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Essay

Long-Term Capital: It's a Short-Term Memory

By ROGER LOWENSTEIN

A FINANCIAL firm borrows billions of dollars to make big bets on esoteric securities. Markets turn and the bets go sour. Overnight, the firm loses most of its money, and Wall Street suddenly shuns it. Fearing that its collapse could set off a full-scale market meltdown, the government intervenes and encourages private interests to bail it out.

The firm isn't [Bear Stearns](#) — it was Long-Term Capital Management, the hedge fund based in Greenwich, Conn., and the rescue occurred 10 years ago this month.

The Long-Term Capital fiasco momentarily shocked Wall Street out of its complacent trust in financial models, and was replete with lessons, for Washington as well as for Wall Street. But the lessons were ignored, and in this decade, the mistakes were repeated with far more harmful consequences. Instead of learning from the past, Wall Street has re-enacted it in larger form, in the mortgage debacle cum credit crisis.

In the wake of Long-Term Capital's failure, Wall Street professed to have learned that even models designed by "geniuses" were subject to error and to the uncertainties that inevitably afflict human forecasts. It also professed a newfound respect for the perils of borrowing. Whether this wisdom endured may be judged by events of the past year, when not only Bear Stearns but also scores of banks and financial institutions have written off hundreds of billions of dollars — a result of blithe faith in models of the housing industry, not to mention a voracious hunger to do business on credit.

Regulators, too, have seemed to replay the past without gaining from the experience. What of the warning that obscure derivatives needed to be better regulated and understood? What of the evident risk that intervention from Washington would foster yet more speculative behavior — and possibly lead to a string of bailouts?

Indeed, through the lens of today's more widespread failure, the Long-Term Capital collapse looks like a small dress rehearsal. But at the time, it sent tremors of fear through the corridors of Wall Street, along

the electronic byways of finance and around the globe. Somehow, a geeky band of bond traders was able to throw the financial world off kilter.

In its first four years, Long-Term Capital achieved phenomenal profits with virtually no downside. Thanks to its seemingly flawless computer models, as well as its formidable arbitrageurs — including two Nobel laureates and a former vice chairman of the [Federal Reserve](#) — it quadrupled its capital without having a single losing quarter.

BUT in the summer of '98, its fortunes took a frightful downturn. With terrifying suddenness, bond markets turned skittish and all the fund's gambits ran into trouble.

As Long-Term Capital teetered, Wall Street feared that its unraveling could set off a systemic meltdown, and [William J. McDonough](#), president of the [Federal Reserve Bank of New York](#), agreed. On Sept. 22 and 23 — by which time Long-Term had lost almost \$4.5 billion — he summoned the heads of the major Wall Street firms, along with senior bankers from Europe, to a conference at the Fed. Fearing chaos, 14 banks — Bear Stearns, ironically, was the lone naysayer — agreed to rescue Long-Term by investing \$3.65 billion. Within a few weeks, calm returned and the crisis passed.

No firm had a closer view of Long-Term Capital than Bear Stearns, the broker that cleared its trades. And it was Bear that sounded the first shot in the current mortgage crisis. In summer 2007, amid a sharp rise in delinquencies on subprime mortgages, two hedge funds sponsored by Bear that invested in high-rated mortgage securities imploded. As foreclosures kept rising, other institutions suffered losses and the crisis spread.

Bear was warned to raise more capital by selling stock, but its senior executives, led by [James E. Cayne](#), the chief executive, thought the company's stock was cheap and refused. Mr. Cayne, who was an original investor in Long-Term Capital, should have remembered that the hedge fund's most obvious flaw was its excessive borrowing, or leverage. Before its annus horribilis, Long-Term had intentionally reduced its equity to a mere 3 percent of assets. It was a fatal mistake.

This time around, Bear gambled that it could survive with a weak balance sheet — its equity-to-assets ratio was an identical 3 percent. By March, worries that Bear was overleveraged prompted a run on its stock and pushed it to the brink of bankruptcy. Again, Wall Street feared that a chaotic collapse could jeopardize the financial system, and the Fed orchestrated a rescue.

AS striking as the parallel is to Bear, Long-Term Capital's echo is far more profound. Its strategy was grounded in the notion that markets could be modeled. Thus, in August 1998, the hedge fund calculated that its daily "value at risk" — meaning the total it could lose — was only \$35 million. Later that month, it dropped \$550 million in a day.

How could the fund have been so far off? Such "risk management" calculations were and are a central tenet of modern finance. "Risk" is said to be a function of potential market movement, based on

historical market data. But this conceit is false, since history is at best an imprecise guide.

Risk — say, in a card game — can be quantified, but financial markets are subject to uncertainty, which is far less precise. We can calculate that the odds of drawing the queen of spades are 1 in 52, because we know that each deck offers 52 choices. But the number of historical possibilities keeps changing.

Before 1929, a computer would have calculated very slim odds of a Great Depression; after it, considerably greater odds. Just so, before August 1998, Russia had never defaulted on its debt — or not since 1917, at any rate. When it did, credit markets behaved in ways that Long-Term didn't predict and wasn't prepared for.

This was the same mistake that scores of lenders would make in the housing industry. The United States had never suffered a nationwide contraction in housing prices; they assumed that the pattern would hold.

