

Response Letter to FDIC Core and Brokered Deposits Study

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Introduction

I was asked to write this white paper in response to the FDIC's request for comments on the issue of Brokered CDs and Core Deposits. I want to thank the FDIC for taking the time to review this paper and hope it will be helpful in your attempts to address some of the issues raised in your request for comment. I am President of Farin & Associates, a firm providing asset-liability analysis and consulting services to community banks and credit unions. I am a 25-year member of the faculty of the Graduate School of Banking at Wisconsin and section leader of both the Funding and Bank Performance Analysis tracks. I also am Faculty Coordinator and lead instructor at the Financial Managers School, a joint program offered by GSB and the Financial Managers Society. I was also the lead author of the rewrite of the ABA Liquidity and Funds Management Toolbox, released in February of 2011. In my distant past I was a contract instructor to FSLIC then OTS, delivering introductory and advanced A/L education to examiners during the thrift crisis. I spend the majority of my consulting time today working with financial institutions on developing core funding strategies.

Overview

The FDIC is currently conducting a Core and Brokered Deposit Study with the goal of obtaining input into potential legislative or regulatory changes with respect to core and brokered deposits. Since the laws and regulations were drafted, a number of innovative deposit products have been developed that don't fit comfortably into these definitions. In addition, the regulations do not consider the full range of sensitivity and volatility of deposits categorized as core deposits.

Bank regulators appear to be headed in the direction of using some form of graduated scale for grading the variety of funding sources that appear on financial institution balance sheets, rather than the black/white distinctions that currently exist for core versus non-core funding and brokered versus non-brokered deposits. I fully support a move in the direction of a graduated scheme for grading sensitivity/volatility of funding sources.

While a graduated scale is the goal, the FDIC appears to want to address this issue in a manner that does not require massive call report changes and, at the same time, is relatively simple to explain.

It is my intention in this white paper to lay out a potential framework for assessing volatility of funding in relation to the effects of a liquidity stress event, like a catastrophic capital failure. This paper will discuss:

- Historical models – Brokered vs. Non-brokered, Core vs. Non-core
- Change agents that broke the historical models
- Characteristics/attributes most closely associated with the brokered CD debate
- Appropriate uses of non-core funding
- Regulatory agency options for dealing with funding liquidity and volatility/stability issues- recommendations will be made at all three levels:
 - Level 1 – Call Report and UBPR
 - Level 2 – Guidance documents, regulation, legislation
 - Level 3 – Examination
- Developing a graduated funding approach
 - Approach taken in ABA Liquidity Toolbox – Aimed at Level 2
 - Criteria for a Level 1 volatility/stability measure
- Level 1 model recommendation – Simplified Basel Net Stable Funding Ratio (NSFR)
- Issues with call reports feeding the NSFR – Objective is to implement a simplified NSFR with minimal call report changes
- Discussion/recommendation on what is to be included in each of the five ASF levels of the numerator of the NSFR
- Recommendations of changes to Level 2 (guidance documents, regulation, legislation) and Level 3 (examination)

While this paper is not in the same sequence as the questions provided by the FDIC in requesting comments on this issue, the questions are addressed in this white paper. I wanted to go beyond just responding to the questions and make recommendations as to how the FDIC might develop a solution to this issue.

While the majority of the content of this paper focuses on deposits, any graduated grading scheme needs to consider all sources of funding, including borrowings and capital. These portions of the liability and capital side of the balance sheet will be brought into the discussion at appropriate times.

Historical Models

In the past, deposits were distinguished by fairly broad, black/white definitions designed to place funding into different categories.

Brokered vs. Non-Brokered

One such distinction written into regulations is the difference between brokered and non-brokered deposits. Regulators felt it important to make this distinction as it is believed there has been a correlation between the levels of brokered deposits in a financial institution balance sheet and the likelihood of failure due to asset quality problems. Of course, the use of brokered CDs does not directly cause asset quality problems. But institutions growing loan portfolios too quickly in an unsafe and unsound manner often fund this growth with brokered CDs.

Brokers charge a fee for putting together the parties and counterparties to a brokered CD transaction. So it seemed appropriate to categorize brokered CDs as those where a fee is involved in putting together parties and counterparties.

When financial institutions fall below PCA Well capitalized minimums, their ability to participate in the brokered CD markets is revoked unless they obtain a waiver from their regulator.

Core vs. Non-Core

FDIC's DSC Risk Management Manual of Examination Policies defines core deposits as:

“Core deposits are generally stable, lower cost funding sources that typically lag behind other funding sources in the need for repricing during a period of rising interest rates. These deposits are typically funds of local customers that also have borrowing or other relationship with the institution. Convenient branch locations, superior customer service, dense ATM network and/or no fee accounts are significant factors associated with inertia of these deposits.¹”

On the other hand, in its Final Rule, Assessments, Large Bank Pricing, Appendix A, the FDIC defines the numerator of the Core Deposits/Total Liabilities ratio as:

“Total domestic deposits excluding brokered deposits and uninsured non-brokered time deposits.”

I prefer the former definition as it comes much closer to how I would define core deposits in working with financial institutions on developing core funding strategies. On the other hand, the latter definition is probably the best the FDIC can do in calculating a ratio like Core Deposits/Total Liabilities given the definition of brokered CDs written into the statutes and the limitations placed by using data presented at the present time in call reports.

The distinction between core and non-core is significant in that one of the primarily historical regulatory measures of liquidity is the non-core funding dependency ratio and because field regulators closely watch levels of non-core funding and trends in concentrations in non-core funding. An institution with high levels of non-core funding and trends showing increasing levels of non-core funding can expect that topic to be a major discussion point in examinations. In addition, the definition of core plays an important role in determining deposit insurance assessments for large banks.

Institutions are asked under current liquidity guidance to set policy limits on overall use of non-core funding and on levels of non-core funding from individual sources. In addition, the loan/deposit ratio is also driven in part by the level of deposits gathered on the call report. The loan/deposit ratio and the net non-core funding dependency ratio are the two liquidity ratios highlighted on the Summary Ratios page of the UBPR.

¹ DSC Risk Management Manual of Examination Policies at p. 6.1-7.

Change Agents

Emergence of Innovative Funding Products

Loan growth has exceeded deposit growth in banking for 13 out of the last 18 years. The exception years were 2008-2010 (great recession) and 2001-2002 (9/11 years). In other words, loans outgrow deposits whenever the economy is healthy. Of course the difference between the loan and deposit growth rates must be funded – generally by reducing investments or increasing use of non-core funding.

A variety of new products have emerged to help financial institutions bridge this funding gap. The design of these products has challenged some of the historical models mentioned in the previous section. Here are a few examples:

- **CDARS Reciprocal Deposits** – This product extends FDIC insurance well beyond the FDIC maximum of \$250,000 through a network that allows multiple financial institutions to provide deposit insurance on a single deposit up to their cumulative \$250,000 caps. These deposits are technically brokered deposits under the current definition. Yet, unlike traditional brokered deposits, they are typically gathered from a financial institution’s own customers. If you read the core deposit definition cited earlier from the Examination Manual, CDARS Reciprocal deposits sound like core deposits. Yet they are excluded from core in the Large Bank Assessment definition because of their classification as brokered CDs under the current law.
- **Rate Board CDs** – Rate boards are private boards that serve as a clearing point for financial institutions that wish to gather funds by issuing CDs and other financial institutions, primarily credit unions, that wish to invest in FDIC-insured CDs. But because the rate board charges an annual fee for membership in the board, but no fee for clearing transactions, funds raised through rate boards are technically non-brokered. They are also included in call report core deposit totals based on definitions like that in the Large Bank Assessment Rule. Yet rate board CDs clearly do not meet the definition of core based on the definition in the Examination Manual, as they are not gathered from customers of a financial institution through any of their normal deposit-gathering processes.
- **Insurance Company Banks** – Insurance companies are increasingly chartering banks with the goal of gathering a greater share of wallet from their insurance customers or improving services delivered to their agents. In some cases, agents are paid a fee for bringing in deposits. I know of at least two insurance company banks that have been told their entire deposit base is made up of brokered deposits because agents were paid a fee for bringing in the deposits. Yet at the same time, the insurance company has a core insurance relationship with those customers that may be as meaningful as the relationships discussed in the FDIC Examination Manual definition. On the other hand, given that their regulator has classified the customer deposits as brokered, those deposits would be classified as non-core under the Large Bank Assessment Rule.

Emergence of New Marketing Channels

The Internet has emerged in the last decade as an effective way of attracting deposits. It could easily be argued that the Internet is just an additional marketing channel that supplements television, radio, and newspaper

advertising, direct mail, billboard, and other traditional marketing techniques. On the other hand, the reach of Internet marketing allows a local or regional financial institution to gather deposits in a much broader geographic market at a level of cost effectiveness that cannot be achieved through other channels. The Internet channel creates some interesting challenges to historical models used to classify deposits in the past.

- MoneyAisle, a CD auction site, initially charged a fulfillment fee for placing deposits. As a result, they were classified by the FDIC as a brokered source. They have since changed to a click-through pricing model, placing them in the same general category as Google Adwords and BankRates.com, both technically non-brokered sources. Yet the deposit-gathering process worked in the same way before and after the MoneyAisle pricing model was changed. Should MoneyAisle still be considered a brokered source? Is how MoneyAisle is compensated for putting together banks and CD customers a relevant factor in assessing the volatility/stability of deposits gathered through MoneyAisle?
- Google Adwords, BankRates.com and MoneyAisle all allow the institution to define the market area in which they wish the deposit products they are attempting to market to be visible. That means they can be used as an additional channel in going after deposits from an institution's defined market area. Or they can be used to expand an institution's market area well beyond the geographic area that could be reasonably reached through brick and mortar channels. Should locally gathered deposits through these channels be handled differently from those gathered in expanded markets?

Conclusions from Examination of Change Agents

It is apparent to me that some of the historical models used in categorizing funding sources are broken, most notably the brokered vs. non-brokered and the core vs. non-core definitions.

