ASSET & LIABILITY MANAGEMENT

‘Gold-Mine’ or ‘Mine-Field’ for Banks?

An Article Published in Leading Banking Magazines

“Increasing Bank Profitability at Acceptable Risk”

Batt-Consulting

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FOR THE LEADERS OF BANKS

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SUMMARY

This article examines the nature of **asset & liability management** (**ALM**), its objectives, how it can be used to increase bank profitability, the role of advanced **asset & liability committees** (**ALCO's**), alternative approaches to ALM, the processes and systems needed, and the reasons why ALM will become increasingly important to banks.

Many traditional lending bankers feel more comfortable with customer credit risks than with ALM risks, even when credit conditions and customer margins and fees are deteriorating badly. They believe that ALM risks are dangerous and little more than speculation. Others believe it is sometimes safer and more profitable to increase dependence on ALM profits whilst reducing credit risks and the customer profits they generate. Progressive banks strike the right balance. They run ALM as a business with profits, not just risks.

With good ALM some banks have increased profits substantially. For them ALM is a "gold-mine", not a "mine-field.

THE NATURE OF ALM

ALM means different things to different banks. All would agree that it involves manipulating the asset & liability (A&L) structure of a bank but the scope and objectives of ALM vary widely between banks.

Banks have several key roles. One obvious example is to handle payments. Another is "intermediation" - banks gather deposits and lend the money to those people and organisations that need financing. Typically, the cost to banks of deposits is less than the yield on loans so the banks are rewarded with a margin, the loan margin. The main risk is the credit risk associated with lending to customers. A more subtle but equally important role is "transformation":

- **Transforming Maturities**: Banks typically collect deposits and other liabilities of shorter maturity and lend and invest the money for longer periods. They mismatch maturities. If longer term interest rates are higher than shorter term rates, banks may improve their net interest margins. However, they incur interest rate risk and may lose money if rates change unfavourably.
- **Transforming Currencies**: A second role is to gather liabilities in some currencies and lend and invest in others. In so doing, Banks probably expose themselves to currency risk. If currency rates move favourably, higher profits may result but the reverse could happen.
- **Transforming Cash Into Investments**: Banks use deposits and other funds to buy marketable securities and make other investments. This creates market price risks but may also enhance net interest margin.

Evidently, a bank's intermediation and transformation activities can improve net interest margin but they also create risks, mainly the credit risks and market risks (the interest rate, currency and market price risks referred to above).

As banks adjust the mix of maturities, currencies and investments in their balance sheets they must keep market and credit risks, and liquidity, under tight control whilst trying to increase net interest margin. This is the heart of good ALM.

The scope of ALM varies markedly between banks in terms of the liabilities and assets considered:

- In some banks ALM has a narrow scope. It focuses mainly on the management of liquidity assets. Other banks include the investments owned by the bank (proprietary investments). ALM usually does not cover credit policy, the balance sheets of subsidiary companies or those in other countries even though these might be large. Trading activities, such as foreign exchange trading, are given limited attention by ALM. As ALM progresses it often widens to cover all liabilities and assets in the home country managed by the Treasury Division.
- More advanced banks consider the balance sheets of all customer and treasury divisions at home and abroad. Trading is included but limited attention is given to owners' equity, fixed assets and subsidiaries' balance sheets.
- Leading banks use a broad definition of ALM that covers the high level management of all balance sheet items, both on and off-balance sheet. It embraces shareholders' equity, customer deposits, money market and other liabilities, liquid assets, customer credits, money market lending, proprietary investments, fixed assets, and trading activities - all at home and abroad and in subsidiaries.

Using the broadest definition, ALM focuses on managing the total A&L structure with the aim of increasing net interest margin, including credit margins, whilst keeping all the resulting risks at acceptable levels. Batt-Consulting encourages banks to adopt the broadest definition. This holistic approach helps to ensure that they can detect, assess and control the full range of risks and find many opportunities to increase profitability by manipulating A&L structures.

