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Rising Rate Readiness: making effective use of your ALM model

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After spending years in the doldrums of a historically low-rate environment, it is time for ALCOs to prepare for the inevitable next rate cycle. The importance of understanding your ***true*** risk profile cannot be overstated, as the consequences for being wrong have never been greater. The best way to most accurately gauge your risk profile is through the development and implementation of a comprehensive ALM risk management process – something so critical that the FDIC recently published yet another guidance (FIL-46-2013 *"Managing Sensitivity to Market Risk"*) to highlight what such a process should entail.

So…financial institutions of all sizes and charters are left to ask themselves two critical questions:

1) What is our ***real*** exposure to changing interest rates?
2) Should I be concerned about rising rates or welcome it with open arms?

While these are very important questions for ALCOs to address, the answers are easy to arrive at, although "easy" is a very relative term. With the right tools and analysis in place the information upon which to make that determination is readily available; however, to separate the wheat from the chaff (the information from the data) and be confident in the results takes time, resources, expertise and in some cases the tools that many bankers simply don't have at their disposal.

What constitutes this "comprehensive" ALM risk management process that the examiners are lauding?

1) A flexible **model** that incorporates:
   a. Account-level data
   b. Optionality
   c. Interest rate ramps, shocks, twists
   d. Variability of assumptions
   e. "What-if" modeling capabilities

2) A thorough ALCO **reporting package** that includes:
   a. NII simulation results in easy-to-understand format
   b. Liquidity analysis
   c. Capital adequacy analysis

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   d. Assumption support
   e. Stress - testing documentation
   f. Strategy discussion and documentation

3) A process that allows key decision makers to understand the results (earnings at risk, liquidity and capital) and formulate the **strategic decisions** that effectively manage risk while maximizing earnings

Modeling:
Models can be either maintained in-house or the process can be outsourced to a third party provider. Either way, the requirements for populating the model with accurate and complete account-level data remain. The data is the foundation upon which the model is built, so if there are weaknesses in those files, the results of the model become unreliable. Proper repricing and payment characteristics, accrual methods and account-type codings are critical to the proper construction of the base model, but also lead to the substantiation of key replacement assumptions.

The rate scenarios that are simulated should maintain a consistency across periods to allow for meaningful comparison to take place, yet also provide valuable information to the decision-makers that identifies risk exposures in realistic rate environments. Up 400bp shocks (instantaneous and permanent increase in rates) provide useful information from a “stress” scenario relative to impact on earnings and capital, yet the likelihood of that scenario actually occurring is remote; therefore, making strategic management decisions on the results could yield a detrimental outcome.

The single most important factor in an interest rate risk model is the assumption development and support process. If the assumptions are flawed, results will be over/understated or potentially opposite, which can result in significant income exposure. With recent build-ups in retail deposit balances, the impact that the assumptions for the deposit base (pricing sensitivity and potential migration) have on results has never been greater--and institutions have never been more in the regulatory cross-hairs than they are today. In anticipation of the next rate cycle, bankers will need to be acutely aware of the behavioral expectation of the deposit base – and the best resources to determine these expectations are deposit studies and stress testing.

In the past, **deposit studies** have been viewed in a more negative light as a regulatory requirement that provides little or no value to the end user. When these studies are performed utilizing sufficient quality data inputs and appropriate qualitative and quantitative analyses, the output can provide useful (even strategic) information to ALCO, including:

- the ability to substantiate key model assumptions used for risk modeling, planning and stress testing
- a more structured deposit pricing discipline

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- targeted marketing campaigns aimed at deposit customer retention and profitability
- a well-informed "early-warning system" that can alert management of undesirable customer trends
- an ability to assess liability-side hedging strategies
- information that can influence asset pricing and product strategy

When the results of the deposit study, along with the other primary assumptions (i.e. cashflow reinvestment, prepayments, etc.) are incorporated into the IRR model, a reasonable projection of net interest income can be derived. However, this projection is only one perspective, and in order for ALCO to gain a more complete comprehension of potential exposure to earnings, institutions must incorporate regular **stress testing** and **scenario testing** as part of their ongoing ALM process.

