

BASEL II AND THE TOP 5 PITFALLS IN ECONOMIC CAPITAL MODELING

Banks working to comply with Basel II's advanced approaches to capital adequacy have or will soon have in place many of the key building blocks for supporting sophisticated economic capital analysis.

Many of these banks plan to leverage their Basel II investments by integrating the economic capital analysis into their risk based decision making process. Done properly, this integration can allow the organisation to improve many areas of their operations and financial results, eg, through better identifying their most-profitable activities after taking risk costs into account. But banks need to steer-around some pitfalls if they are to apply economic capital to gain real competitive advantage:

PITFALL 1 - ALLOWING REGULATORY COMPLIANCE TO DRIVE YOUR PROGRAMME

Economic capital was originally devised to help banks run their businesses better. While the regulatory advocacy of economic capital frameworks is heartening, banks shouldn't over-focus on regulatory applications or, even, capital adequacy. Instead they should immediately use economic capital analysis to throw light on areas such as business line profitability, risk-based pricing and the potential use of credit derivatives to optimise portfolios - and plan the full roll-out of at least one short-term business goal such as improved economic-capital based credit limit setting.

PITFALL 2 - 'DATA FIRST' MENTALITY

Banks that would like to build out an economic capital programme often worry that they 'don't have the right data' to quantify their full range of enterprise risks. Often, banks with this mindset

never actually start the economic capital modeling process (no bank ever has perfect data), or spend an enormous amount of money on a poorly specified data warehouse. A much better strategy is to improve data in parallel with a programme of model development while plugging data holes with best-effort benchmarks and 'triangulation' towards an answer using multiple methodologies, taking note of confidence intervals, and adjusting for economic cycles.

Credit risk is the first and sometimes the only banking risk banks consider, but other risk types can account for up to 45 percent of overall economic capital at a 'typical' bank.

PITFALL 3 - OVER-FOCUSING ON CREDIT RISK

Credit risk is the first and sometimes the only banking risk banks consider, but other risk types can account for up to 45 percent of overall economic capital at a 'typical' bank. These risk sources must be quantified if a bank wants to understand overall capital requirements and compare the performance of business lines - not least because the proportion of risk from each risk source often varies dramatically (eg, between lending and non-lending business lines). One typical problem is that banks forget to assign capital to important risks not fully addressed by the Basel II reforms such as financially-driven business risks, eg, the way interest rate volatility drives the revenue of mortgage origination units.

PITFALL 4 - POOR USE OF BENCHMARKS

While benchmarks are a useful starting point for a best-practice economic capital model, they must be used at the most

granular level possible and replaced with bank-specific data wherever practical as the programme matures. The first step is for the bank to test the sensitivity of its initial economic capital model to changes in benchmark parameters, eg, what happens when estimates of probabilities of default, or credit correlations, change by 20 percent or 50 percent? Then the bank can focus investments on improving the parameters that provoke relatively large changes in economic capital results.

Even where banks take the right methodological approach, they must work hard to educate business leaders.

PITFALL 5 - RISK AGGREGATION

To calculate enterprise-wide economic capital, banks need to aggregate accurately the combined effect of various risks. Some banks simply add up the stand alone numbers, assuming no diversification benefits between different risk types, while others employ a co-variance matrix that fails to take account of the non-normal distribution of risks such as credit and operational risk - creating distortions of as much as plus or minus 35 percent in risk allocations and exaggerating the capital requirements of particular business lines such as commercial lending businesses. The only real solution is to calculate a joint loss probability distribution by combining the distributions of each risk type and taking account of any correlations among them, using the fast, stable, numerical algorithms now readily available for this purpose.

CHALLENGE AHEAD

Banks are right to leverage their Basel II investments by developing economic capital programmes, but many challenges remain.

Even where banks take the right methodological approach, they must work hard to educate business leaders, to find the right balance between 'build versus buy', and to incorporate economic-capital based metrics in incentive compensation. The rewards of a successful programme are extraordinary in terms of aligning all the bank's decisions on the creation of shareholder value and in terms of identifying the best risk-adjusted opportunities in modern banking markets.

This article was contributed by Brannan Johnston, Managing Director, Ambit, SunGard

For more information contact ambitinfo@sungard.com

First published in

**WORLD
FINANCE**