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TRADE NOTES

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June 30, 1997

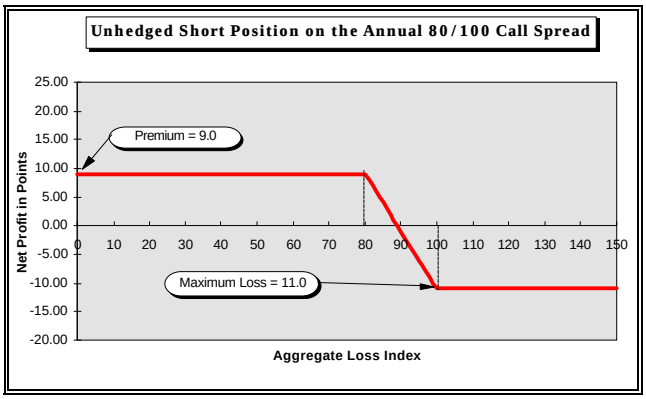
TRADING TERRITORIES

Insurance companies writing property covers in the US often find themselves with concentration of risks in catastrophe-prone areas. They "hedge" such risks by buying reinsurance. Even the reinsurers themselves "hedge" by buying retrocessional covers. Now, with the PCS Option contract at the Chicago Board of Trade "synthetic" insurers (i.e., traders who write call options or call spreads) can protect against regional exposures by "hedging" or buying back regional contracts.

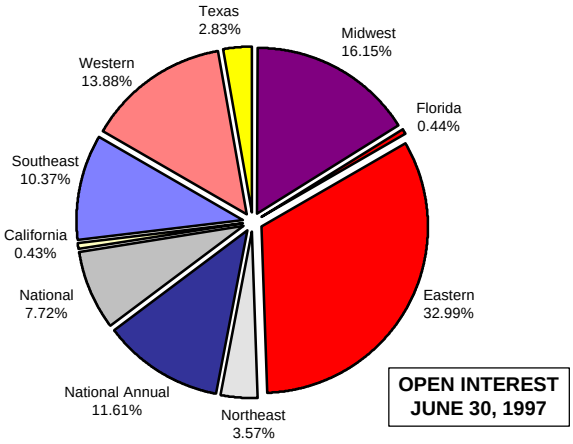
Consider a writer of the National Annual 80/100 call-spread. The writer (or seller) of this call spread will receive a premium in exchange for agreeing to reimburse the buyer of the spread if total catastrophic losses in 1997 exceed $8 billion. The writer will pay out proportionately as losses exceed $8 billion to a maximum amount if losses exceed $10 billion. The 80 and 100 strikes on the call-spread are index levels corresponding respectively to $8 billion and $10 billion of actual aggregate losses as defined by Property Claims Services (PCS).

Catastrophic losses exceeding $8 billion can arise in any number of ways. Sixteen small storms or other catastrophes could occur during the year each causing $500 million worth of insured losses. Or, a single storm (such as Hurricane Andrew 1992) could be so devastating as to cause twice that amount in a single loss. Equally, earthquakes can be as small as Loma Prieta 1989 ($1.2 billion) or as large as Northridge 1994 ($14 billion).

The writer of the call-spread will have to make the decision about whether he is sufficiently compensated for taking these risks. The writers' pay-off diagram will have the following familiar appearance.



The biggest risks to blowing the cover in a single event come from a large earthquake or a large hurricane. While not confined to the coasts, the most likely places for these two things to happen are respectively on the West Coast and East Coast. The 80/100 writer must therefore evaluate whether or not to spend part of his premium to hedge those coastal risks, and whether his remaining premium is sufficient to compensate for the remaining risk. The evidence from the public trading record suggest that traders are beginning to make such evaluations.



There are a variety of issues that have to be considered when making the regional evaluation, and while they are not difficult, they do require careful enumeration. To flesh out those issues, we will pursue the 80/100 example that we originally recommended in a November 11, 1996, Trade Note:

Sell the 1997 National Annual 80/100 call spread	9.0 points
Buy the 1997 Western Annual 80/100 call spread	2.1 points
Buy the 1997 Eastern Third Quarter 80/100	2.5 points
	4.4 pts credit

