

Bank Asset/Liability Management

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Prepared by Mary Brookhart

Funding Your Balance Sheet – Between a Regulatory Rock and a Hard Place

Over the past two years, it has become increasingly apparent that federal regulatory agencies do not look favorably on the use of non-core funding to support assets on the balance sheet of financial institutions. This dislike of wholesale funding sources has become so pervasive that virtually any use has become a subject of regulatory criticism — regardless of the strength of the business case for their usage. This unbridled criticism is having a materially negative impact on financial institution profitability today, and has serious ramifications for both interest rate risk and liquidity management if (when?) interest rates rise in the future.

Why federal regulators continue to link the use of brokered CDs and borrowings to financial institution failures remains a mystery. Numerous studies have been conducted by independent third parties that show virtually no correlation between wholesale funding usage and bank failures, yet the perception persists. Bank failures can almost always be correlated with one problem — poor asset quality!

The ramification of the negative attitude toward the use of non-core funding can currently be seen in the reduced profitability of banks paying up on their deposit base to reduce their dependency on brokered CDs and borrowings. During most of 2010, the cost of wholesale funding alternatives was significantly lower than many market deposit costs. This also impacts the profitability of other financial institutions within the criticized bank's market place, in that they too must now pay higher rates for funding as a result of the artificial, regulatory-induced, competitive market place to protect their own customer bases.

The potential risks being created by the negative

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regulatory attitude toward the use of wholesale funding are even more frightening. In every recessionary environment, monies are parked in financial institutions while depositors await better opportunities for their utilization. This cyclical liquidity trap is well known to every experienced balance sheet manager — *money is always plentiful when there is no place to invest it!* Conversely, when the economy begins to recover and other investment opportunities offer higher returns, monies flow out of financial institutions and need to be replaced at significantly higher costs.

Over the past two years, it has become increasingly apparent that federal regulatory agencies do not look favorably on the use of non-core funding to support assets on the balance sheet of financial institutions.

In addition to the liquidity risk, the negative regulatory attitude toward the use of wholesale funding creates significantly more potential for exacerbating interest rate risk. In every low-rate environment, borrowers want to borrow on a long-term fixed-rate basis while depositors tend to park money in either shorter term CDs or non-maturity deposits. When rates begin to rise, these deposits tend to leave the bank, putting additional pressure on the institution's interest rate risk and liquidity positions. The only cost-effective source of longer term funding to protect against future liquidity risk and interest rate risk is in longer term brokered CDs or borrowings. Any astute asset/liability manager knows that the time to use longer term wholesale alternatives is now, not when rates are higher and term funding is more difficult to acquire.

So how can an institution convince the regulators that the use of wholesale funding makes good business sense and, in fact, could actually be reducing balance sheet risk? The answer is simple — by having the correct policies and limits in place and actively modeling the impact of wholesale funding strategies. Many banks cannot demonstrate to the regulators that they have tested the impact of using these funding sources before using them. Nor can they show the benefit to the institution or what level of liquidity and interest rate risk (if any) they are accepting. As important, all institutions should have policies in place that define how they will use these types of funding and set limits as to the amount they can use.

Today's asset/liability manager is between a regulatory rock and a hard place. Either take criticism today for the use of wholesale funds, or take criticism tomorrow for not effectively managing the institution's liquidity and interest rate risk. Unfortunately, federal examiners are in a no-lose position; they get to level criticism in either scenario, much like the person who steps onto the battlefield after the fight is over and gets to shoot the wounded.

— George K. Darling
Darling Consulting Group

Changes in Banking

Massive changes have taken place in banking in the last few years. Today, we are just beginning to see the scope and magnitude of regulatory changes. Although we have seen many examination changes, the more extensive and exhaustive implementation of changes of law and regulation are still in front of us. As A/L managers, we must adapt to whatever impacts those laws and regulations hand us, in addition to those new practices many of us weren't doing until recently or will be in the future. So many adaptations and new processes, methodologies, systems, requirements, needs, and considerations have already changed dramatically.

Let's look at some of those changes to date and try to understand the changes that A/L managers have had to deal with in such a relatively brief period of time. These are presented in no particular order of importance.

