

How financial derivatives became the world's fastest-growing market

by Anthony K. Wikrent, Richard Freeman, and John Hoefle

According to the October 1992 report of the Bank for International Settlements, *Recent Developments in International Interbank Relations*, "since the mid-1980s, the growth of turnover and of volumes outstanding in markets for derivatives instruments, including over-the-counter (OTC) markets that offer more customized products, has outpaced the growth of most other financial activity." As seen in **Figure 1**, by 1988, the "notional principal amount" (referring to the value of underlying assets) of derivatives outstanding had exceeded the total market capitalization of the New York Stock Exchange. By 1989, the notional value of derivatives outstanding was almost one-third larger than the total market value of all publicly listed companies in the United States. By the end of 1991, the notional value of derivatives was soaring toward being double the market capitalization of all U.S. publicly listed companies.

In other words, if the phenomenal growth rate derivatives exhibited from 1986 to 1991 has continued in the past two years, *the amount of derivative paper outstanding—none of which is carried on corporate balance sheets—is now somewhere around twice the total market value of all publicly listed companies in the United States.*

That financial derivatives have grown to such an extent is all the more amazing, considering that these instruments simply did not exist 25 years ago. The largest single type of derivatives, interest rate swaps, did not get off the ground until the summer of 1982. Futures on currencies did not come into use until May 1972. Interest rate futures first came into being in October 1975.

Oddly enough, there are no official figures available for the *dollar volume* of futures trading in the United States. Not even the Commodities Futures Trading Commission, the federal government agency charged with regulating the futures markets, has figures for the dollar volume of futures trading. Neither do the Chicago Board of Trade or the Chicago Mercantile Exchange, the two largest futures exchanges. The only figures available are for the number of contracts traded (**Figure 2**).

By multiplying the number of contracts traded of a certain basic type—agricultural commodities, precious metals, energy products, currencies, and financial products—by an average price for each basic type, *EIR* has estimated that the U.S. futures markets have an annual turnover of around \$25

trillion. This is a major revision from *EIR*'s original estimate of \$152 trillion, published in December 1992. Still, it demonstrates that the futures markets dwarf the New York Stock Exchange, which had a market capitalization of \$3.713 trillion, and total value of shares traded of \$1.520 trillion in 1991.

The futures markets are also some five times larger than the U.S. Gross National Product, which was \$5.519 trillion in 1991.

These gigantic markets are highly concentrated, with a mere handful of firms completely dominant. A report by the Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corp., and Office of the Comptroller of the Currency, *Derivative Product Activities of Commercial Banks*, issued on Jan. 27, 1993, revealed that the ten largest commercial banks in the U.S. control 95.2% of all derivatives activities by U.S. commercial banks (**Figure 3**).

The same situation probably exists on the investment bank side. In a listing of the 40 largest institutions in the futures markets, ranked by customer equity (the futures markets define equity as the residual dollar value of a futures account, assuming it were liquidated at prevailing market prices), in the March 1993 issue of *Futures* magazine, the five largest were investment banks: 1) Merrill Lynch Futures, Inc. (\$2,176.9 million); 2) Goldman Sachs and Co. (\$1,581.3 million); 3) Shearson Lehman Brothers, Inc. (\$1,527.7 million); 4) Dean Witter Reynolds, Inc. (\$1,120.1 million); and 5) Prudential Securities, Inc. (\$1,106.1 million).

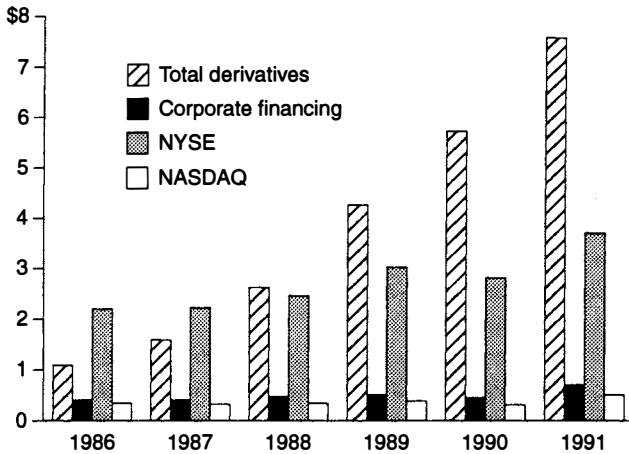
These were followed by 6) Refco, Inc. (\$1,071.3 million); 7) Morgan Stanley and Co. (\$844.7 million); 8) Cargill Investors Service, Inc. (\$804.5 million); 9) Daiwa Securities America, Inc. (\$588.5 million); 10) PaineWebber Inc. (\$576.2 million); 11) Bear Stearns Securities Corp. (\$539.4 million); and 12) Salomon Brothers, Inc. (\$488.6 million).

