ALM Modeling and Regulatory Risk: Manage or Be Managed

by: Michael R. Guglielmo, Managing Director
Darling Consulting Group

Recognizing the importance and benefits of ALM modeling and the need for more forward-thinking business decision support processes, examiners have taken a tough stance towards risk management issues and have made it clear that there is little tolerance for weak risk management practices.

In terms of meeting regulatory mandates, institutions have had to focus on the following:

- earnings simulations for a minimum 24 months;
- different types of rate scenarios, including alternative yield curves and more extreme rate movements;
- model assumptions that are well thought out and empirically supported;
- sensitivity and stress-testing analysis that is performed on a regular basis;
- stronger processes and controls with more self-validation and documentation;
- a better-informed management team AND board that understands the modeling process and the key assumptions that go into it.

Organizations across the spectrum have experienced heavy-handed exams over the past few years as examiners have intensified their scrutiny of liquidity, interest rate risk, credit, capital and earnings and, based upon recent experience and client feedback thus far, the examiners are continuing this crusade in 2012.

While some organizations have benefited with better-informed ALCO and a more proactive risk management process, many others have become victims to many of the unintended consequences that have emerged from the IRR-related guidance.

Supervisory Guidance. In January, regulators provided supervisory guidance (*Interest Rate Risk Management: Frequently Asked Questions*) to address some of the ambiguity and misinterpretation that has arisen from the original 2010 guidance. Key topics the FAQ covered were:

- risk management and oversight,
- measuring and monitoring of IRR,
- stress testing,
- internal controls and validation,
- assumptions.

The following is a summary and commentary related to the 12 specific questions covered in the FAQ:

1) **Third-party model risk management** — Your model needs to be able to capture your organization's risk, require little in the way of rubber bands and Band-Aids to function effectively, have sufficient transparency, be independently validated and have solid vendor support/training.

2) **Strategy and *what-if* modeling** — Your process should include strategy and *what-if* modeling, and the model needs to be capable of capturing all of the risks associated with the products being considered.

3) **IRR measurement methodologies** — Organizations are expected to assess the potential impact that changes in market rates have on earnings and economic capital and are reminded that data aggregation routines can materially impact results when misapplied. *Note*: this has been a major issue that we have revealed with many of the models we have validated, as underlying

products and their characteristics have changed over the past few years (e.g., in-the-money floors embedded in variable/adjustable-rate loans).

4) **Analysis expectations for non-complex balance sheets** — The FAQ *encourages* organizations with non-complex balance sheets to use earnings simulations. Complex or not, it is our belief that NII simulations provide the best means to assess risk (or lack thereof) and the impact of potential strategies.

5) **More extreme rate shock analysis (beyond +300bp)** — Model managers should take into consideration the level of market rates and where we are in the rate cycle to determine what stress scenarios are appropriate. So in the low-rate environment we are in today, examiners could expect a +400bp. A word of caution: there is still ambiguity here and we have seen a variety of ill-conceived requests for scenarios well beyond the +400bp, and while the guidance suggests that this exercise can provide useful information for risk management purposes, it has been our experience that this activity has tended to be a mathematical exercise and a distraction for ALCOs and the decision-making process.

6) **Types of risk analysis and the frequency** — Organizations are expected to periodically analyze the four primary components of IRR: repricing mismatch, basis risk, yield curve risk and options risk. This evaluation should be performed at least annually or when the risk profile changes. When an organization has exposure to a particular risk (e.g., options), then more frequent analysis is expected. To manage limited resources most effectively, we recommend developing a schedule of sensitivity and stress tests over the course of a year and strongly suggest that this analysis be discussed by ALCO and well documented.

7) **Defining board-approved thresholds for monitoring stress scenarios** — Examiners expect limits, triggers or thresholds to be established for stress scenarios that are prepared as part of the regular IRR assessment process. This notion is going to generate a lot of unintended consequences as ALCOs and boards are going to be burdened with having to evaluate an excessive number of limits for IRR, liquidity, capital, etc. and deal with each of the *policy exceptions* for analysis that should be meant for informational and educational purposes.

