

## Retooling your ALCO

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***Retool:* To adapt or alter to make more useful or suitable**

This definition sounds fitting when you examine the financial services landscape in the wake of the Great Recession. Gone are the old business strategies of fast growth in lending and assets funded by non-core sources such as brokered CDs or other wholesale funds. Lending criteria have tightened, and overall caution is being exercised as the economy tries to return to a more positive state. A move to higher capital levels is evident in examination reports and business practice. Capital is proving to be king. During this turmoil, those institutions that had higher levels of capital were less affected as there was less credit risk from higher growth rates and more of a cushion to survive the bumps that took place. Those that stretched out capital positions by faster growth strategies were forced to change business plans, or simply didn't survive. It's easy to see that the survivors had more capital; so all institutions should raise capital levels. But banking is still about putting this capital to work. It is a leverage business and as such, we as financial managers understand that Milton Friedman was right when he said: "There's no such thing as a free lunch." Financial institutions manage risk--without risk there is little room to grow earnings. So as we sit here in 2011, on the leading edge of what will eventually be an economic recovery, the question we must ask is: how can the lessons learned from this recession be used to avoid or mitigate similar problems in the future? Could many of the problems in the "banking sector" have been prevented? If we should see another round of problems, how much "cushion" in our capital account do we need to absorb the shock? From above, the goal is to take past lessons learned, and examine them to help avoid making the same mistakes in the future. In the banking world, we see many areas of change coming in the Asset/Liability process.

Life moves in cycles. When we review the changes in business climate, economic activity, interest rates, etc., we see evidence that supports the fact that change is inevitable. What goes up must come down and what came down will likely rise again. The natural reaction to any negative event is to review how the event happened and try to institute new ways to prevent it from happening in the future.

It's funny to watch how we pick through the institutions that failed in 2007-2009 to look for the "common thread" and find that thread to be the cause of their demise.

This isn't new. In the 1980s when the S&L's failed, as the post-mortem took place pundits determined that the major cause of the failures was interest rate risk related. Institutions had too much in long-term asset positions with rates that didn't move, and funding costs were moving faster than returns. Capital was depleted as earnings dropped. The response to this was a new set of interest rate risk regulations and the formation of current practices for measuring and managing risk. And while interest rate risk was a problem and did cause some failures, it is impossible to believe that this risk accounted for ALL the failures. If it were true that interest rate risk was the cause of the demise, then how did some institutions survive? The one-size fits all approach is convenient, but rarely does it produce the desired results. As we look back at the recent crisis, liquidity risk and credit problems have been tabbed as the problems. Brokered deposits and fast growth, lax underwriting standards, high levels of concentration in one specific area/loan, and low levels of investment liquidity are all common themes in examination findings in troubled or failed institutions.

The regulatory and governmental response has been as expected. New rules and regulations and guidance on liquidity and interest rate risk have been issued. Regulators approach each institution with a new idea on what future "problem institutions" might look like, resulting in more stringent and combative examinations.

In a 2009 speech at the American Bankers Association annual meeting, FDIC Chair Sheila Bair indicated that over 90% of the bank failures were directly related to liquidity risk issues. Many of the liquidity failures stemmed from a lack of capital after credit losses were incurred. The drop in capital levels degraded the bank in the eyes of creditors, and regulators restricted access to external funding sources previously thought to be "available." When cut off from formerly available sources, the banks were in no position to solve the problem.

Now we hear the cry for more "asset based" or "on balance sheet" liquidity loud and clear. But with liquid asset yields below the low levels of funding costs, the institution's earnings are being reduced. It seems that no matter which way we turn, solving one issue in our CAMELS rating causes issues in another area. Is it possible that we can be considered GREAT in all measures? It is our belief that financial institutions are facing a critical moment in time where the past actions for managing risks must evolve into real decision making tools that consider all risks, not individual risks; and that involves major revelations in the ALCO process.

We are beginning to have perspective on the causes of the "Great Recession," though much debate will continue on the actual "cause." What is important to financial managers is how expectations have changed to help prevent future failures. Over the last 18 months, we have seen regulatory agencies issue new rules and guidance on issues such as liquidity, capital, interest rate risk, underwriting expectations, allowance for loan loss methodologies and more. As we consider the statement on risk versus return by great economist Milton

Friedman, it is also good to point out a second famous quote attributed to him: ***“Governments never learn. Only people learn.”***

This paper aims to outline issues required to retool the ALCO process to move into the new regulatory environment with a confidence in the measurements and a demonstrated use of the findings. Remember, this is not a new development; it is a part of the evolutionary process we have been in for a while. It has taken two decades to make it this far, so don't expect this to change overnight. But, it will change.

