

bank reporting sciences



2011 Services Brochure

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**BANK REPORTING SCIENCES** specializes in Asset/Liability Management reporting, advising, and related analytical reporting services to financial institutions throughout the Nation. As our name suggests, we take a scientific approach to what we do. Our clientele rely on the information we produce and the guidance we offer to comply with regulatory and legal obligations, and to better manage the structure of their balance sheets through economic change. Data management, Modeling, and Reporting are all performed with utmost attention to integrity, precision and accuracy. Objectivity, constructiveness and prudence guide our educational efforts, critical observations, and tactical recommendations.

Financial modeling and advising require a rarified expertise. We possess this expertise. It has been developed over many years through research and development, and through listening to and working with hundreds of financial institutions. The solutions we provide focus on a few key areas:

- We enable our clients to comply easily, efficiently, and confidently with regulatory and legal reporting requirements;
- We perform many of the highly complex calculations, specifically in the

area of interest rate risk, that all financial institutions routinely need. We can do this with much greater efficiency, speed, and accuracy than our clients could attain internally, thus saving them time and sparring them frustration;

## What We Do



- We provide the clearest, most incisive Asset/Liability Management reporting available. Our reporting makes even the most complex ALM topics easy-to-understand and approachable for you, your ALCO, and your Board;
- We educate and advise. We help our clients better understand the financial risks they face and offer independent guidance on ways of safely structuring their balance sheets for optimal profitability.

In spite of the technical aspects of our work, ultimately ours is a relationship business. Listening to our clients, understanding their needs and providing professional solutions focused on a few key areas is what makes us specialists. **Making our clients' jobs easier and helping their institutions prosper is what we do.**

# ALM Consulting|Overview



We don't regard any bank as too large or too small for our services. Asset/Liability Management can be an exceedingly complex process regardless of the size of your institution.

Our ALM Consulting Service has one overriding purpose: **to clarify and help you focus**. Focus on properly assessing your bank's strengths. Focus on understanding and accurately evaluating your interest rate and other financial risks. Most importantly, focus on the balance sheet management tactics that can safely enhance the profitability of your institution. The regulatory aspects of ALM are very important and we take them very seriously. But make no mistake, you don't run your bank for the examiners. You run it to make a profit. Helping you do that is what we do.

## Efficient

We alleviate you from as much "process" as possible. Our services are completely outsourced. When we receive your input materials, we perform all of the analytical work, and deliver you a completed executive level report set. These serve as the basis of our ongoing consultations.

## Flexible

We understand that all banks vary in their balance sheet complexity and need for modeling sophistication. We also understand that the capability to produce clean, usable data varies as well. Rather than you adapting to a set of rigid input requirements, we adapt to accommodate the information you conveniently have on-hand. Moreover, our proprietary ALM model gets calibrated specifically to replicate the complexion of your balance sheet.

## Adaptive

Our consultations vary from client to client, and adapt as your needs change. Some clients prefer a continuous emphasis on education, routinely reviewing complex areas with increasingly greater depth. Others prefer the emphasis be placed on specific tactics they can employ, exploring the pros and cons of each.

## Key Service Points

• Service Mode:	Outsourced
• Service Frequency:	Quarterly
• Typical Turnaround Time:	5 to 7 Business Days
• Standard Delivery Mode:	Email (PDF)
• Typical Consultation Time:	30 to 40 Minutes
• "What-If" Analyses Available:	Yes
• Can Accept Call Report Data	Yes

# ALM Consulting|Modeling

BRS created its proprietary ALM modeling software specifically for commercial and savings bank applications. Less a single model and more a system of sophisticated modules, our ALM software was designed to efficiently handle an enormous level of throughput, yet be highly adaptive to the needs of a broad spectrum of financial institutions, from the small to the large, from the straightforward to the highly sophisticated. This is what enables us to model literally hundreds of individual financial institutions, each with a level of customization that rivals and often exceeds the large-scale, internal models.

## The Purpose of Our Model

Our model was designed for one overriding purpose: to look forward and identify opportunities within your balance sheet where changes in mix will increase optimization, and will materially improve profitability without creating excessive interest rate risk or liquidity risk. This information gives us an objective, scientific vantage point from which we can observe your bank, and make specific tactical recommendations.

## The Core Structure

Each institution we work with has its own database, which stores 20 quarters (5 years) of information. Initially, each bank's database is primed with publicly available Call Report data. Although Call Report data on its own is insufficient in several key areas to perform serious analysis, it is a very robust source for balance, income, credit quality, and risk-based capital data.

A series of algorithms are then applied to the Call data, which extrapolate detailed cash flows, earnings and expense rates, detailed average balances, operating expense components, and other statistics and data detail. Ultimately, the system creates from each bank's quarterly Call Report a fully propagated financial database, ready to be augmented by greater detail provided by each client.