Sources and Uses. Historically, we gave this some passing interest — maybe projecting out a few months with contractual core data. Today, it is used in monthly projecting out a couple of years, embedded options included, understanding the changes between changes in asset vs. liability flows, and stressing scenarios for liquidity contingency funding plan measurement and management. If only riding a bicycle was this easy.

Liquidity Contingency Funding Plans. Those were reserved for troubled banks (weren't they?), and even then most didn't know how to create, develop, or manage one. How many of us had even heard of one? Today, in two short years, it has become indispensable. Just a small part of the fun of stress testing. It's like tweeting — everybody's doing it. Look how far we came so quickly. And we thought technology moved quickly.

Non-parallel shifts. Now this is something that we had at least heard of — something the other guy was doing. Not really certain what it was or why anyone would want to do it, but we at least acknowledged the term. Now, we do ramps, twists, curves, and shock the balance sheet and income statement at hitherto outrageous levels of shock and stress and think nothing of it. And if we can't do it in 2.3 nanoseconds while doing the backstroke, we get impatient and look for a faster model.

Earnings horizon projections. These were something the institution did in the budget and updated once a year. Maybe a larger bank you know did it twice a year, but that seemed a little like busy work. Today it is conducted monthly or quarterly by A/L managers, not the budget committee, and is modeled monthly or quarterly for horizons of 24 months or more.

Funding concentrations. Funding concentrations, especially of wholesale nature, were something we looked at if an examiner asked us to, but otherwise were not too concerned about it. Today we know it cold, and the available sources of funds (by provider and the amount) in event of liquidity problems. We present it to ALCO at every meeting and clearly understand that even those sources can and will disappear.

Stress testing. Again, stress testing, like other issues, was virtually unheard of three years ago. Today, A/L managers are expected to be involved in stressing virtually every area of their institution that falls under their purveyance. Shocks are out, stress is in — all of this often without the aid of proven software systems. Just do it.

This one can be challenging. Without available software or software within our budgets, what's an A/L manager to do, as this can be complex. Do we develop a stress test routine at instrument level, or attempt to apply some sort of global analysis? One gives pretty direct and accurate answers, while the other presents potential *Big Picture* results. Either way, it's a lot of work, but A/L managers seem to be creative and are clearing the alligators from the swamp.

Model validation — Huh? My board approves the results every time I provide that information to them. Oh — and so does ALCO. What more could I need?

Not so fast. This is the latest fad since the Hula Hoop, though this one may not fade as quickly, if at all. What was something once reserved only for the most aggressive of internal auditors has now become *de rigueur* for

all A/L managers. We conduct one at least every other year, if not every year depending upon our asset size. An entire cottage industry has sprung up to do this work. And the best news of all — it's not cheap.

Although we have seen many examination changes, the more extensive and exhaustive implementation of changes of law and regulation are still in front of us.

Off-balance sheet position modeling. OK, so this one isn't so new — yet. The large majority of institutions in this country are not active participants in the caps/floors/swaps (i.e., derivatives) market, but with the advent of Basel III and its upcoming implementation, it is likely that more institutions will become active in these markets over time. So ladies and gentlemen, start your engines, get them warmed up and ready for this race to begin in earnest.

Implied floors. These were something only A/L managers with extra time on their hands did in order to look busy. After all, didn't the lenders put floors in the contracts anyway? I'll just import them. Not many of us gave active or considered thought to floors. Floors were something for loans. Not today.

In the coming years though, floors may once again be the last thing on our agenda. Enter caps. With the likely rise in rates (and of course it's always at the speed of light), A/L managers will be pressed hard to consider all optionality that will likely come into play as rates rise and borrowers and depositors push back. We might be well advised to start modeling all of the early withdrawal penalties we might receive and the impact to earnings as we receive them, particularly as we try to understand whether the related deposits will stay at a higher rate, or seek an even higher rate elsewhere.

Decay rates. Having fun yet? Don't forget deposit decay rates. They changed dramatically over the past few years; now they are likely to change every bit as dramatically again as disintermediation again raises its ugly head. Since decay rates are generally cycle dependent, the good news is that we now have yet another significant rate cycle against which to measure. The greater the dependent data, the better the assumption.