### ***Basic issues in ALCO risk measurement today***

In order to retool our ALCO process, we must consider the major areas and issues involved in the current actions and determine the targeted outcomes, in order to build a plan. To better manage this discussion this paper breaks down the issues into four areas for discussion, which are:

- I. Model and Vendor Selection Issues
- II. Data Validation, Assumption Sources, & Documentation
- III. Internal Policies and Goals
- IV. Demonstrate able knowledge and use of the tools

Let's begin with the retooling of model and vendor selection issues.

### ***Model and vendor selection***

As a provider of models and service bureau services to the industry, we have seen firsthand how many institutions select ALM vendors. Model familiarity, “ease of use.” cost, and outsource ability are many of the determining factors in selecting a vendor. But what is unknown is how the models are actually being used in decision making.

In conversations with various regulators, a common concern is heard. The review of ALCO minutes and management discussion shows that most ALCO models are used primarily to measure a risk position. I can hear the calls now: “Isn't that the point of ALCO to assess the risks we have?” Of course, understanding risk is step one of the ALCO process. Every vendor and model can assist in that regard. But what risk or risks is or are being measured? Are we using a tool for measuring one risk by itself, and then heading off to another tool to measure a different risk? Are the results from one risk measurement incorporated into the results from other measurements? And what happens when we find we have risk? How do we use these tools to determine the best course of action? What if there is little risk, but the institution is looking to increase performance or move into new lines of business? Are these questions considered in the risk measurement process to determine if more or less risk impacts return?

In reviewing the 2010 FFIEC Interest Rate Risk Guidance, regulators indicate that management and boards must be able to discuss the model methodology, assumptions, and outputs, regardless of who is running the models. So, for

those that outsource the ALM modeling process due to cost, personnel or other constraints, the responsibility still exists to understand what is happening in the model. Selection of vendors and models must now consider how that firm can help to educate, support and defend the model output and process. The need to engage vendors in the education process and align that vendor resource with the goals and plans of the institution is vital.

### ***Data validation, assumption sources and documentation***

For over 10 years, regulators have been pressing on all models used within institutions to be “validated.” Many different views on validation have evolved over the years, so much so that just this year new model validation guidance was re-released to clarify expectations and approach for institutions to consider.

The basic premise of the regulatory view on validation is a recognition that models depend completely on inputs. When I took my first computer programming class in High School in 1982, we were programming on old punch cards. Each program had to have a card for each command that had to be lined up in proper sequence in order to get the program to run. Today’s programs are much the same, though more intelligent in some ways, which leads to potential errors. Remember this acronym – G.I.G.O...Garbage In, Garbage Out.

Let’s look at how typical asset/liability models work, and consider the common faults that need to be managed to better prepare the models decision making tools.

First, take the raw data from processor files. Models must have raw inputs. Model data requirements vary in nearly direct proportion to model costs. Less expensive models can typically run on more “standardized” data such as call report data. More common to higher cost in-house models are individual loan and deposit extract files from core systems. This underlying data is the lifeblood of any asset/liability model.

### **Typical problems in data sources**

Many institutions feel safe with model data because the model is “integrated” with core systems or uses data from core extract files. This feeling of safety is based on the assumption that the data from the core is correct. Let’s look at three common situations ALM models encounter when dealing with core system data.

We are all aware of the pain from the recent financial crisis. During the past three years, loan quality issues have risen to levels not seen in decades. When ALM models look to core file information for modeling, common fields used include payment amount, maturity date, payment date, interest rate, repricing information, etc. As loan problems grew, many customers fell behind on loans, causing workout plans to be established. These plans might have involved a change in payment whereby the loan is in negative amortization. The payment is not covering the required interest payment. Other loans may have been carried along as slow pay loans where the client might be several payments behind, but are still actively paying on the account. All these real world situations in normal

times amount to small variances in overall projections. But when they are all added together, projections for payments and interest can amount to large swings. Take, for example, a business line of credit that has an outstanding balance of \$500,000. The note was up for renewal in January, and it is now May. The client cannot repay, the loan has been classified by the bank as a “special asset,” and plans are being made to work this loan out. In the meantime, what is the maturity date on the loan on the core system? If it is still January, then the date has passed and the ALM model is unsure how to project the \$500,000 balance. Most ALM models will assume that the entire balance is set to re-price/mature in June when May data is loaded into the model from the core file. This loan can’t be ignored, and no new terms exist yet for handling this past due problem. When the model calculates income at risk on this account, the assumed rate on the renewal or replacement will change on the entire outstanding balance by the change in market rates. That is, the institution is showing as having a more “asset sensitive” position than will actually occur. But the problem moves beyond interest rate risk to liquidity risk management and planning.