THE OBJECTIVES OF ALM

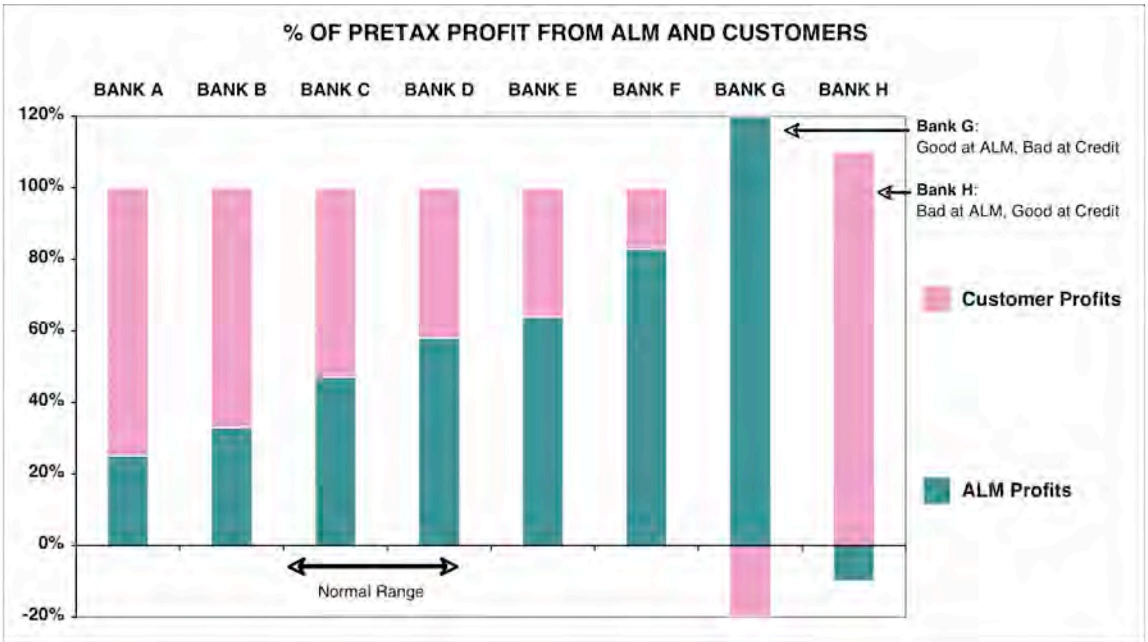
The objective of ALM can be primarily to control risks or to increase profitability whilst keeping risks reasonable. The main objective usually evolves as the scope of ALM becomes broader:

- Banks at an early stage of ALM, still the majority, view ALM primarily as part of overall risk management. They focus on monitoring, avoiding and minimising market risks. Their appetite for taking these risks is small. Attention is paid to compliance with risk limits set by the regulator(s) but few extra, more flexible, limits are set by the banks themselves to improve risk control.
- A smaller but growing number of more progressive banks see ALM as a powerful way to increase profitability at acceptable risk. They wish to be rewarded for the transformation they provide and the risks involved. Their appetite for market risk-taking is bigger in suitable market conditions. Risk limits are adjusted accordingly. ALM considers all asset and liabilities and all the associated risks. They run ALM as a "business" that, just like any business, including lending, has risks but can generate large profits.

These progressive banks know that they have two very different streams of profits and risks:

- "Customer Profits" – those profits that come from having customers that provide deposit margins, lending margins, fees, commissions and charges. This is the reward for intermediation. The main risk is credit risk.
- "ALM Profits" – those from mismatching maturities, taking currency positions, and holding and trading marketable securities and other assets. This is the reward for transformation. Here, the main risks are the market risks.

The following chart shows for a sample of 8 banks the proportion of total bank profits that come from each stream:



Drawing this chart requires good information about the profits from customers and ALM. Banks with advanced ALM have it and they use special transfer rate systems to produce it routinely. Armed with this information, they take explicit decisions about how these profit streams should be balanced. This is an important decision for their ALCO. Sometimes ALCO judges that the risks and profits from the ALM business are more attractive than those from the credit business, for example, when credit conditions are deteriorating. They set policies to expand ALM earnings and reduce credit earnings and risks. With skill, these policies can permit banks to enjoy both larger and less volatile profits. This usually enhances a bank's share price.

