Practice Papers

Bank liquidity risk management through stable and volatile markets: The role of the asset-liability committee and lessons learned for the balance sheet governance operating model

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Moorad Choudhry
Founder, The BTRM, UK

Moorad Choudhry is an independent non-executive director at Recognise Bank Limited, in London, and Honorary Professor at University of Kent Business School. He was latterly Treasurer, Corporate Banking Division at Royal Bank of Scotland. Moorad is a fellow of the Chartered Institute for Securities & Investment, and a liveryman at The Worshipful Company of International Bankers. He is author of 'The Principles of Banking' (John Wiley & Sons, 2012, 2023).

BTRM Ltd, Werks Central, 15–17 Middle Street, Brighton BN1 1AL, UK
E-mail: mooradchoudhry@gmail.com

Claire Trythall
Visiting Faculty, The BTRM, UK

Claire Trythall is Head of Treasury Risk at Newcastle Building Society. She was previously Head of Asset-Liability Management at Hodge Bank, and before that held positions at Barclays Bank, Tesco Bank and Cumberland Building Society, within the fields of asset-liability management and interest-rate risk management in the banking book. Claire has a first-class degree in banking and finance from the University of Derby and a higher national diploma in business from Staffordshire University.

BTRM Ltd, Werks Central, 15–17 Middle Street, Brighton BN1 1AL, UK
E-mail: clairetrythall@yahoo.co.uk

Diyama Abu Laban
Department of Finance and Banking, Birzeit University, West Bank, Palestine

Dr Diyama Abu Laban is Assistant Professor and Head of the Department of Finance and Banking at Birzeit University, Ramallah, Palestine. She obtained her PhD from Brunel University, London.

Department of Finance and Banking, Birzeit University, St No. 4566, Birzeit, West Bank, Palestine
E-mail: dlaban@birzeit.edu

Abstract This study examines the balance sheet management governance operating model of selected failed banks from 2007, 2008, 2009 and 2023, with emphasis on the corporate governance structure in place and the position of the asset-liability committee (ALCO), and draws conclusions and recommendations for future policy. All failed sample banks exhibited near-identical governance frameworks for management and oversight of balance sheet risk: namely an ALCO that reported to the senior executive management committee, and was at least

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two levels, if not three levels, below board level. It is inferred that, as the ultimate responsible and accountable forum for ensuring balance sheet viability and continuing going concern of the bank, the board would benefit from being closer to the balance sheet risk management process. This implies changing the governance structure such that the ALCO is closer to the board itself, and able to provide direct comfort to the board that the bank's capital and liquidity risks are being managed appropriately. The following bank governance measures are recommended, to be imposed by regulatory fiat if necessary:

- Direct delegated authority of the ALCO to manage the balance sheet, from a long-term robustness and viability perspective, directly on behalf of the board.
- The ALCO to report directly to the board, rather than via the executive management committee (or as an alternative approach, changed to become a sub-committee of the board). This recognises that the asset-liability management (ALM) discipline is at least as important as, if not more important than, the 'audit' oversight function undertaken by the board audit committee.
- Technical expertise at ALCO and board level that is capable of discerning the genuine capital and liquidity risk exposure position of the bank, on a medium-term forward-looking basis, at all times.

Keywords: *capital, liquidity risk, asset-liability management (ALM), asset-liability committee (ALCO)*

INTRODUCTION

Banks are the critical infrastructure component in any economy. For this reason, it is unarguable to state that they must be managed in a way that ensures their continuous viability through the economic cycle. The most effective guarantee of a bank's viability over time is a robust balance sheet. This is achieved by first maintaining sufficient reserves of liquidity and buffers of capital to withstand the impact of market events, and secondly by managing the balance sheet continuously to ensure that it does not exhibit excessive sensitivity at any time to unforeseen changes in external factors.