Modern finance is an antiseptic discipline; it eschews anecdotes and examples, which are messy and possibly misleading — but nonetheless real. It favors abstraction, which is perfect but theoretical. Rather than evaluate financial assets case by case, financial models rely on the notion of randomness, which has huge implications for diversification. It means two investments are safer than one, three safer than two.

The theory of option pricing, the Black-Scholes formula, is the cornerstone of modern finance and was devised by two Long-Term Capital partners, Robert C. Merton and [Myron S. Scholes](#), along with one other scholar. It is based on the idea that each new price is random, like a coin flip.

Long-Term Capital's partners were shocked that their trades, spanning multiple asset classes, crashed in unison. But markets aren't so random. In times of stress, the correlations rise. People in a panic sell stocks — all stocks. Lenders who are under pressure tighten credit to all.

And Long-Term Capital's investments were far more correlated than it realized. In different markets, it made essentially the same bet: that risk premiums — the amount lenders charge for riskier assets — would fall. Was it so surprising that when Russia defaulted, risk premiums everywhere rose?

More recently, housing lenders — and the rating agencies who put triple-A seals on mortgage securities — similarly misjudged the correlations. The housing market of California was said to be distinct from Florida's; Arizona's was not like Michigan's. And though one subprime holder might default, the odds that three or six would default were exponentially less. Randomness ensured (or so it was believed) a diverse performance; diversity guaranteed safety.

After Long-Term Capital's fall, many commentators blamed a lack of liquidity. They said panic selling in thin markets pushed its assets below their economic value. That's why leverage is dangerous; if you operate with borrowed money, you lack the luxury of waiting until prices correct.

The fund's partners likened their disaster to a “100-year flood”— a freak event like Katrina or the

Chicago Cubs winning the World Series. (The Cubs last won in 1908; right on schedule, they are in contention to repeat.) But their strategies would have lost big money this year, too.

[John W. Meriwether](#), the fund's founder, later organized a new fund, which suffered big losses early this year, according to press reports.

If 100-year floods visit markets every decade or so, it is because our knowledge of the cards in history's deck keeps expanding. When perceptions change, liquidity evaporates quickly. Indeed, the belief that one can safely get out of a "liquid" market is one of the great fallacies of investing.

This lesson went unlearned. Banks like [Citigroup](#) and [Merrill Lynch](#) felt comfortable owning mortgage securities not because they knew anything about the underlying properties, but because the market for mortgages was supposedly "liquid." Each firm would write down the value of its mortgage investments by more than \$40 billion.

Such stupefying losses suggest the biggest difference between 1998 and today. In '98, though credit markets froze and stocks plunged, they recovered quickly. Long-Term Capital was wholly a financial episode; it left no scar on Main Street. The current crisis has its roots in housing, a mainstay of the economy, and with the bubble's bursting the damage has been enduring and severe.

But Long-Term Capital's influence on regulatory practice is anything but forgotten. [Alan Greenspan](#) conceded at the time that the fund's rescue could lead to "moral hazard," meaning it could tempt financial players to take excessive risk. The warning was ignored. And the notion that a private hedge fund with but 16 partners and fewer than 200 employees could cause lasting harm was never truly examined. It was simply accepted.

The concept of too-big-to-fail, exceptional in 1998, is now a staple in the regulators' playbook. Bear Stearns and, by implication, other troubled investment banks have been taken under Washington's protective skirts; [Fannie Mae](#) and [Freddie Mac](#), too. The [Federal Deposit Insurance Corporation](#) is pushing for easier terms for millions of homeowners; auto companies are demanding loan guarantees.

Where does it end? If individual responsibility is to be fully excised from American capitalism, the free-market enthusiasts who founded Long-Term Capital deserve no little credit.

The shock of their failure was such that hedge funds have been regarded as especially suspect ever since. This, too, is a misbegotten lesson; an investment bank (Bear Stearns) could and did wreak similar havoc. Long-Term Capital's woes had less to do with who was trading than with the kind of assets they were playing with, namely that potent tinder of modern finance: derivatives. (These are off-balance sheet agreements whose value "derives" from that of underlying assets like stocks or bonds.)

In traditional finance, borrowers borrow and lenders lend. The only firms exposed to, say, home

mortgages, are the banks that issue them. Thanks to derivatives, a firm with exposure can pass it off, and a firm with no exposure can assume it.

Markets thus have less information about where risk lies. This results in periodic market shocks. Put differently, derivatives, which allow individual firms to manage risk, may accentuate risk for the group. Markets were stunned to discover that Long-Term Capital owned outsized portions of obscure derivatives. They dealt with that shock in typical fashion: they panicked.

Incredibly, six months after the Long-Term Capital affair, Mr. Greenspan called for less burdensome derivatives regulation, arguing that banks could police themselves. In the last year, he has been disproved to a fault.

INVESTORS have no confidence in banks or in their disclosures. How much will each downward tick in housing prices hurt the bottom line? No one knows. Failing to inspire confidence, banks cannot raise (enough) capital; thus, they do not lend.

Bear Stearns had on its books \$2.5 trillion of a derivative known as a credit default swap. Perplexed and alarmed, investors dumped the stock. And Bear was party to a hopelessly complex web of such derivative deals. Rather than let its contracts fail, regulators forced it to merge.

What we need from Washington now is not a promise of help after the next bust, but a show of wisdom before it. Requiring full, meaningful derivatives disclosure would be a good start. Investors, meanwhile, could help themselves by preparing for the next 100-year flood. Rest assured, it will arrive before then.

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