As part of the April 2010 FFIEC Liquidity Risk Guidance, new expectations were set for institutional liquidity measurement. Now, institutions should consider a “sources and uses” approach to liquidity needs. The most likely source for obtaining such data is in the ALM model, which is predicated on these sources and uses for interest rate risk measurement. So, the treatment of loan projections has become much more visible when examined in the liquidity risk framework. Most interest rate risk reporting focuses on the outcome, not the way the outcome is created. So, in addition to normal payments on performing loans, the ALM model or core application will provide a summary of maturing and repaying loan amounts that can be used as sources of liquidity in the required sources and uses approach to liquidity risk management. If models show past due loans as a source of funding, that is misstating the liquidity availability as well as the overall interest rate sensitivity of the institution. The larger the credit risk problems, the more there will be an impact on liquidity and interest rate risk reporting.

Another prime example is the data availability for accounts with balloon features. In order for an ALM model to effectively project cash flows on these types of accounts, the model must be able to assess both the date that the account will be reviewed/balloon and the date for full amortization. However, most loan systems store a single date, called “maturity date,” which, on a loan that does not balloon, represents the date for full amortization. In the case of a balloon loan, the same field changes its meaning to the date of the balloon. In order to get the full amortization date, models must either calculate this from the P&I payment, origination date, interest rate and payment frequency, or the client must request special fields in extract files containing this information. Once that data is available, the ALM model must be configured to know whether the “maturity date” is really an amortization date or a balloon date and properly project cash flows. It is not uncommon to still find situations where institutions are modeling a balloon loan to fully amortize over the 3-5 year balloon period. The result: overstated

cash flows causing higher levels of asset sensitivity than are realistic, and liquidity levels that are overstated as well.

While we have picked on the loan side thus far in the examples, be aware the same types of issues apply to investment security projections. In fact, with the increased regulatory pressure to increase asset based liquidity (securities), and many of these securities containing options that change with rates such as calls or puts, expect more pressure to validate the sources of investment projections and options. As this need grows, institutions may need to plan for increased expenses in their internal ALM modeling budget.

In all of this we must remember that core systems and ALM models are maintained by humans and humans make mistakes. It is still amazing how core systems allow certain mistakes to happen. For example, how is it that a loan type defined as a variable rate account can be set up on the loan system without a repricing index and margin having to be set? Or, how can fixed rate products be set to having a repricing date and index? Likewise, many assumptions in ALM models fail to reflect the real happenings at an institution, yet these assumptions are used for “passing the test” on risk. It’s time to decide your philosophy on this management practice. Are you in it for decision making or to say that it has been done?

### **Other data propagation issues**

Many institutions rely on outsourced service providers to produce ALM reports for risk management. These models are subject to the very same issues mentioned above, and can carry some other data risks as well. Take for example the only regulatory risk management model used to measure and assess risk, the OTS NPV model.

The OTS model relied on the submission of aggregated data for maturity and repricing. This aggregation was built around a set chart of accounts with very generic assumptions about how those accounts would act. When originally introduced for the Savings & Loan industry, the model fit very well off the rack. Most thrift balance sheets were comprised primarily of 1-4 family residential loans. The details for completing the data submission were more complicated and better captured differences. Little data input existed for items such as consumer loans or multi-family products. However, the industry grew in its involvement with multi-family loans over the years, while the data collection system and model failed to change and recognize the differences. In one recent case we examined a set of OTS results where the institution had a large portion of variable rate multi-family loans on 6% floors. Under the OTS data collection system, these loans had no floor or real repricing information attached. The model made assumptions that there are NO floors and that all loans reprice at the same time and the same amount. Now, if this were a small part of the balance sheet, this might be acceptable. But in this case, the difference between modeling the OTS assumptions and the real individual contract assumptions amounted to the following comparison of Net Portfolio Value:

Rate Shock	OTS NPV Ratio	Farin NPV Ratio
0 bp	12.15%	11.50%
+100 bp	11.86%	9.58%
+200 bp	11.06%	6.87%
+300 bp	9.99%	1.15%

Under the OTS model and data collection system, this bank had been operating under an assumption that there is little to no risk in the balance sheet. Moving from 12.15% to 11.06% ranks them under the TB-13a ranking system as a minimal risk. This was because the model assumptions on repricing were wrong on roughly 1/3 of the assets on the balance sheet, and the data collection system made assumptions that all the loans were “homogenous.” When regulators refer to model risk, this example should come to mind. When properly modeled, this institution is not without risk. In fact, it is showing a significant risk position with NPV ratios dropping from 11.50% to 6.87%.

Not only did this place them in the High Risk category under the OTS regulatory rating; the internal board limit for post shock NPV was 6% for all rate shocks, which, at the 200 bp shock, is teetering, and, at the 300 bp shock, is being violated severely. This demonstrates the power of relevant, accurate data and assumptions on outputs.

These examples should help you find areas to assess in your ALM modeling. Start with the large balance sheet items and those with significant options that impact cash flow and re-pricing. Those using an outsourced firm must demand reporting that details the specifics of cash flows used in the projections and square these projections with reality to ensure that the model results are providing reasonable estimates. Step one in your retooling process is the development of a regular and rigorous process review of the projected cash flows and how contract options are set to ensure that correct projections are being used in measuring risk levels. Remember, G.I.G.O.

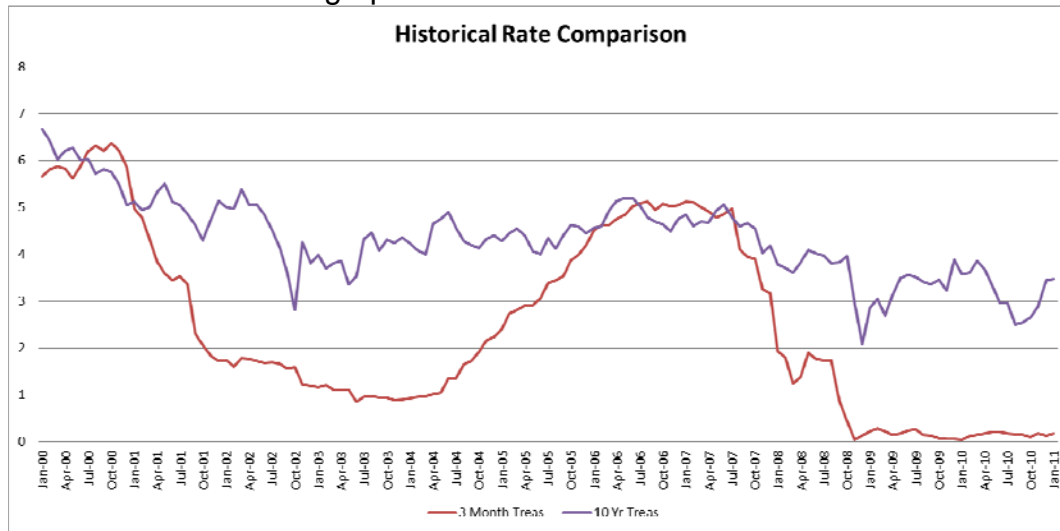
*Action Steps:*

- Review the data sources and critical components on major line items for complete and accurate modeling.
- Determine how your balloon loans are treated inside your ALM model.
- Review your investment portfolio to determine if the need exists for more specific cash flow modeling on complex securities.
- Determine how your core system presents past due or non-accrual loans, and what is done in the modeling of interest rate and liquidity risks with these accounts.

**Interest rate projections and modeling**

In the 2010 FFIEC Guidance on Interest Rate Risk management, the regulators clearly opened their doors and indicated that the traditional use of immediate changes in interest rates on all terms is not likely. The terminology now used when deciding how hard to move rates is “severe and plausible.” In the past, the

use of immediate and parallel shocks were a simple way for the examiners and management to avoid the issue of what rate forecast is likely or realistic. Arguments on these assumptions take too long to resolve, so the standard practice was simply using shocks to get a sense of the magnitude of risk. Over the past two interest rate cycles however, it has become clear that the use of shocks to measure earnings projections for items such as budgets or liquidity levels requires more realistic movements for accurate results. Take a look at the movement in rates in the graph below.