Batt-Consulting has never found a bank in which ALM profits (which exclude customer credit and deposit profits) contribute less than 25% of total bank profits. This assumes that profits are measured correctly which, commonly, they are not. 40% to 60% is normal. Some banks get most of their profits from ALM and may even lose money on lending.

The CEO of one bank refers, colourfully, to his "two racehorses" - his "customer horse" and his "ALM horse" - to remind colleagues that each presents very different opportunities and risks, and that they must compete. He and his ALCO pay close attention to both and get the balance right. This is the key reason why his bank enjoys high and stable profits.

INCREASING BANK PROFITS WITH ALM

There are many ways to increase bank profitability with effective ALM. They focus on cutting the cost of liabilities, increasing asset yields and thus increasing net interest margin whilst keeping market risks reasonable. Examples are:

Hunting for Cheaper Funding

The cost of customer deposits varies considerably by product, maturity, currency and market segment. This is because interest rates paid and operating costs involved are different. Capturing cheaper deposits usually makes good sense but this could increase mismatching of the balance sheet and thus interest rate and currency risks. ALCO might need to consider changing asset maturities and currencies to keep the mismatch reasonable. This is where ALM policy and marketing strategy interact. To keep them compatible, marketing people should be involved in selected ALCO meetings. Importantly, if a bank can develop a fine reputation for its ALM, its rating may be improved by the rating agencies. This is likely to reduce the cost of inter-bank funding which can have a very favourable on bank profitability.

Advancing Credit at Higher Rates

As with deposits, the true yield on lending also varies by product, maturity, currency and market segment. Interest rates, bad debts and operating costs all vary. A bank may be tempted to sell more of its higher-yielding loan products but this might increase mismatching and reduce liquidity. Changes might be needed to the liabilities side of the balance sheet. Clearly, ALM and credit policies need to be aligned and this means top credit officers should attend ALCO meetings.

Reducing Excessive Liquidity

Regulations and reputation require banks to hold sufficient liquid assets but these yield little or no return. Sometimes banks may have the opportunity to choose higher-yielding liquid assets or to redeploy excessive liquidity into other assets that are more remunerative. Such moves might increase bank profitability but they need careful consideration.

Reducing Excessive Fixed Assets

When a bank buys a branch, a head office, a computer or other fixed assets it ties up money in assets that produce no direct return. The money could otherwise be lent to customers or invested. Wise ALCO's consider selling and leasing-back buildings and leasing equipment and then redeploying the money freed up more remuneratively.

Investing in Higher Yielding Investments

Most banks have a diverse portfolio of investments which can include bills, bonds and equities, including shares in subsidiary companies and affiliates. The yields on these investments almost certainly are very different as are the risks. Both vary over time. As a result, opportunities arise to restructure the portfolio to increase returns. In addition, the portfolio yield might be more, or less, than available from other assets such as customer or inter-bank lending. Clearly, keeping investment strategy up-to-date is another challenge for ALM.

Reducing Intra-Group Funding Costs

Most banks have subsidiary companies which need to be funded. Perhaps a subsidiary has its own funding sources but it might be cheaper for the parent bank, or another subsidiary company, to provide the funding. In a similar vein, an international bank has funding sources in different countries and currencies across which funding costs vary. This presents an opportunity to increase funding from cheaper places and channel the funds to others where asset yields are higher. Optimising intra-group funding is often a major opportunity for banks and one that ALCO's should consider.

