RISKY BUSINESS?

Insurance is boring ... or at least it's supposed to be

BY JESSIE ROMERO

In ancient Babylon, around 1800 B.C., merchants transporting their goods to markets in the Mediterranean and Persian Gulf had to worry about thieves, pirates, and sinking ships. So they developed a system to share the risk of transport with their investors: Merchants paid a premium above the going interest rate in exchange for a promise that the lender would cancel the loan in the event of a mishap.

By collecting premiums from many merchants, an investor could afford to cover the losses of a few.

Nearly 4,000 years later, the basic model of insurance hasn't changed much, although its size and scope have increased dramatically. Today, there are more than 3,700 insurance companies in the United States alone, selling insurance on everything from crops to vacations to fantasy football teams. Insurance premiums (excluding health insurance) totaled $1.1 trillion in 2012, about 7 percent of GDP.

It's also possible to buy insurance on insurance itself. This practice, known as reinsurance, helps insurance companies limit their exposure to risk and free up capital for other uses. But it also increases the interconnectedness of the insurance industry, which, in the wake of the financial crisis, has some regulators concerned about the potential for systemic risk. Those concerns are exacerbated by the recent trend of insurance companies purchasing reinsurance from companies they own — creating a so-called "shadow insurance" industry. Are tools intended to help insurance companies manage their risks actually making the industry as a whole more risky?

Insurance and the Economy

In general, there are two types of insurance companies apart from health insurers: property/casualty companies and life insurance companies. Property/casualty companies sell products designed to protect consumers and businesses from financial loss due to damage or liability. Life insurance companies sell life, disability, and long-term care insurance, as well as annuities and other financial products that

provide individuals with an income stream during retirement.

Although property/casualty companies far outnumber life insurance companies — there are more than 2,700 of the former in the United States, compared with about 1,000 of the latter — by most measures the life insurance sector is much larger. Life insurance accounts for 58 percent of written premiums, and life insurance companies hold $5.6 trillion in assets, compared with the $1.6 trillion held by property/casualty companies. Many insurance liabilities are long term in nature, but companies must also be able to pay out claims quickly and sometimes unexpectedly; they thus tend to invest in stable, liquid assets. About 70 percent of property/casualty insurers' assets and 54 percent of life insurers' assets are invested in bonds. (See chart.) That makes them a major source of funding for corporations, state and local governments, housing, and the federal government. For example, life insurance companies own 18 percent of all outstanding foreign and corporate bonds.

Insurance companies have a lot to invest because of "float," which is money that has been collected in premiums but not yet paid out in claims — or "free money," in the words of Warren Buffett, whose company Berkshire Hathaway owns GEICO as well as several other smaller insurance companies. Particularly in the property/casualty sector, float is the primary source of profit; many companies show a loss on underwriting, meaning that they collect less in premiums than the total of their current expenses and expected future payouts. State Farm, the largest insurer in the United States, incurred an underwriting loss in nine of the past 12 years, while still earning billions in net profit.

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Insuring the Insurers

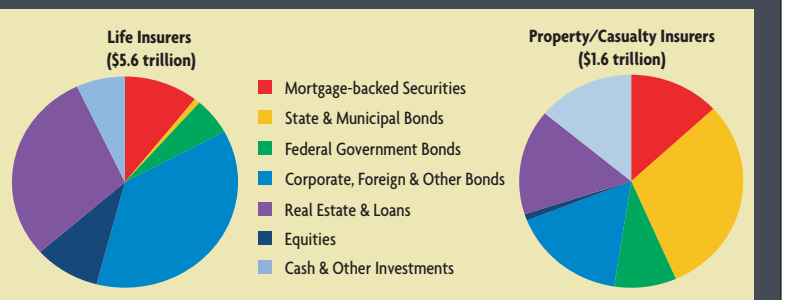
State Farm and other property/casualty companies will insure your home against the risk of damage from hail, lightning, wind, or fire, but they won't insure against flood damage. That's because insurers depend on the "law of large numbers" to limit their exposure to risk. The law of large numbers is a statistical rule stating that the larger the number of individual risks, the more likely it is that the average outcome will equal the predicted value. For example, flipping a coin 20 times is more likely to yield 50-50 results than flipping it twice. So even if it's impossible to predict when lightning will strike a single home, it is possible to determine the average likelihood of a lightning strike across many homes. By selling a large number of policies, insurers are able to calculate with some confidence how much they are likely to pay out to the entire pool, and set their premium levels accordingly. That's not the case with a flood or other catastrophic event, which could cause an unpredictable amount of damage to many homes within the same geographic area at the same time.

Sometimes the law of large numbers isn't enough protection, as proved to be the case in 2005 when hurricanes Katrina, Rita, and Wilma — three of the top 10 most expensive hurricanes in U.S. history — all struck the southeast United States within a few months of each other, causing $80 billion in insured losses. (The National Flood Insurance Program, which is run by the federal government, paid out an additional $18 billion.) To help hedge the risks of such large claims, property/casualty insurers buy insurance for themselves — a practice known as reinsurance. (Life insurance companies also purchase reinsurance, but property/casualty companies make up the majority of the market.) Reinsurers covered about 45 percent of the losses resulting from the 2005 hurricane season, and 60 percent of the losses related to the Sept. 11, 2001, terrorist attacks. "Reinsurance quite literally makes the property/casualty market possible," says Tom Baker of the University of Pennsylvania Law School.

