SUNGARD AMBIT

GLOBAL ALM PRACTICES SURVEY

May 2007

"Banks that wish to remain competitive must keep up with the latest developments in risk measurement and management… One of the most important sound practices for a banking organization is the tying of risk exposure to capital… by more clearly defining risk exposures and identifying the causes and controls for their losses, bank management can more effectively integrate decisions about risk-taking into their strategic and tactical decision-making."

Governor Susan Schmidt Bies,
U.S. Federal Reserve, March 29, 2006

"Liquidity regulations should be based on qualitative approaches designed to foster sound enterprise risk management, not prescriptive, quantitative requirements."

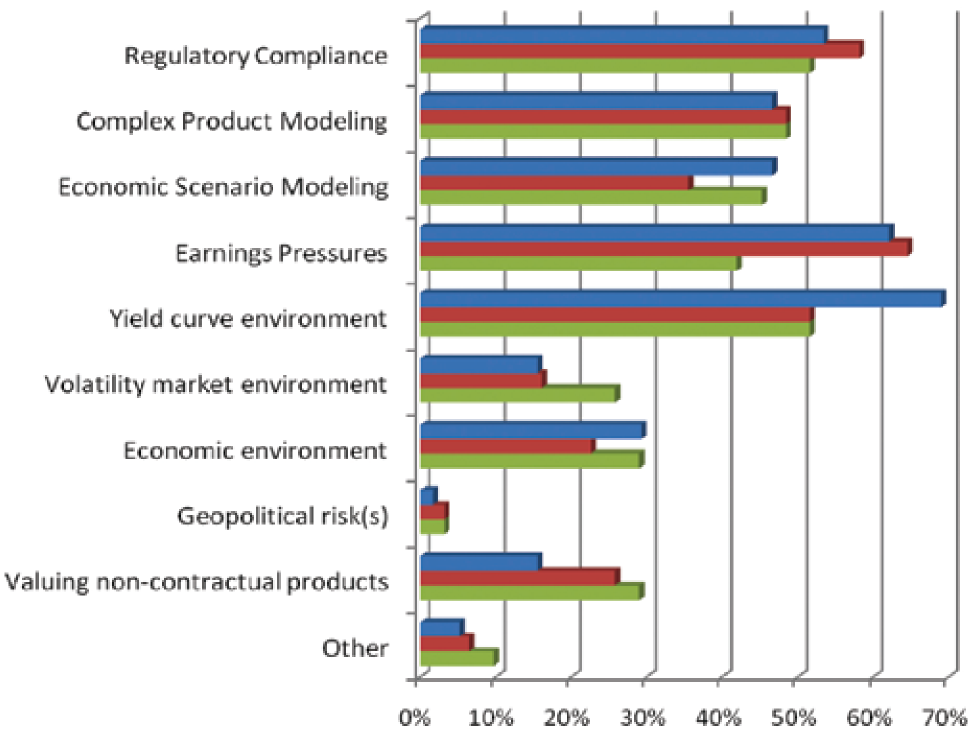
Principles of Liquidity Risk Management, Institute of International Finance, March 2007

EXECUTIVE SUMMARY

The demands of today's marketplace will require a more proactive and integrated view of balance sheet risks and returns; measuring the efficiency of capital utilization subject to a firm's consolidated risk and return appetite remains of utmost importance for banks of all size. The constant evolution of balance sheet risk management is quietly occurring in banking institutions across the globe. Though perhaps not the stuff of newspaper headlines, there are interesting developments and challenges afoot in the practice of asset/liability management (ALM). SunGard's annual Global ALM Practices Survey is designed to highlight these for the international banking community.

In the findings of our most recent survey – fielded during the first quarter of 2007 – we can observe that ALM structure and ALCO practices are shifting from finance-focused to risk-based. However, current practice is still dominated by a focus on earnings and deterministic interest rate environments. We also see causes for caution as well as encouragement.