Gearing-Up Capital

The ratio of some banks' total liabilities to shareholders' funds is only 5 or 6. More commonly it is 8 to 10 but it can be much higher. Higher capital gearing implies banks are doing more business which should lead to higher profits. If there are few opportunities to gear-up capital by increasing customer deposits and loans, many banks can increase interbank deposits and loans. However, if interbank maturities are matched, little extra profit and probably a loss is generated because margins from matched inter-bank deposit-taking and placing are small or negative. The key is to mismatch the extra balance sheet. Of course, risks increase and, if things go wrong, the return on shareholders' funds can suffer. Equity may even be reduced or wiped out. Finding the best balance is a key challenge for ALM.

Grasping the above opportunities is a central part of ALM. The opportunities are straightforward to understand. In practice, poor information and lack of time for ALCO are often problematic with the result that ALCO meetings and ALM policy can be incomplete, confusing or wrong. To be effective, ALCO's need strong analytical support.

THE ROLE OF ALCO

Today, most banks have an ALCO but the different objectives for ALM can be seen vividly by observing them in action:

- The ALCO's of less advanced banks focus on ALM risks:
  - They meet infrequently, typically once a month. Meetings are short - 1 or 2 hours
  - Information about risks may be adequate but information about ALM profitability is missing or wrong
  - The time available for testing alternative future ALM policies is inadequate and policy-testing tools are weak
  - The main output from ALCO's are limits to restrict risk-taking and these limits are not updated often to reflect changing market conditions and expectations
  - Decisions by ALCO mainly mimic competitors and show little strategic initiative
  - Limited attention is given to explaining ALCO decisions across the bank
  - Similarly, little time is devoted to ALM training for the board, ALCO members and other executives
- By contrast, the ALCO's of more advanced banks focus on increasing profitability as well as controlling risks:
  - ALCO's meet weekly or more often if market opportunities and risks make it worthwhile. Meetings are longer
  - Information about both ALM profits and risks is plentiful, up-to-date and correct
  - Advanced tools are used for cash flow management and stress-testing
  - Sophisticated computer models help ALCO's choose the best ALM policies
  - These ALCO's produce comprehensive ALM strategies, budgets and risk limits which are updated regularly
  - Considerable time is devoted to communicating ALCO decisions to customer divisions and treasury units, including those abroad in international banks
  - Importantly, much attention is spent on ALM training, starting with the board and ALCO but moving on to people in treasuries, customer divisions, human resources (which recruits ALM specialists and organises training), information technology (which procures the necessary IT systems) and internal audit

ALCO's are often seen as obscure, technical and mysterious committees when first launched. Eventually, they usually rise to be one of the most important committees. They have a strong influence on policies produced by others, including credit and marketing committees.

Batt-Consulting often observes confusion at ALCO meetings in less advanced banks. Chiefly, this is because of lack of understanding, poor information and weak analysis. Unsurprisingly, these ALCO's usually produce few or confusing ALM strategies and policies. Other managers complain that ALCO is a "black-hole" - much goes in but little comes out!

Our experience is that ALCO's only work well when they are supported by a small but high quality team of ALM analysts - an ALCO Support Group which has the following main responsibilities:

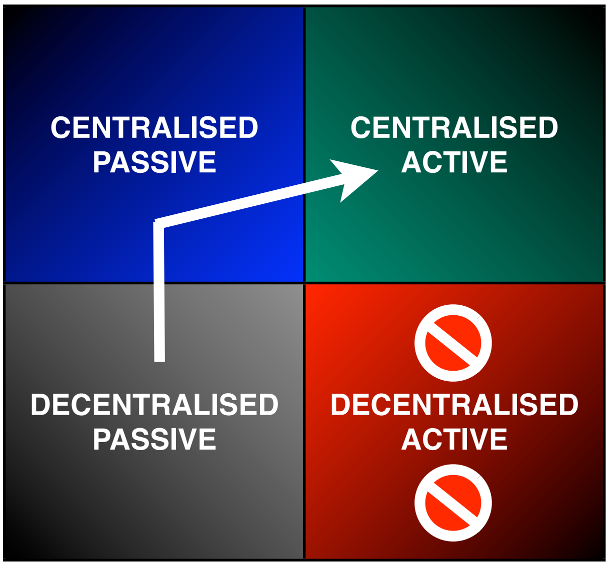
- Gathering information about the A&L structure, rates and prices of the bank and its competitors, understanding the reasons for the recent ALM performance of the bank and its competitors, and assessing the implications of regulatory changes that affect ALM
- Developing a longer-term ALM strategy which covers A&L structure, trading, investment and how the bank's organisation structure, skills and systems should evolve in support of ALM
- Coordinating the provision of forecasts of interest rates, currency rates and yields on marketable securities
- Developing shorter-term ALM policy directives, including revisions to risk limits and pricing policies
- Proposing to the chairperson of ALCO agendas for its meetings and explaining all the subjects above at ALCO
- Recording ALCO decisions, explaining them to units across the bank which need to know, checking compliance with ALM policy, and triggering any corrective action needed
- Defining and procuring ALM training needed by the board, ALCO members and other executives