Of these firms, the three with the largest net adjusted capital (the amount of liquid capital established by Commodities Futures Trading Commission capital requirements) were Salomon Brothers (\$999.6 million), Goldman Sachs (\$963.6 million), and Shearson Lehman (\$859.4 million).

EIR's revision of its estimate of the size of the futures markets means that the largest market in the world remains the foreign exchange, or currency, markets. In March, the Bank

FIGURE 1

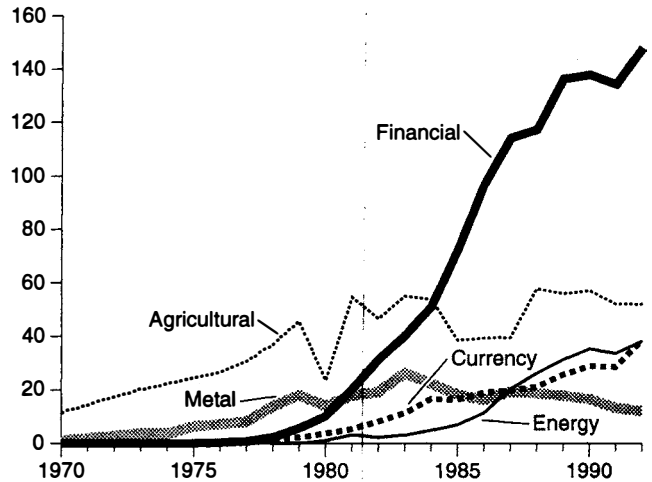
Derivatives compared to U.S. corporate financing and stock market capitalizations
(trillions \$)



Sources: Bank for International Settlements; Securities Industries Association.

FIGURE 2

Number of futures contracts traded
(millions of contracts)



Sources: Commodities Futures Trading Commission; Futures Industries Association.

for International Settlements (BIS) issued a new report, *Central Bank Survey of Foreign Exchange Market Activity in April 1992*, which states that foreign exchange trading increased 42% from 1989 to 1992, to an estimated \$880 billion per business day. This figure includes derivatives trading in currencies (i.e., futures contracts on currencies, swaps, and options), but also excludes offsetting positions. The actual total gross turnover reported by the 26 central banks which conducted the surveys, was \$1.354 trillion a day.

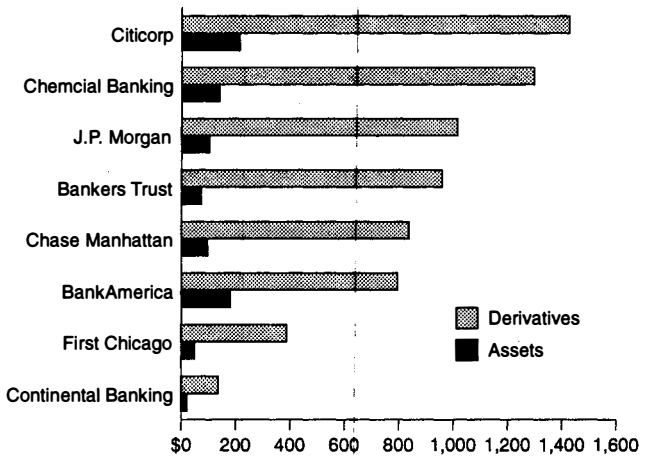
According to the BIS report, London now trades more dollars and deutschmarks than the United States or Germany does. London has increased its share of world trading, from 25% or \$187 billion in 1989, to over 40% or \$300 billion in 1992. Trading in London is also increasingly concentrated, with the 10 most active banks in the City of London accounting for 43% of trading in 1991, compared to 36% in 1986, according to a report issued last year by the Bank of England. That means 10 London banks accounted for 18% of all world currency trading in April 1992 (Figure 4).

The second largest currency market was the United States, reporting a daily volume of \$129 billion in 1989, and \$192 billion in 1993. Japan was the third largest, with daily volume in April 1989 of \$115 billion, and \$126 billion in 1993.

The fifth and sixth largest markets were two key members of the British Commonwealth: Singapore and Hong Kong, with \$76 billion and \$61 billion in daily trading in April 1992, respectively. If the figures for Britain, Singapore, and Hong Kong are added together, it will be seen that the British Empire controlled almost exactly half of the \$880 billion in

FIGURE 3

Derivatives activities compared to balance sheet assets at big U.S. banks
(billions \$)



Source: Salomon Brothers.

