on equity, and current P/E multiples suggest either weak growth expectations or high risk discounting relative to other industries.

Transferring financial risk off an insurance company's balance sheet to the capital markets will reduce shareholder return uncertainty and liberate capital. This will enable capital redeployment toward activities with the potential for higher returns, for example the origination and servicing segments of the insurance business. For primary insurers whose core competence is in these more stable segments, capital markets mechanisms could unlock substantial potential for shareholder value growth.

Moreover, primary insurers are tax-disadvantaged holders of insurance risk in most jurisdictions; capital markets investors (e.g., mutual funds) can hold the risk efficiently at a lower price. As prices for insurance risk migrate toward the expected return of end investors, the after-tax return for a traditional insurer will be below their hurdle rate requirement. This same phenomenon is an underlying reason for the transfer of portfolio loan assets from banks (where their after-tax return is below hurdle) to end investors (where their return is comparable to other investments).

For reinsurers, disintermediation is a double-edged sword. It poses a threat to some parts of their existing business, but will create new vehicles through which they can free capital for expansion

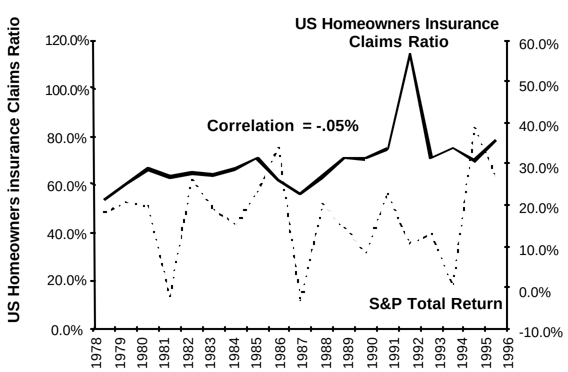
EXHIBIT A: P&C INDUSTRY RETURNS



in other business lines. While their motives for disintermediation are mixed, reinsurers will clearly add to the volume of packaging and securitization of insurance risk in the capital markets.

For capital markets investors, financial products based on insurance risk offer a unique opportunity to enhance the risk / return efficiency of their portfolios. Insurance losses tend to have little or no correlation with returns in the securities markets, as illustrated in Exhibit B. In principle, investors can hold these instruments efficiently at a comparatively low expected return:

EXHIBIT B: HOMEOWNERS LOSSES VS. EQUITY RETURNS



This furthers the case that capital markets investors should ultimately be able to offer a better price for the risk than a levered financial intermediary which must hold significant capital to protect against the potential risk of insolvency from adverse loss performance.

Finally, it is also in the interests of insurance regulators and other policymakers to encourage the development of capital markets risk transfer mechanisms. Ultimately the public sector is better served if the economic losses resulting from financial shocks (e.g., natural catastrophes, mammoth liability lawsuits) are absorbed by large pools of capital. Well-capitalized reinsurers have been the historical shock absorbers. In the future however, capital markets investment portfolios might be an even better shock absorber. Their collective scale offers the longer-term promise of absorbing catastrophic losses currently underwritten implicitly by the public sector (e.g., property insurance in some hurricane-prone regions). Increased transparency in the pricing and reporting of risk would accompany the development of insurance capital markets and encourage more responsible underwriting by primary issuers (as indeed has happened in the credit markets). These incentives should enable regulators to overcome their current skepticism with respect to capital markets vehicles, and to become strong advocates for their further penetration. A logical first step would be modifying regulatory capital requirements to reflect the risk reducing benefit of capital markets mechanisms.

Barriers To Disintermediation

While many insurers have long recognized that they are not the ideal holders of insurance risk, the challenge has been to find mechanisms through which loss volatility could be transferred efficiently to a better-positioned investor. Currently, there exist both conceptual and practical barriers to market development.

Insurance risk transference contracts typically face conceptual challenges stemming from moral hazard, basis risk or their combination. For example, consider the possible CAT Bond structures which have gained considerable publicity in recent years. Bonds whose payoff is based on the actual loss experience of the insurer present a moral hazard problem for the investor, since they are taking on risks from a much better informed seller (the insurer). Conversely, bonds whose payoff is based on a trigger event (e.g., a California earthquake) leave the insurer with basis risk. Some structures provide blended versions of the two problems (e.g., bonds whose payoff is based on the industry loss experience).

The growth of insurance risk transference through the capital markets also faces some practical challenges. Institutional investors are unfamiliar with insurance-related instruments and will need to be educated about their potential attractiveness. Furthermore, many of the potential investors have not yet fully developed a portfolio management discipline to model the risk / return enhancement. Secondary market trading may develop slowly, presenting a "Catch 22"-type barrier for investors with liquidity needs.