Performing various analyses on the model assumptions affords ALCO with an understanding of the impact key assumptions have on model outputs and what the potential range of exposure could be to earnings under various "stressful" circumstances. As results of ALM models are not absolute, this information is critical for ALCOs to possess while determining the strategic direction the institution will take.

Reporting:

The output generated from an effectively managed IRR model is only valuable to ALCOs if the information is disseminated in such a way as to be easily understood by the end user. The ALCO reporting package is the way that data is converted into information - whether that information is ultimately used for decision making (ALCO), education (board) or compliance (examiners). Financial institutions often find it a challenge to construct a reporting package that accomplishes all of these goals without either including so much information that the reports become overwhelming and unclear or taking a more minimalistic approach that inhibits decision making (or at least the *correct* decisions from being made).

So that begs the question: what should be included that allows ALCO to make the right decisions at the right time, informs the board on the high level position and issues and provides sufficient information to satisfy examiners that the process meets the standards defined in recent guidance?

Regulatory Compliance – As everyone is aware, there has been no shortage of regulations/guidelines issued in the past few years focused on interest rate risk management. The FDIC FIL issued in October 2013 is just the latest reminder to bankers that IRR management remains front and center on the minds of regulators. Running minimal analyses over a short horizon does not provide sufficient perspective on the ***overall true risk profile*** of any financial institution, but in order to comply with the guidance, models must be sufficiently flexible to simulate the numerous variables (pricing sensitivity, optionality,

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changes to yield curves, etc.) that are necessary to capture the true risk profile of the institution, yet this often requires modeling upwards of 20+ scenarios to both satisfy the requirements while also providing "useful" information to ALCOs. Regulators have historically viewed the EVE/NEV (economic valuations) as the analysis to focus on when managing risk on the balance sheet. While there is some useful information to derive from these calculations (long-term structural mismatches, variability of cashflows) there are *major* shortcomings in the analysis that can result in decisions made by ALCO that are detrimental to future earnings, simply to "bring the EVE/NEV ratio into compliance." These calculations do not take into account reinvestment of cashflow and many of the key assumptions within the IRR model that are critical to accurate analysis. The results are ***highly dependent*** upon the non-maturity deposit assumptions – the longer the life, the more value the deposit base holds, yet regulators routinely view these NMDs as shorter-term products that hold little or no value to the institution. While the regulations result in a multitude of scenarios and analyses to be performed, it is incumbent upon the institution to determine what is the truly valuable information versus that which is done to comply with regulator requirements.

ALCO Decision Making – When sifting through the abundance of information that the model provides, it is critical to provide to ALCO the key information that it needs to understand:

1) Near-term and long-term exposure to changes in interest rates – this is best accomplished by the use of the aforementioned IRR simulations, and in order to be most effective, these simulations should be run over a longer (i.e. 5-year) horizon. There should be a continuity of scenarios performed to identify changes to exposure and measure policy compliance. The 5- year horizon allows ALCOs to manage to the near-term exposures to NII while not being "blind" to the longer-term profile, which may be quite different than near-term.

2) Potential impact of alternative assumptions/stressful events – while the assumptions that are the foundation of the IRR model are critical to determining the exposure to changing rates, ALCOs must also have an understanding of the potential exposure to alternative assumptions, both to different assumptions as well as ***stressful*** events that have a range of magnitudes. By running these alternatives, ALCOs can gain a better understanding of which assumptions drive results and require the most focus, and what potential events cause the most impact to earnings, and prepare a game plan to address these before they reach a dire level.