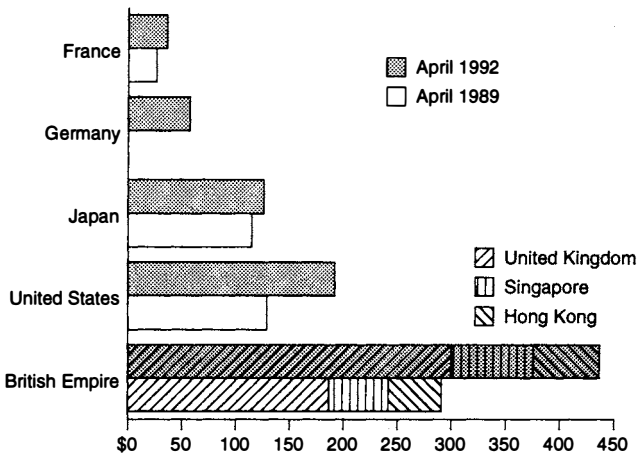
foreign exchange trading that took place every day in April 1992.

In December 1992, for the occasion of the meeting of the finance and bank ministers of the Group of Seven, the BIS issued a new estimate of daily world currency trading, of \$1 trillion a day.

FIGURE 4

The City of London dominates world currency trading

(daily currency market trading in billions \$)



Source: Bank for International Settlements.

Two case studies

Derivatives and agricultural commodity trading

How much does the trading activity on the futures markets contribute to "making the economy more efficient?" Just how many grain futures contracts—covering corn, wheat, oats, soybeans, barley, and sorghum—that are traded on the futures markets, are real, representing the movement of agricultural produce, and how many are purely speculative trades?

Most American farmers will tell you that the agricultural futures markets, whether for grain, livestock products, oil-seed products, orange juice, coffee, or sugar, are the farmers' worst opponents, forcing the price of grain products down below production cost. Only 5-15% of farmers even bother to use the futures market to sell their products.

Normally, in theory, the agricultural futures market would work in the following way. A wheat farmer, at planting time in the spring, might see that the price of wheat is but \$2.25 per bushel. He might buy a September or December wheat futures contract (a "put") that will pay him \$2.75 for his wheat at the month at which the contract expires. This way the farmer has guaranteed himself a minimum price for his wheat when it comes time to sell.

However, most farmers know that the theory does not work out that way in practice. The eighth largest futures trading firm in America, for futures trading of all kinds, is

Cargill Investor Services, Inc., run by the Cargill grain cartel. The 34th largest futures trading firm is ADM Investor Services, Inc., of Archer Daniels Midland. They directly manipulate prices against the farmer.

Consulting the statistics provided by the Commodity Futures Trading Commission, which regulates the futures and options industry, in 1992, there were 17,552,356 grain futures contracts traded. Of that total, only 64,200 were settled by delivery/cash settlement, meaning that the actual grain produce of the contract was taken for physical delivery. That is but 0.36% of all contracts traded.

However, at the level of the farmer selling his grain to an elevator, for each sale of real grain—called a hedge—there has to be an offsetting speculative trade to make the market. So, on that first level, there are 128,400 legitimate trades. Then, the local elevator usually sells the grain to the sub-terminal or terminal, such as in Omaha, Nebraska or Kansas City, Missouri, and sale by the local elevator operator must be offset by a speculative sale. Plus, the sub-terminal or terminal might have to sell the grain one more time. So, there are three times 128,400 contracts which can be considered legitimate. That is 2.2% of all trades; so 97.8% of all trades are purely speculative, having no connection to the real process involving the farmer and his produce. They involve speculators, often linked to the grain cartels, moving paper back and forth, attempting to capture spreads, or drive down the grain price for farmers.

The Bank of New England blowout

The January 1991, failure of the Bank of New England (BNE), which had until its collapse been one of the 10 largest bank holding companies in the United States, provides a good example of the way federal regulators have propped up the banking system, and of the risks faced by banks which play in the world derivatives markets.

The collapse of the speculative real estate market, which virtually wiped out the Texas banking system in the late 1980s, spread to New England by the end of the decade, bringing to a close the speculative bubble known as the "Massachusetts miracle." Boston-based BNE, which had lent heavily in the regional real estate market, suddenly found itself with overwhelming losses on its real estate portfolio. The bank, which had grown rapidly thanks to the real estate bubble, was dying with the collapse of that bubble.

In October 1989, BNE, which then had \$31.4 billion in assets, announced plans to dramatically downsize the bank through massive asset sales and employee cutbacks. The plans included selling some 10% of its branches, closing loan production offices in Chicago, New York, and Philadelphia, and reducing its work force by more than 20%.

In late December 1989, BNE took the extraordinary step of rescinding a previously announced 34¢ quarterly stockholder dividend. The step was forced by federal regulators, who were already making preparations for the inevitable fail-

ure of the insolvent bank. Federal regulators also threw out the chairman of the bank, and replaced him with an interim chairman, H. Ridgely Bullock.