The responsibility for managing the bank's balance sheet, like all responsibilities within a bank, lies ultimately with the board of directors. In most banks this specific responsibility is delegated, via the senior executive management committee (EXCO), to an asset-liability committee (ALCO). The various bank failures in 2023 represented principally a failure of asset-liability management (ALM) practice by the banks concerned, particularly in key segments of the ALM discipline, namely liquidity risk management and interest-rate risk management in the banking book (IRRBB). An earlier round of bank failures during 2007–2008 also demonstrated the consequences of poor ALM governance practice, most notably Northern Rock in 2007 (a rare example of a bank failing for purely liquidity risk-related reasons) and Royal Bank of Scotland in 2008, which required a taxpayer bailout after both its capital and liquidity resources were wiped out.

Bank failures in the USA in 2023 were precipitated by the rise in US$ interest rates during 2022. This exposed the failed banks' balance sheets to large-scale unrealised losses, which then triggered a bank liquidity run. In the cases of Silicon Valley Bank and First Republic Bank there was in place an excessive concentration of non-customer assets and of non-stable funding, on the balance sheet. In theory the board should be aware of such concentration and ensure such a state of affairs does not develop. To reiterate, in the orthodox governance framework the board delegates this responsibility to the EXCO, which further delegates it to the ALCO. It is this governance framework that will be reviewed in the light of the bank failures of 2023, given that lessons of concentration risk that were expected to be learned after the failures of 2007–2009 were apparently not learned.

This paper considers the balance sheet governance framework of a sample of failed banks in 2007–2009 and 2023. It is noted that the orthodox operating model, and where this places authority and seniority of the primary balance sheet management forum in banks (the ALCO), was not sufficiently robust to

prevent an excessively risky balance sheet structure from developing in all the failed banks. This had been observed in the earlier round of bank failures in 2007–9. This has implications for the ALCO operating model, the role of the ALCO as steward of the balance sheet and particularly the distance of the ALCO from the ultimate responsible authority in the bank, the board of directors. The authors recommend what they consider to be a more effective framework for the bank ALCO governance framework, one that is better suited to managing risk under volatile market conditions.

The remainder of this paper is organised as follows: Literature; The orthodox balance sheet governance framework; Balance sheet mismanagement and the 2023 bank failures; ALCO governance framework at a sample of failed banks; Conclusions; Policy recommendations.

LITERATURE

Unlike certain topics in banking and finance (for example, valuation and use of derivatives, structured finance securities, modelling the yield curve, and investment management, to name but a few), the importance, role, responsibilities and track record of the primary bank balance sheet governance committee (namely, the ALCO) has attracted very little research interest in either academic or practitioner literature. This is an apparent paradox of the number of publications versus the importance of the subject: for instance, derivatives and structured finance products are used by less than 10 per cent of the world's banks,[1] yet an ALCO is in place to manage balance sheet risk at essentially every bank in the world.

Wilson[2] describes the ALM discipline in detail as a technical process but makes no reference to the governance of the process or the role of any governance committee for ALM, such as an ALCO. Gup and Brooks[3] do note the role of the ALCO in managing bank balance sheet risk, and this is the earliest published work that the authors have found that makes explicit reference to the role of the ALCO in managing bank balance sheet risk. Johnson[4] notes the role of the ALCO but only as an ingredient in the ALM process. Choudhry[5] notes the growing importance of the ALCO not only for ensuring sound ALM practice but also for ensuring long-term balance sheet robustness. On page 536 this text notes:

> A greater number of financial institutions are enhancing their risk management function by adding to the responsibilities of ALM function. These have included enhancing the role of the [. . .] asset and liability committee (ALCO).
>
> Many of the decisions [concerned with] running the bank's entire portfolio will be closely connected with the overall direction that the bank wishes to take. These are Board-level decisions.

This recognises the vital role of the board in ensuring that the balance sheet ('portfolio') is managed in line with the board's view on overall direction.

Choudhry[6] later described in chapter 8 the essential role of the ALCO as follows: 'The ALCO will have a specific remit to oversee all aspects of asset-liability management, from the front-office money market function to back-office operations and middle-office reporting and risk management.'

