



THE PARTY'S OVER

by David Derwin

A number of flies were attracted to a jar of honey. They entered and ate greedily. While feeding, however, their feet and wings got covered with the honey, they could not get free and so died.

– *The Flies and The Honey Pot, Aesop's Fables*

Fear and greed are truly the eternal underpinnings of the markets. Nothing changes in the history of humanity or in the history of the markets: only the names and the dates change. In this article, we will review the recent trends and current environment of the credit market; compare and contrast this with previous financial hiccups; highlight the main risks, and provide forecasts for the future.

A new kind of money: Derivatives are a major component of credit and funding because they allow financial institutions to offset the inherent risks in their lending practices. Credit and lending would not exist in their current form without the use of derivatives. According to the Bank for International Settlements (BIS), global liquidity is an inverted structure with top-heavy derivatives accounting for 75% of global liquidity (Figure 1). The U.S. Office of the Comp-

troller of the Currency indicates that 82% of all derivatives are interest-rate based (Figure 2).

Wag the dog: As of December 2006, the total amount outstanding of over-the-counter (OTC) derivatives was US\$415 trillion. To put this in perspective, according to figures from Bloomberg LP and the BIS, global GDP at the end of 2006 was US\$48 trillion, global stock market capitalization was approximately US\$50 trillion and global debt was estimated at US\$80 trillion. Using these numbers, the global derivatives markets is:

- 8.6 times larger than the world's entire annual economic activity;
- 8.3 times larger than every listed company in the world, and
- 5.2 times larger than all debt securities.

Does the tail wagging the dog come to mind?

The weighted average credit exposure to risk-based capital of the top five bank holding companies in the U.S. was 586:1.

Rising rates, rising risk: Keep in mind that 82% of outstanding derivatives are based on interest rates and that much of the dramatic growth in the absolute size of derivatives occurred in a period of falling long-term interest rates

To make matters worse, we are now in an environment of rising interest rates and credit spreads, likely to cause the exacerbation of the tightening credit markets.

Moral hazard: To us, moral hazard means conflict of interest, greed and throwing caution to the wind. Current accessibility to derivatives has encouraged a vicious cycle of unprecedented borrowing and lending. This has clearly given way to an element of moral hazard and overconfidence in financing and lending practices, as it always does. (Always remember the Savings & Loans crisis in the U.S. in the early 1980s, the technology bubble of 2001, and of course the current sub-prime mortgage market, etc.)

Banks have been renting out their balance sheets by guaranteeing others' credit risk for years. They are now fully extended on credit, hence the current liquidity/ credit crunch. Based on 2007 first-quarter data compiled by the U.S. Office of the Comptroller of the Currency/Administrator of National Banks, the weighted average credit exposure to risk-based capital of the top five bank holding companies in the U.S., which hold 97% of notional derivatives, was 586:1. The bank with the highest leverage had a credit-exposure-to-capital ratio of 799:1.

As a comparison, 10 years ago, before the exponential build-up in derivatives, Long-Term Capital Management (LTCM), the hedge fund that blew up in 1998, had leverage of approximately 350:1 and caused losses of only \$4.5 billion. Yet

Figure 1 The structure of Global Liquidity

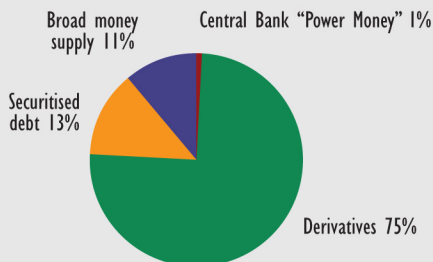
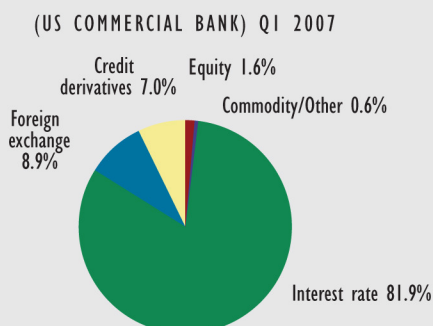


Figure 2 Percentage total Nationals by type



this crisis still led to a Federal Reserve organized bailout, according to Roger Lowenstein, author of *When Genius Failed*. Given that the derivatives market has grown from about \$75 trillion when LTCM blew up in 1998 to the current \$415 trillion, a near six-fold increase, imagine what could potentially happen today? Or tomorrow? Or next week, or next month or next year, or inevitably sometime in the future?