8) **No growth modeling** — The strong regulatory preference for no growth modeling was clearly reemphasized in the FAQ. It did point out that understanding the impact of growth on an institution's risk profile is also a sound practice, and that management *could* prepare growth scenarios in this context. Many banks document their understanding of growth implications via more qualitative discussion at ALCO regarding the impact of potential strategies on their risk profile (interest rate risk, liquidity, capital, earnings), a practice we find to be effective. Additionally, we believe policy limits or guidelines should be related to the no growth model to ensure that future expectations for growth do not influence our current risk assessment. Also, period-to-period comparisons of no growth models allows ALCOs to more clearly understand the direct impact recent balance sheet changes have had on the overall risk profile.

9) **Independent validation/model certification** — Institutions cannot rely exclusively on vendor-commissioned model certifications to satisfy supervisory expectations for independent validation. There are simply too many moving parts, switches and dials that can be adjusted within a model that can influence results and accuracy. Organizations must adopt an effective validation framework that includes conceptual soundness, ongoing monitoring, and outcomes (backtesting) analysis.

10) **Effective backtesting** — *Backtesting* means a lot of things to a lot of people. The FAQ attempted to address this to a degree and highlighted the notion of outcomes analysis whereby actual and forecasted results are compared and key contributing factors or drivers are identified. Tracking key drivers (i.e., interest rates, prepayment speeds, runoff, new volume) and comparing actual vs. forecasted activity can be highly effective in assessing model risk. In addition, the FAQ correctly highlighted sensitivity testing as a useful tool for identifying the assumptions that have the greatest influence on results. Simulating and comparing the relative impact of the various key drivers will quickly provide the model manager, the ALCO and the board with an understanding and appreciation for the relative contribution and impact critical assumptions have on the risk profile and provide a priority list of the assumptions that need to be most closely monitored and supported.

11) **Non-maturity deposit (NMD) decay rates** — The FAQ cautions organizations to avoid reliance on industry *estimates* or default vendor assumptions. For those who have difficulty

obtaining data, industry estimates can be used as a *starting point* until sufficient data is available. A word of caution here: while core deposit studies can be important and beneficial to the assumption development process (to the extent that they are fundamentally sound), they should not be relied upon exclusively to determine the actual assumption used. These studies provide an important perspective and can help organizations better understand what has occurred over previous rate cycle(s) but cannot and should not be considered a perfect predictor of future consumer behavior. There are simply too many variables and non-economic fundamentals that can impact current deposit activity. While the FAQ did not specifically address the deposit pricing sensitivity betas, historical tracking of balances, deposit rates, and market rates can be helpful in the assumption process.

12) **Impact of non-economic fundamentals on deposit behavior** — The FAQ acknowledges that non-economic fundamentals may impact deposit behavior particularly during times of stress. Examples provided included *flight to quality* (insured deposits or core vs. non-core) and early withdrawals on time deposits. Again, core deposit studies can be helpful in identifying these elements and their potential impact on IRR (and liquidity). We have found sensitivity analysis — periodically simulating the impact of a precipitous runoff in potential non-core NMDs and increased early withdrawals on CDs — to be very beneficial in this regard.

It is most evident that examiner expectations are continuing to grow relative to ALM modeling and model risk management. Organizations across the spectrum should anticipate another challenging year from a regulatory standpoint. More than ever, it is essential for institutions today to take command and ownership of their ALM model and modeling process and continue to transform their ALCO into a well-informed, proactive decision-making body. Simply put — manage, or be managed.

Michael R. Guglielmo
Managing Director
Darling Consulting Group, Inc.
mguglielmo@darlingconsulting.com
Tel: 978.463.0400
www.darlingconsulting.com

With over 25 years of experience in asset/liability management, Michael has provided technical and strategic consulting to a diverse group of financial institutions in the U.S. and abroad. Michael is also a frequent author and top rated speaker on a variety of balance sheet management topics.

During his tenure at DCG, Michael has served in various capacities, including Director of Financial Analytics. In addition, he is a technical resource for the ongoing development of many of DCG's ALM-related products and services. Prior to joining DCG, Michael managed the ALM and strategic planning process for a regional bank in the northeast.

Michael is a graduate of Fairfield University with a degree in economics.

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