Long-Term Capital Management (LTCM)

The hedge fund, Long-Term Capital Management, was founded in 1994 by John Meriwether, the head of bond trading at Salomon Brothers. It had a star-studded board including two Nobel prize-winners and a former vice-chairman of the Fed. Investors rushed to have a piece of the new fund, and it started trading with just over $1 billion in capital. Over the following four years the fund provided a cumulative return of 182% and investors' initial optimism seemed amply justified.

Much of this success was built on convergence trades. In other words, if the prices of two closely related assets got out of line, LTCM bought the cheaper one and sold short the more expensive one until the prices converged. For example, the most recently issued Treasury bond (known as the *on-the-run* bond) is generally more liquid than earlier issues and therefore sells at a slight premium. This premium usually disappears six months later when a new on-the-run bond is issued. By selling short the current on-the-run bond and buying a bond with a similar maturity, LTCM "sold liquidity" at a small profit. One LTCM partner described the strategy as similar to "a giant vacuum cleaner sucking up nickels that everyone else had overlooked." But with leverage of 20 to 1, these nickels translated into dollars for the equity holders.

Many of the assets in which LTCM invested were risky, but the offsetting short positions substantially reduced the fund's risk. Moreover, the fund was highly diversified with spread positions in a variety of assets. Consequently, despite the leverage, the risk of the equity was similar to that of the Standard & Poor's Index.

It did not last. On August 13th, 1998, Russia defaulted on its ruble debt. This was a precursor to a sharp increase in price volatility in many markets and to a move by several hedge funds and proprietary trading desks to reduce their exposure and reverse their convergence trades. As a result, there was an increase in the price of liquidity. One example is the 10-year on-the-run swap spread which reached almost 1 percentage point in September 1998. This was four to five times its level during the previous six years. Another example was the record spread that emerged between on-the-run and off-the-run U.S. Treasuries.

Although LTCM had almost no exposure to Russia, it suffered substantial losses in common with a number of other hedge funds. Prices that LTCM had bet would converge diverged further. In just three days the value of LTCM's holdings declined by over $1 billion. By mid-September the value had fallen from more than $4.6 billion to $600 million. This was something like a 10 standard deviation event –something that couldn't happen.

One feature that contributed to the severity of the decline was LTCM's on- and off-balance sheet leverage, which increased sharply as the value of the equity declined. The obligation to provide additional margin as prices declined forced the fund to liquidate its positions in a market that was already short of liquidity. Thus the fund was forced to engage in feedback trading, whereby each decline in the value of its portfolio required further sales.

By September LTCM was close to default, demonstrating Keynes's comment that "the market can stay irrational longer than you can stay solvent." A formal default by LTCM would have enabled its derivative counterparties to terminate their contracts and to liquidate their collateral. The threat of large forced sales and the danger of consequent market disruption led the New York Fed to arrange a meeting of LTCM's counterparties. These provided an injection of new equity capital and oversaw an orderly liquidation of the portfolio.

Despite the Fed's intervention, a number of investment banks and security houses sustained large losses as a result of the flight to liquidity, and, although in the event there were no major failures, the market value of affected institutions fell sharply. For example, during the week surrounding the announcement of the LTCM losses, the equity value of the four retail banks that attended the Fed meeting lost $43 billion or nearly 30%. The changes in asset prices also caused disruption in the primary markets. For example, the widening of swap spreads increased the cost of hedging bond issues and partly for this reason the primary market for corporate bonds became for a while largely moribund.