The ALCO Support Group is not a profit centre and is best located in the Finance, Risk Management or Strategy function but not in Treasury which, as a profit centre, should be subject to independent review.

ALTERNATIVE APPROACHES TO ALM

Four main approaches to ALM can be found in banks: decentralised-passive, centralised-passive, centralised-active and decentralised-active. In this context, decentralised means that top management spends little time on ALM and leaves it to lower levels. Centralised means the top team is heavily involved. Passive indicates a low appetite for market risk. The aim is to avoid it. Active banks are keen to take market risks.

Most banks start as decentralised-passive. Some move on to one of the other approaches. Becoming centralised-active is the goal of progressive banks:



Each approach is distinctive in terms of the board's appetite for market risk, the time devoted by ALCO, the ALM policies produced by ALCO, organisational arrangements for ALM and, crucially, the size and volatility of bank profits:

Decentralised-Passive

These bank's fear or ignore market risk. They do not fully understand ALM and devote little time to it. ALM is seen as "fashionable" and chiefly as risk control - not as a business that can make money at acceptable risk. ALCO, if one exists, produces no explicit ALM strategy and few useful ALM policies. ALM profits and risks cannot be measured properly, if at all. Profits and profitability are usually volatile because the A&L structure is rigid and often wrong for market conditions. Profitability is significantly less than it could be. Many banks are still decentralised-passive.

Centralised-Passive

Wise banks start to upgrade ALM by first becoming centralised-passive. In this phase, there is still great caution about taking market risks. ALCO spends much more time on ALM and concentrates on upgrading ALM skills and systems and then on formulating ALM strategy. Careful preparations are made for the bank to move safely to the centralised-active approach. Because these banks are passive their A&L structure is not changed often so profitability remains volatile and less than it could be. Their risk/reward profiles remain unchanged. A considerable number of banks are now centralised-passive. Some are moving on to centralised-active which is when real benefits are realised. Others remain stuck in the centralised-passive phase and gain little.

Centralised-Active

Progressive banks run ALM as a business that generates profits and involves risk-taking. They adopt the centralised-active approach. ALCO's devote much time and, when market conditions are right, they actively take controlled market risks. They ensure, continuously, that their ALM strategies, policies and methods lead to higher profits and acceptable risks. These banks normally enjoy bigger and less volatile profits.

Decentralised-Active

The most dangerous approach to ALM is decentralised-active. It should be avoided at all times. Top management gives little time to ALM. It allows lower level mangers to manipulate A&L structures and trading positions, sometimes without adequate controls. ALM and total bank profits are very volatile and may even plunge into disastrous loss. Even famous banks have suffered this way - some even died - as can be seen from the newspapers. They failed to see the perils.

ALM PROCESSES AND SYSTEMS

For centralised-active ALM, banks need to install several key processes and systems:

Understanding the Current A&L Structure

Obviously an ALCO can only function well if it understands its A&L structure. It is surprising how difficult this can be in many banks. All assets and liabilities need to be classified by type of instrument, maturity, currency and market segment. Maturities present special problems because there are three types that must be known: original maturities (usually required by regulators), remaining maturities (key for liquidity management), and maturities to next repricing dates (essential for interest rate risk management). These types of information cannot be easily produced by some banks. This forces them to upgrade their accounting and IT systems.