- It makes little sense to break brokered and non-brokered deposits into two separate groups based on how an intermediary is used or compensated for its efforts in putting together the party and counterparty. Intermediary compensation has little to do with the volatility/stability of a funding source.
- The traditional break point between core and non-core fails to consider the wide variety of rate sensitivity and stability of funds in the FDIC Examination Manual definition of core deposits. It also fails to recognize that some 'non-core' funding sources (CDARS Reciprocal, for example) match the Examination Manual definition of core funding, while some 'core' funding sources bring in deposits from customers that are well outside the Examination Manual definition of core customers.

It would appear to make sense to develop a method for grading funding sources based on a sliding scale rather than around black/white definitions like core/non-core and brokered/non-brokered.

In the remainder of this document, I will adopt the following convention in categorizing funding sources

- Core funding – Funding gathered from customers through traditional funds-gathering channels as part of a core funding growth/retention strategy. In other words, I will use the definition of core funding the FDIC published in the Examination Manual. I will further define a core funding growth/retention strategy later in this white paper.

- Non-core funding – Any source of funding that falls outside the Examination Manual definition of core. This definition covers all forms of wholesale funding (FHLB Advances, Fed Funds Purchased, Repos, etc.), as well as deposits gathered using non-traditional techniques from sources other than those defined in the FDIC Examination Manual definition of core deposits.

I am not suggesting the FDIC adopt the Examination Manual definition for call report purposes. In fact doing so could require major call report changes. Rather, I am merely identifying the terminology that will be used through the remainder of this white paper. Later in this paper I will suggest a number of call report modifications and legislative/regulatory changes that will bring the definition of core deposit ratios used in call report-based core deposit calculations closer to the spirit of the definition of core deposits in the FDIC Examination Manual.

Characteristics/Attributes Most Closely Associated With Core/Brokered CD Debate

If funding sources are to be graded in assessing their volatility or potential role in funding risky assets, it makes sense to examine the attributes of funding sources that might be a factor in slotting funding sources in a graduated scale. For each I will offer an opinion as to whether the characteristic or attribute can be easily measured, the source of the data needed to measure the attribute, and whether it makes sense to include this characteristic/attribute in a funds grading scheme.

Ease of Acquisition

Does the presence of certain kinds of deposits (e.g. brokered, Internet, listing service) inherently increase an institution's risk? To the extent any of the above sources are more volatile in times of liquidity stress, they would increase liquidity risk. However, the same could be said for uninsured retail deposits and other uninsured or uncollateralized sources of funding, like Fed Funds purchased. One of the reasons a graduated grading scheme for grading funding volatility is being proposed later in this paper is to allow an institution's overall trends in funding volatility to be tracked over time and compared to peers.

Does non-core funding facilitate increased risk-taking? I'm sure there are numerous examples of failed financial institutions that funded risky assets with brokered, Internet, and listing service deposits. But the FDIC needs to keep in mind that loans have outgrown deposits 13 out of the last 18 years. The bulk of the industry plugged the funding gap with non-core funding. The vast majority of financial institutions used those funding sources wisely.

I inherently mistrust statistical correlation studies that relate one event to another. For example, in Wisconsin it would be very easy to show a correlation between the appearance of daffodils and the disappearance of snow in April. But is it valid to conclude the appearance of daffodils causes the snow to disappear? It is my belief that an institution inclined to grow using risky assets is going to find the funding to fund that growth in one way or another. For example, were non-core funding not available, an institution might elect to pay particularly high deposit rates for core funding. That approach not only damages the institution's franchise, it also damages competitors. Does the availability of brokered CDs lead to increased risk-taking? I think not, no matter what the statistical correlation studies say.

A concern expressed by many is that when funding is available too easily, it contributes to inappropriate levels of growth and to the acquisition of risky assets. The Federal Home Loan Banks were criticized during the thrift crisis because the easy access to FHLB advances by their members allowed some institutions to rapidly build portfolios of high risk assets. Traditional brokered CDs received similar criticisms, both during the thrift crisis and more recently during the 2008-2010 recession. Many sources of non-traditional funding exhibit features that allow funds to be raised rapidly through these sources. On the other hand, it takes time and effort to grow portfolios of traditional core deposits like CDs and non-maturity deposits in a cost-effective manner through core funding strategies.

It is certainly possible to assess how quickly funds can be brought on line from a particular funding source. Institutions are expected to document ease of availability and periodically test availability of funding sources authorized in their liquidity policy and relied on as part of their contingency funding plan.

However, I feel it would be inconsistent to downgrade a funding source because it allows quick and easy availability of funds, when that very feature causes it to be a desirable contingent funding source in responding to liquidity stress events. For this reason, I wouldn't recommend ease of access as a grading attribute in grading the desirability of funding sources. Furthermore, there are better ways to evaluate whether a funding source is being used to support inappropriate asset growth or acquisition of risky assets than merely downgrading a funding source because of this characteristic/attribute.

Volatility/Stability

Volatility and stability are arguably the most important issues in grading a funding source. The fundamental question is whether the funds will be there in a stressed situation or whether they will disappear, partially or completely. There is a fairly extensive list of factors affecting volatility/stability.

Insured vs. Uninsured

Stability of an institution's core deposits and many of the non-core funding sources lean heavily on the FDIC insurance shield to protect depositors' principal and accrued interest. Many of the change agent funding sources discussed earlier in this white paper use the FDIC insurance shield for protection. CDARS Reciprocal deposits, traditional brokered CDs, and rate board CDs are all examples of non-traditional funding sources using the FDIC insurance shield for protection. There is no question uninsured deposits are more likely to run in a stress situation than insured deposits. It is relatively easy to determine whether deposits are covered by insurance. Call reports already break out insured from uninsured deposits. For all of the above reasons, availability of full insurance coverage is always going to be an important criterion in any deposit volatility/stability grading scheme.

Collateralized vs. Uncollateralized

Some funds providers insist on collateral coverage to back up the funds they are providing. Most notable collateralized funding sources are the FHLB system, the Federal Reserve, the Repo markets, and providers of government funds. Many of these sources are non-core funding sources. Government funds are a special case

in that they are generally gathered locally, but because of their size, they are generally protected by collateral coverage and/or through FDIC insurance coverage obtained through sources like the CDARs Reciprocal Network.

Collateral coverage requirements on funding sources are a two-edged sword. On one hand, collateral backing allows these providers to stick with a troubled institution much longer than funding sources with neither collateral coverage, nor FDIC insurance protection. Collateralization greatly enhances the stability of these funding sources. On the other hand, depending on the kind of collateral backing up the transaction, an institution with significant collateralized funding might find itself short of the asset-based liquidity needed to deal with stress events. This is especially true of collateralized sources requiring high quality liquid assets, like the Repo markets.

Call reports provide limited insight into form and amount of collateral coverage pledged to individual funding line items. Extensive call report changes would be necessary to gather this information. On the other hand, in many cases, sources of funding can be broken down between those that require collateral coverage and those that do not. For example, FHLB borrowings are never offered unsecured and always require collateral coverage.

Any deposit classification system grading volatility/stability of funding sources needs to consider whether the funds are protected with collateral and possibly consider the quality of collateral required. It also needs to consider the fact that during times of performance-based liquidity stress, collateralized funding sources often increase collateral haircuts. Should an institution find itself short of collateral, the increased collateral haircuts could reduce funding availability from the source. Additional pledging requirements caused by increased collateral haircuts could also reduce an institution's asset-based liquidity buffer that could be needed to deal with liquidity stress events.

Term Structure and Options

Contractual Structure of Funding

Generally speaking, the longer the term the funding provider has committed to, the more stable the funding source. It is hard to deny that a recently issued, 5-year FHLB advance is a more stable funding source than a newly issued, 6-month bank CD, in spite of the fact the FHLB has historically been considered a non-core funding source while the CD, if under \$250,000, is considered to be core.

In addition, remaining term to maturity is the more important factor than the original term at time of issue. A 5-year bank CD maturing next month would be viewed as a less stable funding source than a 24-month, traditional brokered CD issued yesterday.

Call reports generally ask for maturity information on funding sources based on maturity ranges and remaining maturity. Hence, the data exists in the call report to consider contractual structure of funding in a deposit stability/volatility grading scheme.

Ability to Run

Instruments often provide options to those providing funds to call those funds from the institution prior to scheduled maturity. These options might be formally stated, like a 5-year FHLB advance with a 1-year call option. Or they might be left to the discretion of the user, like a CD customer who is generally expected to pay some kind of penalty for early withdrawal from the contract.

The concern in this context is the likelihood the funds will leave early should an institution experience a liquidity stress event. Most non-traditional funding sources charge a mark to market penalty for early withdrawals or do not allow early termination at all. The major potential problem area with ability to run is retail CDs, because early withdrawal penalties are often inadequate to hold funds in the event of a liquidity stress event.

Information on adequacy of early withdrawal penalties is not gathered as part of the call report process. Unless significant revisions are made, it is difficult to factor this issue into any funds grading system other than making some fairly non-institution specific runoff assumptions. On the other hand, such issues should be taken into consideration in an institution's internal modeling and analysis systems, especially when running liquidity stress events.

Actual Behavior of Funding Source

For many funding sources, behavior of those providing the funding may be materially different than the contractual terms and conditions imply. Here are a few examples:

- Non-maturity deposits can be immediately withdrawn by depositors. However, because they are used to support transactions (checking accounts) and are used to park pools of liquidity that may or may not be earmarked for specific needs, they exhibit long-term behavior characteristics that are different than their contractual characteristics. Under normal circumstances, a pool of these deposits will gradually decay off the books over time. Decay rates are used regularly by financial institutions in projecting cash flows coming off pools of non-maturity deposits when performing EVE and liquidity calculations. While a financial institution suffering economic stress may see increases in decay rates, data from recent failures indicates it is unlikely all of these deposits will disappear entirely, even though the contract would allow that to happen,
- Term funding often remains at an institution after maturity. Most institutions retain 65% to 90% of renewing CD funds at maturity. Liquidity stress could reduce these retention percentages, but data from recent failures indicates it is unlikely that all would disappear at maturity. Funds provided by sources like FHLBs are often renewed at maturity even though an institution is suffering from economic stress as long as there is adequate collateral to back the renewing funds.
- While data on these behaviors is not gathered at the institution level on call reports, it is possible to make generic assumptions based on behavior across the industry or across a specific funding source.