In the late 1990's we saw high interest rates on short term treasuries. Since 2000, the short term interest rates have exhibited much greater volatility than the longer term rates. During the period from 2004-2006, short term treasury rates moved up by 4% while long rates have moved minimally. In the 2010 revision to the Interest Rate Risk Guidance, FFIEC indicated that institutions must be prepared to assess earnings at risk under severe and plausible movements in rates. Parenthetically, they indicated a desire for a 400 basis point movement. Below is a snapshot of page #5 of the FFIEC Guidance.

When conducting scenario analyses, institutions should assess a range of alternative future interest rate scenarios in evaluating IRR exposure. This range should be sufficiently meaningful to fully identify basis risk, yield curve risk and the risks of embedded options. In many cases, static interest rate shocks consisting of parallel shifts in the yield curve of plus and minus 200 basis points may not be sufficient to adequately assess an institution's IRR exposure. As a result, institutions should regularly assess IRR exposures beyond typical industry conventions, including changes in rates of greater magnitude (e.g., up and down 300 and 400 basis points) across different tenors to reflect changing slopes and twists of the yield curve. Institutions should ensure their scenarios are severe but plausible in light of the existing level of rates and the interest rate cycle. For example, in low-rate environments, scenarios involving significant declines in market rates can be deemphasized in favor of increasing the number and size of alternative rising-rate scenarios.

*Excerpt from Pg. 5 of the 2010 FFIEC Interest Rate Risk Guidance*

Note that the request for a 400 basis point shock is embedded in a sentence where they indicate a desire for changing slopes and twists of the yield curve. The request made by the examiners is for more realistic changes in rates, not a higher level of unrealistic rate forecasts. Realistically, the 4% move the regulators are concerned about is one that looks like the 2004-2006 movement on short term rates while long term rates remained flat.

So, when assessing your institution's real earnings at risk, are you considering the likely movements such as those seen in recent history?

For many institutions, the shape or their risk position will change dramatically when funding costs move faster than asset yields.

Let's be clear though, it is still true that the institution is NOT in the business of forecasting interest rates. Too many external sources for reasonable interest rate movements are available for use in testing the outputs. Having a good source of external rate forecasts is a critical component to effective ALCO management. These projections should correlate to the economic conditions and offer up a set of indications that will trigger changes in the forecasts.

***Action steps:***

- Build in reporting that considers non-parallel movements in interest rates to test real earnings impacted by realistic rate movements.
- Ensure compliance with FFIEC Interest Rate Risk Guidance by measuring at least two years of earnings at risk results.

**Major non-core assumptions in ALM modeling**

For years, ALM modeling firms have relied heavily on the only regulatory source for two critical assumptions made in modeling interest rate risk; prepayment speed projections by rate environment and non-maturity valuation assumptions. This data was regularly published by the Office of Thrift Supervision each quarter after collecting the data from call reports and assessing risk.

With the industry losing the primary model used as a benchmark for risk levels and a primary source of key assumptions for risk management, institutions are going to be forced to "Stand and Defend" their model assumptions and understand the implications of being wrong. In statistical terms, if your confidence level is off, what is the impact on your risk position? All the guidance papers impacting the Asset/Liability process in the past two years include specific discussions on the use of "stress testing." Now the traditional stress test we are familiar with are tests of changes in interest rates on earnings or value at risk for interest rate risk measurements. But increasingly, regulators are asking institutions to stress test critical assumptions such as non-maturity durations and rerun the analysis to see the impact. For example, if you had to reduce the duration assumptions on non-maturity deposits by 20%, what would your interest rate risk position look like? Is that a reasonable test for regulators to request? Our belief is that institutions that are using core accounts to hedge longer term,

fixed-rate assets must be in a position to understand and defend critical assumptions such as core duration. If you simply are using the “industry data” like OTS and relying on that as an indicator of your behavior, you may be in trouble and should be asked to test. Many institutions have conducted internal studies on core account behavior. If you are able to adequately discuss the methodology used and understand the assumptions that impact that study, you are in better position to use your results in risk management. However, be prepared to run a stress test that looks at your results and assumes at least one standard deviation of error in the results to assess the importance of the core assumption on risk levels. The issue here is what happens if you are wrong by a significant factor, how much potential risk is there? This is a reasonable test to help show your board and regulator why it is so important to continue to conduct analysis critical areas of the business and consider the impact of future business strategies on the core deposit behaviors.

