NBA 5420 – Investments and Portfolio Management Problem Set 10 – Case Study II

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1. Suppose you can finance up to $100 million in 20 year Treasuries (with a modified duration of 15 years), which are trading at yields of 3.22%. Interest-rate swaps of similar duration are quoted at 3.40% versus LIBOR. The repo rate is 20 basis points below LIBOR. What would be the net carry of a trade constructed similarly to the example given in the case study, and what would be the net gain in dollars for every basis point rise in the swap spread (assuming the repo rate remains the same relative to LIBOR)? (Hint: recall that for bonds, % price change = - duration \* Δr)

Answer:

2. In Roger Lowenstein’s “When Genius Failed,” Morgan Stanley bankers jokingly called LTCM the “Central Bank of Volatility”? In what sense did LTCM provide both insurance and liquidity to other financial market participants? Give some specific examples. What’s the problem with “selling insurance”?

Answer: it use the judge method to provide the high liquidity, but at the same time, it also can keep low risk.

The example that LTCM implement to achieve low risk while with high liquidity.

3. In what ways did LTCM act like a dealer bank rather than a hedge fund? Do we need to worry in the future about hedge funds creating systemic risk in financial markets?

Answer: It focus on more safe assets, and do not touch the stocks. So its assets are more safe.

Yes, creating the systemic risk. different hedge funds will choose different investing strategy.

4. What’s the problem with calculating Value at Risk (VaR) with historical standard deviations and correlations? Even more importantly, what’s the problem with increasing your leverage or exposure inversely with market spreads and volatility to target a constant VaR?

Answer: The historical data is not reasonable to calculate Value at Risk (VaR). Because the current market changes so quickly and need to get more recent data to do the calculation.

Case study questions: 5. For the (A) case: Should LTCM return its capital base to investors? If so, should it redeem all investors proportionately, distinguish between inside vs. outside investors, etc.?

Answer: The inside investor should keep their investment in LTCM. while it should return money proportionately to the investor. It depends on the strategy of the hedge fund, when the hedge fund works well, every investor wants to put their assets in to the hedge fund.

6. For the (C) case: After suffering losses in August 1998 and seeing its NAV fall to $4.08 billion, what is LTCMs best course of action? Reduce positions, but by how much and at what cost? Try to raise equity, but would investors go for this? Draw down its credit line?

Maybe reduce position. to the percentage that it can suffer the big risk.