Depositor Relationship

I think that most would agree that a depositor, particularly an insured depositor, is likely to stay with an institution for a longer period of time than a number of other funding sources. But the devil is in the details.

Deposits classified by call reports as core are treated equally, in spite of significant differences in features and behaviors between classes. While some core and non-core deposit balances are broken out in memo entry areas, they are not broken out at the same level of disaggregation as in deposit categories. For example, reciprocal deposits balances are not broken out between CDs and non-maturity deposits, nor are the reciprocal CD balances broken out by remaining maturities on call reports.

Depth of Depositor Relationship

Depth of the relationship is also an important factor in volatility/stability of a deposit funding source. If the relationship with the customer includes an actively utilized personal or business checking account or an operating credit facility, the funds in a checking account are likely to be far more stable than balances in a CD brought in by a single relationship customer. In addition, other deposit accounts owned by a customer who has a relationship-based checking account are also likely to be less volatile.

Call reports do not ask that deposit balances be broken out based on relationship criteria. Development of call report changes needed to provide this information would require a firm definition of what constitutes a stable relationship, fairly significant changes to call reports, and potentially significant development work by the providers of core systems to the industry.

Actions by Counterparties, Intermediaries, and Regulators

Most of the stability/volatility discussion to this point has focused on actions potentially taken by funding source counterparties, should an institution be undergoing a stress event. This group includes most depositors, FHLBs, the Federal Reserve, and other funding sources where an institution obtains funding directly from a provider of funds.

In other cases intermediaries are involved in putting together institutions needing funds with those providing funds. Traditional brokered CDs fall into this category. Most providers of Fed Funds Purchased also fall into this category. It could be argued that reciprocal deposits fall into this category, in spite of the fact the relationship is negotiated between the bank and its customer. That's because the network providing deposit insurance beyond \$250,000 intermediates the transactions necessary to provide the additional insurance coverage.

Some intermediaries are willing to intermediate transactions as long as there is FDIC insurance backing up the deposits. Other intermediaries may use third-party scoring models to grade institutions. In the latter case, results from scoring models could lead to restrictions being placed on an institution's ability to gather funds through the intermediary, either in the form of exclusion from any further transactions or by placing a cap on outstanding balances at current levels.

Regulators also play a role in volatility/stability of funding sources through legislation, guidance documents, examination, and regulatory policy. For example, volatility of traditional brokered CDs is significantly influenced by regulatory actions when financial stress causes an institution to drop below well-capitalized status. In most cases, those institutions are blocked from further use of traditional brokered CDs, causing funds provided to roll off an institution's balance sheet as they mature.

Because potential volatility of funds gathered through intermediaries can be measured at the source level, it is relatively easy to consider volatility of a funding source due to actions taken by both the intermediary and regulator, as long as those balances are broken out on call reports.

Cost of Funding

This is a potentially important input into a funding classification system. A good general rule in considering this issue is that the more features of an account that are important to parties to a transaction other than rate, the less sensitive they will be to rate paid. This rule affects the relationship between a bank and its customers. It also affects the relationship between a bank and its potential sources of non-traditional funding.

- In the case of core deposits, high-cost funding is likely to be more volatile than lower-cost funding with a similar duration. In the case of non-maturity deposits, rate-sensitive funds are likely to be more volatile than non-rate sensitive funds. For CDs, rate sensitive customers are less likely to renew CDs with the same institution if competition is willing or able to pay a higher rate. In all these examples, the imposition of interest rate caps on troubled shops by regulators will have a greater affect on the volatility of rate sensitive funds than on non-rate sensitive funds.
- In the case of non-core funding, a bank may chose a high-cost provider over a lower-cost provider based on other attributes of the relationship with the provider. For example, a non-collateralized source might be selected over a collateralized source in spite of lower costs for the latter if the institution is pushing against collateral or asset-based liquidity policy limits. A higher-cost, non-brokered source might be selected over a brokered source if the institution is concerned about the potential of having its access to brokered funding pulled by its regulator or to avoid the stigma associated with the use of brokered funding.

Relative cost of funding can be measured in a number of different ways:

- Differentials in rate paid at the time of the analysis. This can lead to misleading results at extreme ends of the rate cycle. This is particularly true at the bottom of the rate cycle when the relationship between all rates is compressed and when central bank actions to stimulate the economy may cause current rate relationships to deviate from history. A good example is the current unusually low cost of FHLB advances in relation to other comparable duration funding sources.
- Average differentials in rates over time through complete rate cycles. This measure would probably be better than a single point measure. However, in comparing cost of an institution's core deposits to non-core funding alternatives, servicing costs need to be factored into spreads, as it costs money to service core deposits, while it costs far less to service other funding sources.
- Pricing betas which measure the extent to which a change in market rates is passed along in the form of rates paid on various products.

While it is relatively easy to gather relative cost data for most non-core funding sources, gathering data on all-in core deposit costs or pricing betas at the individual product level for individual institutions is much more difficult. Call report income statement data is not sufficiently disaggregated to calculate average funding costs for balance sheet categories listed on call reports. Survey data from third-party survey firms lack information on

balances associated with the survey rates, so weighted costs cannot be calculated. Because of the way in which it is provided, survey data means and medians are also influenced by the extent to which banks employ tiering structures, promotional accounts, and by the number of branches an institution has within a market. While betas are important inputs into A/L models and important outputs from core deposit studies, there is currently no mechanism for regulatory oversight of this analysis other than through guidance documents and as part of the examination process.

In summary, no institution-specific data on deposit pricing is available from call reports, nor is it reliably available from survey firms. Cost data is also not available on retail deposits at the product level. As a result, as desirable as it might be to consider cost data in grading funding sources, it is impractical without major call report changes. The issue of relative funding costs can be much more accurately assessed in the examination process by evaluating the internal systems used by financial institutions in making pricing decisions.

Appropriate Uses of Non-Core Funding

While inappropriate use of non-core funding can play a role in financial institution failures, it is important to recognize when use of non-core funding sources makes a great deal of sense.

As a Structural Tool

Big banks raise funds where they are cheap relative to the curve then use tools like interest rate swaps to move their funding duration where needed to fund the asset side of the balance sheet. Most smaller institutions lack the expertise to use these tools. As a result they use tools like term and amortizing FHLB advances to structure their funding to properly support their assets.

As a Cost Management and Franchise Enhancement Tool

What types of deposits are likely to enhance a failed institution's franchise value and what types of deposits are likely to reduce it? I feel this question should be broadened to focus on both healthy and failed institutions. I'll address the healthy institutions first, then comment on the impact on failed institutions. It should be obvious from the title of this section that I believe non-core funding, when used as part of an effective funding strategy, can enhance franchise value.

Under most circumstances, average cost of core deposits is below that of non-traditional funding sources, even considering cost of servicing. But in order to accelerate growth of core deposits, institutions will generally raise rates paid relative to competition. In doing so, they increase rates on a portion of their non-rate sensitive funds in order to attract rate sensitive funds. So funding costs increase by not only the rate paid on the new funds, they also increase by changes to rates paid on non-rate sensitive funds. As a result the marginal cost of funds raised can be well above the average cost of non-traditional funding.

It makes sense to fund growth of the balance sheet with non-core funding when the marginal cost of core funding is materially above the cost of non-core funding. This is often the case when the industry finds itself in the situation where loans are outgrowing deposits (as they have in 13 out of the last 18 years) as the pressure to grow core funding to maintain liquidity drives up core deposit rates relative to non-core funding costs.

Let's illustrate this point with an example. Say XYZ bank has \$100 million in money markets priced in such a way that the all-in cost of funding (including servicing) is 1.0%. This portfolio of MMDAs is modeled in Strategy 1 of Figure 1. The cash flow duration of 4.07 years is derived based on recent OTS money market decay rates of 20% per year. Match funding the cash flows of this portfolio with appropriate term FHLB advances would result in a weighted average alternative funding cost of 3.154%, the Investment Retail Benchmark shown in Figure 1. This analysis assumes that at an all-in cost of 1.0%, XYZ bank is seeing neither growth nor shrinkage in its MMDA portfolio, thus the 100% retention percentage assumption in Strategy 1. Marking future principal and interest cash flows from the MMDAs to market using the FHLB curve as discount rates results in a market value of \$91.672 million or the core deposit intangible shown on the right side of Figure 1 of \$8.328 million. That \$8.328 million would increase Economic Value of Equity (EVE) relative to book capital by an identical amount. EVE is arguably the most important component of an institution's deposit side franchise value.

FIGURE 1 – CURRENT PRICING

| Marginal Cost Analysis | | | | | | | | | | |
|-------------------------------|------------|-------------------|----------|------------|-------------|----------------------|--------------|------------|----------|-------------------|
| Strategy Name: | | Current Pricing | | | Date: | | 4/23/11 8:29 | | | |
| Strat Sumry | | Balance | Wtd Cost | Duration | Int Expense | Investment Rtl Bench | Spread | FTP Income | ROE | Diff - MV to Book |
| Strategy 1 | | 100,000.00 | 1.000% | 4.07 | 1,000.00 | 3.154% | -2.154% | 6,624.60 | 0.00% | (8,328.06) |
| Strategy 2 | | - | 0.000% | 0.00 | - | 0.000% | 0.000% | 0.10 | 0.00% | (0.13) |
| Marginal Effect (S2-S1) | | (100,000.00) | 1.000% | 4.07 | (1000.00) | 3.154% | -2.154% | (6,624.50) | 0.00% | 8,327.93 |
| Deposit Detail | | Strategy 1 | | | | Strategy 2 | | | | |
| Deposit Type | Maturities | Rate | Ret % | Balance | Duration | Rate | Ret % | Balance | Duration | |
| Summary | 100,000.00 | 1.000% | 100.00% | 100,000.00 | 4.07 | 0.000% | 0.00% | - | 0.00 | |
| Detail | | | | | | | | | | |
| MM - 100K | 100,000.00 | 1.000% | 100.00% | 100,000.00 | 4.07 | 0.000% | 0.00% | - | 4.07 | |

Let's assume XYZ Bank finds itself in a rising rate environment where market rates (FHLB rates) move up 200 bp. The market rate increase is the result of the Federal Reserve raising rates to slow down a recovering economy. As a result of the recovering economy, our institution experiences increased loan demand and now needs \$10 million in additional funding to fund loan growth.

