

Long term capital management

Countries



**ASSIGN
BUSTER**

Meriwether was the former vice-chairman and head of bond trading at Investment bank Salomon Brothers. Meriwether put together a high profile team of traders and academics in an attempt to create a fund that would profit from the combination of the academics' quantitative models and the traders' market judgment. Some of the high profile employees brought on were Nobel-prize winning economists Myron Scholes and Robert Morton, as well as David Mullins, a former vice-chairman of the Federal Reserve Board.

Many large Investment banks and other sophisticated investors eagerly invested \$1.3 billion when the fund opened. Latch's main strategy was to make convergence trades. These trades involved finding securities that were misplaced relative to one another, taking long positions in the cheap ones and short positions in the rich ones. The trades LILT focused on primarily involved Japanese, U. S. , and European sovereign bonds. They also held long positions in emerging market sovereign bonds and hedged these with dollars.

Because the differences in values were very small on these convergence trades, the fund needed to take large and highly-leveraged positions in order to make a significant profit (Figure 1). LILT was very successful when it began with an annualized return of over 21% in its first year, 41% in the second year and 43% in the third year. Then, in 1998 it lost \$46 billion in less than four months following the 1997 Asian financial crisis and 1998 Russian financial crisis. The fund eventually had to be bailed out by the Federal Reserve, with the fund liquidating and dissolving in early 2000.

The fund had huge positions of almost 5% of the global fixed income market so financial intervention by the Federal Reserve was necessary to avoid a global financial meltdown (Figure 2). On September 23, the Fed organized a bailout of LILT, encouraging 14 banks to invest \$3.6 billion in return for a 90% stake in the firm. Summary of the Problem In 1998 the fund had equity of \$5 billion and borrowed over \$125 billion which equates to a leverage ratio of around thirty to one.

Latch's Investment managers thought that their complex computer models were correct when they represented that the long and short positions were highly correlated and so the net risk was small. In addition to being highly leveraged, Latch's hedges were not properly constructed. In order to avoid massive losses, LILT held Russian bonds and shorted the ruble during the Russian Financial Crisis in 1998. Meriwether did not anticipate that banks guaranteeing the ruble hedge would shut down when the Russian ruble collapsed, and the Russian government prevented further trading in its currency.

The main problem that eventually caused the demise of LILT was the market's flight to liquidity following the Russian Financial crisis. The market was in fear and fled to U. S. Treasuries which drove up the price of those liquid assets. The spread between different maturity Treasuries widened quickly and dramatically. LILT was not prepared for this type of market action and was essentially unhinged as their convergence trades were acting in the opposite fashion. The fund had taken huge bets off computer models.

Ultimately, Latch's overbalance on computer models that predicted the future based on the past, combined with high leverage and improper interest rate hedges is what caused the massive hedge fund to collapse. Investors had lost 92% of their investment (Figure 3). Of the \$4.4 billion lost, \$1.9 billion longed to the partners, \$700 million to Union Bank of Switzerland, and \$1.8 billion to other investors. Associated Risks LILT assumed liquidity risk because of their large, highly leveraged positions.

The fund also faced liquidity risk because it would often sell their most liquid positions because those positions were the least profitable, thus increasing risk overages. The fund also faced a crisis as margin calls required them to sell off their investments at huge losses. LILT also incurred market risk as the fund managers essentially bet everything on their convergence theory. If prices ever behaved differently (which they did) then market forces would drive dramatic losses. The fund also took on too much credit risk.

They were forced to take on ever increasing leverage levels to squeeze as much profit as possible from their trades. They were taking such large positions in their perceived arbitrage opportunities that the profit was eventually disappearing. They were in fact, moving the market. Lessons Learned The lessons learned from the LILT collapse all stem from management's overbalance on computer models. Their confidence in these models that predicted the future using data from the past was faulty at its core. Because LILT leadership was so assured in their models, they took on excessive amounts of leverage.

The amount of leverage was inappropriate considering the risk that the convergence trades were incorrect. Additionally, the types of trades they were making would only be successful for a short period of time because the positions kept growing and moving the market. The fund managers should have built more contractor probabilities into their models and looked at things such as systemic risk. There are factors outside of the logical market that cause events such as bank runs, financial institution failures and the collapse of currencies.

Those kinds of one-off events cannot be accurately predicted using probability models based on the past. Conclusion If I was in charge of risk management at LILT there are several steps I would have taken to reduce their risk exposure. I would have had the computer models audited by a third party to ensure their accuracy and give an unbiased opinion of potential risks. Sometimes high profile leaders will not listen to others within the firm so an outsider might bring a new perspective. I would also not allow that amount of average given the positions that were outstanding.