This has certainly been the most challenging period of several generations. Certainly it has been the always famous *100-Year Event*. A/L managers of this era will go down in the history of banking as the *can-do* generation. It has been tough and challenging and has required a lot of street sense and creativity to develop new *everythings* and *work arounds* until the software coders can catch up and the regulators themselves begin to understand what they are asking for in this new world. They have relied upon you to tell them. And you have responded with sound new self-developed methodologies. Congratulations.

— Greg Doner, CEO
FIMAC Solutions LLC

Choosing the Right Interest Rate Risk Model Validation Provider

When it's time for the periodic model validation, the question is often whether the internal audit department is performing the function in-house or if it has to be outsourced. While model validation may be cheaper if done internally, it is often difficult to meet the criteria of both independence and expertise without looking outside of the institution.

When determining whether to have the validation performed by internal or external resources, consider the importance of the modeling process at the institution, the complexity of the products on the balance sheet, and management's use of the model's final output. The reviewer should be able to detect any flaws in the asset/liability management/interest rate risk policy or procedures, spot potential weaknesses, ensure that the data, assumptions, theory, calculations, and output are the most accurate possible, and recommend meaningful corrections or enhancements. The reviewer should also be independent of the modeling process and possess considerable expertise in the field of interest rate risk simulations.

There are many advantages for outsourcing the validations and audits. In addition to meeting the independence and expertise criteria, external consultants stay current by participating in industry forums, communicating with the regulators, and regularly exchanging ideas within peer groups. Consultants can provide a broader knowledge base, bring experience to the project gained from industry-wide participation, and make recommendations based on what they have seen work. They can also operate outside of the company politics, and

provide additional resources as needed for upgrades to the policies, processes or procedures. However, choosing the right consultant or firm to perform the validation is often a confusing and cumbersome task.

Vendor Management and Oversight. Each institution should have a formalized vendor management and oversight (VMO) policy that documents the process for the engagement of third parties, including the need identification, project description, vendor solicitation, request for proposal (RFP) content, contract award, desired deliverables, project completion, evaluation, and payment. The VMO policy often dovetails with other policies that are specific to the task; in this case, the model validation policy would provide the documented expectations for a comprehensive model validation. According to *OCC Bulletin 2000-16*, the five component parts of an effective model validation policy include:

1. Independent review
2. Defined responsibility
3. Model documentation
4. Ongoing review
5. Audit oversight

Ensure that each of these elements is addressed in the institution's policy, and the document can serve as a starting point for the project's expectations as defined in the RFP.

Decision Matrices. To facilitate an assessment of multiple responses to a model validation RFP, and ensure that there is an apples-to-apples comparison for the choice of a third-party provider, break the project into three decision matrices:

- Qualifications
- Engagement
- Deliverable

Decision matrices provide the opportunity to do a side-by-side comparison and quickly and efficiently review the various submissions in an objective and quantifiable format.

Qualifications Matrix. The qualifications matrix outlines the desired credentials for the consultants and firm under consideration for the specific project.

(a) *Independence.* The person performing the validation should not be responsible for any of the data, assumptions, calculations, or report preparation in conjunction with the model under review.

(b) *Expertise.* The reviewer should be familiar with the IRR/ALM modeling software, the institution's balance sheet and risk profile, accounting rules, regulatory expectations, industry best practices, forecasting and simulations, liquidity and capital requirements, and strategic planning.

Institutions may also require of the consultant examples of participation in industry events, speaking engagements, or recent publications.

(c) *References.* Those inquiring should ask for testimonials about the sales process, data exchange, communication throughout the project, comparison of final deliverable to contract expectations, support and followup, and payment. References provided should be specific to the project and be more narrowly defined based on charter type, asset size, balance sheet complexity, model and/or geographical location.

(d) *Staff, management stability.* Continuity of the vendor's staff and management provide stability to the engagement and is a factor in minimizing possible omissions and duplications throughout the project.