The first (and, as far as the authors can discern, only[7]) regulatory authority to issue guidance specifically regarding the role and importance of the ALCO was the UK Financial Services Authority (FSA). A 'Dear CEO' letter issued by the FSA in January 2011 noted, among other things, that the role of the ALCO should include the following:

- proactively control the business in line with firm's objectives; ***focus on entire balance sheet***; [authors' emphasis]
- ensure risks remain within risk appetite;
- consider impact on earnings volatility of changing economic and market conditions;
- act as the arbitrator in the debate and challenge process between business lines;
- focus on effects of future plans/strategy at bank and business line level;
- ensure issues are fully articulated and debated;
- engage in active dialogue amongst various members and display a strong degree of challenge;
- ***be attended by the CEO*** [authors' emphasis], chaired by the CFO, and include Head of Treasury, all business group heads, chief economist and Head of Internal Audit.

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The FSA publication described unequivocally the importance of the ALCO in ensuring robust ALM discipline; that said, it retained the traditional and prevailing orthodoxy that the ALCO should report to the EXCO (it noted that the ALCO should 'take decisions to manage ALM risks, or escalate issues to EXCO').[8]

Choudhry[9] subsequently noted the paramountcy of the ALCO in all matters concerning ALM and balance sheet risk management, noting the following comparison to the board, board risk committee, EXCO and executive risk committee (ERC):

> While all of these committees have an element of responsibility for the bank's balance sheet, it is the ALCO that is responsible for this and nothing else. It alone has the bandwidth to discharge this responsibility effectively and to help ensure that the balance sheet shape and structure is long-term viable. Thus the executive committee that is most closely concerned with balance sheet risk on a strategic and integrated basis (both sides of the balance sheet and all aspects of risk) is ALCO. Given this, what is the most effective way to ensure above-satisfactory and effective governance from Board perspective? We suggest that it is to ensure the paramountcy of ALCO.

Choudhry[10] recommends that this paramountcy be recognised by elevating the ALCO to either: (i) directly report to the board (so at equivalent seniority to EXCO); or (ii) become a sub-committee of the board. This is addressed again later in the paper.

The conclusions drawn from the literature review are that, if a bank wishes to ensure a robust balance sheet through the cycle, the ALCO would ideally be given authority to manage the balance sheet to board-approved risk appetite levels. To ensure effective communications between the ALCO and the board, the 'distance' between them — in terms of hierarchy and reporting line — cannot be too far. The mandate given to the ALCO is highly strategic; hence it requires effective coordination with board objectives and the ERC to be efficient.

THE ORTHODOX BALANCE SHEET GOVERNANCE FRAMEWORK

The ALM discipline in a bank is perforce a technical one; a business journalist might describe it as the quintessentially technical banking discipline. Implementing ALM effectively in a bank requires an expert understanding of arcane subject matter; for instance, at any one ALCO meeting the members may be asked to debate and approve issues related to the following:

- Liquidity risk exposure: for example, what customer loan-deposit ratio (LDR) or customer deposit concentration limit to allow the business to manage to.
- Capital: for example, what additional capital should be in place to allow for unrealised losses that arise following a move in market interest rates.
- Earnings: for example, what net interest income (NII) and net interest margin (NIM) and, critically, what sensitivity of these indicators to one or more changes in internal and external balance sheet factors (such as customer and product type changes) should the bank manage to.
- Non-traded market risk: for example, the ΔNII metric and its sensitivity to 'business-as-usual' market changes alongside the prescribed stress scenarios.
- Balance sheet composition: for example, what amount of non-customer assets should the bank hold, and to what maturity.
- Collateral management: for example, which assets are eligible for repo at the central bank in the event of liquidity stress.

It is a current debate as to whether the ALCO is the most appropriate committee in charge of risk measurement associated with ALM strategies, or whether this should be the ERC. This paper recommends that this area must be owned by the 'first line of defence'; perforce, this suggests it must be the ALCO because the ERC is a second-line-of-defence governance forum.