3) Liquidity needs and contingency planning – the overall ALM process encompasses more than just IRR measurement. In order to make decisions regarding how to manage risk and increase earnings,

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ALCOs must know what exposure they are managing, but also how much liquidity they currently have, and how much they will ultimately need, to most effectively position the balance sheet in anticipation of the next rate cycle. There are many ways institutions measure their liquidity levels, but the most effective measurement we have found is utilizing a basis surplus approach to accurately gauge how much cash the institution can raise quickly (i.e. within 30 days) at a minimal cost with no principal loss (i.e. not selling assets). This analysis needs to be projected out for a 1-2 year horizon and it is imperative to stress these liquidity levels (stressing is not just for IRR assumptions). While most institutions find themselves awash in liquidity in the current environment, those funds can quickly dissipate when rates begin to rise, and ALCO needs to understand the potential exposure before liquidity becomes too costly or ceases to be available.

Presenting this information clearly to ALCO will provide a clear picture as to the potential exposure to changes in rates as well as the liquidity available to fund future balance sheet activities. This is the key information to drive discussions focused on managing the risk on the balance sheet while maximizing the earnings potential, without unknowingly sacrificing opportunities in the future. It is important to run potential strategies through the IRR and liquidity models to quantify the results, understand the expected benefits as well as the potential risks involved (every transaction is going to have both a risk and reward aspect that must be understood before execution). A flexible IRR model incorporated with a thorough liquidity measurement and management process provides ALCO with the information needed to most effectively manage the balance sheet and adhere to the policy and vision set forth by the board.

Board oversight – the board is ultimately responsible for setting the policy/vision for the institution, and it is ALCO's job to manage the balance sheet to meet these goals. Boards should have a high level understanding of inherent risk/exposure, the financial performance of the institution and the compliance with the policies it has set forth. The policies put in place should guide the institution toward financial success, and not limit its ability to effectively manage the balance sheet – this is most commonly seen when the policies put in place are too many in number or too constrictive in levels.

Strategic Decision Making:

The IRR model, liquidity management and appropriate ALCO reporting package are the means to the ultimate end result – making the right strategic decisions for the institution at the right time to manage risk and improve earnings. When all stakeholders are on the same page as to risk profile, potential exposure to alternative rate scenarios and assumptions, liquidity levels and needs and expectations both from a performance (board) and compliance (regulatory) perspective, ALCO will be able to utilize the information at hand to discuss the direction the institution will navigate and how to best reach the goals.

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When all analyses are properly integrated at ALCO, it becomes more than just risk management – it evolves into Asset/Liability Management (ALM), a more integrated balance sheet management philosophy that is essential in today's difficult business climate and in anticipation of the next rate cycle.

Institutions of all sizes, charters and regulatory oversight MUST have an understanding of their true balance sheet risk profile. If the analyses are flawed or limited, the foundation upon which these decisions are made is weakened and the ongoing success of the institution is in jeopardy. Incorrect assumptions, poor data, limited modeling or utilizing the wrong tools (i.e. EVE rather than IRR) has the potential for causing ALCOs to think they have one exposure (exposed to rising rates) when in fact, rising rates will be the most beneficial scenario for most financial institutions.

Now is the time to ensure you have the right process (and tools) in place to understand how your balance sheet will respond during the next rate cycle, so make sure everyone is on the same page before it is too late.

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Mark is Managing Director at Darling Consulting Group (DCG). He works directly with financial institutions throughout the country helping them improve their ALM process, meet regulatory requirements and understand the key components to asset/liability management. In addition, Mark works directly with clients to aide in their ALM outsourcing and ALCO process development and conducts education for client ALCO committees, boards and senior management.

DCG provides balance sheet management solutions for banks and credit unions across the United States. Our 80+ person professional team offers a unique and comprehensive approach to balance sheet management that incorporates specialized tools, educational programs, and unbiased advice for institutions between $20 million and $200 billion in assets. Working in partnership with senior management and boards of directors, we produce significant, quantifiable results for hundreds of financial institutions throughout the country.

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