Measuring ALM Risks

There are several measures of ALM risks. The most basic include maturity gapping reports, open exchange position reports, duration concepts, static sensitivity and dynamic sensitivity analysis. More advanced banks use value-at-risk (VAR) models. The efficacy of all these measures depends on having a flow of good information about A&L structures, interest rates and currencies. Not surprisingly, this is an extra reason why many banks upgrade their accounting and IT systems in support of ALM.

Measuring ALM Profitability

Banks which choose to run ALM as a business need to know the profits and profitability that come from ALM decisions. Without this they cannot balance profits against risks. Only seeing the risks may result in them being over-conservative. This is self-evident but the great majority of banks still cannot measure ALM profitability. To do so, they need a special system of transfer rates for calculating margins on assets and liabilities. The “mark-to-market” system is preferred by advanced banks and the “dual pool rate” system gives a reasonable, high-level, approximation. Most banks measure margins using a “single pool rate”, “psychological rates” or a “cost-of-funds” system. None of these measures ALM profits which are, falsely, attributed to loans which therefore appear to be more profitable than they really are. The “cost-of-funds” system is particularly common but gives incorrect measures of product, customer, market segment and branch profits. It is seriously misleading, even dangerous. It can give incentives to increase already-big mismatching.

Forecasting Rates

Forecasts of interest rates, exchange rates, yields on bonds and other investments are essential if an ALCO wishes to explore the impact on profits and risks of alternative ALM policies. Such forecasts can be made inside the bank but they can be bought from specialised companies and universities in some countries. Whatever the sources, forecasts need to be assembled, circulated, explained and challenged. Banks with advanced ALM pay close attention to forecasting accuracy, the success of which is rewarded well to encourage greater accuracy.

Testing Alternative ALM Policies

At the heart of ALM policy testing is forecasting a bank’s A&L structure and profit & loss account, making assumptions about the run-off and replacement of asset and liabilities, future rate movements and alternative ALM policies. To gain real insight, many scenarios need to be examined. Doing the calculations for just one scenario is time-consuming enough. Repeating them for many scenarios is just not feasible without a computer model. More basic models can explore scenarios one at a time. They are useful. Alternatively, Monte Carlo risk simulation models explore thousands of scenarios in seconds. They are preferred by leading banks.

Communicating ALCO Decisions

ALCO decisions are often profoundly important and have a major impact on bank performance. They can also be complicated to explain and yet, without clear explanation, they are likely to be implemented badly or not implemented at all. Some banks do a poor job which means the work of ALCO is wasted. Others make impressive efforts to explain their ALM policies. This involves clear written policy guidelines (preferably using charts as well as numbers!), online access to ALM policies, and presentations. Handling communications is a key job for ALCO Support Groups.

Batt-Consulting has helped many banks to install or upgrade the preceding processes. Time and investment in training and new systems are the main investments. The payoff is normally handsome - greatly increased ALM and bank profitability and less volatile profits.

THE GROWING IMPORTANCE OF ALM

Some banks took their first steps to advance ALM 40 years ago. Others have yet to start! Progress has been steady but the pace of development is speeding up and looks set to continue for several good reasons:

Reduced Dependence on Lending Profits

Customer lending margins have been declining for years in many markets - the result of fierce competition. Periodically, credit conditions are so bad that bank profitability suffers greatly. Some banks consider that lending is a tough business on which they should not be over-dependent. Some try to boost fee income. Others turn to ALM. The best do both.

Growing Customer Sophistication

Customers increasingly want to benefit from changes in interest rates and currencies. They are becoming "treasurers". Certainly, this is true of corporate customers but even retail customers, particularly when rates are high, now appreciate the opportunities. If they foresee interest rates rising, they prefer fixed-rate short-term deposits and longer-term loans. This is evident from the growing proportion of fixed rate instruments in many banks' balance sheets. This trend gives banks the chance to design and sell more fixed rate A&L products. In turn, this means they can manage their maturity structures and interest rate risks more flexibly. Similar considerations apply to products in different currencies.