But let’s examine the use of institutional assumption on core funding over the past 2-3 years. During the financial crisis, many institutions have seen the funding from certificates of deposit decline as a percentage of total funding. These funds have migrated over to the “core accounts” such as savings, MMDA, and checking accounts. Many ALCO models are blind to the migration effect. In 2006 for instance, let’s say that the institution’s MMDA account balances represented 15% of total deposits, and CD’s represented 45%. At that time, the duration assumption on the 15% balance was a three year average life assumption. Currently the liquidity preference of customers and lack of rate differentials has increased the MMDA’s to 25% while CDs balances declined to 20% of total deposits. Over the last 3 years total deposits have been flat in the institution. So, given that the mix has changed, what assumption is applied to your MMDA account for duration? It is not unreasonable to assume that many financial institutions are simply applying the same duration assumption of 3 years to the 25% of total deposits, effectively extending durations on deposits at the bottom of a rate cycle when it is a safe assumption that balances will migrate out when rates rise. This is an example of the black box effect of Asset/Liability modeling.

Other regulatory agencies have stayed away from assessing risk levels with their own models and publishing results. Certainly each regulator has a set of internal “scorecards” or litmus tests to find potential threats. If that screening process picks your institution as a higher risk, expect the examination to look for evidence of key model inputs being tested and tuned to your specific situation, and stress tests around the results should you be wrong.

*Action Steps:*

- Review your model setup for core deposit treatment and be able to defend the source of assumptions.
- Compare how assumptions have changed or how you are dealing with mix changes in your institution to ensure proper reporting of duration/value.

## Internal policies and goals

On the subject of policies and goals, it is important to return to the concept of “capital as king.” It will be quite some time before the game of lower capital ratios and fast growth is viewed by regulators as an acceptable practice. For now, the stakes are raised on required capital and this concept of testing capital levels for different risks will continue to evolve. It is reasonable to expect that in the near future the goals for risks like income at risk and liquidity risk will be linked to overall business strategy and capital levels. Thus, individual risk limits are less important but take on a greater meaning when viewed for their impact on other risk areas. Development of a complete ALCO scorecard that assesses the different risks and associated return within the business plan is seen as the next phase of reporting and analysis. It is unreasonable to expect that each risk area under the ALCO guidance will come in at a minimal risk level. Remember Milton Friedman’s quote about free lunch? Institution management and the board must actively set targets on desirable risk levels in consideration of the capital levels and business opportunities. As the recovery begins to pick up steam, perhaps your institution may be willing to take on more interest rate risk than liquidity or credit risks in order to make the necessary earnings for capital needs. Capital planning is the heart of planning and risk management as we move into 2012 and beyond.

With that said, there are several items that need addressing within the basic policy framework now. From how actual limits are set, to the issues of control and governance, down to specific actions required for non-compliance. All of these areas are mentioned within the recent guidance papers on interest rate and liquidity risks as important factors. For our discussion, we want to focus first on the role that limits play in most policy statements. Generally, institutions set limits by “drawing a line in the sand”. Behind the line is fine, but over the line is bad. This focus sets up limits that are absolute, creating a pass/fail grade instead of a A-F system. For instance, when measuring earnings at risk, the policy might state that net interest income levels should not vary by more than 10% in a rising interest rate projection. While that level may be fine, what is missing is the concept of degrees. If your institution was showing a 9.75% decline would you act differently than if the level shows a 3.5% decline? Certainly! What we need to see in policy limits throughout the ALCO process is the introduction of limits that call ALCO to greater levels of action as the institution approaches the limit.

Establishing a set of policy limits in relationship to other risks allows institutions to craft their strategy and priorities in the capital planning process and monitor risk/return performance.

Original Policy Limits				
CAMEL Component	Ratio	Green Limit	Yellow Limit	Red Limit
Capital Risk	Core capital Ratio	9.00%	8.00%	<8.00%
	Tier 1 Leverage	9.00%	8.00%	<8.00%
	Risk Based Capital	13.50%	12.00%	<12.00%
Earnings	ROA	1.00%	0.40%	<0.40%
Interest Rate Risk	Income at Risk	-15.00%	-30.00%	>-30.00%
	Current EVE Sensitivity	-200bp	-400bp	>-400bp
	Forecast EVE Sensitivity	-200bp	-400bp	>-400bp
Liquidity Risk	Liquidity Gap Ratio - Base	15.00%	5.00%	<5.00%
	Liquidity Coverage Ratio	105.00%	100.00%	<100.00%
	Non-Core Funding/Assets	30.00%	40.00%	>40.00%
Credit Risk	Net Loss / Avg Loans	0.50%	1.00%	>1.00%
	Non-Accr / Loans	1.00%	2.25%	>2.25%

By establishing limits on the various risks and setting interim steps for concern and action, ALCO is in a much more informed position to monitor changes in risk levels and increase actions as positions begin to move.