(e) *Financial stability.* To mitigate the risk of monetary loss, project delay, or incompleteness,

the consultants may be asked to provide proof of financial stability.

(f) *Timing.* The ability to complete an engagement according to a predetermined timeline is critical to many projects. While certain tasks allow some degree of flexibility, others must adhere to strict deadlines.

(g) *Cost.* The expense to the institution is always one of the major factors in determining the contract award. Proj-

Vendor Selection Decision Matrix	Vendor 1	Vendor 2	Vendor 3	Vendor 4
Qualifications				
Independence				
Expertise				
Staff, management stability				
Financial stability				
Timing				
Cost				
Affiliate relationships				
Engagement				
Travel expectations				
Resource requirements				
Internal audit involvement				
Product definition				
Mutual nondisclosure and confidentiality				
Followup, defense of report				
Deliverable				
Meets regulatory requirements				
Format				
Content				
Recordkeeping				

ect costs should be easy to determine and defined in such a manner that avoids unpleasant surprises or add-ons.

(h) *Affiliate relationships.* The consultant should be required to disclose any relationships with institution insiders, anything that could compromise independence, or any potential conflict of interest. Such disclosures may include the promise of future or additional services that are contingent upon the current contract.

While model validation may be cheaper if done internally, it is often difficult to meet the criteria of both independence and expertise without looking outside of the institution.

Engagement Matrix. The engagement matrix outlines the depth and scope of the project. In many cases, the manner in which each topic is addressed may specifically include or exclude a candidate.

(a) *Travel expectations.* If the consultant is required to be onsite during any part of the engagement, the cost for the project may increase.

(b) *Resource requirements.* It is important for both parties to document the resources that will be required for the project, including data requirements, technology, and access to staff and management. The availability of personnel may have a direct effect on the scheduling.

(c) *Internal audit involvement.* The extent to which the audit department will be involved will also have a bearing on the scope of the project. Shared projects or joint efforts will be approached in different ways.

(d) *Product definition.* Requirements should be defined for the draft and final products. If a single draft or multiple drafts are expected, that should be clearly stated in the RFP. The total number of drafts, the instances that precipitate a new draft, and the allowable time between drafts should be documented. Any additional costs associated with multiple drafts should also be defined, as well as the point at which the project is deemed to be completed and finalized.

(e) *Mutual nondisclosure and confidentiality.* Both issues

should be addressed and documents should be signed by authorized parties.

(f) *Followup, defense of report.* In accordance with the terms of the contract, the institution has an expected quality of service. The institution and the consultant should have an understanding of the support provided in conjunction with the service and they may formalize that understanding in the proposal and contract.

Deliverable Matrix. The deliverable(s) matrix assists in narrowly defining the components of the draft and final products.

(a) *Meets regulatory requirements.* Consultants may offer varying levels of products, and it is important to ensure that the final deliverable meets the regulatory requirements.

(b) *Format.* The format and delivery method may vary from consultant to consultant and project to project. RFPs should specify the format (paper, bound, electronic, multiple copies), the channels (e-mail, CD, secure FTP site), and recipient of the reports.

(c) *Content.* To avoid any confusion, many RFPs spell out the minimum requirements for the final report including, but not limited to, an executive summary, scope, detailed risk identification as well as findings and recommendations for corrections and enhancements. Within the body of the report should be a review of the source data, current position, future positions, assumptions, interest and discount rates, scenarios and applicable timeframes, yields and costs, theory and methodologies, model, calculations and math, model adequacy, policies and procedures, exposure limits, outputs and reporting, EVE/NPV/NEV and NII IRR profile diagnostics, trend analysis, and back testing.

It is important to ensure that the final deliverable meets the regulatory requirements.

(d) *Recordkeeping.* The consultant may also be asked to provide a copy of the firm's document retention policy and to describe the company's intentions with respect to the storage and/or availability of institution data, model or customer data, workpapers and other documents. If

the consultant chooses to return the documents, all data, reports, and workpapers should be returned to the institution within a reasonable time following the completion of the engagement.

