

An evaluation of interest rate risk tools and the future of asset/liability management

The nature of risk management is evolving rapidly. Regulatory pressure to integrate across the taxonomy of risk types is forcing banks to improve their enterprise risk management (ERM) practices and invest in centralised data infrastructure and software. Practices that more closely associate Treasury processes (liquidity risk management, capital management and balance-sheet management) with risk practices across the enterprise are being re-evaluated. More effective risk assessment and risk reporting processes are required.

Managing beyond interest rate risk

Traditionally, asset/liability management (ALM) has been associated with the management of structural balance-sheet interest rate risk (IRR). The tools for measuring and monitoring IRR have historically been the repricing gap model, net interest income simulation and the sensitivity of market value of portfolio equity. At some banks, due to the concentration of skills and cash flow models, the ALM function is also responsible for performing a variety of other balance-sheet management analyses, including liquidity risk, funds transfer pricing (FTP), capital management and risk policy setting. Therefore, the full scope of ALM can be much broader than just IRR. And, given the lack of standardisation in the industry, it is not surprising there is a wide range of sophistication in ALM.

Approaches to ALM

While regulators and practitioners might agree on what ALM risk management tools are available, they do not necessarily agree on which ALM tools should be used to quantify risk – that is, an earnings-based sensitivity or market value sensitivity. Regulators are demanding stronger risk management practices, and so banks are increasingly looking at more sophisticated approaches to ALM. Approaches to ALM can be broadly categorised as 'simple' or 'sophisticated':

Simpler approaches to ALM:

- Periodic gap model
- Calculating the impact of parallel and instantaneous interest rate shocks on static earnings or market value using discounted cash flow analysis

Sophisticated approaches to ALM:

- Dynamic simulation of the balance sheet under multiple interest rate scenarios
- Option-adjusted valuation
- Volatility-based risk metrics, which include value-at-risk, stochastic earnings-at-risk and risk-adjusted return on capital or economic value added

Which approach is best?

As it was in the past, no individual risk metric is ideal. Rather, they all have strengths and weaknesses. Institutions use those tools that quantify risk consistent with the complexity of their balance sheets. However, viewing risk using metrics based on different underlying assumptions can provide insight into evolving market conditions. In particular, firms that were able to quickly adjust forward-looking scenario analysis or integrate measures of market risk and counterparty credit risk into their positions across businesses were better able to assess evolving market conditions.

The future of ALM

The acknowledgment of industry weaknesses and an atmosphere of strong regulatory reform has signalled the incentive for change, post the 2008 banking crisis:

Governance – ERM governance practices are gaining ground, driven both by lessons learned by financial institutions during the credit crisis and as a result of regulatory pressure.

Liquidity risk – The measurement, management and supervision of liquidity risk is now considered to be as important as capital management.

FTP – FTP is enjoying a renaissance – particularly with regard to incorporating liquidity costs in product pricing, performance measurement and new product approval. Prior to the credit crisis, many banks treated liquidity like a free good for transfer pricing purposes. This behaviour was reportedly one of the causes for the poor liquidity outcomes during the credit crisis.

Data Infrastructure – The inevitability of Basel III compliance is forcing banks to invest in data infrastructure. The Basel III framework hinges on integrated asset, capital and funding management. Basel III liquidity data requirements span multiple functional and organisational silos, necessitating the implementation of the ERM datamart.

Moving out of the back office – ALM is evolving from a back-office risk management cost centre to an integrated front-office balance-sheet management function. The convergence of market and credit risk has accelerated post crisis, partly due to regulatory pressure.

To remain competitive, banks must keep up with the latest developments in risk measurement and management. Ultimately, firms that tie risk exposures to capital more effectively will be better able to integrate risk-taking decisions into their strategic and tactical decision-making.

To read the full Moody's Analytics paper, *An evaluation of interest rate risk tools and the future of asset liability management*, visit www.moodyanalytics.com/FutureALM

For more information, please contact Moody's Analytics at: ALMAsia@moody.com