## The Analytical Process

The analysis of each institution is a 3 stage process:

1. The ALM system establishes the Bank's current Risk, Return, and Capital profiles. Specifically, it evaluates Liquidity, Credit Quality, Profitability, Efficiency, and Risk-Based Capital.
2. The system performs a flat market rate forecast simulation of the balance sheet, and constructs the resulting income statement. This process takes into account all options resident with the balance sheet, i.e.: calls, steps, ARM resets, conversions, and prepayments.
3. Then, the system performs 6 more forecast simulations – 3 with market interest rates rising, 3 with market interest rates falling. With each simulation, the aforesaid options automatically adjust to the given interest rate environment.

## ALM Consulting|Modeling continued

The analytical process provides the means to accurately identify a bank's exposure to interest rate risk, and evaluate future earnings performance, the future liquidity profile, and future capital ratios under a series of alternative market rate environments. This robust analytical process creates the foundation from which we can scientifically evaluate, and suggest alternative tactics that make sense for a bank to consider.

### How We Evaluate a Bank

When the model completes its analysis, it intelligently searches for certain relationships, certain signs that indicate an alternative strategy may make sense for the bank. The system then automatically simulates the appropriate alternative strategy – a reasonable, real-world shift in balance sheet mix and volume that will create increased optimization within the balance sheet, and lead to better profitability without creating excessive interest rate risk or liquidity risk.

### Data Input

There are 3 tiers of Input, each successively more detailed and robust than the last. Regardless of the Input Tier, the ALM system applies specific optionality such as calls, puts, prepayments, and early withdrawals to the appropriate primary portfolio. Assumptions about optionality are updated routinely to reflect the current market rate environment.

### Basic Input

Basic Input is the absolute minimum we require to analyze an institution. Basic Input requires minimal effort to put together, and is recommended only for the smallest and least complex institutions.

1. Call Report Transmission File or ASCII Export File;
2. Internal Pricing Information for Loan and Deposit products.

### Intermediate Input

Intermediate Input offers an exceptionally very high degree of refinement to the modeling of cash flows and optionality, while still keeping input preparation time to minimum. Intermediate Input, in whole or in part, offers modeling of the various primary portfolios at the logical group level. This means that instrument characteristics (i.e. fixed rates/adjustable indices, maturity, reset and call dates, caps, and floors) are applied at the group level. Intermediate Input is recommended for institutions with total assets less than \$750 million with moderate complexity in any of the primary portfolios.

1. All Items from Basic Input;
2. Any or all existing Internal Cash Flow Hard-Copy Reports for the following primary portfolios:
  - Securities
  - Loans
  - CDs
  - FHLB Advances
3. The Annual Budget

## ALM Consulting|Modeling continued

### Advanced Input

Advanced Input offers the ultimate in analytical refinement and control. Advanced Input, in whole or in part, offers modeling of the various primary portfolios at the instrument level. This means that instrument characteristics (i.e. fixed rates/ adjustable indices, maturity, reset and call dates, caps, and floors) are all handled instrument by instrument. Our ALM system can usually accommodate pre-existing application files provided they possess the basic required data columns. Advanced Input is recommended for institutions with total assets more than \$750 million, or any institution with a high level of complexity within any primary portfolio.

1. All Items from Basic Input;
2. Any Items from Intermediate Input;
3. An Excel Spreadsheet or ASCII File detailing any or all of the following primary portfolios:
  - Securities
  - Loans
  - CDs
  - FHLB Advances
4. The Annual Budget

### Accuracy

One of the most technically challenging aspects to evaluating interest rate risk is preparing the **Earnings Simulation** - a one year, option adjusted, cash flow and reinvestment forecast that predicts your future earnings under a series of alternative interest rate environments. Nearly all of our observations and tactical suggestions flow from the results of the Earnings Simulation. You may base decisions on the results of the Earnings Simulation. The Earnings Simulation is the most important element of asset/liability management. It must be accurate.

To ensure accuracy we Back-Test. Each year, we Back-Test the Earnings Simulation we prepared one year prior against the bank's current actual earnings. Several hundred financial institutions utilize asset/liability management information from BRS. **Statistically, our Earnings Simulations are accurate to within 5% of actual.**

# ALM Consulting|Reporting

Clear. This is the word that best describes BRS' ALM ADVISOR™ asset/liability management report set. Each quarter we give you a clear, unobstructed view of where the bank is, and more importantly, what lies on the horizon. For clarity and incisiveness, ALM ADVISOR has no rivals. Created with one overriding goal: **to be user friendly**, ALM ADVISOR alleviates you from the chore of interpreting dense, complex reports that are often as thick as a phonebook, and frees you to focus on the information that is important.