Assume XYZ finds that in order to retain 100% of its \$100 million in Money Markets that it needs to move MMDA rates by 75% of the change in market rates (beta = 0.75, Rtn% = 100%). Figure 2 Strategy 1 reflects the new all in cost of 2.5%, an increase of 1.5%. The core deposit intangible has increased from \$8.328 million (Figure 1) to \$8.843 million (Figure 2, Strategy 1). That increase is a byproduct of the fact the gap between the discount rates used in market value calculations and all-in cost opened up by 50 bp as the MMDA Beta is 0.75 while the FHLB Beta is 1.0. XYZ Bank could plug the funding gap by borrowing \$10 million in cash flow matched FHLB advances at 5.06%. Those advances at time of origination would have a market value equal to book, or in other words are neutral to XYZ's EVE. So the total effect of this transaction on EVE is \$8.843 million in EVE enhancement relative to book.

On the other hand, XYZ management feels it could raise the \$10 million of additional funding needed by moving MMDAs by 90% of the change in market rates (beta = 0.9), raising all-in costs 1.8% to 2.8%. Many would argue that franchise value would be enhanced by using the MMDAs (Strategy 2) to fund loan growth as compared to the FHLB advances (Strategy 1) as the 2.8% average cost of the MMDAs after the pricing change is 226 bp less (Strategy 2 line in Figure 2) than the cost of the FHLB advances. They would be mistaken!

FIGURE 2 – WHOLESALE VS PAYING UP

| Marginal Cost Analysis | | | | | | | | | | |
|-------------------------------|------------|---------------------|----------|------------|-------------|----------------------|---------|--------------|----------|-------------------|
| Strategy Name: | | Wholesale vs Pay Up | | | | Date: | | 4/23/11 8:52 | | |
| Strat Sumry | | Balance | Wtd Cost | Duration | Int Expense | Investment Rtl Bench | Spread | FTP Income | ROE | Diff - MV to Book |
| Strategy 1 | | 100,000.00 | 2.500% | 3.80 | 2,500.00 | 5.060% | -2.560% | 7,996.51 | 0.00% | (8,843.27) |
| Strategy 2 | | 110,000.00 | 2.800% | 3.80 | 3,080.00 | 5.060% | -2.260% | 7,827.04 | 0.00% | (8,401.65) |
| Marginal Effect (S2-S1) | | 10,000.00 | 5.800% | 3.79 | 580.00 | 5.060% | 0.740% | (169.47) | 0.00% | 441.62 |
| Deposit Detail | | Strategy 1 | | | | Strategy 2 | | | | |
| Deposit Type | Maturities | Rate | Ret % | Balance | Duration | Rate | Ret % | Balance | Duration | |
| Summary | 100,000.00 | 2.500% | 100.00% | 100,000.00 | 3.80 | 2.800% | 110.00% | 110,000.00 | 3.80 | |
| Detail | | | | | | | | | | |
| MM - 100K | 100,000.00 | 1.000% | 100.00% | 100,000.00 | 3.80 | 2.800% | 110.00% | 110,000.00 | 3.80 | |

When an institution raises rates to go after market share they pay up on a portion of their non-rate sensitive funding in order to attract rate sensitive funding. The difference between these Strategy 1 and Strategy 2 is shown on the Marginal Effect Line. Strategy 2 raises an additional \$10 million in money markets. Interest expense is up by \$580 thousand. If the increase in interest expense (\$580K) is divided into the increase in balances (\$10,000K), the marginal cost of the new funding raised is 5.8%. Why is the marginal cost so much higher than the average cost? XYZ bank incurred two separate costs in raising the \$10 million in new MMDAs. They paid 2.8% for \$10 million of new money costing \$280,000 per year. They also paid an extra 30 bp on \$100 million in MMDAs they could have retained at 2.5%. That 30 bp increase in rates on non-rate sensitive funds cost them an additional \$300,000 per year for a total cost increase of \$580,000. The marginal cost of the \$10 million is 74 bp above the FHLB alternative (Marginal Effect Line Spread), an increased cost of \$74,000 per year.

In the upper right corner of the screen, the effect of the Strategy 2 pricing action is translated into economic value. As a result of incurring a higher marginal cost for MMDAs than the wholesale funding alternative, the MMDA deposit intangible drops from \$8.843 million in Strategy 1 to \$8.402 million in Strategy 2 in spite of the fact there are \$10 million more in MMDAs. In the process they destroyed \$441 thousand of EVE. While this is a very simple example, it is neither contrived, nor an irrelevant academic concept. Examples like these have been in my teaching arsenal ever since TB 13 and TB 13-1 were issued by OTS in 1989. Managing economic value was a focus of the Advanced A/L seminar I delivered to OTS examiners during that period. Over the last 20 years we've seen the relationship between marginal cost of funds and the effect on franchise value play out over and over as customers develop strategies to optimize funding costs while meeting growth goals.

In this example, FHLB advances were the alternative non-core source of funding. But any non-core source (brokered CDs, rate board CDs, Internet listing service CDs, etc) could be substituted for the FHLB advances with very similar results. Ironically, the further the non-core source is away from the definition of core in the FDIC Examination Manual, the greater the positive effect on franchise value. That's because non-traditional funding raised from local markets (CDARs Reciprocal CDs, for example), is more likely to cause an upward repricing of some existing customer deposits than funds raised from outside the market (CDARs One Way buys, for example).

Now let's move our focus to failed institutions. One might argue that in an assisted transaction, an acquirer has the ability to break CD rate contracts and to reduce market rates on both non-maturity deposits and CDs. Thus, the higher cost of Strategy 2 (above) would arguably be preferable to Strategy 1, which utilizes a FHLB advance. I would counter by saying that any intelligent management team considering acquiring a failed shop with high-cost deposits is likely to assume the deposit base is loaded with rate-sensitive customers. Breaking contracts on CDs and reducing rates on non-maturity deposits would be likely to cause large quantities of these deposits to flee. As a result, any bid package the management team would submit would be discounted to reflect the volatile nature of this high cost funding. The FDIC is paid less for the funding, increasing the costs of resolving the failed institution. Effective management of funding costs through intelligently constructed core/non-core strategies enhances franchise value for both healthy and failed institutions.

As a Contingent Funding Source

The previous two items illustrate the role non-core funding plays as part of the base funding strategy built into a bank's business plan. But non-core funding sources are also important resources for an institution's contingency funding plan. The Interagency Guidance on Liquidity and Funds Management encourages institutions to diversify funding sources and avoid being overly concentrated in any specific source of non-core funding. It also indicates institutions need to develop contingency funds to deal with stress events that could put a strain on their liquidity. These contingency funding plans need to specify which sources of liquidity will be tapped in dealing with stress events.

Summary on Appropriate Uses

It is important that any funds grading system deployed by the FDIC not discourage or prevent the appropriate uses of non-core funding. Yes, each institution should set overall policy limits on the use of these resources. Yes, limits should also be set at the individual source level. And yes, monitoring systems need to be in place to measure utilization against limits. And finally, it makes sense to ask institutions to define how they plan to use various sources of non-core funding in their balance sheet funding strategy.

Regulatory Agency Options in Dealing with Liquidity and Funding Volatility

Regulatory agencies like the FDIC have a variety of tools to use in monitoring, supervising, and managing financial institution performance and risk management practices. Those tools are implemented and used at three different levels. While the three levels specified in this section represent oversimplification of options available to regulatory agencies, they do represent three key break points in the data collection, analysis, and

supervision process that will be addressed in the rest of this white paper. Note that these levels are my definitions and are not derived from any regulatory definition.

Level 1 - Call Reports and the UBPR

The primary purpose at Level 1 is to monitor trends in performance and risk management and compare the performance of institutions to peers. Call reports will always be backward looking. That's because balance sheets and income statements are always dated by the time they are received by FFIEC and translated into UBPRs.

In spite of the fact that many recently released guidance documents focus on performance and risk in business plans or strategies, it is unlikely that regulators will ever ask institutions to communicate business plans or strategies as part of call reports.

In asking for input on this study, I understand the FDIC has expressed concern about any solutions requiring massive call report changes. The FDIC also expressed a desire to keep the solution simple. Given the complexity of the issues discussed in the previous section, both requests represent a significant challenge to anyone attempting to design a solution.

Many of the ratios used to track risk in the UBPR are rather easily calculated from existing call report data. That is true of the two major measures of liquidity tracked on the Summary Ratios page of the UBPR, the Net Non-Core Funding Dependency ratio and the Net Loans & Leases to Deposits ratio. Most reading this document are familiar with the issues in using these ratios as primary liquidity risk policy limit and measurement tools.

In addressing the issue of use of non-core funding to support inappropriate asset growth, the above two UBPR ratios do not necessarily point out negative trends that may have been occurring in how funding is being used. In the case of loan/deposit ratio, all non-core deposit funding sources are included in the denominator of the ratio. In the case of the net non-core funding dependence ratio, some non-traditional deposit insured sources are included in the core funding totals. As a result, in the liquidity ratio area of the UBPR, these two primary ratios are supplemented with roughly eight additional ratios.

On the positive side, many of the ratios currently used to measure liquidity are cross-balance sheet ratios that examine what is happening on one side of the balance sheet relative to the other side. Cross-balance sheet ratios are desirable in that a properly constructed cross-balance sheet ratio can relate changes in volatility/stability of funding to the portion of total assets requiring stable funding. In my opinion, neither of the above two Summary Ratios page liquidity ratios pass the 'properly constructed' test.

In the ABA Liquidity Toolbox (Toolbox) released in February, 2011, we suggested that a number of the traditional liquidity ratios should be tracked by banks as triggers. Triggers are ratios tracked on a regular basis that are leading indicators of developing problems or areas into which more investigation is merited. We have serious reservations about setting policy limits around any of the current call report liquidity ratios because of their shortcomings. We feel regulators should view the UBPR liquidity ratios in the same manner we recommended in the Toolbox for banks - as trigger ratios that call attention to an area requiring further drilling down and analysis. Such an approach is consistent with how examiners should use call report data and the resulting UBPRs. The

UBPR helps identify areas requiring additional investigation either in an examination or between examinations. The exception might be in the case of a troubled shop where a regulator might enforce limits on these ratios.

