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CASE STUDY SERIES

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Case Study 16 Questions

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THE FAILURE OF LONG TERM CAPITAL MANAGEMENT (LTCM)

LTCM was a hedge fund started by John Meriwether in 1994 and was run by a 'Dream Team' that had the best minds of Wall Street, academia and government.

Given the star studded team that headed LTCM, behemoth financial institutions and High Net-worth Individuals (HNIs) of Wall-street and across the world were keen to invest in the fund. Thus, at the time of its launch it got the largest startup funding to date, worth $1.25 billion. At a time when the S&P 500 index gave an average return of 21%, LTCM was a huge success in the first four years of its launch and yielded returns upto 19.9%, 42.8%, 40.8%, and 17.1% respectively. However, the fund collapsed in 1998 suffering overwhelming losses on its $125 billion portfolio, subsequently resulting in the intervention of the Federal Reserve that brought together private banks and investment banks to bail out the fund.

LTCM adopted a trading strategy involving convergence trades that aimed to profit from the relative mispricing of assets. It included buying fairly cheap assets to make profits when the market corrected for price discrepancies to attain their true value.

LTCM actively invested in several markets across countries including the United States, Canada, Germany, Italy, United Kingdom, France, and Japan. The fund started collapsing at a time when several Asian economies were facing a liquidity crisis in the aftermath of which the Russian Government defaulted on its bonds and devalued the Ruble.

One of the most important takeaways from the collapse of LTCM is the danger of using excessive leverage and extensive exposure to derivatives. LTCM

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had a balance sheet leverage of more than 25-to-1 with assets worth $125 billion of which equity was worth only $5 billion. The reserves that the company maintained was also marginal compared to its exposure in the derivatives market. Given the hype surrounding the promising team of LTCM, it had easy access to cheap debt and deep trading discounts from clearing brokers, prompting it to use leverage extensively. Its lenders included the famed investments banks and commercial banks of America such as JP Morgan, Lehman Brothers, Morgan Stanley, GoldmanSachs, Chase Manhattan and Merrill Lynch.

By the end of 1996, LTCM's portfolio had a vast chunk of equity options and interest rate swaps which are two of the most common used forms of derivatives. Derivatives are instruments which derive their value through an underlying asset such as stocks, commodities, index, metals or other products. The most simplistic form of derivatives are forward contracts such as a farmer agreeing to sell his commodities to a third party, three months later, at a price determined today. Derivatives help to mitigate uncertainties in the market for risk averse players by transferring the risk to counter-parties who willingly bear the risk in return for profits, if the markets are favorable. A popular kind of derivatives that large funds like LTCM made extensive use of are the OTCs (Over the Counter Derivatives). Unlike other derivatives that were regulated, OTC market was neither centralized, regulated nor transparent, limiting price discovery.

By the end of 1997, LTCM had an estimated amount of OTC derivatives worth more than $1 trillion. For every dollar in equity, the firm had positions of $200 or more in derivatives without the knowledge of its counter-parties or federal regulators. Most of the OTC trades were set in a way to offset each other, however the increased exposure to derivatives exponentially increased the risks involved in the fund because derivatives solely worked on the premise of speculation. When the crisis in Russia imploded, LTCM's long

standing formula for success failed to do magic, and it suffered devastating losses. Moreover, LTCM had very little capital in its reserve to repay its counter-parties and had posted miniscule amount of collateral on all of its trades. Due to the opaque nature of the OTC market, the counter-parties could also not assess the size of its positions spread across several markets in different countries. In 1998, the fund lost 80% of its own capital of $5 billion, and was under a massive debt of $120 billion, facing insolvency.

The failure of the fund posed huge systemic risk for all intermediaries associated with LTCM, given its sizeable market position. This could potentially aggravate a panic in the middle of the existing liquidity crisis, posing a huge threat to all the counterparties involved- including behemoth commercial banks and investments banks of America, Europe, and Asia. Given the vast scale of the fund's operations it was considered to be a "classic setup for a run where losses were likely, but nobody knew who would get burned." The fear of a financial collapse prompted the Federal Reserve to step into action which facilitated the rescue of the fund by bringing together 16 financial institutions from across the world - including Barclays, Chase Manhattan Bank, Credit Suisse JP Morgan, Deutsche Bank, Goldman Sachs, Paribas, Merrill Lynch and Morgan Stanley.

Multiple Choice Questions

1. **Which BEST describes the prevailing strategy employed by LTCM in its initial, successful years?**

   A. Relative value
   B. Event-driven
   C. Distressed debt
   D. Global macro

2. **Each of the following contributed, directly or indirectly, to LTCM's problems EXCEPT for:**

   A. Salomon Brothers liquidation of positions
   B. LTCM seeking new equity
   C. Russian debt default
   D. Narrowing of interest rate spreads

3. **The lessons learned from LTMC include EACH of the following EXCEPT for:**

   A. Better use of stress tests in assessing credit risk
   B. Need for initial margin if counterparty's principal business is trading
   C. Need to train new personnel in compliance, disclosure and capital requirements
   D. Need to incorporate endogenous and exogenous liquidity risks

4. Although LTCM was well diversified across the globe, across different assets and trading assets, it still proved difficult to shake off market risk. Which of the following best explains why market risk remained persistent?

A. All of its trading strategies were hinged on a single economic prediction: that risk premiums and market volatility would decline.

B. The diversification was somewhat narrow-based i.e., the fund concentrated on just a few similar assets

C. Imitators flooded the market creating a situation where LTCM served as the market maker, rather than the price taker

D. None of the above

5. Consider the following statements:

I. LTCM models assumed that low frequency/high severity were correlated over a period of time

II. LTCM models accounted for the spikes in correlations among asset class prices during economic shocks

Select the true statement(s):

A. I

B. II

C. Both I and II

D. None

6. **Long-Term Capital Management, a hedge fund started by ex-employees of Citigroup, posted returns of 43% and 41% in the first two years of its formation due to its positions in global equity, derivatives, and fixed income assets. After the 1998 financial crisis in Russia, the fund lost 44% of its capital. Which of the following factors lead to the financial disaster of LTCM?**

I. Use of highly leveraged positions, which was possible due to waived initial margin requirements
II. Use of flawed trading models because it failed to account for the spike in correlations among asset class prices during times of economic crisis/shock.

A. I only
B. II only
C. Both I & II
D. None of the factors

7. **The failure of Long Term Capital Management almost brought the financial markets to a standstill and has since become a marker buoy to show just how far certain risk management safeguards can go to alleviate the risk of failure. Which of the following statements about LTCM's failure is incorrect?**

A. LTCM relied too much on theoretical market risk models and too little on stress testing, gap risk, and liquidity risk
B. LTCM scantily disclosed its positions and exposures, and counterparties had few ways to find out LTCM's exposure to other counterparties
C. In most of its repo and swap transactions' LTCM did not pay an initial margin as would other non-bank counterparties
D. There was no moral hazard at play in the run-up to LTCM's failure