Bankers Trust and the birth of modern risk management

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Bankers Trust (BT) pioneered the development of modern risk management practices between the mid-1970s and mid-1990s.The man who led the efforts was Charles Sanford who articulated 3 key principles:

- Any trading position involves risk and consumes capital.
- The only reason to take risk is to generate higher returns. Higher the risk, higher the expected return.
- The return has to be comparable with the return for other similar risks.

Sanford realized that capital acts as a buffer against large unexpected losses. So, he developed a methodology for allocating capital to individual investors based on the potential losses. This was called risk or economic capital. Accordingly, Sanford would calculate the risk adjusted return on capital (RAROC) for the transaction. By introducing risk explicitly into decision making, Sanford was able to align the interests of the people who managed the capital with those who owned the capital.

Sanford extended the RAROC model across product lines. He put in place a system to separate funding risk from lending risk. The prevalent practice was to assume the same cost of funding for all loans. In the new system, the lenders managed the credit risk and the traders the funding risk. BT was able to decouple market risk income from credit risk income, thereby enabling the firm to measure the RAROC of its funding desk separately and insulate lenders form interest rate fluctuations.

RAROC was applied to credit risk as follows:

- Credit officers assigned ratings to each borrower.
- Risk amount was calculated as the current outstanding under the facility plus a percentage of the unused facility limit.
- Risk factors for each ratings bucket were calculated from the volatility of corporate bond credit spreads of the same rating.

Risk capital was assigned on the basis of risk amount, credit duration of the exposure and the risk factor.

Essentially, BT translated credit risk into spread risk (market risk + default risk) and calculated economic capital based on the maximum mark to market exposure of the loans/commitments over the credit duration period.

In the late 1970s, BT defined risk as the maximum loss expected to occur over a defined period and at a specified confidence level. By the early 1990s, this measure became popularly known as Value at risk or VaR.

BT identified four super categories of risk:

- Market
- Credit
- Operational
- Liquidity

For each type of risk, the historical price volatility was used to determine the maximum potential loss within a one year period at a 99% confidence level.

BT used its understanding of RAROC to offer a range of new financial products to customers. Under the Glass Stegall Act, commercial banks could not place CP (commercial paper). BT successfully argued before the US Supreme Court that CP was not a security but a loan and could be offered by commercial banks.

BT also saw the leveraged buyout (LBO) boom of 1982-84 as a big opportunity. LBO lending generated high returns but the credit quality of the borrowers was typically below investment grade. But BT found ways to identify the key risks of each transaction and structure the loan appropriately to manage the risks. BT soon became a market leader in LBO financing. The bank also found ways to offload these loans to other market participants. A thriving secondary market made loans more liquid and allowed the banks to diversify their loan portfolio and reduce their risk exposure.

BT's most distinctive contribution was its role in developing new derivative products and expanding the use of derivatives by non-financial companies. BT was a pioneer in interest rate swaps, barrier options and various other kinds of derivatives- equity, currency, commodity, insurance, credit.

In 1984, BT set up the banking industry's first product control function. The responsibilities of this department included basic accounting at the product/business unit level, analysis of complex structures to verify pricing, validation of ricing models and verification of accounting practices. Members of the PC team were given the position and stature to challenge senior business managers when needed.

Due to its advanced market risk management practices, BT became the first US bank to receive permission from the regulators to use internal models for determining market risk capital.

In early 1994, the Federal Reserve raised interest rates to control inflation. Bond values fell and many of BT's customers suffered losses and were naturally upset. BT ran into trouble with the regulators. Investigations revealed that BT had not acted in reckless disregard of any duties. However, certain individuals had engaged in inappropriate conduct. Even before the investigation, BT had dismissed two such individuals. BT also paid a fine of $ 10 mn without admitting or denying guilt. Around this time, BT experienced losses in its Latin American department. But the bank recovered and the stock price rose from about $ 51 in March 1995 to $ 116 by June 30, 1998.

The Russian crisis, however, changed BT's fortunes. Between July 14 and October 7, 1998, the share price fell from $ 121 to $ 48. As losses piled up, BT's CEO, Frank Newman decided to sell the bank for $ 93 per share to Deutsche bank.

Most of the losses of BT had resulted from mark to market positions booked after 1995. BT's losses were spread across multiple lines and geographies. This shows that risk management can never eliminate risk completely. While analytical models are useful in abstracting reality and help us to focus on the most important variables and relationships, they have their limitations. These limitations arise from our incomplete understanding of financial markets, shortage of relevant data and the changing nature of key variables and relationships over time. In the case of BT, exposures that earlier had shown little or no correlation suddenly appeared to move in lock step.

The most credible explanation for the losses incurred by BT in 1998-99 seems to be a dilution of the standards earlier maintained for applying RAROC. In 1996 and 1997, the bank's strategy emphasized revenue growth and large bonuses were paid to top executives. Gradually, the loan portfolio started to increase as the percentage of total assets and exposure to high risk counterparties began to grow. The market dislocation of 1998-99 exposed the pitfalls of this strategy. Excluding the LDC (Less Developed Countries like Mexico defaulted on their loans.) loan losses reported in 1987 and 1989 and focusing on the 1987-95 period in which Sanford served as Chairman and CEO, BT posted an average Return on Equity of 20.4%.

To promote effective risk management, many issues need to be addressed- corporate governance, compensation policy, regulatory oversight and accounting transparency. The greatest challenge in addressing these issues is to restore confidence in the financial markets without sacrificing innovation and creativity