Conclusion. Management should evaluate several issues when selecting a consulting firm to perform the validation and verification of the institution's asset/liability management and interest rate risk model. Vendor management and oversight policy requirements can often serve as a starting point and will dictate most of the expectations for the deliverable and vendor selection. If the RFP is well written and the consultant is carefully chosen based on a thorough comparison and analysis of submitted proposals, the financial institution will have a blueprint to follow when managing external consultants.

— Deborah Donaldson, President and CEO
Alpha-Numeric Consulting, LLC

Data Management and the A/L Process

Data management is critical to the asset/liability process. Prompt, accurate data gathered from many different sources is what feeds A/L models. The strategies that are modeled by asset/liability management software lay the groundwork for sound risk management and investment decision making. This article addresses some of the special data concerns for A/L managers.

A/L data is gathered from many sources. Looking at the balance sheet, each section involves unique data management concerns. Below, organized by balance sheet category, are issues to consider on data management for a typical financial institution.

Investments. The investment accounting system is a good starting point for gathering security information. Data such as par amount, book value, coupon, yield, and maturity date are readily available on these systems. Unless the investment accounting system is directly linked to a capital markets system, however, many important pieces of information must be gathered elsewhere. These include market value, cash flow projections, especially on CMO products, duration, average life, and prepayment speeds.

Loans. General ledgers summarize the book balance of the various loans that make up the total loan portfolio. However, some serious digging is needed to obtain the detailed data A/L managers need. The loan application system is where this detail is stored. Extracting the data, however, can be a challenge. Many loan systems have standard reporting packages that produce canned reports for asset/liability management. These often show maturity, interest rate, and sometimes amortization schedules. The consensus is that these reports are difficult to work with for one reason or another. A/L managers may have better luck having someone in the IT department create an extract report that will supply the necessary data. The ideal situation is to have an internal data warehouse into which loan data is periodically loaded. The information is then accessible through a query tool or loaded directly into the A/L model.

There is particular concern for those who rely significantly on external servicers for processing their loans. Servicers may have difficulty supplying the necessary account-level detail for a number of reasons. In addition, a servicer may charge programming fees to set up and run data extracts. Field name and values can be particularly tricky. The institution should designate a person who is knowledgeable of each servicer and their data to act as a servicing liaison.

Data management is critical to the asset/liability process. Prompt, accurate data gathered from many different sources is what feeds A/L models.

Commercial loans, where financing terms are uniquely tailored to the client, may also be another area of difficulty. Commercial loan systems are generally lacking at many institutions and often do not capture all of the A/L data necessary. This may leave asset/liability managers to dig through physical files for information — the worst possible situation!

Deposits. Deposit data is gathered from an application system similar to that used for loans. The data needed on deposit products is generally minor. On the most basic level, all of the data needed for a certificate of deposit, for example, is the current balance, interest rate, and maturity date. More sophisticated A/L models may use additional

data as a predictor of customer early withdrawal and rollover behavior.

Borrowings. Borrowing data is generally the easiest to obtain because the instruments are usually simple fixed-rate or adjustable-rate interest with a bullet maturity. A/L managers who use borrowings with call features embedded in the host instrument, however, must be able to value such options.

Derivatives. As with borrowings, this data should be readily available to asset/liability managers since they generally are the initiators of the transactions. The real challenge for A/L managers is to have access to reason-

able valuation software or capital markets systems. Each institution has its own unique account of systems and data availability. The key is to find out the most efficient way to capture good, reliable data in your banking environment.

— Alan Kolosna, CFA

Alan Kolosna has, over the last 15 years, worked in Treasury functions at several medium-sized financial institutions. He is a CFA charter holder and a member of the Association for Investment Management and Research. Additionally, he teaches Ethics and Professional Conduct for the Atlanta Society of Financial Analysts.

Notice – ALM Software Updates

The upcoming April issue of the *Bank Asset/Liability Management* newsletter will feature a semi-annual survey of asset/liability management software models.

This listing will be an abbreviated version of our October ALM survey, and will feature software vendors, company contacts, telephone numbers, e-mail addresses, and website URLs.

The more detailed listing, including pricing and various features of the software, will appear in the October issue.

Please submit your vendor information for the April listing to:

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