For a while RBS was 'the world's biggest bank'. It all came undone after RBS's bid for ABN Amro in 2007 and the subsequent rights issue in 2008–leaving shareholders with losses of over 95%. A Government rescue left UK taxpayers with a large share of a very small bank.

Omega Metrics Risk technology would have provided accurate advance warnings to investors and the means to hedge their positions with a loss of only 10% between August 2007 and the end of 2010.

Omega Metrics Risk Technology

Our proprietary technology for market risk measurement provide unprecedented accuracy as risk levels vary through the cycle. It also produces early warnings of asset price bubbles and anti-bubbles. Our trend analysis identifies the transitions between market expansions and contractions.

Together, these analyses would have warned investors of the risks of severe loss they faced in their RBS positions. For anyone who wished to maintain their investment, a hedging program informed by Omega Metrics technology would have made the difference between catastrophic loss and a minor inconvenience.

Market Risk Measurement

As global equity markets began their rapid recovery from the Tech Bubble Crash, European bank stocks in general and RBS in particular soared in value. From mid 2004 to the second quarter of 2007 the STOXX® Europe 600 Bank Index rose by 69%. In the same period, RBS shares gained almost 80%. These impressive gains came with a significant level of market risk.

Risk levels were elevated but RBS's market risk was slightly lower than that of the European Bank Index. At the time RBS announced shareholder approval for its ABN Amro bid in September 2007, its 5-day 99% VaR was 7.8%.The Expected Shortfall (ES) –the average loss conditional on a VaR breach–was 11.8%. For the Bank Index VaR was 7.8% and ES was 13.9%. So RBS was producing larger gains and, for the moment, lower drawdown risk than the European Bank Index.

But, less than a month later when RBS announced that ABN Amro had accepted the deal, the 5-day risk levels for RBS had ramped up sharply: VaR 10% and ES of 16% while the Bank Index risk was virtually unchanged. RBS's market risk continued to rise inexorably in the subsequent months.

Before RBS's April 2008 rights issue, the 5-day 99% VaR has exploded to 18.5% and the ES to 29% compared with the European Banks values of 10.7% and 16%. These are 5-day drawdowns that should have been expected to occur once every 5 months. Investors who knew this would undoubtedly have taken a different view of the rights issue.

Early Warning of Asset Price Bubbles

Omega Analysis' risk measurement technology reveals predictable Risk Cycles which are leading indicators of market booms and busts.

Unstable Expansions–unsustainable asset price increases–emerge during market booms. They provide real-time Correction Levels that are predictions of the extent to which markets must fall in the subsequent downturn.

RBS began an Unstable Expansion in July 2004 and the STOXX® Europe 600 Banks Index followed in September of that year. At what turned out to be the peak of the market for RBS, the Correction Level was over 60%. For the Banks Index it was 32%. In the vast majority of cases, Unstable Expansions are followed by a price collapse at least as far as the Correction Level. As the ABN Amro bid was being prepared, this indicator was predicting a loss to RBS shareholders of at least 60%.

Trend Analysis

Omega Metrics Downturn Indicator is tuned to observe the transition from boom to bust in the 'long wave' cycles in equity markets. In mid-August 2007, the Downturn Indicator signalled the end of the boom in RBS shares. This was followed in October 2007 by the same signal for the European Bank sector and in February 2008 for global equity markets.

Early Warning of Asset Price Anti-Bubbles

Just as Unstable Expansions are indicators of unsustainable asset price increases, Unstable Contractions indicate 'anti-bubbles' of panic selling. These can lead to very rapid uncontrollable declines. At the end of September 2007 RBS share decline had produced a warning that an Unstable Contraction had begun in mid-August. By the time the Unstable Contraction ended a year later, RBS shares had dropped in value by 84%.

Omega Metrics Dynamic Hedging

Given the Risk Alerts, individual investors could have sold their shares. Alternatively, if the expected profits from the investment had been sufficiently attractive, they could have proceeded with a hedge constructed to control their downside exposure.