ALM ADVISOR elegantly combines data, graphics, and concise qualitative customized narratives that allow you to move easily from one topic to another. One of ALM ADVISOR's most distinctive features is that it presents your actual results along side your internal ALCO targets and performance goals. If you don't have a complete set of ALCO targets or they need to be updated, that's not a problem. We can set them for you.

ALM ADVISOR has three primary sections: the **Executive View**, the **Detail View**, and the **Financial View**.

## Executive View

The Executive Overview is a 3 page "At a Glance" view of a bank's Risk, Return, and Capital profiles. The Overview is unique in that it combines succinct custom narratives with graphics, ratio data, ALCO targets, and comparative statistics. However, the Executive Overview's real power is in its vivid, highly innovative layout. Complex, and often dry, information is made approachable and easy to follow even for non-ALM practitioners, such as Board Members. This means that time is spent focusing on the information, not on interpreting reports.

## Detail View

As the name suggests, the Detail View is an in-depth 17 page look at a bank's Risk, Return, and Capital profiles. The 5 quarter trend of each key measurement is shown graphically along with its accompanying ALCO target, and accompanied by concise discussion of the meaning of the measurement and its overall relevance.

## Financial View

Rounding out the ALM ADVISOR is a 3 page section of traditional financial statements. Each financial statement provides a clean, comprehensive 8 quarter look at a bank's balance, income, and rate history. Also included in the Financial View is a detailed traditional Balance Sheet Gap report.



# ALM Consulting|Advising

Ongoing advising is a cornerstone of BRS' ALM Consulting Service. Each quarter we will schedule a 30 to 40 minute conference call with you and your colleagues to review your results and discuss relevant tactics. Our sessions will emphasize the "big picture" with specific focus on selected areas as needed. Our advice is "food for thought". Independent observations and tactical suggestions you, your colleagues and your Board can consider and weigh against your current strategic plan.

## The Investment Portfolio

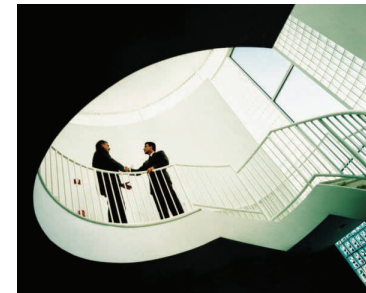
Is the portfolio optimized for the current rate environment? Are you laying the groundwork to capitalize on the next rate adjustment? Will the bank realize an excessive opportunity cost because there is too much concentration in Fed Funds?

## The Loan Portfolio

Is the loan portfolio well-balanced? Does the duration of any loan group create excessive interest rate risk? Are excessive credit quality problems creating an ongoing threat to earnings and capital?

## The Funding Portfolio

Does the bank have a balanced funding portfolio? Is your Now, Savings and MMDA pricing fully adjusted to market levels? Is the bank exploiting the benefits of effectively structured long-term debt?





## ALM Consulting|Policy Development

The ALM Policy is the framework of the ALM process. Each bank's balance sheet mix exposes it to different levels of the 3 main forms of financial risk: Interest Rate Risk, Liquidity Risk, and Credit Risk.

It is the universal goal of every bank to maximize its profitability, but do so in a manner that does not expose the bank to excessive levels of risk. The Policy defines the limits for key measures of risk, limits that have been established to specifically accommodate a bank's unique balance complexion, strategic direction, and appetite for risk.

BRS has created the ALM Policy for nearly all the financial institutions we work with. The emphasis of our standard ALM Policy is on the measures of risk and their respective limits, not on internal bank procedures.

### Standard Where It Should Be

When a policy has too many guidelines, it loses meaning, and thus its usefulness. Like our ALM ADVISOR asset/liability management report set, our standard ALM Policy was created with one goal: clarity. We have done the research to determine the optimal set of key standard risk measures.

### Custom Where It Has To Be

Not standard however are the limits established for each measure. To tailor limits to your institution, we perform a 3 year statistical analysis of your bank's balance sheet, which yields a scientific baseline of parameters for measuring risk, return, and capital. These parameters can then be further refined to allow for additional "slack", and accommodate anticipated changes in balance sheet mix and strategic direction. This approach ensures the limits established for your bank can be substantiated.

### Consistent, and Dynamic

Our standard ALM Policy was created to work hand-in-hand with our ALM ADVISOR asset/liability management report set. The standard risk measures within the ALM policy are reported quarterly in the ALM ADVISOR along with the risk limits. When the ALM Policy gets updated the new risk limits flow through to the ALM ADVISOR. We believe the ALM Policy should be dynamic, and adapt to the changing complexion of a bank. At least annually, we review the established risk limits for appropriateness to a bank's current balance sheet mix and strategic direction, and recommend any necessary modifications.

