



Insurance Futures: Will Insurers Pass Or Play?

By Henri Bersoux

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If the Chicago Board of Trade's plans go forward this summer, insurance futures will soon be traded on the commodities exchange alongside wheat and soybeans.

This may seem odd, at first. But insurance futures are only the latest financial products to join the more traditional commodities being traded on the floor of the exchange. Speculators and hedgers currently trade futures on such curious

things as government debt securities and stock indexes, not to mention gold.

The similarities between commodities and insurance futures may not be immediately apparent. The common thread is price risk, or the difference between expectation of future prices and current prices.

In the case of farmers and manufacturers, the risk is that an unacceptable change in a commodity's price will wreak havoc in production and marketing plans.

In the case of insurers, the risk is one of diminishing profits or

even the creation of a loss on a book of business, as might happen with a significant and unexpected rise in health care costs. This type of exposure is called "trend risk" because it is systemic, affecting all insurers in a certain line of business.

The commodity underlying the insurance futures contract is not a book of business. It is the expected profit or loss on a line of business in a given period, as measured by an index that serves as a benchmark. For the stock market, for example, the benchmark is the Dow Jones industrial average.

The Chicago Board of Trade is expected to introduce trading on insurance products to the group health market this summer, soon after futures on homeowners insurance make their debut. Other insurance products will likely be introduced at a later date. Automobile and marine insurance futures are already in the product development pipeline.

Interviews with spokesmen for insurers indicate they may be slow to accept the concept of insurance futures. But they have that luxury. Other risk-transfer methods already exist. And, according to Edward Silins, an actuary and partner at Coopers and Lybrand, which is helping the CBOT refine the insurance futures contract and implement the index, "The success of the insurance futures contract doesn't hinge on insurance companies jumping in. There are enough other players to make it work."

The use of insurance futures to hedge risks in underwriting profitability is being reviewed by a number of insurers. They say the costs of using futures are potentially lower than reinsurance treaties. And they say that futures — although not a complete substitute for reinsurance — could be bought or sold a great deal faster than it takes to make reinsurance arrangements.

As to the "other players" who could help the concept get off the ground, they are taking a cautious approach as well. A spokesman for a major hospital said the concept deserved a full examination. But the official, like other health care providers contacted for this article, expressed a good



deal less than unbridled enthusiasm.

Thomas R. Donovan, the Chicago Board of Trade's president and CEO said, "We have every reason to believe that insurance futures can achieve the same kind of success as interest rate futures."

Mr. Donovan added, "It is important to point out that such success does not only benefit CBOT members trading these contracts. In the case of Treasury bond futures, the most actively traded single contract in the world, the CBOT's contract was responsible for a 10-fold lowering of the 'bid-ask' price in the Treasury bond market. This means that, because of the efficient pricing mechanism our contract brings to the marketplace, taxpayers have had to bear a lower cost of financing U.S. Government debt. We expect insurance futures and futures options to have a similarly beneficial effect on the insurance industry, helping to stabilize cost and price while helping to manage what is inherently a risk-intensive industry."

How Will It Work?

For each type of insurance future, the CBOT's pool manager says a representative national pool will compile data from information on policies gathered from insurers.

The CBOT will first introduce insurance futures to the health and property-casualty lines of insurance because the underwriting profitability of these products is more volatile. Traditional life insurance products are more predictable and less exposed to trend risk, although they may be considered later on for a different index.

A health insurance product pool, for example, will contain groups of policies that meet a certain standard on group size, covered benefits, level of deductible, level of coinsurance, issue date, geographic diversification and more. The companies that provide policies for potential inclusion in the pool will themselves have to pass certain tests, such as having a minimum claims-paying ability rating. These criteria may be fine-tuned before and after the product is introduced.

The firm managing the health pool for the Board of Trade — Coopers and Lybrand — will then publish a profile of the policies it selects for the pool. And traders

(speculators and hedgers alike) will use this data to forecast profits on that pool and to guide their insurance futures buying and selling decisions. Each month, the pool managers will calculate its loss experience and publish an index.

Insurance futures will be bought and sold in open outcry auction trading at prices that reflect the traders' expectations of profit or loss on the pool. And each quarter, expiring contracts will be settled to the value of the index.

If profits on the pool are lower when a futures contract expires than initially expected, insurers who hedged their underwriting profitability by selling a futures contract will receive the difference between the contract price and the index. On the other hand, if profits on the pool are greater than expected, insurers who sold a futures contract will pay out the difference between the price and the index.

The party on the other side of the transaction will either be a speculator or someone who is also hedging trend risks. Others hedging trend risks with insurance futures might include, in this case, health care providers.