Given that the same alerts, with less severity, applied across the European Bank sector, a portfolio of short positions could have been adopted. To see what the effect of that approach would have been, we have simulated a short position in the STOXX® Europe 600 Banks Index.

The success of a hedge depends both on the selection of the short and, critically, on the varying size of the short position. In the simulation the ratio of the 5-day 99% ES for RBS to that of the Banks Index has been used as the hedge ratio. The overall long-short position is then adjusted to comply with a Risk Target 5-day 99% ES. Figure 1 shows the result.

What Omega Metrics Risk Cycle Research Could Have Done for RBS Investors

The risk warnings of severe multi-day drawdowns, the likelihood of a loss of more than 60% in a market correction and the trend analysis indicating the transition from boom to bust would have alerted RBS shareholders to the extreme level of risk they were taking on with the ABN Amro acquisition and the subsequent rights issue. Any investors who believed that the prospective benefits were significant could have hedged their position to turn a disastrous 95% loss into a minor annoyance–a loss of 10%.

The same technology would have helped investors in all of the major banks that collapsed during the Credit Crisis and all those that were saved.

The Same Conditions that Applied in 2007-2008 are Present Now.

Unstable Expansion in global equity markets has left a very large gap between the market peak last May and the Correction Level. Multi-day risk levels have exploded in equity indices and individual stocks–especially European banks. Finally, our Downturn Indicator marked the transition from boom to bust last July.

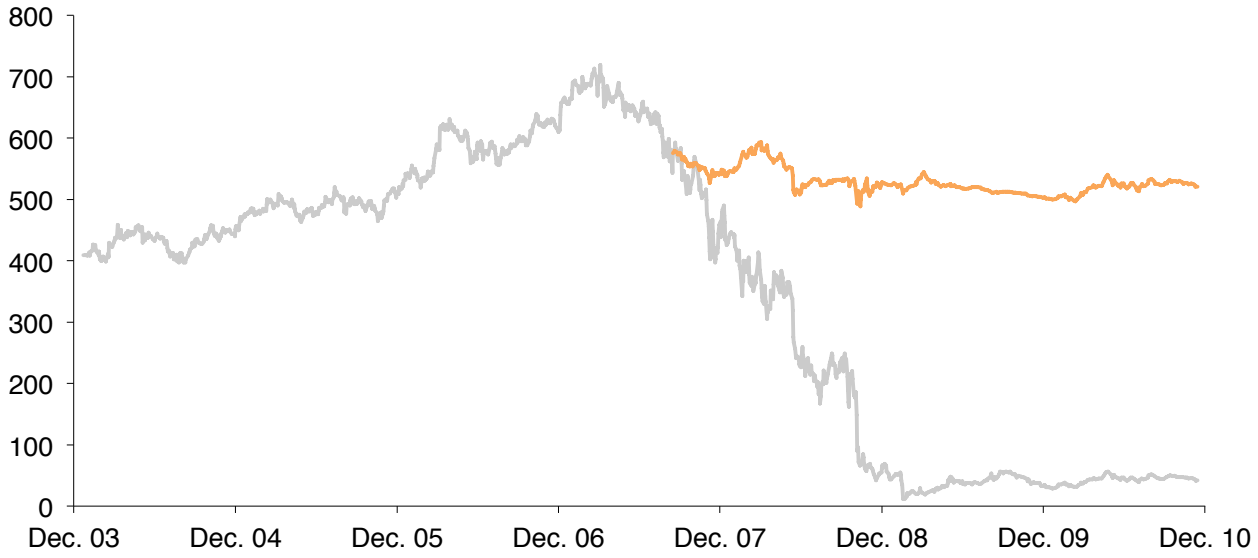

Figure 1. RBS shares and a pro forma dynamically hedged position long RBS and short the STOXX® Europe 600 Banks Index. The size of the short position is determined by the relative 5-day 99% ES levels of RBS and the Banks Index. The long-short portfolio is then sized to meet a 5-day 99% risk target. By the end of the period, over 80% of the position was in cash. The cash component received a zero return in the simulation and no transaction costs were included.

Omega Analysis

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