The major shortcoming of the ratios currently being calculated to measure liquidity is there is no reliable master ratio that attempts to integrate information contained in the other ratios as an overall liquidity volatility/stability assessment tool. Hopefully, that issue will be addressed by the US banking regulatory agencies as part of this study. It is certainly one of the major recommendations in this white paper.

Level 2 - Legislation, Regulations, and Guidance Documents

Regulators have a right to expect an institution's internal systems to be more sophisticated than those used to produce call report data. If an institution is to evaluate risk in a business plan or strategy, whether the risk be credit, interest rate, concentration, liquidity, or capital, the risk being measured should be addressed with internal measurement systems and internal policy limits.

In the area of liquidity risk, the Interagency Guidance document clearly states liquidity risk should be evaluated in the context of a business plan or strategy. Examiners have every right to expect that an institution will have internal systems in place to meet requirements specified in guidance documents. They also have a right to expect that larger institutions with more sophisticated balance sheets will have more sophisticated measurement and monitoring systems than smaller, less sophisticated institutions. Guidance documents and examinations offer the potential to implement different expectations based on different levels of sophistication.

One of the problems with legislation is that if too specifically defined, it removes regulatory flexibility in dealing with a rapidly evolving banking system, and specifically new, non-traditional funding vehicles. Legislation that hard wired the definition of brokered CDs is a good example of what should be avoided to the extent it is possible.

Level 3 - Examination

Information gleaned from the call reports and UBPR are early warning indicators that may trigger changes in examination frequency and help identify areas of exam emphasis. Of course, the majority of the examination will focus on a review of performance data, results from internal systems, evaluation of quality of internal systems, and quality of management.

While there are a variety of outputs from an examination, the best known is the institution's CAMELS rating based on a combination of quantitative and qualitative measures of performance in key performance, risk management, and overall management areas. A variety of enforcement actions are available to motivate management to correct performance deficiencies.

Developing a Graduated Funding Approach

As developers of the ABA Liquidity Toolbox, we were forced to deal with the above three levels out of sequence. The purpose of the Toolbox was to provide the industry with a set of tools to address the Interagency Guidance on Liquidity and Funds Management - Level 2 in the above hierarchy. Our hope was that institutions taking the

approach recommended in the Toolbox would pull higher scores on the “L” in CAMELS, and be better prepared to deal with liquidity stress events in the future.

If I was to offer a general criticism of the Interagency Liquidity Guidance document it would be that the document is long on “what to do” and short on “how to do it.” Of course, “how to do it” is somewhat dependent on the size and complexity of the bank reacting to the guidance document, so I can understand why the document might be long on “what” and short on “how.” Similar issues exist with the Interagency Guidance on Interest Rate Risk.

Because the target audience of the ABA Toolbox was primarily community banks, we felt it was important to show how a community bank might implement measurement systems and policy tools that were consistent with the intent of the guidance document. We researched regulatory presentations on the subject and found a general lack of quantitative examples of how to measure liquidity risk and set policy guidelines based on a dynamic approach to measuring liquidity risk in the context of a business plan or strategy.

Our search for regulatory examples captured the Basel Consultative Document on Liquidity and Funds Management. That document introduced two new measurement tools, the Liquidity Coverage Ratio and the Net Stable Funding Ratio. It also discussed the desirability of using a measurement system based on cash flow analysis. While the Toolbox was being developed, the Consultative Document morphed into the Basel III International Framework for Liquidity Risk Measurement, Standards, and Monitoring, released in December, 2010. That document focuses on “how to do it,” the part we felt was missing in the Interagency Guidance.

Liquidity Coverage Ratio (LCR)

One of the issues we were attempting to address in the ABA Toolbox was how to determine the minimum acceptable asset-based liquidity buffer called for in the guidance document. We have fielded repeated reports from our bank customers indicating they had been criticized on examinations for having inadequate levels of asset-based liquidity. When they asked the examiner, “How much is enough?” the response was along the lines, “That’s for you to figure out and for us to review and criticize if we don’t agree with what you established.” It is my belief that examiners haven’t been provided with tools for making asset-based liquidity buffer assessments and, as a result, are looking at peer group data. The peer data approach is inconsistent with the Liquidity Guidance Document’s statement that asset-based liquidity buffers need to be based on an institution-specific assessment.

After reviewing the Basel III LCR calculation, we concluded that setting minimum levels of asset-based liquidity buffers was exactly what the LCR is designed to do. It begs the question, “If a 30-day duration liquidity stress situation occurs, will you have sufficient asset-based liquidity to make it through the 30-day period without tapping into your wholesale borrowing capacity?” The Basel LCR is a stress test incorporating assumptions as to deposit and wholesale funding runoffs caused by the stress, while blocking draw-downs of unused borrowing capacity. It also considers the quality and marketability of unpledged liquid assets, as well as cash flows coming off loans and investments in the 30-day period. While it is a static test, we reasoned, “How much is a business plan likely to affect balance sheet mix in a horizon as short as 30 days?” It also takes a graduated approach to assessing volatility/stability of funding sources.

After reviewing other alternative ways of setting standards for asset-based liquidity buffers, we recommended the Basel LCR as an internal tool (Level 2) for measuring and monitoring asset-based liquidity with some modifications to reflect unresolved US specific issues that have not yet been addressed by US regulatory agencies. We felt the information needed to complete an LCR calculation was available from internal bank systems. We encouraged institutions to adopt the LCR as an internal measurement tool and provided them with a spreadsheet to perform the calculation. Finally, we advised them to set policy limits around this ratio as their primary floor on minimum levels of asset-based liquidity.

Net Stable Funding Ratio (NSFR)

The Basel III Net Stable Funding Ratio is another static stress test ratio introduced in the Basel III Liquidity Framework. It measures whether there is sufficient stable funding in an institution's balance sheet to cover its need for stable funding on the asset side of the balance sheet over a 1-year horizon. Like the LCR, the NSFR makes assumptions as to deposit runoffs and renewal of maturing non-traditional funding over that 1-year horizon.

We rejected the NSFR as a measurement system and policy-setting tool for Level 2 internal liquidity analysis for the following reasons:

- It is a ratio calculated from a static balance sheet. The Guidance called for evaluating liquidity risk in the context of a business plan or strategy. Significant changes to the content of a balance sheet could occur over the 1 year horizon of the NSFR that would not be considered in the NSFR calculation.
- It is already a generic stress test. As so, it wasn't very well suited to add stress test assumptions for the institution-specific stress events called for in the guidance document. We'd be laying stress tests on top of stress tests.

We instead recommended that institutions use their Asset/Liability models to generate sources and uses reports for a business plan or strategy that roll into a 1-year, cumulative liquidity gap/asset ratio. While the focus is on the 1-year ratio, we recommended that the cash flow analysis extend over 2-3 years. Pre-stress policy limits would be set around the 1-year gap. Then the sources and uses report could be stressed with assumptions causing changes in cash flows. Based on the changes in cash flows, the stressed 1-year liquidity gap/asset ratio would be calculated. If necessary, results of the stress test might cause the institution to make changes in the policy limits. Based on liquidity gaps opening as a result of a stress test, a contingency funding plan could be written describing the actions that would be taken and the funding sources tapped into to survive the stress event being tested. Note that while the Basel NSFR was rejected as a primary tool for measuring liquidity using internal systems (Level 2), we encouraged those designing stress tests to review assumptions used in the NSFR and apply them in running their own sources and uses based stress tests.

Level 2/Level 3 Summary

When we completed the work on the ABA Toolbox, we felt we had defined a measurement system framework that would comply with the directives in the Liquidity Guidance document. Institutions implementing the measurement systems and putting the required policy components in place would be likely to be judged to be out in front of the regulatory compliance curve from the standpoint of measurement systems.

In addition we devoted an entire tool to describing the various sources of non-core funding. In that tool, we took them through the thought process on setting overall limits on use of non-core funding and setting limits at the source level. In addition, we encouraged them to define how these funding sources would be used – as part of their base business plan strategy, and/or as a contingent funding resource should a stress event occur. We also provided them with forms they might use in documenting their thought process.

If the measurement system recommended in the ABA Toolbox showed solid levels of liquidity, and the institution had the appropriate role definitions and policy limits in place for non-core funding, we felt they would have taken major steps in the direction of receiving a positive rating for the “L” in CAMELS.

It would be my recommendation that regulatory agencies, including the FDIC, place no restrictions on the use of non-core and near-core funding for institutions with solid ratings for the “L” in CAMELS, solid overall ratings, and who are in compliance with risk-based capital regulations.

However, a better early warning indicator is needed at Level 1 that considers the graduated levels of volatility and stability found in the various forms of financial institution funding. In addition, through trend and peer analysis, the early warning indicator would need to help identify trends in the use of volatile funding to fund risky assets.

Criteria For Level 1 Volatility Measure for Inclusion in UBPR

If I were to define one or more ratios that considered the stability/volatility of funding sources for inclusion in the call report data collection framework with results output to the UBPR, that ratio (or ratios) would meet the following criteria:

- It could be readily calculated from call report data. That means it would need to be a static (rather than a dynamic) measure of liquidity. Call report changes to implement the measure would need to be minimal over the short haul with the ability to ramp up sophistication as needs to do so evolve.
- It would need to be a cross-balance sheet measure that does a comparison over a sufficiently long horizon to be meaningful. Trend and peer comparisons could lead to meaningful conclusions.
- It could be deconstructed into an asset-side and a liability-side measure for trend and peer analysis purposes in much the same way as net interest margin can be deconstructed into yield and cost of funds.
- For the purposes resolving the black/white brokered CD and core deposit issue, it would need to incorporate a graduated approach to measuring volatility/stability of various funding sources.
- It would need to be relatively easy to explain and understand.
- It would need to be sufficiently flexible to deal with new, non-traditional funding products as they become available.
- It would need to consider the most meaningful subset of the attributes in determining volatility/stability discussed earlier in this white paper, while at the same time minimizing call report changes.

Level 1 Recommendation – Basel Net Stable Funding Ratio

A number of potential models were constructed and reviewed that would have the potential of meeting the above criteria. The review of each model led back to the same basic question. Does the industry need yet another model to deal with and implement?