Where insurers may be protecting themselves against an unexpected rise in health care costs, for example, health care providers may be protecting themselves against an unexpected drop in revenue because of falling prices or demand for their services.

As with other products or instruments being traded on commodities exchanges, buyers and sellers of insurance futures will be required to maintain a margin account with their CBOT brokers. Brokers margin accounts typically run from 3 percent to 18 percent of contract value.

At the end of each day's trading, the CBOT will debit or credit margin accounts of traders according to their gains or losses on insurance futures and other contracts. That means that the futures position is "marked to market" every day. If a trader's margin falls below CBOT requirements, it has the authority to require a greater margin.

The daily mark-to-market procedure will prevent unsettled losses from building up. This, in addition to margin accounts and stringent

Options On Futures

The buyer of an option on futures, like other options, pays a premium for the right to buy or sell something at a given price at a later date. The premium is determined in open outcry pit trading, in the same fashion as the futures themselves.

Selling a future can be additional protection for an insurer against price risk and a hedge against the resulting losses on a book of business. But it does not allow the seller to benefit from favorable price movements.

In order not to lose out entirely on potentially favorable price movements, a company may, for example, purchase a call option on insurance futures. If the futures unexpectedly rise in price (the loss experience on the pool is better than expected), the insurer can sell the call and realize a profit.

In the alternative, the call may expire without being used — and the holder's loss is limited to the premium he paid.

Combinations of risk management techniques using futures and options on futures abound.

CBOT oversight, will ensure that the risk of default by any party is virtually non-existent. Indeed, the Board of Trade Clearing Corporation stands as guarantor of every transaction. And the system has seldom broken down. No CBOT clearing member has ever failed to settle its obligation to the CBOT.

Insurance companies that participate in the pool will not have to trade futures, and insurers do not need to be in the pool in order to trade.

Futures Introduce New Elements to Risk Transfer

Insurers can already transfer underwriting risk through reinsurance agreements. But futures, while also shifting risk, introduce new dimensions to the marketplace.



Professors Greg Niehaus and Steven Mann of the University of South Carolina recently co-wrote a paper on insurance futures contracts that — among other things — examines how futures differ from reinsurance agreements.

First, they wrote, "...the shifting of underwriting risk to a reinsurer affects incentives of the ceding insurer to reduce underwriting losses." In other words, an insurer who reinsures a good deal of his business may not be as careful when selecting policyholders, or as careful when reviewing claims (a moral hazard akin to individual policyholders being less prone to avoid risks they have insured). This hazard, the authors acknowledge, may be lessened in the case of insurers by their need to maintain a reputation that allows them to return frequently to the marketplace, and by the use of coinsurance and deductibles in contracts.

Hedging underwriting with a futures contract based on a pool outside the party's control, the authors argue, mitigates further these incentive problems.

Second, the authors added, reinsurance agreements are contracts between two insurers who must gauge each other's default risk. And default risk is less of a concern with insurance futures.

Will futures take away business from reinsurers, or will reinsurers be big customers of the product?

Jeannette Herrmann, an advisory economist at the CBOT, said, "Reinsurers stand more than other

insurers to benefit from the hedge afforded by insurance futures, primarily because they are more exposed to trend risk — particularly when they write excess-of-loss treaties." An excess of loss reinsurance treaty indemnifies an insurer for losses above a certain figure.

"We expect reinsurers to be users," added Ms. Herrmann.

Insurers agree that futures are unlikely to replace reinsurance entirely. One senior official at a major life insurance company said, "Insurance futures are not a substitute for reinsurance. If you misprice a product, you're not going to make up for it by hedging in the insurance futures market — except, of course, for the medical inflation component."

Like other insurers, this official's company is intrigued by the concept of futures but is taking its time to decide whether to delve into them — or even whether to contribute policy data for the pool. The official said, "Companies already have their hands full compiling all sorts of other data." Irwin Stricker, vice president, group pricing and standards, Guardian Life Insurance Company, said the main advantage "will be that if insurance futures perform as expected, they will transfer risk at a lower cost." The Guardian, which does not currently reinsure medical risk, is also taking a wait-and-see approach to trading futures.

"Larger companies have more ways to absorb risk internally," said a spokesman for one of the largest

life and health insurance companies in the country. He said that smaller insurers may benefit the most from the use of insurance futures. He indicated that futures would require the same level of technical know-how as reinsurance — and therefore be just as accessible to smaller insurers.

"For large insurers," he added, "the interest may be that employers can use futures to better manage health insurance payouts — particularly when dealing with long-term retiree health liabilities. Otherwise, the difficulties of predicting payouts may drive them to support national health care."