In a reinsurance contract, the company that wishes to purchase reinsurance is called the cedent. The cedent pays a premium to cede certain risks to the reinsurer. In exchange, the reinsurer promises to pay some portion of the cedent's losses, or to pay for losses once a certain threshold is reached. The cedent is then allowed to claim a credit on its financial statements for the ceded risks, either as an asset or a reduction in liabilities. This enables primary insurers to write more policies and to take on risks that they might not otherwise insure. That trickles down to consumers and businesses in the form of cheaper policies and more insurance for new or untested ventures.

Reinsurers manage their risks by writing policies for companies all over the world, since the risk of an earthquake in New Zealand is uncorrelated with the risk of a hurricane in the United States. Reinsurers also are located all over the world: In 2011, U.S. insurance companies purchased reinsurance from nearly 3,000 reinsurers domiciled in more than 100 foreign jurisdictions. Still, the market is dominated by a small number of large companies; the 10 largest nonlife

Insurance Companies Asset Allocation



NOTE: Life insurers' assets includes both general account and separate account assets.
SOURCES: Federal Reserve Bank of Chicago; American Insurance Association; *Econ Focus* calculations

reinsurers account for about half of global premiums. And the majority of reinsurers tend to be located in just a few countries: Germany, Switzerland, the United States, and especially Bermuda, home to 16 of the world's 40 largest reinsurers, where less stringent regulatory and capital requirements make it relatively easy to set up a reinsurance company.

Is Reinsurance Risky?

Since the 2008 financial crisis, the insurance industry has come under new scrutiny from both U.S. and international regulators. That's largely because American International Group, the second-largest insurance company in the United States, received a government bailout in 2008. AIG didn't get into trouble through its traditional insurance business — the problems stemmed from its derivatives and securities lending operations — but the company's near-collapse underscored the role that large nonbank institutions play in the financial sector. Since the crisis, both AIG and Prudential have been designated "systemically important financial institutions" by the Financial Stability Oversight Council, making them subject to additional supervision. Prudential is the third-largest U.S. insurance company, and is closely connected to capital markets through its derivatives and securities lending portfolios, among other activities. (See "First Designations of 'Systemically Important' Firms," *Econ Focus*, Third Quarter 2013.)

Regulators also are looking specifically at reinsurance. For example, the Federal Insurance Office, a new division of the Treasury Department that was created by the Dodd-Frank Act, has been charged with preparing a report for Congress on the "breadth and scope" of the reinsurance industry. (The report was due in September 2012 but has not yet been completed.) The International Association of Insurance Supervisors (IAIS), which has developed a framework for identifying "global systemically important insurers," is considering developing a separate methodology for reinsurers.

The potential for systemic risk stems from the degree of interconnectedness created by reinsurance. If an insurance company writes a policy and purchases reinsurance for that policy, it still carries the risk of whether the reinsurance counterparty will pay when it is supposed to. And the reinsurer might purchase reinsurance itself, which creates additional counterparty risk, explains Anna Paulson, the director of financial research at the Chicago Fed. "Part of the issue has to do with opacity and being able to see who ultimately bears the risk," she says.

Still, research suggests that while the failure or insolvency of a major reinsurer could lead to a crash within the insurance industry, the damage would be unlikely to spill over to the rest of the economy, as J. David Cummins and Mary Weiss of Temple University concluded in a 2010 working paper. (Cummins and Weiss do note that the risk increases if reinsurers are heavily involved in noninsurance activities, such as derivatives trading or asset lending.) The IAIS reached the same conclusion in a 2012 report, noting that in reinsurance the payments are strictly tied to the occurrence of an insured event. Unlike in banking, there is no overnight lending, and there are no payments or cash calls on demand, either of which might spark a run on reinsurance. (Financial institutions that rely on short-term loans, such as overnight loans, to fund longer-term assets face significant liquidity risks if their counterparties become unwilling to provide or roll over the loans.) Between 1980 and 2011, 29 reinsurance companies failed with minimal impact on the broader insurance industry.

"Imagine these institutions are running a marathon," says Etti Baranoff, a professor of insurance and finance at Virginia Commonwealth University. "The banks are holding hands, so if one falls down, it pulls the others down with it. But the reinsurers are just running beside the insurance companies. If one of them falls down, the insurer might run a little slower, but he could still make it to the finish line."

A New Shadow Industry?