One model reviewed was the Basel Net Stable Funding Ratio. That model, which comes to the industry through Basel is likely to be implemented in some form by US banking industry regulators. It meets most, if not all, of the above criteria for a call report/UBPR ratio. Phase-in date internationally for the NSFR is set for January 1, 2018, a date well into the future.

As discussed earlier, in implementing internal measurement systems (Level 2) for the ABA Liquidity Toolbox, I rejected the Basel Net Stable Funding Ratio as it is a static measure. I felt a sources and uses based tool looking at business plans made more sense with the governing ratio being the 1-year liquidity gap/asset ratio. I also made the point that we cannot ever envision the call report gathering business plan projections so the 1-year, cumulative liquidity gap/asset ratio cannot and is unlikely to ever be displayed on the UBPR.

On the other hand, it is feasible that the Basel Net Stable Funding ratio could be calculated and presented in a simplified form on the UBPR, assuming sufficient changes were made to the call report and some simplifying assumptions made. It meets much of the criteria listed in the previous section.

- It is a cross-balance sheet ratio that measures the extent to which stable funding (numerator) is available to cover assets needing stable funding (denominator). The Basel target for the NSFR is 100% or greater.
- The numerator has the potential to provide an overall index of volatility/stability of an institution's funding base. Trends in this index could be tracked over time and compared to peers. The numerator could be brought up independently of the denominator. For example, the numerator could be brought up first to address some of the needs coming out of the FDIC Brokered CD/Core Deposit study. The denominator and combined ratio could be brought up later, once appropriate asset-side call report changes were made.
- The time horizon of the NSFR is one year, a horizon looking sufficiently far enough into the future to deal with significant stress events and management actions taken to mitigate those events.
- The NSFR is a standard stress test employing parameters like deposit runoffs suggested by Basel. However, in deriving a volatility/sensitivity measure, the FDIC could easily modify some of the volatility assumptions to reflect the complex array of non-traditional funding products being offered by the industry. As new products are introduced, they could be assessed, then dropped into this framework.
- The NSFR applies a graduated scale to different funding products with runoff (volatility/sensitivity) factors ranging from 0% runoff (100% retention) to 100% runoff (0% retention).
- It considers the most important brokered CD debate attributes discussed earlier in this paper – or at least those that can be measured using call report data without huge modifications.
- At a conceptual level, it would be fairly easy to explain.

- While call report changes would be necessary, most of the raw numbers are already being produced by bank core systems. Changes would be mostly restricted to how the raw numbers are aggregated for call report purposes.

Most of the remainder of this document will focus on the numerator of the NSFR (the Available Stable Funding ratio) as funding is the focal point of this paper. While the process in designing the denominator of the NSFR ratio (the Required Stable Funding ratio) would be similar to the numerator, I anticipate this task will be taken on later, and it is not addressed in this paper.

Issues with Current Call Report Feeding NSFR ASF Ratio

Call reports aggregate all insured deposits into a relatively small number of lines on schedule RC-E. Uninsured deposits are aggregated into another set of lines. Within each of these two general categories, non-maturity deposits are broken out from CDs and CD breakdowns by remaining maturity are gathered on Schedule RC-O. RC-E also breaks deposits down by source. Balances for reciprocal deposits (RC-O) are not broken down by type or term. Schedule RC-M breaks down borrowings between FHLB advances and other. Within each of these RC-M categories, balances are broken by remaining term.

The call reports provide no information on imbedded options in term instruments, like call options and early withdrawal options. Significant additional call report breakdowns would be necessary to have institutions provide that data at a time when bank regulatory agencies are walking away from the similar detailed data requirements needed to feed the OTS NPV model.

Anyway, call report breakdowns on funding will need to be modified to deal with the transition of FDIC insurance limits from \$100,000 to \$250,000. The 12/31/10 call report appears to be partially through that transition. Changes to the call report needed to implement the limited form of the NSFR ASF ratio discussed in the remainder of this document would involve pulling data at the same level of detail for all items reported on RC-E, RC-O, and RC-M. Where appropriate, non-maturity deposit balances should be reported separately from term balances and term balances broken down by remaining term.

Core systems providing information for call reports already are doing this level of disaggregation to complete schedule RC-O, so it is a matter of computing subtotals for balances that are already being disaggregated and reporting to a reorganized call report section.

This is the only major area of call report modifications needed to prepare the numerator of the Level 1 NSFR as recommended in the following section. Note there is precedent for regulatory agencies taking a relatively complex measure designed for internal use (Level 2) and making a number of simplifying assumptions in order to make use of the concepts embodied in the measure at the call report level (Level 1).

A good example of a simplified ratio is the Balance Sheet Liquidity Ratio, one of the two ratios used in measuring “Ability to Withstand Funding-Related Stress” in the large bank assessment. If the calculation of the Balance Sheet Liquidity Ratio is examined, it clearly embodies the concepts of the Basel Liquidity Coverage ratio and even draws its deposit runoff assumptions from that ratio. But simplifying assumptions have been made that:

- Eliminate the need to deal with the differentiation between Level 1 and Level 2 assets and their associated haircuts in the LCR – a breakdown not currently in the call report.
- Eliminate the need to separate investments pledged from those not pledged as they are in the LCR – information not gathered in the call report.
- Eliminate the need to compare asset and liability cash flows as they are compared in the LCR – as insufficient data to do so is gathered on the call report.
- Eliminate the need to make assumptions as to draw down of unused credit lines as they are in the LCR – as insufficient information to do so is on the call report.

What we end up with is a useful ratio for the purpose of insurance assessment that required minimal call report changes to implement. Yet most would agree that the LCR calculation that properly lives at Level 2 is a superior measure as compared to the Balance Sheet Liquidity Ratio as it takes all of the above factors into consideration.

The author feels that a simplified ASF ratio is a viable candidate to replace the other ratio used in measuring “Ability to Withstand Funding-Related Stress” in the large bank assessment, the Core Deposit/Total Liabilities ratio that has flaws exposed elsewhere in this document.

NSFR Funding Layout Discussion and Issues

Figure 3 is the Basel Available Stable Funding (NSFR numerator) definition.

FIGURE 3 – BASEL AVAILABLE STABLE FUNDING DEFINITION

A. Definition of available stable funding

124. Available stable funding (ASF) is defined as the total amount of a bank’s:
- capital;
 - preferred stock with maturity of equal to or greater than one year;
 - liabilities with effective maturities of one year or greater;
 - that portion of non-maturity deposits and/or term deposits with maturities of less than one year that would be expected to stay with the institution for an extended period in an idiosyncratic stress event; and
 - the portion of wholesale funding with maturities of less than a year that is expected to stay with the institution for an extended period in an idiosyncratic stress event.
125. The objective of the standard is to ensure stable funding on an ongoing, viable entity basis, over one year in an extended firm-specific stress scenario where a bank encounters, and investors and customers become aware of:
- A significant decline in profitability or solvency arising from heightened credit risk, market risk or operational risk and/or other risk exposures;
 - A potential downgrade in a debt, counterparty credit or deposit rating by any nationally recognised credit rating organisation; and/or
 - A material event that calls into question the reputation or credit quality of the institution.

In implementing the ASF measurement, Basel breaks funding into 5 groups and assigns an ASF factor (availability as a percent of the total) to each group. If an institution’s funding balances can be broken down into these 5 groups from call report data, total ASF can be computed. By dividing a total ASF by total funding a measure of the liquidity/stability of an institution’s funding can be reported on the UBPR. It can then be tracked over time (trend analysis) and compared to peers.

100% ASF Factor Funding and Issues

Figure 4 indicates what is included in the group carrying a 100% factor.

FIGURE 4 – 100% ASF FACTOR FUNDING

| <u>ASF Factor</u> | <u>Components of ASF Factor</u> |
|-------------------|---|
| 100% | <ul style="list-style-type: none"> • The total amount of capital, including both Tier 1 and Tier 2 as defined in existing global capital standards issued by the Committee.²⁹ • The total amount of any preferred stock not included in Tier 2 that has an effective remaining maturity of one year or greater taking into account any explicit or embedded options that would reduce the expected maturity to less than one year. • The total amount of secured and unsecured borrowings and liabilities (including term deposits) with effective remaining maturities of one year or greater excluding any instruments with explicit or embedded options that would reduce the expected maturity to less than one year. Such options include those exercisable at the investor’s discretion within the one-year horizon.³⁰ |

The first two items are capital items, Tier 1 and Tier 2 capital and preferred stock with a remaining maturity of greater than 1 year as long, as the preferred stock is not subject to investor executed options that can be exercised within 1 year. The third item is all term borrowings and deposits with remaining maturities of 1 year or more, as long as the term funding does not contain an option that allows the funding to be called inside of 1 year.

As recommended in this section of the white paper, the simplified ASF would be a Level 1 UBPR ratio. It would be entirely reasonable for regulators to ask institutions to consider the impact of imbedded options in analysis performed in internal systems (Level 2). In fact, standards for interest rate risk analysis call for A/L models to consider most forms of imbedded options. On the other hand, the cost of gathering data needed to assess call options in call reports would exceed the benefit in a ratio used for this purpose. I recommend that call options be ignored in calculating Level 1 NSFRs. This is the first major simplifying assumption.

General Discussion Relating to the 90%, 80%, and 50% Categories

The following three sections beg the issue of which deposits are actually bank customer deposits. Keep in mind, I lean strongly in the direction of the definition in the FDIC Examination Manual. One of the issues in that definition is the geographic area over which the deposits are gathered in relationship to the bank’s ‘market.’ While it is theoretically possible to separate core customers from other depositors based on bank service area

definitions as employed in the implementing regulations of the Community Reinvestment Act, neither core systems nor call reports provide an effective mechanism for doing so. Issues include:

- Into which category should traditional brokered CDs or rate board CDs, where the depositors are other financial institutions, be reported. The same question can be raised about deposits gathered through various Internet marketing techniques (Bankrates.com, Google Adwords, MoneyAisle) from well outside an institution’s normal deposit-gathering area.
- Into which category should large government deposits that are either protected by collateral pledging or cleared through reciprocal networks be reported.
- Into which category should products like CDARS Reciprocal deposits that are typically gathered from local customers, but are insured to balances beyond \$250,000, be reported.