In early February 1990, in an attempt to calm public fears and prevent depositor runs, Bullock declared that the bank was "off the critical list and getting better. . . . We're in a fix-it mode. We're not going to be as big, but we're going to be better."

BNE was not "off the critical list," however; the only thing keeping its doors open was a massive covert bailout from the Federal Reserve. By the time Bullock made his statement, the bank had already received nearly \$1 billion from the Fed.

Beginning in mid-January, the Fed had begun pumping vast amounts of money into BNE via loans from the Boston Federal Reserve. Federal Reserve statistics show that the Boston Fed lent banks in its region \$478 million the week ended Jan. 24, compared to just \$3 million the week before. While the Fed does not reveal to which banks the money was lent, it is clear that most, if not virtually all, went to prop up BNE.

The weekly bank lending by the Boston Fed rose dramatically in the following weeks: \$440 million the week ended Jan. 31, then \$723 million the next week, then \$930 million, and \$1,280 million the week ended Feb. 21. During each of the next seven weeks, the Fed pumped between \$1.5 billion and \$1.85 billion into the bank; by April 11, the Boston Fed had lent \$15.6 billion to its regional banks, the vast majority going to the Bank of New England.

By March, after some \$5 billion of bailout funds had already been injected into the bank, the Office of the Comptroller of the Currency and the Fed issued formal cease-and-desist orders to the bank. The Fed order stipulated that the bank could not pay stock dividends without permission from the Fed—a requirement that had already been in effect for more than three months!

Even more comical was the bank's admission in its second quarter 1990 report to the Securities and Exchange Commission, that it may need government assistance to survive. This, after some \$18 billion had already been funnelled into the bankrupt bank!

The end for the Bank of New England came on Jan. 4, 1991, when Chairman Lawrence Fish told federal regulators that the \$450 million loss the bank suffered in the fourth quarter of 1990, had wiped out its \$225 million in equity, making the bank officially insolvent. At this point, the bank had just \$23 billion in assets, and had fallen from 10th place on the list of largest U.S. banks, to 33rd place.

Not surprisingly, the announcement triggered massive depositor runs at the banks, with long lines forming at its corporate offices. Two days later, on Sunday, Jan. 6, 1991, federal regulators officially closed the bank. Federal Deposit Insurance Corp. Chairman William Seidman estimated the ultimate cost to the agency of the failures at \$2.3 billion, at

the time the second most costly bank failure in U.S. history, after the 1988 failure of First Republic Bank Corp. of Dallas.

Why did federal regulators pump more than \$18 billion into the Bank of New England, and then close it? If they were going to close it anyway, why did the regulators keep the bank open for a year after it was insolvent?

The answer is: derivatives.

The *Wall Street Journal*, in a June 18, 1991, article by Craig Torres, revealed that regulators had propped the bank up for a year in order to unwind its portfolio of "off-balance sheet" derivatives transactions.

"Everybody knew we had \$30 billion in assets" on the balance sheet, BNE head of treasury operations Arthur Meehan told the *Journal*. "But nobody but a small cadre of regulators and analysts knew we had \$36 billion in off-balance sheet activity."

During November and December 1989, before BNE publicly revealed the size of its fourth-quarter losses, BNE chief currency and derivatives trader David Pettit was able to trim his off-balance sheet exposure by \$6 billion; getting rid of the remaining \$30 billion was not so easy.

The bank, under the close supervision of federal bank regulators, began attempting in January to cash out thousands of derivative transactions. However, as word of its financial troubles spread in financial circles, banks all over the world denied BNE credit, and demanded cash up front. Not surprisingly, this is when the Boston Fed began pumping money into BNE.

Having become a pariah on world financial markets, BNE enlisted the help of Shearson Lehman and Prudential Securities to help it unwind its currency swaps on the Chicago Mercantile Exchange's International Monetary Market. By doing so, Meehan acknowledged, "we moved the risk out of the interbank system into the exchanges;" but had we not, he said, regulators would have been forced to take over BNE's trading positions.

By the end of 1990, BNE had reduced its derivatives portfolio to \$6.7 billion. A week later, the bank was closed.

The collapse of the BNE nearly sent the global banking system into "gridlock," the *Journal* warned, adding, "It all sounds far-fetched. But that's just what nearly happened, federal regulators say, in the months before they seized the Bank of New England."

If BNE, with its \$36 billion in derivatives, nearly sent the global banking system into gridlock, imagine what would happen were Citicorp, with its \$1.4 trillion in derivatives, to fail.

"For certain banks there is a lot of exposure" in the derivatives market, a senior examiner at the Office of the Comptroller of the Currency told reporter Torres. "If we had a real problem with one of the larger banks, a meltdown scenario would be a possibility."

That meltdown scenario is not just a possibility. It is, in fact, well under way.