POSSIBLE PROFITABLE OUTCOMES

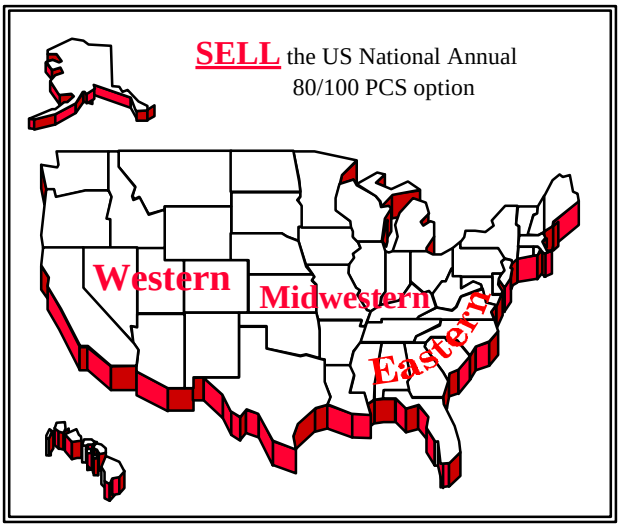
This trade could result in the following **UPSIDE:**

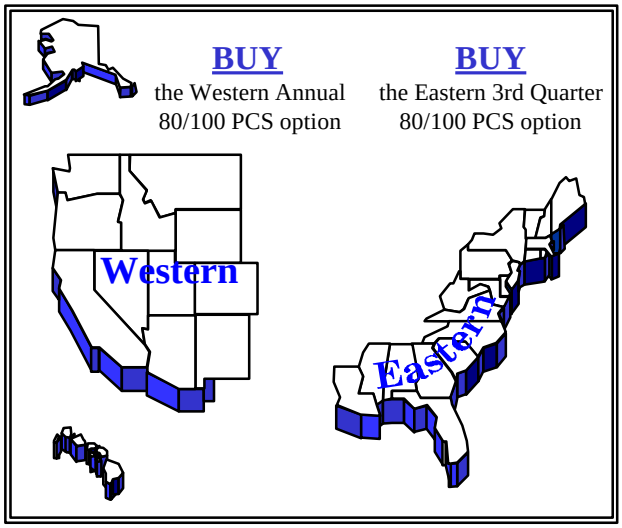
1. If 1997 National Annual losses are less than $8.0 billion (index value 80), the trade will earn the full amount of premium, 4.4. points. By contract specification, a National index value of under 80 means that both the Western Annual and the Third Quarter Eastern must also be less than 80.)
2. If 1997 National Annual losses are between $8.0 billion and $8.44 billion, the trade will earn somewhat less than the full amount of premium written with "break-even" occurring at $8.44 billion.)

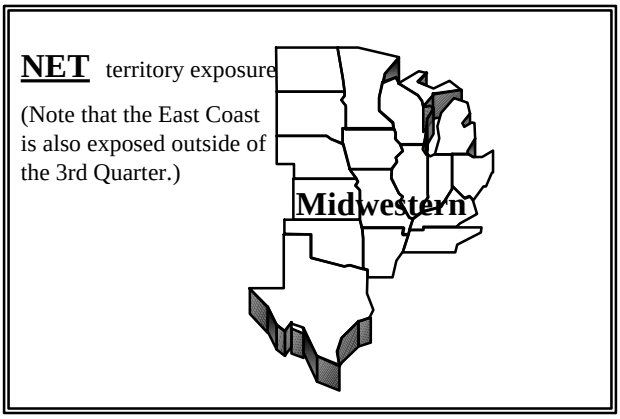
also,

3. If the aggregate Western Annual or aggregate Third Quarter Eastern losses are greater than $10 billion (a "blowout" event or aggregation), the trade will still earn the full amount of premium written. Explanation: losses of greater than $10 billion in either of these two regional indices will result in a maximum profit of 20 points on the corresponding long call spread. This profit will fully offset the 20 point loss on the short National Annual call spread, leaving the 4.4 points of premium written fully intact.
4. Furthermore, if a "blowout" event or aggregation in either of these two contracts occurs, the trade contains a "free" call spread that may result in additional profits. For example, if after the trade is entered a $10 billion or greater earthquake occurs, the profits on the long WA 80/100 will fully offset all the losses on the short NA 80/100. The position will still earn the full premium written and now has a "free" call spread in the following sense: Third Quarter Eastern losses over $8 billion will result in profits to the long 3Q Eastern 80/100 spread. These profits could total up to 20 points, leading to a best case outcome of a 24.4 point profit.