Making decisions in the ALM space requires expert judgement based on past experience practising in these fields. This dictates a need for suitably qualified individuals to be members of the ALCO. However, the ultimate responsibility for managing balance sheet risk lies with the board. The board will, at least in theory, have sufficient technical expertise and market understanding to ensure that ALM discipline is strong. That said, it is unrealistic to expect board members,

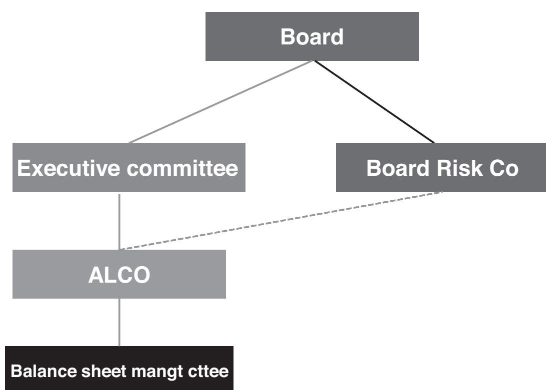


Figure 1: Traditional ALCO governance structure

particularly non-executive directors (NEDs), to have the same level of in-depth, and current, technical knowledge as the ALCO. Therefore, in order to make the responsibility of the board members easier to discharge in practice, this could be best achieved by placing the ALCO as 'close' to the board as possible. A close formal structure would facilitate more effective two-way communication. Additionally, strong coordination between the ALCO and the ERC would remain essential.

All that said, observers may be surprised that the traditional, and still orthodox, operating model observed for the ALCO governance framework, universally around the world, remains that shown in Figure 1. This places the ALCO (at least) two levels below the board.

The following statement, given in the response letter of a regulatory authority following a supervision site visit at a bank, is typical of the view concerning the orthodox governance model for ALM risk management that is observed in most banks around the world: 'We expect ALCO to be an executive committee, and for the Board's management of balance sheet risk to be undertaken via the Board Risk sub-committee.'[11]

This expectation, whether stated explicitly or not, is the orthodox ALCO governance model for management of the balance sheet (which of course includes management of liquidity risk) in place in the majority of regulatory jurisdictions around the world. Given the track record of this operating model at failed banks in 2007–2009 and again in 2023, many of which became unviable purely because of balance sheet mismanagement, it is not unreasonable to consider challenging this orthodoxy.

This paper suggests the orthodox operating model places the board, which is ultimately responsible for the safe governance and stewardship of the balance sheet (and thereby the bank), too far away from the ALCO. This results in banks being able to run balance sheet structures that render them vulnerable to market downturns that impact the balance sheet, because the board is not close enough to the balance sheet to realise the extent of risk exposures that are in place and to direct corrective action (or prevent such a state of affairs from arising in the first place). In other words, the history of bank failures in 2007–2009 and 2023 shows that the orthodox governance structure has resulted, on more than simply a few occasions, and across multiple jurisdictions, in bank boards being unaware of the sensitivity of their balance sheet to changes in external factors until it was too late.

BALANCE SHEET MISMANAGEMENT AND THE 2023 BANK FAILURES

The bank failures of 2023 were not purely failures of liquidity risk management. That said, three failed banks in the USA as well as Credit Suisse in Europe experienced liability outflows that matched or exceed those observed during the earlier round of bank failures in 2007–8, as noted in Figure 2.

Self-evidently, one does not need to experience large scale outflows very quickly, as occurred at Silicon Valley Bank, in order to become unviable (for instance, note the pace and volume of outflow levels for the other failed banks in Figure 2). Once there is a loss of confidence in a bank, its demise as an independent private institution is practically guaranteed.

That said, the balance sheet structure of the three failed US banks was such that they were extremely vulnerable to a loss-of-confidence induced bank run. Consider Figure 3: this shows excessive concentration of unstable funding at these failed banks. When one observes also that the failed banks had a concentration in a specific type of depositor (large non-bank