Respondents shared their top concerns:



SunGard's 2006 Global ALM Practices Survey:

- **131 banks surveyed around the world**
- **70% of respondents based in North America**
- **30% of respondents based in Europe, Asia Pacific and Latin America**
- **45% of respondents from banks with assets of up to $15bn**
- **46% of respondents from banks with assets above $15bn**

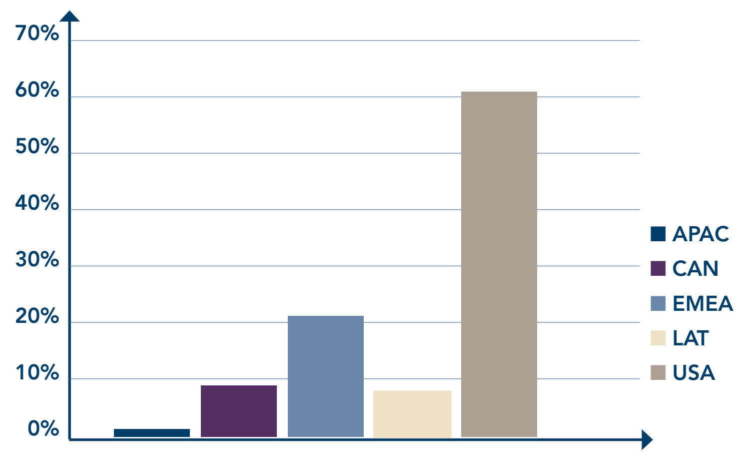
PARTICIPANT PROFILE

Participation in the study was global, with over 130 respondents spanning 22 countries, who provided their input via the Internet in response to a targeted email invitation.

By geographic region, respondents hailed from:

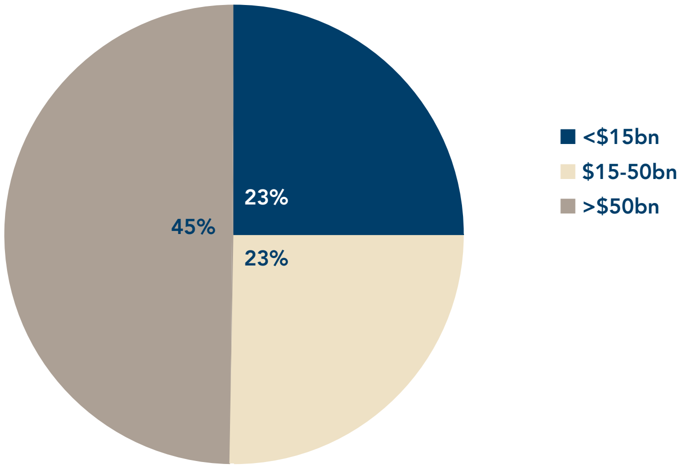
- USA
- Canada (CAN)
- Latin America/ Carribbean (LAT)
- Asia/Pacific rim (APAC)
- Europe/Mid-East/Africa (EMEA)

Chart 1: Geographic Location of Respondents



There was significant representation by institutions of all asset sizes, with 45% percent identifying their asset size as less than $15bn.

Chart 2: Respondents by Asset Size



KEY FINDINGS OF THE SURVEY

The demands of today's marketplace will require a more proactive and integrated view of balance sheet risks and returns; measuring the efficiency of capital utilization subject to a firm's consolidated risk and return appetite remains of utmost importance for banks of all size. Beyond regulatory compliance, the drive toward improved risk measurement and governance is in response to several factors:

- Markets are becoming more liquid, and portfolios, positions and the idiosyncratic attributes of portfolios are becoming more tradeable.
- Components of risk that historically have not been "actionable" are being made increasingly liquid through advanced financial engineering and structuring tools, new financial models and methods, enhanced communication and technology, and improved data analysis capabilities.
- Richer sets of risk management tools – such as structured investment vehicles, credit derivatives and loan and credit risk trading mechanisms – are necessitating that internal risk measurement and pricing systems be consistent with market-based pricing mechanisms.