With proper limit controls in place, the focus moves to monitoring systems. In order to better manage the complicated and inter-related risks, we feel that new reporting styles need to evolve that take the gradient limits into consideration and orders the various risks in rank order of the capital plan objectives. Once laid out in that order, then management can create a quick view of the risk positions in relationship to each other and assess how new ideas or plans will impact the risk levels and returns. As an example, the following layout is Farin's approach to reporting interrelated risk positions and returns.

Risk/Return Risk/Risk Decision Matrix 1 YR Forecast					
CAMEL Component	Ratio	Base Plan	Stress Test	Modified Plan	Stress Test
Capital Risk	Core capital Ratio	9.25%	7.77%	10.15%	8.45%
	Tier 1 Leverage	9.25%	7.77%	10.15%	8.45%
	Risk Based Capital	13.45%	11.75%	14.15%	12.37%
Earnings	ROA	1.15%	-0.75%	0.85%	0.45%
Interest Rate Risk	Income at Risk	-15.55%	-22.50%	-10.55%	-19.50%
	Current EVE	325bp	375bp	155bp	185bp
	Forecast EVE	340bp	365bp	210bp	275bp
Liquidity Risk	Liquidity Gap Ratio - Base	12.25%	-5.55%	16.65%	3.55%
	Liquidity Coverage Ratio	102.33%	94.45%	107.35%	104.35%
	Non-Core Funding/Assets	25.75%	33.45%	19.55%	27.25%
Credit Risk	Net Loss / Avg Loans	0.45%	1.35%	0.35%	0.80%
	Non-Accr / Loans	1.30%	2.75%	0.95%	2.00%

In the example above we see the institution is doing well in the base case plan with all indicators in the Green or Yellow limit levels. However, as we apply the stress tests (liquidity, credit, or others combined) we see that capital drops to unacceptable levels and liquidity and credit concerns appear to be the major cause. ALCO, seeing these results, prepares alternatives that increase capital levels from base plan at the expense of earnings (ROA declines to 0.85% from 1.15%). Other benefits of the strategy are lower levels of interest rate risk. Remember Friedman here again, as the lower risk levels lead to lower returns. But when stress tests are applied, the institution is not failing any component.

It is clear with the various regulatory actions that this approach to managing concurrent risks is not just a theory being explored. The National Credit Union Administration (NCUA) issued guidance on the management of "Concentration Risk." The Office of Thrift Supervision (OTS) issued a letter recently to all CEO's indicating a need for a capital planning approach that readdressed the impact of stress tests on capital levels. The recent "stress tests" applied to large banks by regulators was the first step in their understanding of the inter-relationships of concentration levels, risk positions and capital needs for the entire financial services industry.

As you begin to set sights on the 2012 planning process, give thought to the need to more specifically define acceptable risks, prioritize financial targets and review all the risk limits to see how they fit with one another, as soon they will likely be modeled together rather than in silos.

*Action Steps:*

- Set ranges of risk levels for all ALCO risks with corresponding ALCO actions when out of range.
- Develop a holistic look at all risk areas, ranking acceptable risks according to business plan.

***Demonstrate able knowledge and use of the tools***

Have you heard the old saying, "you can't kid a kidder?" Well, when it comes to ALCO reporting and actions there must be a way to have the two meet. One of the easiest ways for ALCO teams to ensure a better understanding of their actions on institution performance is to improve the minutes of the ALCO meetings.

For several years, I have used the analogy of High School English class readings. Remember that day back in high school when the English teacher assigned a reading of *The Grapes of Wrath* or other literary work? If you were like me and not a big reading fan, all you could see was a lot of pages in a language style that was not easy to follow. Some that loved to read took to these books without issue. That was the idea behind Cliff's Notes. Cliff's Notes represent a digest version of a book where each chapter, main characters, major plot lines and actions are summarized from chapter to chapter. The old saying in our school was that, with Cliff's Notes, you could probably get a C on a paper.