While the following section does not directly address where all of these funding sources should be slotted, it does propose guidelines that will help slot the above items and any other non-traditional funding sources that currently exist or might be developed. These issues will be discussed as we work through the next three sections.

90% ASF Factor Funding and Issues

Figure 5 indicates what is included in the group carrying a 90% factor.

| FIGURE 5 – 90% ASF FACTOR FUNDING | |
|--|--|
| <u>ASF Factor</u> 90% | <u>Components of ASF Factor</u> <ul style="list-style-type: none"> • “Stable” non-maturity (demand) deposits and/or term deposits (as defined in the LCR in paragraphs 55-61) with residual maturities of less than one year provided by retail customers and small business customers.³¹ |
| In the LCR section referenced in the above definition, Basel goes on to say: | |
| <p>55. These retail deposits are divided into “stable” and “less stable” portions of funds as described below, with minimum runoff rates listed for each category. The runoff rates for retail deposits are minimum floors, with higher run-off rates established by individual jurisdictions as appropriate to capture depositor behavior in a period of stress in each jurisdiction.</p> <p>(a) <i>Stable deposits (run-off rate = 5% and higher):</i></p> <p>56. Stable deposits, which receive a minimum run-off factor of at least 5% in every jurisdiction, are those deposits that are fully covered by an effective deposit insurance scheme or by a public guarantee that provides equivalent protection and where:</p> <ul style="list-style-type: none"> • the depositors have other established relationships with the bank that make deposit withdrawal highly unlikely; or, • the deposits are in transactional accounts (eg accounts where salaries are automatically deposited). | |

The LCR definition comes very close in concept to the definition of core deposits in the FDIC Examination Manual with the exception that the Basel definition indicates that deposit insurance is a criterion in defining deposits as stable. This category receives balances from retail (consumer) and small business deposits, including non-maturity deposits and CDs with maturities of less than 1 year that are considered to be stable. Large business deposits that are fully insured are also included in this category.

Current call reports collect data that separate fully insured deposits from those not fully insured in most cases. On the other hand, most bank systems do not have the criteria and tools designed to separate customer deposit files into pools based on the relationship criteria specified in the Basel or FDIC Examination Manual definitions.

It is our recommendation that the FDIC include all insured deposits in this category that come from sources where the majority of deposits can be assumed to be customer deposits gathered directly from customers, as long as the deposits are fully insured. Reciprocal deposits should be included in this category as they are consistent with both the FDIC Examination Manual and Basel Stable definitions.

This is the second major simplifying assumption. It is assumed if deposits are gathered through normal core deposit channels, the majority of deposits will have a relationship that would qualify under Basel relationship criteria. Because there is no mechanism to differentiate deposits raised via the Internet, as opposed to traditional marketing channels, deposits gathered from customers using Google Adwords, Bankrates.com, MoneyAisle, and other similar sources would be included in this category, as long as they were fully insured.

The following insured funding sources would be among those excluded from this category:

- Traditional brokered CDs – not typically gathered directly from customers and are clearly lacking a significant business relationship. These deposits can be easily excluded as they are currently broken out on the call report.
- Rate Board CDs – Gathered from banks and credit unions, not from retail, small business, or large business customers – again, no significant business relationship exists. These deposits can be easily excluded as they are also currently broken out on the call report.

Note that funding in the 90% ASF factor group includes all non-maturity deposits, but only the portion of term funding with remaining maturities of less than 1 year. Term funding with a maturity greater than 1 year would be reported with the 100% ASF group.

80% ASF Factor Funding and Issues

Figure 6 indicates what is included in the group carrying an 80% factor.

FIGURE 6 – 80% ASF FACTOR FUNDING

| <u>ASF Factor</u> | <u>Components of ASF Factor</u> |
|-------------------|---|
| 80% | <ul style="list-style-type: none"> • “Less stable” (as defined in the LCR in paragraphs 55-61) non-maturity (demand) deposits and/or term deposits with residual maturities of less than one year provided by retail and small business customers. |

In the LCR section referenced in the above definition, Basel goes on to say:

(b) *Less stable deposits (run-off rates = 10% and higher):*

57. Supervisory authorities are expected to develop additional buckets with higher run-off rates as necessary to apply to buckets of potentially less stable retail deposits in their jurisdictions, with a minimum run-off rate of 10%. These jurisdiction-specific run-off rates should be clearly outlined and publicly transparent. Buckets of less stable deposits could include deposits that are not covered by an effective deposit insurance scheme or sovereign deposit guarantee, high-value deposits, deposits from sophisticated or high net worth individuals, deposits that can be withdrawn quickly (e.g. internet deposits) and foreign currency deposits, as determined by each jurisdiction.

This definition appropriately places uninsured deposits into a higher runoff category. It also focuses on the fact deposits from sophisticated individuals may be less stable. As we interpret this wording, this category would include the following funding sources:

- Retail and small business deposits that are not fully insured. Note that call reports fail to provide the information needed to screen fully insured deposits into this category based on a lack of a meaningful business relationship. The call reports also fail to identify individuals who are sophisticated investors or high net worth individuals. Given call report limitations, the only retail and small business deposits that would be added to this category are balances that are not fully insured. This is another simplifying assumption.
- Traditional brokered CDs – not gathered directly from customers and lacking a significant business relationship.
- Municipal deposits insured through reciprocal networks – not a retail or small business customer.
- Rate Board CDs – Gathered from banks and credit unions, not from retail, small business, or large business customers – no significant business relationship.

In assessing whether the items listed above other than retail and small business deposits belong in this category, the FDIC should consider:

- Whether actions taken by an intermediary in the above funding sources might restrict or eliminate access to the funding source should an institution find itself under performance-based liquidity stress.
- Whether actions taken by the regulatory agencies might restrict or eliminate access to the funding source should an institution find itself under a performance-based liquidity stress.

Should either the intermediary or the regulator be likely to restrict or eliminate access to the above funding sources in performance-based liquidity stress situations, consideration should be given to moving that funding source to the 50% ASF level.

The NSFR materials do not specifically address the treatment of collateralized wholesale funding. However, there is a much more extensive discussion relating secured wholesale funding in the section of Basel III Liquidity Framework covering the Liquidity Coverage Ratio. Basel applies runoff factors ranging from 0% to 25% based on the liquidity of the collateral pledged against the source of secured wholesale funding. The runoff factors apply a haircut to the collateral assuming that if the funding source was not renewed, the collateral would be sold to fund the outflow. Pledged securities are removed from available highly liquid securities in the LCR. So sale of pledged securities to fund outflow of collateralized borrowings would not reduce asset-based liquidity as measured by the LCR. It makes sense to use the same criteria in dealing with secured wholesale funding in the NSFR as in the LCR.

The call report provides no mechanism to match collateral against secured funding sources. A conservative approach would be to assume a weighted average 20% runoff factor, or an ASF of 80% for secured wholesale funding. Doing so would allocate secured wholesale funding to this category. These sources would include, but not be limited to:

- FHLB advances
- Collateralized government deposits
- Borrowings from the Federal Reserve
- Secured Fed Funds transactions
- Other forms of collateralized borrowings

Note that funding in the 80% ASF factor group includes all non-maturity deposits but only the portion of term funding with remaining maturities of less than 1 year. Term funding with a maturity greater than 1 year would be reported with the 100% ASF group.

50% ASF Factor Funding and Issues

Figure 7 indicates what is included in the group carrying a 50% factor.

| FIGURE 7 – 50% ASF FACTOR FUNDING | |
|-----------------------------------|---|
| <u>ASF Factor</u> | <u>Components of ASF Factor</u> |
| 50% | <ul style="list-style-type: none"> • Unsecured wholesale funding, non-maturity deposits and/or term deposits with a residual maturity of less than one year, provided by non-financial corporates, sovereigns, central banks, multilateral development banks and PSEs. |

The 50% ASF funding category is designed to capture wholesale funding sources that are neither insured nor backed by collateral. This group breaks into two major subcategories:

- Deposits that are not fully insured and that are supplied by non-natural persons (other than retail or small business).
- Borrowings secured from funding sources that are not backed by collateral.

The thought process used by Basel in assigning a 50% runoff factor to large business customers is that the businesses are likely to have more sophisticated CFOs who are more likely to pull uninsured deposits from troubled financial institutions when a financial institution finds itself in a liquidity stress situation caused by performance issues.

The current call report structure has no mechanism for dealing with the Basel distinction between small and large business deposits. That break point is defined by Basel as aggregate funding in excess of 1 million Euro, approximately \$1.4 million US at the time this paper was written. There is currently no mechanism in the call report to break out balances based on this criterion. This breakout could be accomplished by adding an additional break point on the call report at \$1.5 million in addition to the \$250,000 break point that is already in place.

The major source of uninsured borrowings is the uninsured Fed Funds purchased market. When a financial institution gets into a liquidity stress environment caused by performance issues, actions taken by intermediaries cause this to be one of the first funding sources to disappear.

In the discussion for the 80% group, I mentioned that availability of certain insured non-traditional funding sources is affected by actions taken by regulators when a financial institution finds itself in liquidity stress brought on by performance issues. To the extent the FDIC and other regulatory agencies plan to continue to revoke or restrict access to these funding sources in performance-driven, liquidity risk situations, those insured sources should be placed in the 50% (rather than 80%) group. That recommendation is based on the fact the availability of these sources would be more consistent with other funding sources placed in the 50% group, in spite of the fact the funds are fully insured.

Note that funding in the 50% ASF factor group includes all non-maturity deposits, but only the portion of term funding with remaining maturities of less than 1 year. Term funding with a maturity greater than 1 year would be reported with the 100% ASF group.

0% ASF Factor Funding and Issues

Figure 8 indicates what is included in the group carrying a 0% factor.

| FIGURE 8 – 0% ASF FACTOR FUNDING | |
|----------------------------------|--|
| <u>ASF Factor</u> | <u>Components of ASF Factor</u> |
| 0% | <ul style="list-style-type: none"> • All other liabilities and equity categories not included in the above categories.³² |

The 0% ASF factor group captures all other sources of funding not identified in the earlier 100%, 90%, 80%, and 50% groups. For most financial institutions this is a relatively small percentage of funding made up of such items as accounts payable and the like.