ORGANIZATIONAL ALIGNMENT

To keep pace with industry changes, many financial institutions are embracing the principles – if not the prescriptions – of advanced risk management as advocated under emerging policy regimes, such as the Basel II Capital Accord. They are beginning to acknowledge the importance of enhanced governance around risk-based pricing and economic value creation, considering the risk-based capital attributed to deals as well as costs and returns. Ultimately, banks are starting to move from a "buy-fund-and-hold" mentality (a "warehouse" for risk) to "buy-decision-and-act" (a "weigh-station" for risk). In support of this evolution, the quantitative risk measurement, data analysis and reporting tools associated with ALM increasingly inform strategic enterprise-wide decisions which – in turn – is influencing the organizational alignment around ALM.

The past year has seen a significant shift in the location of ALM responsibility within banking organizations. The 2005 survey indicated a nearly even split between the Treasury and Finance groups. In 2006, ALM ownership was clearly flowing away from Finance towards Treasury (56%) and Risk Management (27%) functions.

Location of ALM	2005	2006
Treasury	45%	56%
Finance	44%	24%
Risk Management	6%	27%
Other	8%	2%

Table 1: Location of ALM

The increased ownership by a dedicated Risk Management function is not as evident in banks with assets under $15bn, possibly because they are less likely to staff such a function.

When it comes to the size of banks' ALM departments, there is consistency of results across banks of varying asset sizes. For both data management and forecasting, banks with less than $50bn in assets most frequently have 1 or 2 dedicated people. For the largest banks, each of these groups may regularly range from 1 to 3 people. Banks of all sizes reported 1-2 personnel performing strategy and risk activities.

ALCO PRACTICES

Looking at the composition of banks' asset/liability management committees (ALCOs), the survey continued to find CFOs and Treasurers best represented (85% each), followed by ALM Managers (79%) and CEOs (76%). Only 50% include line of business managers. 45% of banks now have CROs on the committee, a remarkable leap from 6% in 2005, in keeping with the shift in functional responsibility to Risk Management groups. Over seventy percent of banks surveyed said their ALCOs meet monthly, with eleven percent meeting weekly and the remainder quarterly or at other intervals.

Certainly today the most important responsibility facing the committee is developing an intuition as to how the bank's business, departmental activity and market movements will influence earnings, both today and over an appropriate forecast horizon. Therefore, current ALCO practice still emphasizes earnings, including current year plan, the impact of month-to-month changes to forecast on net interest income and net interest revenues, and the sensitivity of margin and net interest revenues to changes in market risk factors such as the yield curve and various driver rates. However, over time, the ALCO will be expected to embrace a much more active balance sheet management philosophy that includes active risk management strategies across the traditional asset/liability, liquidity and credit risk groups.

Primary Focus of ALCO	% of total
Assessing earnings at risk profile	43%
Discussing and validating business plans (rate, volume, and mix)	16%
Assessing economic value at risk	12%
Reviewing changes to forecasted earnings	12%

Table 2: Primary Focus of ALCO

Given that over 70% of ALCOs meet monthly, it is to be expected that reporting frequency is similarly concentrated around that time horizon. A large majority of respondents are using the full range of reporting tools available, from the most simple (repricing gap – 88%) to the sophisticated (duration of equity – 82%). Other popular reports include income simulation (98%) and liquidity gap (85%).

ALCO POLICY

47% of respondents base their risk metrics on current rates as if unchanged over time. 51%, on the other hand, make certain assumptions about future rates when calculating earnings risk vis a vis policy limits.