Though LTCM and many previous financial blow-ups were relatively small, they still required either government and/or central bank intervention. While one could argue that LTCM was designed to take risk while banks are hedged to intermediate risk we all know positions are not always marked-to-market, hedge books are not always hedged, proprietary black models don't always work, a AAA-rating is not really a AAA-rating, discount bids occur, greed overpowers fear, markets are not always efficient, and not all derivatives are benign.

We therefore know that a true handle on risk is not attainable. The aforementioned prove this hypothesis. So, with derivatives leverage in the U.S. banking system at nearly 600 to 1, there is no margin for error. Imagine buying a \$600 stock and having to put down only \$1 of collateral. An infinitesimal 0.17% move would wipe out your capital.

Risk, like energy, cannot be destroyed but merely transferred from one holder to another. So who holds the ultimate risk of the \$415-trillion derivatives market? Or more importantly, but often overlooked in this environment with attention focused on commodity (Amaranth) or credit (sub-prime) derivatives, who holds the risk of the \$340 trillion of interest-rate risk derivatives market?

What does all this mean? We have recently seen the problems that have resulted from over-leverage and risk taking in the credit derivative/sub-prime market. Now consider this: If we look again at Figure 1, credit derivatives account for only 7% of the derivatives market in the U.S. By contrast, the interest-rate derivatives market represents more than 80%. In the unfolding environment we see the following:

- The liquidity party is over.
- Interest rates are moving higher.
- Mortgage rates are moving higher.
- Credit will be less accessible to corporate and individual borrowers.
- It will be more difficult to hedge credit and interest rate risk.
- Bid-offer spreads on risky bonds will widen.
- Some higher risk, less liquid assets will go "no-bid".
- As the pendulum swings, the market will overreact to the other side.
- Good investment and trading opportunities will materialize.

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Bottom line: Derivatives made lending easier and more abundant by removing the risk from financial institutions' balance sheets. This trend continued for years, creating false confidence in risk-management systems while balance sheets eventually became extended from compounding derivatives leverage. This party has now come to an end, triggered by the implosion of the U.S. mortgage market, which resulted in large losses for hedge funds and mortgage lenders and caused an unwinding of leverage and available credit across the entire credit market. Most importantly, the bulk of sub-prime U.S. mortgages come due early in 2008. All credit markets will tighten further.

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In defence of derivatives

Financial derivatives seem to be blamed for most of the world's ills. When there is a backlog of uncleared credit derivatives contracts, which are nothing more than insurance contracts, and there are concerns that it could cause systemic risk to the industry, everyone blames derivatives, simply because the instrument has the term derivative in its title. When CDOs issued on sub-prime mortgages fail, as with the recent Bear Stearns hedge fund problems, everyone blames derivatives, since many are synthetic in nature; and anything synthetic is believed to be a derivative instrument. The fact is that the advances made in the valuation models of derivatives, which have also augmented pricing models used for securitized assets, have helped the world of

finance identify ways in which to distribute risk that many could not have even dreamed of just a couple of decades ago.

We have all learned how to distribute risk among members of our own industry, across our borders to other industries, such as insurance, and even within instruments, such as synthetic CDOs that breakdown a single instrument into a myriad of repayment dates and credit quality instruments. The opportunities created as a result of the development of derivatives pricing, and especially the fact that most assets are now viewed through the derivatives prism, has helped make the world of finance significantly safer and more exciting.

Many investors are now using derivatives to improve returns on their invest-

ments, rather than simply using them to hedge, as was the case in the past. And regulations such as the UCITS III Directive, which has enabled mutual fund managers to expand the range of permissible investments to include derivative instruments and to use derivatives to add long/short investment strategies to regulated funds offered to retail investors, are also helping fuel the growth of the industry. They are no longer the preserve of hedge funds and the proprietary trading desks. The problem is that processing OTC trades is especially tricky because the contracts involved do not share common characteristics in the same way as more vanilla instruments do.

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