

## Bank on It: Upheaval Breeds Derivatives

On the wall of Charles Smithson's office in Princeton, N.J., is a Confederate bond that he likes to call a "dual-currency commodity convertible with optional delivery"—a Civil War-era financial derivative.

In explaining the modern variety of these products for Chase Manhattan, a major derivatives issuer, managing director Smithson of the bank's risk-management research unit likes to employ history. It's a technique he used as a Texas A&M economics professor in the 1970s when he

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By Tim W. Ferguson

wrote a book ("The Domsday Myth") to dispel the idea that the world was running out of oil.

Now there's a minipanic over derivatives, whose unwinding is blamed for dragging down the markets. Mr. Smithson points out that conceptually they're little different from what the Japanese rice traders or the Dutch explorers were doing in the 17th century with crude options. The principle is to spread risk and reward so that uncertainty doesn't inhibit commerce. Even in Aristotle's time, he says, olive presses were optioned because of crop volatility.

Over the ages, hedging has diminished when conditions settled down. No such luck today, after 25 years of international economic upheaval. Demand is up for products that mitigate risks—and can be used to capitalize on them.

Banks and other financial institutions that design these hedges are now at the center of controversy. As currencies zigged and interest rates zagged in recent weeks, unexpectedly big losses have been felt in derivatives. Instead of risk being controlled, it seems to have exploded.

Has theory been turned on its head? Is this, as House Banking Committee Chairman Henry Gonzalez called it this month, "a giant, global, electronic Ponzi possibility"?

The theory behind derivatives is that by allowing any exposure to be hedged with economic sidebets, stress will be taken off those institutions most exposed to a turn in the economy. Case in point: the 1980s thrift crisis. Although the S&L story had many sidebars, the industry was basically ravaged by an unhedged mismatch of long-term mortgages at low rates and interest-bearing deposits at rising rates.

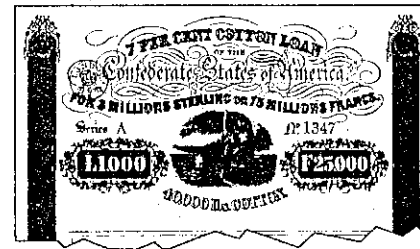
Lesser extremes of that clash exist throughout the marketplace, and the task of creative finance—banking at its best, really—is to resolve them. Some fuddy-duddies cavil that derivatives have disrupted good old stocks and bonds, but given the unsteadiness of today's economy, anyone who prefers to have markets allocate resources (as opposed to administrative fiat) ought to welcome the notion of high-tech hedging. Without it, businesses would have to "avoid the elements" in much more cumbersome ways, such as moving plants around as currencies fluctuate.

Instead, we have analysts playing multidimensional chess, swapping risks to match and cover while requiring the least deadweight loss (capital cushions) to the economy. For example: It's better for a corporation to have paid \$5,000 for an arcane option than to keep liquid \$500,000 to cover an exigency; the half million can be invested. In trying to model for untold circumstances, or simply being short-run greedy, the designers (or the buyers) of derivatives have made errors, and these have made news. But usually these things work.

A recent Chase Manhattan research paper finds that corporations hedging through use of "hybrid debt" significantly decreased their risk exposure and thus their cost of capital. That is what the long-run in-

centives in lending would predict: Banks have an interest in improving the credit of their clients. A bank or other derivatives dealer may take a hit if things go wrong.

One way that can happen is when the purchasing company wants not to hedge but to trade on its reserves for profit. University of Rochester finance Prof. Clifford Smith observes that derivatives issuers are "going to be less picky" about the in-



High-tech finance, circa 1863

tentions of a top-rated company whose top financial officer might want to bet on, say, a rising yen. "If he's wrong, the stockholders are going to bear primary costs of inappropriate or ineffective speculation. On the other hand, with smaller companies with lower rated credits, as a dealer in this market I'm going to worry a lot more about underlying business exposure of the client."

Through various safeguards, federal regulators found in one survey of selected banks, the dealer institutions had limited their own exposure in this allegedly scary arena to 2% of equity capital. Another recent survey, by the Washington-based Group of 30, an association of major financial houses, found that although less than half of responding institutions said they subjected their portfolios to multiple stress tests including a liquidity squeeze, strong majorities planned to do so soon. And the major players, which account for 75% or more of the derivatives market, already do.

Along the way, entrepreneurial finance

has spawned a burgeoning market for computer programs to help the quantitative brains keep count. Rod Beckstrom, CEO of C.ATS Software in Silicon Valley, estimates his subindustry has reached \$250 million in sales.

Nevertheless, some politicians and other worrywarts say the situation is out of control. It bothers them when the action is off balance sheets (and out of regulatory sights). Where regulation exists, it is carved into competing jurisdictions. But some scholars, such as Harvard business Prof. Robert Merton, think diversified (though more rationally structured) regulation can, like dispersed risk, promote stability.

The control crowd wants to impose financial restraints. To "settle the fever," Rep. Gonzales suggested a tax on derivative use. Others want caps on bank activity in this area. The Basle Committee in Switzerland, on behalf of international banking regulators, is at work on refining capital reserve requirements (a form of tax) for derivative exposure.

Those who want to rein in a "dislocative" influence in the markets need to understand that every tax or trading limit discourages marginal capital from entering. Owners of wealth don't want to have their escape routes blocked or their yields diminished. And when they stay out, liquidity (the capacity to trade at some realistic price) is reduced and risk for everyone is increased.

Back when Mr. Smithson's Confederate bond was issued, textile mills in London and Paris wanted not only to guard against devaluation but to hedge the possibility that a long Civil War would deplete cotton supplies and send prices skyward. The note entitled them to the goods if they could bust a blockade. After defeat at Vicksburg sealed the South's fate, the paper lost worth. But the idea has been spun into the threads of a useful if leaky canopy for a grander yet still gun-shy global economy.