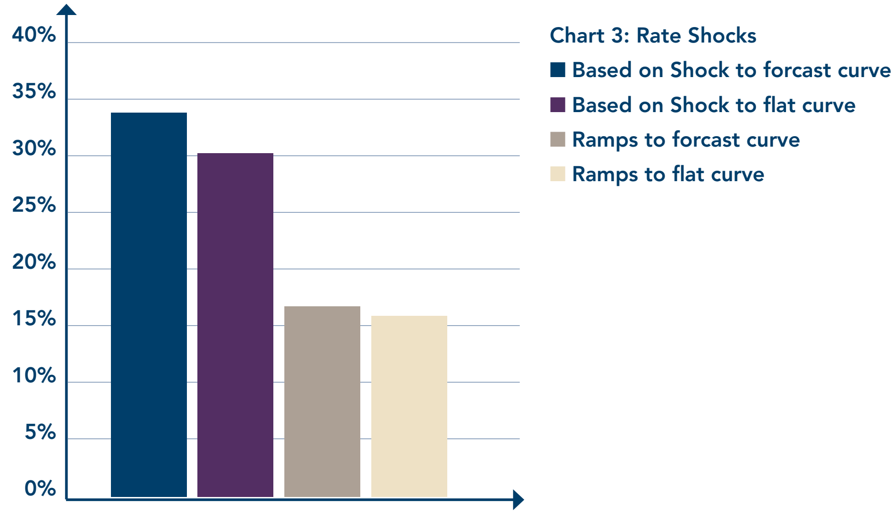


Chart 3: Rate Shocks

The large majority of respondents (58%) report setting policy limits around a balance sheet that includes growth from the forecast.

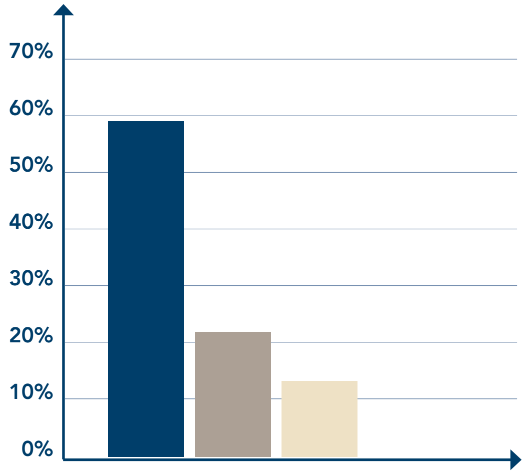


Chart 4: Interest Rate Risk Policy Limits
- Growth according to the forcast
- Flat balance sheet
- No new busines; balance run-off

Respondents indicated that in addition to standard policy-based risk scenarios, the ALM groups at some banks are evaluating other scenarios, of which the most popular is non-parallel yield curve sensitivity (76%). Interestingly, despite the explosion of credit products that influence pricing and allow banks to better manage balance sheet risks, credit risk modeling remains outside the scope of ALM.

Tests Performed	% who perform
Non-parallel yield curve sensitivity	76%
Key rate sensitivity	56%
Shock to market implied forward rates	55%
Risk analysis based on principal component analysis	22%
Scenarios reflecting shocks / shifts to credit spreads	14%

Table 3: Common Risk Analysis Performed by ALM Group

HEDGING AND CALIBRATION

As much of a bank's balance sheet is still based on historical cost accounting, most accrual book hedging is cash flow – not fair value – and most treasurers, accrual risk managers and executives look to flow measures of risk first and then to valuation of stock measures. As a result, simulation of accrual cash flows has been, and continues to be, the dominant theme for ALM risk measurement.

Valuation is critical for accrual book risk management, but for reasons quite different from the trading book. Trading risk is mark-to-market and short-term in horizon. Accrual book valuation is critical along 3 primary dimensions:

- Impact to capital due to VaR of portfolios that flow through capital via other comprehensive income (OCI)
- Accurate valuation for FAS 133 and IAS 39 hedge effectiveness
- Quick and reasonable marks in evaluating "what-if" strategies

Given the emphasis on assessing the earnings profile of the institution, it is understandable that 51 % respondents reported their key hedging objective is mitigating aggregate earnings volatility. Converting repricing gap priorities (24%) and mitigating portfolio value at risk (18%) were distant runners-up. Interestingly, these priorities were consistent across banks of all asset sizes.