Take that example and apply it to the regulatory review of the ALCO process. Typically, prior to the exam a request is made to send the last 12 months of ALCO minutes. What does that set of notes convey to the reader? If it consists of only 12 total pages you are probably in for a tough exam. Assuming that these minutes are reviewed in advance, what story would be told by your minutes? Are there characters? What's the plot? How is the villain being pursued or the heroine being saved? If your ALCO is actually using numbers to plan future strategy and make decisions and review results, then make sure your documentation reflects that. Many clients have started to bring in a non-ALCO member as scribe to get good meeting notes.

Better note taking and minutes gets you a long way, but for many the ALCO isn't doing the analysis of business decisions on a regular basis. Here's where the effort of the entire group must ramp up. Back-testing is a concept that is a wonderful theory and can lead down many different roads. For us, back testing really asks ALCO the question on a regular basis: "How well are those inputs to the model that we can control being controlled?" If you are projecting to grow loans by \$3 million in a quarter and that requires \$7.5 million in originations, then the back-test should check both the net growth number for accuracy, as well as the level of activity required or done. When variances exist, a discussion on cause/effect should appear in the minutes. If the growth is aggressive or tame, then the plan should be updated and re-projected. Loan growth projections in the ALM models should be the same as those used by loan officers for their targets. If the loan department is using different numbers for projections than the ALM model, whose numbers are the examiners to believe?

A critical component to making the modeling and risk measurement tools most effective is the commitment to on-going education. Here again we see regulators indicating in the recently April 2011 FFIEC Model Validation Guidance that a strong part of on-going validation is the continual training for critical model users to ensure proper training and understanding of model capabilities. But beyond that we see regulators like NCUA issue new rules on the financial education of the board members as a pre-requisite to board involvement. As the regulators continue to press the responsibilities down to the institution, the institution must commit to staying abreast of changes and to gathering the necessary training and educational resources so all involved can better understand the ALM issues.

In the area of demonstrated use and control, ALCO's must take their past actions and projections seriously enough to want to test the outcome, and business units need to be held accountable for the productivity levels assumed. This helps to ensure that all areas of the institution are "bought in" to the ALM modeling process.

*Action Steps:*

- Ensure meeting minutes are reflective of the conversations being held, and that if read by an outsider there is enough substance to properly portray the efforts of the ALCO.

- Tie business units to the production levels in the ALM modeling forecasts.
- Build a back-test process that demonstrates good control over internal assumptions.

## **Conclusion**

Evolution occurs with the passing of time. Without evolution we would still be riding horses for transportation, plowing fields with mules, and wondering what it is like to walk on the moon. Asset/Liability Management for financial institutions is an evolutionary process. For years the ideal ALM process has been discussed, written about, and debated. After each business cycle we see new changes and regulations that move us along the path. There is no reason to believe that will stop. In fact, with the number of institutions declining and the pressure to perform increasing, the simple truth is those that adapt will survive. Your ALCO process is somewhere on a continuum of growth in process. It is said that those that are unwilling to change do not survive well when change is happening. For financial institutions, change is upon us in the form of regulatory expectations, public perception, economic challenges and personal responsibility. As we look at all the changes and opportunities, we know that being in a position to succeed requires planning, risk management, and, of course, a little bit of luck. Committing to changes in managing the ALCO process can and should represent a chance to improve financial results, not simply act as a regulatory requirement. In order to navigate the new requirements, we need the best tools and approaches available, and must align them with your institution's plans and goals in managing the risk versus reward opportunities.

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## **About the author:**

Dave Koch, Chief Operating Officer. Mr. Koch has delivered educational programs for national and state industry trade groups, in addition to several Federal Home Loan Banks and Corporate Credit Unions. He serves on the faculty of the Graduate School of Banking at the University of Wisconsin and has served as faculty of the CUNA Management School in Madison WI. In addition to the speaking roles, Mr. Koch consults with financial executives to help find creative solutions to their business challenges. Mr. Koch earned his B.S. degree in Economics at Eastern Illinois University, in Charleston, IL.

## About FARIN

FARIN is a financial-services consulting firm that for 25 Years has been providing asset/liability management solutions, retail product-pricing solutions, and Web products and services to banks, thrifts, and credit unions nationwide. **Our software solutions, consulting services, and educational programs** help financial managers find creative solutions to today's financial challenges. FARIN is best known for using its technology and education to help community financial institutions develop and implement retail strategies.

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