Calculating the Available Stable Funding (ASF) Ratio

Once the funding balances on a financial institution’s balance sheet has been allocated to the 5 ASF factor groups, a balance weighted ASF ratio can be calculated. Figure 9 shows an example of such a calculation for a \$500 million institution.

| FIGURE 9 – WEIGHTED ASF CALCULATION | | | |
|--|-----------------|-------------------|------------------------------|
| ASF Group | Balances | ASF Factor | ASF Weighted Balances |
| 100% ASF | \$200 mm | 100% | \$200 mm |
| 90% ASF | 200 mm | 90% | 180 mm |
| 80% ASF | 50 mm | 80% | 40 mm |
| 50% ASF | 48 mm | 50% | 24 mm |
| 0% ASF | 2 mm | 0% | 0 mm |
| Total | \$500 mm | 88.8% | \$444 mm |

In this case, ASF weighted funding is \$444 mm on a \$500 million funding base or 88.8% of total funding. ASF weighted funding could be tracked over time through multiple call reports providing trends identifying whether an institution is becoming more or less reliant on more volatile funding over time. ASF values could also be calculated for peers, allowing values for an institution to be compared with peers, to gain a sense for the relative level of volatile funding on their balance sheet. Trends in peer data could also be used by regulators to gain a sense for whether the industry is becoming more or less reliant on less stable funding. And as pointed out earlier it could be used to replace the Core Deposits/Liabilities ratio in the Large Bank Insurance Assessment model.

Using a similar approach of working through data already available on call reports and making simplifying assumptions would also allow regulators to create an index focusing on trends in an institution and peer group averages in concentration of assets in groups requiring support by stable funding (RSF ratio), the denominator of the NSFR. This analysis could be conducted concurrently with or subsequent to development of the ASF index. Once the two studies are complete and implemented in the call report and UBPR, regulators would have a simplified form of the Basel NSFR that measures the extent to which assets requiring stable funding are covered by stable funding, a cross-balance sheet ratio that would help identify trends in the NSFR both at the institution level and peer level.

Developing these simplified NSFR based ratios at the call report/UBPR level (Level 1) would help the industry prepare for introduction of the more detailed version of the NSFR proposed by Basel, should it ultimately be adopted as an internal policy and measurement standard (Level 2) by US banking regulators. It would provide a sufficient period of time to test application of the NSFR concepts to financial institutions with ample opportunity to ferret out unintended consequences of this measure.

Recommendations at Level 2 and Level 3

Level 2 - Legislation, Regulations, and Guidance Documents

Basel III Liquidity Ratios

Earlier in this document we discussed our ABA Liquidity Toolbox recommendations aimed at banks attempting to deal with some of the measurement system and policy issues raised in the Interagency Guidance on Liquidity and Funds Management. We rejected the NSFR ratio as an internal measurement tool for reasons discussed earlier and instead recommended a dynamic sources and uses approach based on the institution's business plan or strategy with the governing ratio being the 1-year, cumulative liquidity gap/asset ratio. We made that recommendation in spite of the fact that with the NSFR coming down from Basel, there is at least some possibility US banking regulators will require use of that ratio for internal analysis at some point in the future.

While the simplified call report versions of the component parts of the NSFR AFS ratio recommended earlier in this white paper wouldn't be used directly to set policy limits at Level 2, once those ratios are developed and produced on the UBPR, banks should be encouraged to use those ratios as early warning ratios and triggers in their liquidity policies in much the same way as loan/deposit and net non-core funding dependency ratios have been used in the past.

We did recommend institutions adopt the Basel Liquidity Coverage Ratio as their primary tool for setting policy limits around their asset-based liquidity buffer and adopt the LCR as an internal tool in measuring asset-based liquidity levels. It is certainly possible that call reports could be modified to produce the LCR on UBPRs, but call report modifications would need to be fairly extensive. The FDIC has already faced this issue in the development of the Balance Sheet Liquidity Ratio in the large bank assessment rule. We see the full LCR as a Level 2 tool.

Brokered CD Definition

It is our feeling that the brokered deposit definition should be eliminated from the statutes and regulations as it has outlived its useful life as a tool for identifying volatile funding sources. I suspect that the FDIC will be reluctant to release its power under current rules to cut off access to brokered CD markets for institutions falling below well-capitalized minimums unless that power is replaced with something allowing greater power or flexibility in cases where use of any form of funding is deemed to be a part of taking on inappropriate levels of risk. Therefore, we believe the FDIC and other banking regulators should be empowered to restrict access or cut off access to any funding source a troubled financial institution may be using in what the regulator feels to be an inappropriate manner. Certainly that power exists with core funding when the regulator imposes caps on rates paid for troubled institutions. In addition to providing that general power, the FDIC might consider:

- Use the simplified ASF ratio as a factor in any deposit insurance assessment scheme so institutions with high levels of unstable funding are financially induced to address the situation.
- For institutions with performance problems evidenced by CAMELS ratings, falling below well-capitalized status, or other criteria:

- Require that institutions judged to have insufficient levels of available stable funding be required to raise their AFS ratios to a defined acceptable level within a stated time frame. We prefer this approach over current approaches that totally cut financial institutions off from a particular funding source like traditional brokered CDs. Based on the structure of the current brokered CD statutes, this sanction can be easily circumvented by switching over to a non-brokered funding source that might be every bit as volatile.
- Place caps on levels of funding at the source level for funding sources considered to be less stable.
- Continue to use interest rate caps as a tool to prevent institutions from paying high rates on core funding that have the potential to damage other financial institutions competing in the same markets.

As pointed out earlier, the likelihood of the regulator capping or eliminating access to a particular funding source (like traditional brokered CDs) should be taken into consideration in deciding whether these funding vehicles are slotted into the 50% or 80% groups in the simplified NSFR.

Dealing with Imbedded Options

One issue that should be addressed in future guidance documents is the importance of internal systems measuring the potential effect of call options on term deposits and borrowings in a liquidity stress situation. Stress tests should assume some outflow of funding, especially when CD early withdrawal penalties are less than adequate to hold onto funding. Similarly institutions should be encouraged to develop methods to separate stable from less stable funding along the lines of the Basel definition for internal reporting and analysis. It might also be helpful for the FDIC to incorporate a methodology in future guidance documents that sets minimum standards for early withdrawal penalties on CDs that would allow an institution to make assumptions relative to the level of customers likely to break CD contracts in stress situations.

Core Funding Strategies

Another issue that should have been addressed in the guidance document is the importance of developing a core funding strategy aimed at meeting core funding growth goals while managing funding costs. Core funding is identified in the guidance document as the most critical non-capital funding source. Yet most of the attention in the Liquidity Guidance document is focused on non-core funding.

There are a number of recommendations and considerations in the AFS grading scheme recommendations that heighten the importance of this portion of the liquidity plan.

- The potential factor of relative rate paid on volatility didn't make the cut in developing the final AFS grading scheme because of difficulties in collecting data on call reports and in other ways, particularly on core funding. Yet this information can be or should be found in internal systems.
- When the economy recovers it is likely that loans will begin outgrowing deposits as they have 13 out of the last 18 years. When that happens, liquidity will tighten to levels seen prior to 2008. Institutions will be competing aggressively for deposits in funding loan growth.

- The CD population is aging. When wealth transfers from seniors to Gen X, Gen Y, and boomers, the funds to a great extent are not flowing back into CDs. With my typical customer seeing 50% of core deposit funding in CDs, you have to ask where the funding will come from to fund future loan growth.
- With interest rate floors under a significant portion of bank loan portfolios (VR commercial loans and home equity), many financial institutions will see net interest margin compression for the first 200 bp of rate rise.

An effective core funding strategy and plan:

- Sets overall goals for growth in core funding.
- Sets overall goals for levels of non-core funding in the business plan.
- Is consistent with remaining inside liquidity policy limits.
- Sets goals for evolution of funding mix over time.
- Considers the nature of funding needed to mitigate interest rate risk on the asset side of the balance sheet.
- Provides a plan for meeting core funding growth and mix goals while effectively managing cost of funds.
- Provides the analytical tools to make deposit pricing decisions and to determine when it makes more sense to use non-core funding than core in funding the balance sheet. An example of the kinds of analytics that leads to more effective deposit pricing decisions was highlighted in Figures 1 and 2.

We recommend that the next time the liquidity guidance document is updated, the gaping hole in the liquidity guidance relating to the importance of developing a core funding strategy and plan be plugged.

Level 3 – Examinations

We don't see any major changes being made to the examinations themselves or to the manner in which CAMELS ratings are determined. Certainly some ratios might be swapped out in setting quantitative ratings for the "L" in CAMELS. As pointed out numerous times in this white paper, call report ratios provide a set of early warning triggers that will point examiners to the internal systems and performance areas that need to be examined in depth.

In the previous sections we pointed out a number of areas where the liquidity guidance documents might be upgraded. We also pointed out where changes at the call report level might improve examiners ability to detect developing problem areas.

Clearly the simplified NSFR components (AFS and RFS) would help examiners see trends in bank funding and asset allocation which would help identify areas where greater depth needs to be explored in examinations. The examinations themselves continue to benefit from a focus on the quality of internal systems for measuring and monitoring liquidity risk and the resulting analysis coming out of those systems.

One of the areas we would have liked to address in the volatility/stability analysis at Level 1 was the relative cost of various core and non-traditional funding sources. As pointed out in the previous section, we eliminated it as a criterion in measuring volatility/stability of various funding sources because data was not available from call reports to perform meaningful comparisons, especially as it relates to core funding.

We recommend that in the examination process, examiners review the mechanisms a bank has in place to make deposit pricing decisions and how the institution goes about making funding decisions relating to the use of non-core funding. Institutions claiming that they used non-core funding because it was cheaper overall than core funding should have analysis in place to support that decision. Figures 1 and 2 are examples of analysis tools that might be used to support a decision to use non-core funding, rather than core funding, to support balance sheet growth. Those choosing a higher-cost funding source over a lower-cost source of the same duration should be able to explain why the higher-cost source was chosen.

Finally, in the previous section we recommended a number of changes to regulation and legislation, with a particular focus on the brokered CD issue. Hopefully the changes we recommended would provide examiners an improved tool set in dealing with performance issues, particularly in the area of liquidity, without introducing some of the anomalies brought on by current legislation and regulation.