Better Equipped Bankers

As customers have become more sophisticated so too have bankers who are better educated than before. More are intrigued by ALM and have the analytical skills to deal with its complexities. Some can even handle the mathematics of derivative instruments which can be used to hedge as well as take market risks. At the same time, the quality of bank information and communications systems has improved. Advanced ALM was not possible without these systems. They are available now and will continue to get better.

Better Decision-Making

Banks that understand ALM, especially those that can measure ALM profits separately from customer profits, have a great advantage. They have much more accurate information about the profitability of products, individual customers, market segments, branches and ALM. Important decisions about marketing strategy, credit policy, loan pricing, opening and closing of branches are much easier and more reliable. Even decisions about organisation structure, recruitment and training, and IT investment are more rational when the importance of ALM is understood.

Higher Profitability

The big prize from centralised-active ALM is the extra profit that results. Batt-Consulting has seen banks increase profits by over 50% and, in some cases, double profits. This has come from wiser, continuous and more flexible management of the balance sheet. Profitability, return on shareholders' funds, can also be increased greatly. This is because of the capital needed to back market risk-taking. In some countries the regulatory capital required is still determined only by the size and quality of a bank's loan portfolio. The regulations do not specify that capital is required to take market risks. This presents banks with the chance to make money without capital! Some see the opportunity and grasp it. Even under the Basel 2 capital adequacy accord there is an opportunity to have less capital-backing for market risk-taking. This is because the capital required is influenced by value-at-risk models. If a bank can persuade its regulator(s) that it has a reliable model, it may be permitted to have less capital. An identical bank with no model, or a poor one, would need more capital. Both banks would have the same business and profits but the first one would need less capital. Its return on regulatory capital would be higher. The best ALCO's exploit the opportunities from advanced models.

SUMMARY

ALM in progressive banks focuses on the total A&L structure with the aim of increasing net interest margin, including credit margins, whilst keeping all the resulting risks at acceptable levels. It is run as a business. There are usually big opportunities to increase profitability and keep it more stable. Some banks have increased profits by 50%+. A few have doubled theirs. ALM can be a "gold-mine"! ALCO's govern ALM but can only be effective with high quality information and analytical support. More banks are now centralised-active. No bank should ever become decentralised-active, not even temporarily. It is dangerous as the records show. For success, several key processes are essential and might require a bank to upgrade accounting and IT systems. ALM training is often essential for boards, ALCO members and other executives. Powerful forces ensure that ALM will become increasingly important.

ABOUT THE AUTHORS

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Milan is a Senior Consultant with Batt-Consulting.

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He has masters degrees from the Universities of Cambridge and London and holds the Diploma of the Imperial College of Science & Technology.

ABOUT BATT-CONSULTING

Batt-Consulting is a specialised management consulting and top-level training firm that serves banks, worldwide. Based in the UK, it was founded in 1990.

The firm's main mission is to help banks "increase profitability at acceptable risk".

The following services are provided in support of ALM consulting work for banks:

The Progressive ALM Methodology: "PALM"

- PALM pinpoints the action needed by a bank to reach world-class standards of ALM
- Bank CEO's appreciate PALM because it deals with both broad policy issues and more detailed aspects of ALM
- PALM is objective, rigorous, inexpensive and quick to apply - normally 2 to 4 weeks is sufficient

Seminars About World-Class ALM

- These general management level seminars are for all senior bankers, not just ALM and treasury specialists
- The seminars are normally 3, 4 or 5 days long

Workshops About Transfer Rate Systems in Banking

- These specialised workshops are for those who need to produce or use accurate profitability and risk information
- They are highly relevant to banks that wish to measure ALM, product, customer and branch profitability correctly
- They are normally 2 or 3 days long

Brochures about these services are available from Batt-Consulting or its website:

www.batt-consulting.com

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