While traditional reinsurance might not be of great concern to regulators, the same is not true of "captive" reinsurance, a vehicle used primarily by life insurance companies that has become popular over the past decade. A captive reinsurance company is a wholly owned subsidiary of a primary insurance company, usually domiciled in a different state or offshore. The primary insurer cedes a block of policies to the captive, which often has lower capital and collateral requirements than its parent company. As with third-party reinsurance, this reduces the liabilities on the books of the parent company and allows it to make other use of the capital it had set aside for those liabilities, such as paying dividends to shareholders or issuing securities. The difference is that the amount of risk hasn't been reduced. "Normally, with reinsurance, you're actually transferring risk off of your balance sheet and out of the consolidated organization. But captive insurance often doesn't provide the benefit of a risk transfer. The risk stays within the consolidated organization," says Paulson.

Captives have been used by noninsurance companies since the 1960s as a way to self-insure against risks that might be very expensive to insure through a third party; oil companies, for example, have used captives to insure themselves against environmental claims. Because the parent company is the only one at risk, capital requirements are relatively low, which makes them cheap to set up. And the parent company can claim significant tax deductions for the premiums it pays to its new subsidiary.

Life insurers got into the game in the early 2000s, after the National Association of Insurance Commissioners issued new guidelines for state regulators that required life insurers to hold much higher reserves on certain term and universal life policies. But if an insurance company could cede some of those policies to captives, it could take credit for reinsurance and reduce its required reserves. Around the

same time, states began changing their rules to allow life insurers to establish captives, led by South Carolina in 2002.

The practice grew quickly. In 2002, companies with captives ceded them 2 cents of every dollar insured. By 2012, they ceded 25 cents of every dollar insured. Over the same period, the total amount of "shadow insurance" grew from $11 billion to $364 billion, according to research by Ralph Koijen of the London Business School and Motohiro Yogo of the Minneapolis Fed.

States such as South Carolina, Utah, Hawaii, and especially Vermont, which is the largest captive domicile in the United States, began courting captive insurers in an effort to compete with Bermuda for the business travel, white-collar jobs, and tax revenue they create. Since 2005, the captive industry has contributed more than $100 million to South Carolina's economy, according to the South Carolina Department of Insurance. "South Carolina has a strong interest in economic development and job growth and the captive sector does just that," the department said via email.

More than 30 states and Washington, D.C., currently advertise themselves as captive domiciles, although they differ in the types of risks they allow companies to reinsure. In June 2013 North Carolina became the most recent state to allow captives.

Critics of captive insurance in the life insurance industry are concerned that this competition will lead to a regulatory "race to the bottom." State insurance regulations generally treat captives much more leniently, since regulators aren't concerned about the effects of the captive's solvency on the state's consumers. And one way for a state to lure more captives is to have lower capital formation and reserve requirements than its neighbor. But those concerns aren't well founded, according to the South Carolina Department of Insurance, since states can also compete on factors such as the cost of doing business, the prevalence of professional service firms in the state, or the experience of the state insurance department's staff.

The bigger concern of critics, however, is that the use of captive insurance makes life insurers appear healthier than they are, by allowing them to increase their capital buffers without actually transferring risk or raising new capital. According to Koijen and Yogo's research, accounting for captive reinsurance reduces the median company's risk-based capital by 53 percentage points, or three ratings notches. (The credit rating agency A.M. Best assigns insurance companies one of 16 ratings, from A++ to S.) Expected losses for the industry increase by between $19 billion and $61 billion; because states operate guaranty funds in the event of an insurance company insolvency, those losses could potentially be borne by taxpayers and other insurance companies. And because the new state laws allow captives to keep their financial statements confidential, it is difficult for consumers, shareholders, and regulators to find out how much an insurer relies on captive reinsurance.

Benjamin Lawsky, New York's superintendent of financial services, recently called for a moratorium on the formation of new captive reinsurance companies. Dave Jones, California's insurance commissioner, told the *New York Times* that California would not allow captives to form in the state because it was "concerned about systems that usher in less robust financial security and oversight. ... We need to ensure that innovative transactions are not a strategy to drain value away from policyholders only to provide short-term enrichment to shareholders and investment bankers." The University of Pennsylvania's Tom Baker is more blunt: "Anytime a company is setting up its own captive, hold on to your wallet."

But captives also provide real benefits to their parent companies and, by extension, to consumers, and there could be costs to eliminating them. "Through captives, insurers are able to ... avoid credit downgrades and reductions in the availability and affordability of some life insurance products," the South Carolina Department of Insurance said via email.

Koijen and Yogo also note that captive reinsurance reduces financial frictions for the companies that use it, which may lower their marginal cost and thus increase the supply of insurance to consumers. They estimate that eliminating captives could raise marginal cost by 17.7 percent for the average company and reduce the amount of insurance underwritten annually by $21.4 billion, from its current level of $91.5 billion. "There are pluses and minuses of captives, and they need to be analyzed together," says Paulson. "Ultimately the debate is, have we found an appropriate balance? Do we collectively have enough insight into what's going on?"

From ancient Babylon to modern Bermuda, insurance has evolved to meet the needs of consumers and corporations — and of the insurers themselves. Captive insurance and reinsurance might be innovations that increase the efficiency and profitability of the industry, or they might cause significant harm to the financial sector, or both. Either way, they will not be the last innovations debated by regulators, economists, and policymakers. **EF**

Readings

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