### Key Service Points

• Standard Fee:	\$600
• Typical Creation Time:	3 to 5 Business Days
• Standard Delivery Mode:	Email (PDF)
• Consultation Provided:	Yes
• Typical Consultation Time:	30 Minutes
• Customizations Available:	Yes

# Regulatory|FAS107 Fair Value Reporting

For banks with \$100 million or more in total assets, our FAS107 Fair Value Disclosure easily fulfills your year-end reporting requirement. Prepared with the same attention to accuracy as our complete ALM analysis, the FAS107 Fair Value Disclosure lets you efficiently and cost-effectively cross this requirement off your year-end to-do list.

## What We Need

- Call Report Transmission File or ASCII Export File
- Internal Pricing Information for Loan and Deposit products
- Any or all existing Internal Cash Flow Hard-Copy Reports for the following portfolios:
  - Loans
  - CDs
  - FHLB Advances

## What You Get

- The FAS107 Fair Value Disclosure Report
- The Fair Value Components Report
- Documentation of Valuation Methodologies

## Key Service Points

- |                            |                      |
|----------------------------|----------------------|
| • Standard Fee:            | \$600                |
| • Service Mode:            | Outsourced           |
| • Service Frequency:       | Annually             |
| • Typical Turnaround Time: | 3 to 5 Business Days |
| • Standard Delivery Mode   | Email (PDF)          |



# Regulatory|Canary Early Warning System

BRS' Canary Report takes the OCC's Canary Early Warning Measures to a higher level of utility. The Report elegantly combines each ratios' definition with a graph of the latest 5 quarters as compared to the OCC's benchmark. Additionally, the report also indicates in plain-English the statistical trend of each ratio and the speed at which this trend is occurring.

## What We Need

- Call Report Transmission File or ASCII Export File

## What You Get

- The Ultimate Canary Report

## Key Service Points

- Standard Fee: \$1,000 (Annually)
- Service Mode: Outsourced
- Service Frequency: Annually
- Typical Turnaround Time: 3 to 5 Business Days
- Standard Delivery Mode: Email (PDF)



# Custom|Model Validation

BANK REPORTING SCIENCES not only provides ALM modeling and reporting services directly to financial institutions, but we also validate models and the modeling and reporting services provided by other firms. Our independence, combined with our expertise in ALM for financial institutions make BRS one of the few firms in the country qualified to provide this service.

Our Model Validation service provides a completely confidential, objective, critical evaluation of your internal model or of an outsourced modeling/reporting service. We evaluate your existing process across a spectrum of categories, and grade each category using our proprietary rating system. We then offer specific recommendations for improvement in each area.

## The Validation Process

The scope of each validation varies with the size and sophistication of each financial institution. Generally though, every Validation consists of a written evaluation and specific recommendations for improvement in the following key areas:

- The data sources utilized by the ALM model or reporting service;
- Effectiveness of data mapping and data utilization by ALM model;
- Appropriateness of assumptions utilized by ALM model;
- The accuracy of the ALM model's income projections;
- The theoretical soundness of estimations of economic value;
- The overall robustness and adaptability of ALM model.

## Key Service Points

- Service Mode: Outsourced
- Service Frequency: As Needed
- Typical Turnaround Time: 5 to 10 Business Days
- Typical Report Length: 5 to 7 Pages
- Consultation Provided: Yes
- Fee Structure: Billable at \$200 per hour



## Institutional | BondSwap™

In the fixed-income world, there has never been a trading simulation tool that accurately modeled all the complexities of a swap, was exceptionally easy to use, and produced reports that made all the dimensions of a trade idea vividly clear. Until now.

Developed by BANK REPORTING SCIENCES in partnership with Griffin, Kubik, Stephens & Thompson Inc., one of the Nation's leaders in fixed income institutional sales to financial institutions, **BondSwap™** is a fixed income trading simulation model that is an evolutionary leap forward in financial technology. BondSwap expertly handles a myriad trade combinations, instrument structures, and analytical techniques. Highly user-friendly and incredibly fast, BondSwap represents a new generation in fixed-income analytics.

To learn more about **BondSwap™**, visit its dedicated website at **[www.BondSwap.net](http://www.BondSwap.net)**.



## contacting BRS



### By Phone

We welcome your phone call. Our normal hours of operation are 8:30am to 6:00pm eastern standard time. If you call and all our associates are occupied, please leave a message in general reception and we will return your call as promptly as possible.

Phone **410-799-7002**

### By Email

We welcome your email. Along with your inquiry, please be sure to include the following contact information: your name, your title, your organization's name, and your phone number.

Email **info@BankReportingSciences.com**