Similar risk transfer barriers existed in the credit markets. Ultimately, disintermediation was enabled by the increasing power of credit risk measurement tools, the development of industry-accepted standards for risk evaluation, and the accumulation of research on the return performance of instruments. The general acceptance of

S&P / Moody's bond ratings as a reasonably trusted and well understood standard enabled corporate bond investors to take credit risk without re-underwriting each name. The combination of government agency standards and credit guarantees enabled the transfer of prepayment risk (without credit risk) to mortgage investors. Securitization of consumer receivables and small business loans relied on underwriting standards, and pool seasoning as vehicles for making risks more transparent and acceptable. The credit markets which remain most illiquid (e.g., middle market, commercial real estate), are those for which trusted transaction-level risk models or standards do not yet exist, and for which considerable basis risk would remain even if an index (e.g., of property prices) was used as the risk transfer device.

A comparison of credit and insurance markets (see Exhibit C) suggests that insurance securitization to date (e.g., CAT Bonds) is focused on a piece of the insurance risk pie which represents only a fraction (15-20%) of the opportunity, and which is among the most challenging to transform. As shown in Exhibit C, CAT Bonds have some properties (e.g., sparse flow of new information) which are different from any credit market instruments. Securitization could proceed more rapidly in insurance segments where information updates are more frequent and the risks are easier to evaluate, large enough to justify the cost of re-underwriting and / or easier to express in terms of a publicly-quoted index (e.g., mortality, auto, theft).

Overcoming The Barriers

The barriers to insurance risk disintermediation might be overcome by one of several means:

- Trusted, independent *rating agencies* might emerge for insurance risk. A number of firms (such as Risk Management Solutions) have developed models to aid insurers in the quantification of risk. For example, these models can combine meteorological estimates of a windstorm of a certain path and severity, with data on the location, construction and value of buildings in the storm's path, to produce estimates of the range of potential losses that a particular insurance portfolio could experience. Similar models have been developed for earthquakes, flooding and subsidence. Generally accepted standardized ratings based on models such as these would help to build liquidity in the market
- Alternatively, a well-capitalized financial institution willing to guarantee the less transparent elements of the portfolio risk (e.g., a reinsurer) might seek to fulfill the role of a *conduit* between the primary and secondary markets. Through time, as the performance of the instruments became more transparent, the conduit / guarantor would gradually reduce the scope of their guarantees
- Finally, a special purpose *government-sponsored enterprise* might be set up to perform the role of conduit / guarantor similar to the role currently played by government agencies (e.g., FNMA) in the mortgage market. A set of agencies could be established to increase access to insurance in areas where the public sector is currently the implicit underwriter

The above are not mutually exclusive, and may well happen in combination. As these mechanisms become established, barriers to disintermediation will diminish, paving the way for a rapid expansion of the transfer of insurance risk into the capital markets.

Implications

The trend toward disintermediation presents both threats and opportunities to traditional insurance players, and an opportunity for non-traditional participants with specific core competencies:

- *Traditional reinsurers* are likely to find parts of their core business threatened by capital markets substitutes. However, reinsurers' expertise in evaluating complex insurance risks will be central to the successful structuring and distribution of insurance financial instruments. Reinsurers need to consider whether their best strategy is to transform themselves into "insurance investment banks," form partnerships with distribution-oriented investment banks, migrate to a rating agency role, or focus their efforts on those "toxic" segments of insurance risks that the capital markets are least likely to hold.
- *Primary insurers* will also see their business transformed. The trends favor insurers with specialized expertise in particular forms of insurance, as they will be able to transfer their risk concentrations and focus on what they do best – accessing customers and underwriting specific risks. There will be less need for capital, and less need to diversify risk across multiple product lines, so nimble monoline insurers might emerge as serious competitors in the origination and servicing segments. If many insurers deploy their liberated capital toward origination and servicing, the result could be over capacity and an industry shakeout, which further favors the true underwriting and / or distribution specialists.
- For *non-traditional participants*, there is primarily opportunity. Investment banks might pursue opportunities in the packaging, distribution, and secondary trading of insurance securities. Another potential opportunity for investment banks (or hedge funds) is to establish proprietary portfolios, which exploit the inevitable pricing inefficiencies in new markets. Those which decide to do so should invest now in the required people and technology, as this market (like the mortgage-backed securities market) will likely be dominated by just a few players. Financial guarantors and rating agencies should consider insurance securities as a major expansion opportunity for their core business.

It is imperative that all firms in the above segments position themselves now for the coming changes. While insurance disintermediation is only in its infancy, it will have a profound effect as it accelerates. Players which take their current position of market dominance for granted will lose their most profitable business to competitors which are nimbler and more well focused. Those which act now to align their strategy with the prevailing trends will create a sustainable source of shareholder value.

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