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FINANCIAL ENGINEERING UC BERKLEY EXTENSION

CASE STUDY ANALYSIS

General Observations:

This class was very interesting: it represents an academically rigorous attempt to mathematically quantify and—very important—visualize the economic phenomena of markets.

It is, however, important to recognize that a study of markets is not a “hard” like physics for the simple reason that there is no reliable mathematical model for human behavior. “Greed, fear, and ego” are highly elastic and nonlinear attributes.

Another aspect in the study of economies and markets is that they suffer from a “feedback loop” that often lags behind events by months and even years. For example, the equity markets have recently set a series of record highs followed by the biggest sell-off in five years. We will not know “why” this happened for probably another six to twelve months. By that time, the information is probably only of historical interest.

Game theory and behavioral science have attempted to arrive at a more quantifiable approach to studying behavior with the most obvious application being ‘war gaming’ by government defense departments. No one, however, has been able to demonstrate that such methodologies are reliably applicable to open capital markets.

Furthermore, probably the first rule of human psychology is that **people are invariably “economic” with the truth!** The following case studies would both appear to illustrate this propensity.

Farallon Capital Management

The historical context of the proposed BT/MCI merger was, of course, the “dot.com meltdown” (N.B., this is a misnomer; it was actually a telecom industry crash) that was in percentage terms the largest loss of equity in American corporate history.

When the deal the acquisition was announced, it was the largest international merger ever proposed. Farallon, however, felt that the arbitrage spread was unusually narrow so their initial position was the reverse of the usual merger arbitrage position; i.e., the bought BT “long” and MCI “short”. This would prove to be the correct position in this circumstance and if they had held firm they would have prevented considerable losses. As the arbitrage spread widened, however, Farallon reversed their initial position. It’s likely they felt pressured to ‘follow the herd’ so as not to be left out of the largest international merger in history.

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The ‘dynamics’ of the deal were, however, all wrong. Why would the guy with the “cheap” real estate, BT, be paying a premium to buy the guy with “expensive” real estate, MCI? The ‘normal’ deal in this situation would be the exact reverse and this is how the market originally priced the merger. It would appear that BT was seduced by the siren song of “growth”.

Later in 1997, MCI announced losses in the domestic phone service that was double the original estimates; other financials indicated that MCI’s projected growth was not meeting targets. BT had previously purchased 20% of MCI and had members on the Board of Directors so the only plausible explanation for BT being unaware of the true prospects for MCI was that someone had been **“economical with the truth”**.

From the moment of the announcement of MCI’s losses, the BT merger was doomed (BT could withdraw from the deal for \$150M) and Farallon were stuck with losses on the largest position in their portfolio.

Depending on how long Farallon was taking to unwind their positions, they might have been rescued by a “fool rushing in where angels fear to tread”. That “greater fool” was, of course, WorldCom who in 1998 proceeded to offer \$37B for MCI in what was then the largest merger in American corporate history.

Needless to say, WorldCom is an infamous example of corporate executives being **“more than economical with the truth”**: when WorldCom went bankrupt it was the largest bankruptcy in American corporate history and today all of its senior management are long-term guests in the US Federal penitentiary system.

Citibank

Presumably the historical context of this case study is the Asian Currency Crisis of 1997 during which the S. Korean Won depreciated against the US dollar from 1000Won/USD to 1700Won/USD.

At the time, banks were carrying many non-performing loans thus creating the pressure to enhance rates of return on equity. Citibank was proposing to achieve this by utilizing a Credit Default Swap (CDS) that was touted as “...providing off-balance sheet approaches to achieve the desired results.”

Perhaps I’m naïve, but isn’t improving return on equity by off-balance sheet transactions an oxymoron? There may be situations in which this transaction may be successful but when things go wrong, they tend to go horribly wrong (e.g., Enron). The Asian Currency Crisis was one of the times things went very badly wrong. When liquidity dries up then CDS deals can quickly become a game of musical chairs: someone is going to left without a seat.

The CDS deal was that Citibank would be paid par value on the bond in the event of a default. The obvious question is how was deal going to be enforced? (Who’s the “goon

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squad”?) In the event of a “run on the bank”—what was happening during the currency crisis—it not necessarily a question of *how much* you’re going to paid as *when*. How long can you keep “off-balance sheet approaches” off the balance sheet?

It’s important to remember that during the Asian Crisis major Korean corporations were defaulting on their loans and there was a major political backlash against both the IMF and the World Bank. In this environment, Citibank could be seen as not merely a bank but as potential “political enemy” of the Korean government.