RECOMMENDED TRADE NOV 11, 1997 - SLF TRADE NOTE "STRATEGY FOR THE GRAND NATIONAL"







POSSIBLE UNPROFITABLE OUTCOMES

The trade is, however, exposed to certain **RISKS**:

1. A catastrophic event or events in Texas, the Midwest, or Fourth Quarter Eastern could result in National Annual losses greater than $8.44 billion. This would result in losses in the short National Annual 80/100 call spread without offsetting gains in either of the long call spreads, since they do not cover Texas, the Midwest or the fourth quarter.

   Again, the maximum potential loss this trade could suffers is 15.6 points.

2. That aggregate events in either the Western Annual and/or Third Quarter Eastern of less than $8 billion could boost the National Annual index above 80 causing losses to the short National 80/100 call spread without corresponding gains in either the long Western Annual or Eastern Third Quarter 80/100 spreads.

MITIGATION OF RISKS

One feature that can help mitigate the risk of this trade is that the aggregation can be observed over time.

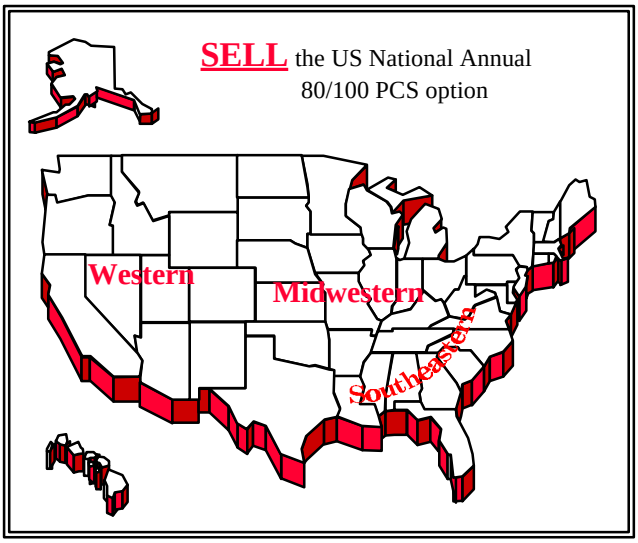
A writer of this cover may be able to manage the trade so as to somewhat limit losses or to change its risk profile. Although it can be, it is not necessarily a "touch and blow" trade.

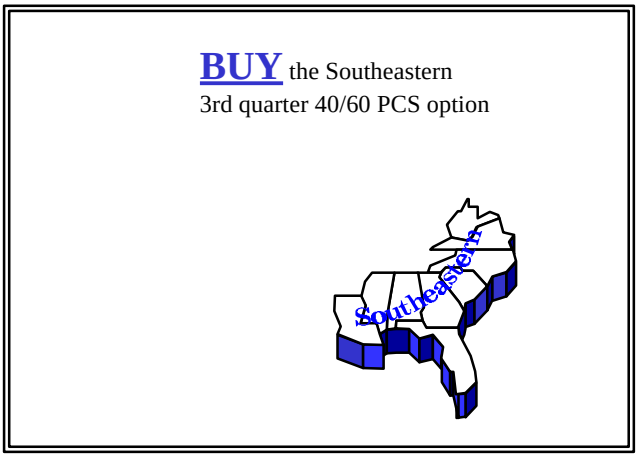
If losses in the National Annual start to aggregate too quickly, the writer of this cover may be able to close out the position at a small loss or may be able to restructure the risk of the trade using other PCS contracts, if he wishes.

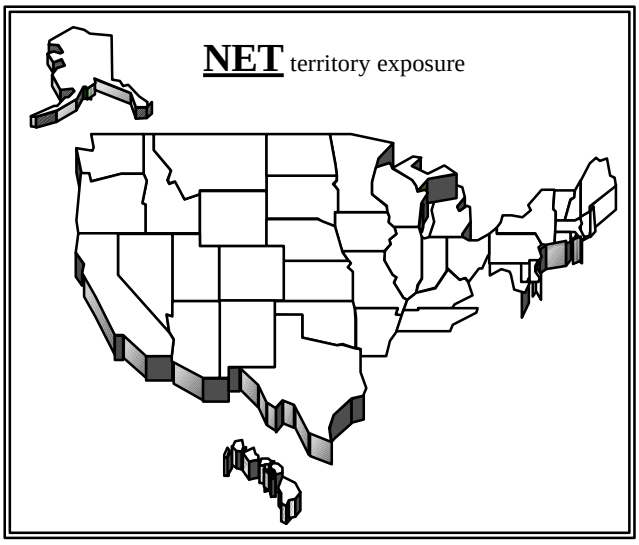
As of July 1, 1997, the National Annual aggregations are below average. The mid-year index is at 18.4, somewhat below the ten-year indexed average of 43.9. On the other hand, we are entering the major exposure period, the hurricane season – it is certainly worth evaluating the remaining premium. Current prices are as follows:

		11/11/96 Prices	6/30/97 Prices	Profit (Earned Premium)	Potential Profit (Unearned Premium)
NA	80/100	9..0	4.0	5.0	4.0
WA	80/100	2.1	0.9	-1.2	0.9
EC	80/100	2.5	1.7	-0.8	1.7
Net Premium		4.4	1.4	3.0	1.4

SOUTHEAST VARIANT







The (annualized) remaining rate-on-line is therefore 14 percent. Whether the trade was initiated in November or whether it is to be initiated immediately, the question for the trader is, "Is the remaining six months of the year worth 14 percent Rate-on-Line, given that it contains the hurricane season?"

CONCLUSIONS: OTHER TERRITORY TRADES

The Grand National is not the only territory trade on which traders have focused. Examination of the public record shows another pattern which appears popular – what might be called the Southeast Variant. In this trade, only the southeastern hurricane risk is hedged, and it is done at a lower attachment point. The trade is:

Sell the 1997 National Annual 80/100 Call Spread
Buy the 1997 Southeast Third Quarter 40/60 Call Spread

Pictorially, the trade is shown on previous page as the Southeast Variant.

As this market matures more and more variations will develop as the interests of the various participants emerge. Our objective here has been to keep you informed of the emerging possibilities.

OTHER TRADE NOTES AVAILABLE FROM SEDGWICK LANE FINANCIAL:

- **PCS Quarterly Reports**: Trade Prices and Catastrophic Events, 1st Quarter 1996 through 2nd Quarter 1997.
- **A New Wall and LaSalle Street Cocktail (With a Slice of Lime Street): The Securitization of Insurance**, *CFO Magazine* July-Aug 1997.
- **A Year of Structuring Furiously: Promises, Promises**, January 31, 1997.
- **Strategy for the Grand National**, November 12, 1996.
- **"Arbitraging" the Grand National**, November 26, 1996.
- **If it's good enough for Warren Buffett …** December 15, 1996.
- A variety of papers written with reference to the original ISO contract including the **"Perfume of the Premium … or Pricing Insurance Derivatives"** recorded in the proceedings of the 1995 Bowles Symposium, Georgia State University, Atlanta, Georgia.

SEDGWICK LANE FINANCIAL

Sedgwick Lane Financial was formed in May 1996 as a joint venture between Sedgwick Re and Lane Financial LP.

Sedgwick Lane Financial (SLF) is a Broker-Dealer independently licensed and registered with the Securities and Exchange Commission, specializing in reinsurance securitization and derivatization.

SLF offers both consulting and brokerage services in the use of capital market products for insurance and reinsurance clients, both directly and in conjunction with other members of the Sedgwick Re and Sedgwick Group plc. In particular, it works closely with INSTRAT US and INSTRAT UK, the Insurance Strategy arms of the Sedgwick Group in developing integrated solutions for client problems.

SLF undertakes its own securitization and placement, but works closely with other capital market providers as circumstances demand.

SLF acts as a broker on the leading derivatives exchanges and in the over-the-counter market. In particular, it is the broker for several leading reinsurance institutions' proprietary trading activities in insurance derivatives. It also acts as broker for independent names and individuals.

SLF produces well-regarded market research and newsletters informing clients of developments in the securitization area. Its consulting activities have ranged from selecting investment mangers for Workers' Compensation Trusts to evaluating the nature of new investment markets for the International Bank for Reconstruction and Development.

ACCOUNT PAPERS

Every market has its own idiosyncrasies and initiations that must be completed before business can be conducted. In the case of PCS Options, the Commodity Futures Trading Commission (CFTC) is the regulator. It requires that properly drawn-up account forms be executed and risk disclosure forms be signed before any trading commence. If you are contemplating acting in this market, we will be pleased to send you such forms and assist you in their completion. That way, you will be better prepared to act when opportunity knocks or necessity calls.