According to the CBOT, liquidity is also a key element that makes futures markets work. Without the need to monitor default risk or other factors, futures for existing products on the exchange are bought and sold at break-neck pace.

Reinsurance agreements, on the other hand, often entail negotiating and monitoring costs and involve delays.

Insurers Cautious

Senior actuaries and investment officials at insurance companies are approaching the concept of insurance futures cautiously. The problem, according to Leslie Rosenthal, the chairman of the group that developed the CBOT insurance contract, is that there is a lack of familiarity with the product on the part of chief executive officers. Said Mr. Rosenthal, "Numbers' people are naturally attracted to this, but management at some companies — not understanding the product — may feel it is safer not doing anything."

Concerns about safety may be overblown, Mr. Niehaus said, adding, "I can't think of a reason to be wary of this product." Mr. Niehaus' opinion appears to be shared by many financial experts familiar with the proposal.

The entry of insurers into the insurance futures and options market will not likely be impeded by regulations at the state or federal level.

Most states that restrict investments by insurers already have "basket clauses."

The so-called baskets represent a small percentage of the insurers' assets that is unrestricted as to where it may be invested. This allows insurers to experiment with new classes of financial products, be it for hedg-

Insurance Futures: A Glossary

Board of Trade Clearing Corporation: An independent corporation that settles all trades made at the Chicago Board of Trade. The clearing body acts as guarantor of all the trades it clears. It reconciles the accounts of its member firms each day to ensure that all gains have been credited and that all losses have been collected. The BOTCC also sets and adjusts member firm margins in light of changing market conditions.

Cash Settlement: Insurance Futures Contracts are settled in cash based on the actual value of the index on the last trading day. This is in contrast to those that specify the delivery of a commodity or financial instrument.

Commodity Futures Trading Commission: A federal regulatory agency that oversees futures trading in the United States.

Futures Contract: A legally binding agreement on the trading floor of an exchange to buy or sell a commodity or financial instrument sometime in the future.

Hedging: The practice of offsetting the price risk inherent in any cash market position by taking an equal but opposite position in the futures market. Hedgers use the futures market to protect their businesses from adverse price changes.

Margin: Financial guarantees required of both buyers and sellers to ensure fulfillment of contract obligations.

Margin Call: A call from a clearing house to a member to bring margin deposits up to a required minimum level.

Mark-to-Market: To debit or credit a margin account on a daily basis.

Open Outcry: Method of public auction for making verbal bids and offers in the trading pits or rings of futures exchanges.

Option: A contract that conveys the right, but not the obligation, to buy (or "go long," known as "call option") or sell (or "go short," known as "put option") a particular commodity or financial instrument at a certain price for a limited time. Only the seller of the option is obligated to perform.

Pit: The area on the trading floor where futures and options on futures contracts are bought and sold.

Settlement Price: The last price for a commodity or financial instrument on any given trading day.

Strike Price: Also known as **Exercise price.** The price at which the futures contract underlying a call or put option can be purchased (if a call) or sold (if a put).

Source: Chicago Board of Trade

ing or for speculative purposes.

Beyond that, according to insurance company executives, most states that restrict investments allow the use of futures for hedging purposes, and not for speculation.

That intent matches up with federal requirements. Insurance futures and options will be regulated by the Commodity Futures Trading Commission. Before being implemented, the product must satisfy certain requirements, the most basic being that insurance futures can serve as hedging instruments.

That, said Mr. Niehaus, is a fairly easy test to meet. He said, "There appear to be hedgers on both sides of the risk: insurers who stand to lose if, for example, medical costs rise; and health providers who stand to gain under the same scenario."

According to most sources knowledgeable about the regulatory process, insurance futures will easily gain CFTC approval once the CBOT has secured all of the data needed to form the pool for each product.

Beyond approval, the CBOT would like to see insurance futures and options integrated into the new risk-based capital formula being devised by the NAIC. Larry Gorski, an actuary with the Illinois Department of Insurance, indicated that regulators will surely review any proposals. As to how insurance futures will be treated, Mr. Gorski said, "That depends on the potential downside."

Among other considerations, Mr. Gorski said, "We'll have to look at just how much potential profit you're giving up when you sell insurance futures."

The Test of Time

Once futures are up and running, they will have to pass the test of the marketplace.

Said The Guardian's Irwin Stricker, "Insurance futures will grow slowly. They will have to stand the test of time. Companies will be comparing the index to their own experience. If the index is an accurate measure of trending, insurance futures will be successful. Otherwise, they will not."

That is just fine with the CBOT's Leslie Rosenthal. Mr. Rosenthal said, "We'll be patient. We just don't want people to cross us out without giving this concept some serious thought."

It appears insurers are doing just that. For now, however, they haven't decided whether to pass or to play. 