Chart 5: Hedging Priorities

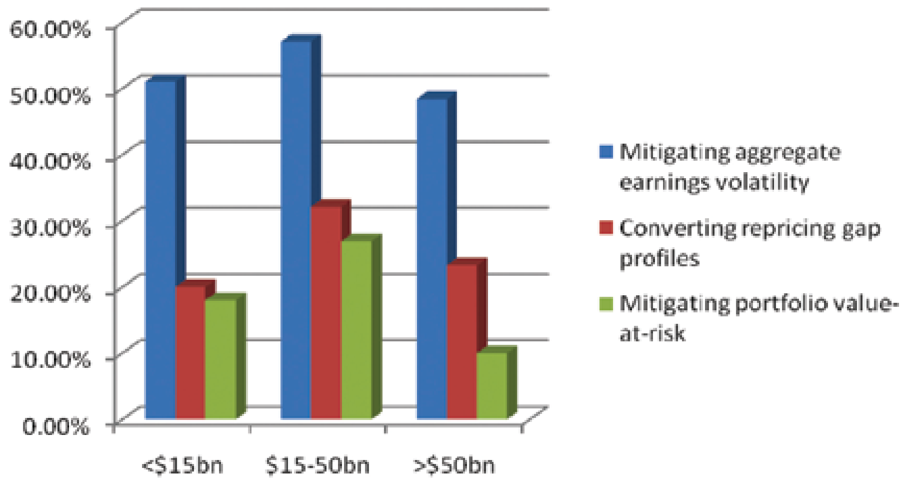
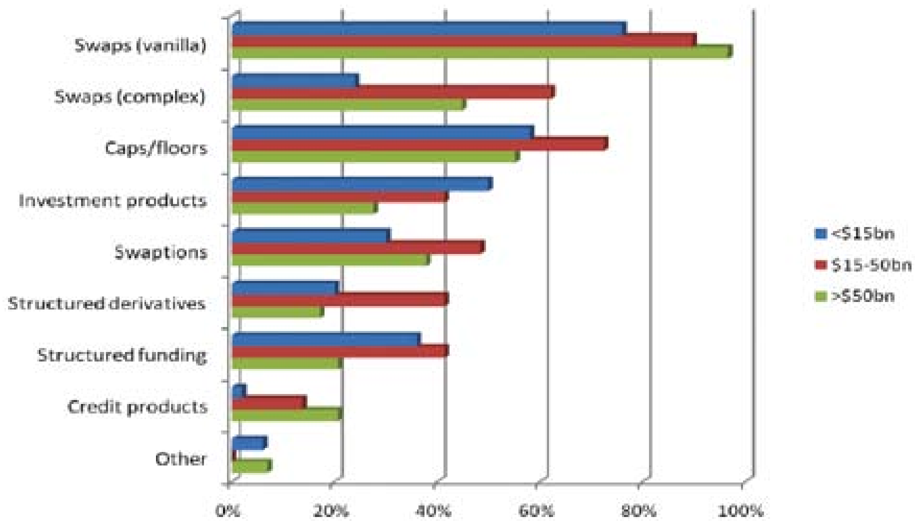


Chart 6: Hedging Instruments Used



The data reinforces that ALM still operates in a deterministic world. Of the total sample, few respondents reported looking at earnings profiles in stochastic interest rate environments (25%), and fewer still at value-at-risk (14%).

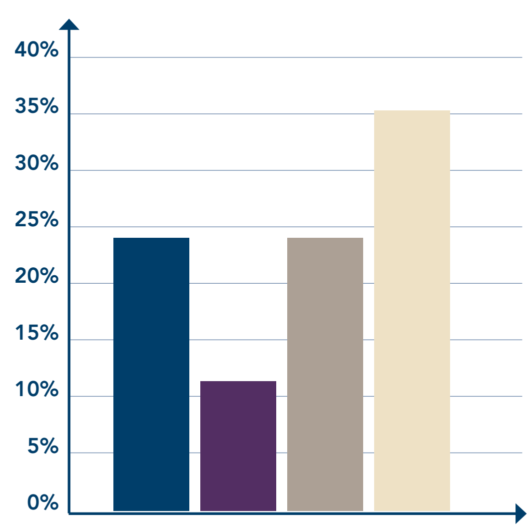


Chart 7: Use of Stochastics

- Earning at Risk
- Value at Risk
- Both Earning and Value at Risk
- Not applicable

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ABOUT AMBIT

SunGard's Ambit is a banking solution suite for retail, commercial and private banks. It provides banking professionals with solutions that support front-, middle- and back-office operations, as well as solutions for financial management, risk and compliance. Ambit helps banks improve customer service management, streamline business processes, comply with regulations and capture growth opportunities. For more information, visit www.sungard.com/ambit.

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