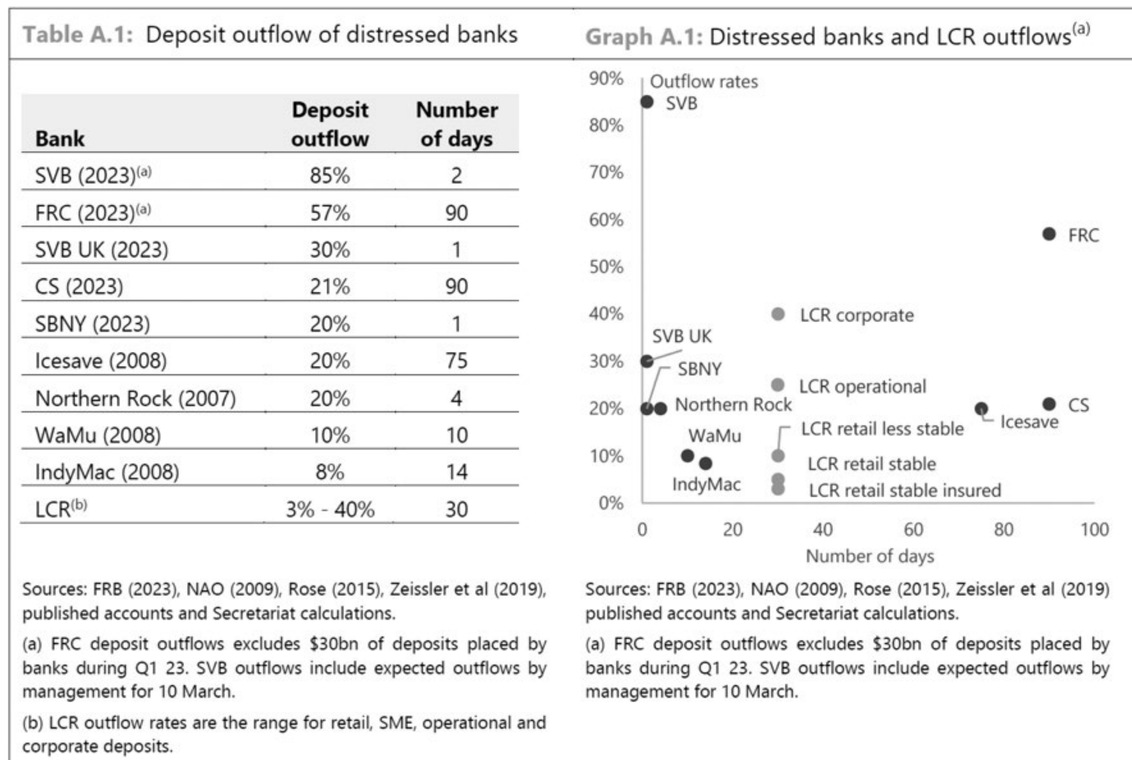


Table A.1: Deposit outflow of distressed banks

Bank	Deposit outflow	Number of days
SVB (2023)[a]	85%	2
FRC (2023)[a]	57%	90
SVB UK (2023)	30%	1
CS (2023)	21%	90
SBNY (2023)	20%	1
Icesave (2008)	20%	75
Northern Rock (2007)	20%	4
WaMu (2008)	10%	10
IndyMac (2008)	8%	14
LCR[b]	3% - 40%	30

Sources: FRB (2023), NAO (2009), Rose (2015), Zeissler et al (2019), published accounts and Secretariat calculations.

(a) FRC deposit outflows excludes $30bn of deposits placed by banks during Q1 23. SVB outflows include expected outflows by management for 10 March.

(b) LCR outflow rates are the range for retail, SME, operational and corporate deposits.

Figure 2: Deposit outflow of distressed banks
Source: BIS (2023).

financial institutions), it can be seen that this funding concentration existed in three forms:

- concentration by product type (instant access operational deposits and 'call deposits');
- concentration along the term structure (contractually overnight tenor); and
- concentration by customer type (where they are a source of unstable deposits).

The failed US banks exhibited severe concentration on the asset side of the balance sheet as well. Silicon Valley Bank, for example, at the time of its demise had over 60 per cent of its balance sheet assets in the form of bonds.[12] That is, they had more non-customer assets — in the form of long-dated fixed coupon bonds — than customer assets. The funding method of these assets was also not to be considered as 'medium-term' or 'stable'. Figure 4 makes this clear (the metric to note is 'Loans + HTM securities/total deposits'). In other words, the LDR was aggressive. (The 110 per cent LDR figure for First Republic Bank, being observed 15 years after the 2008 global bank crash, almost defies belief.)

The excessive concentration in long-dated bond assets made the failed banks particularly vulnerable to rises in interest rates. The knowledge that such rises had resulted in large unrealised losses generated a loss of confidence that then led to a bank run — a run that the banks were particularly exposed to because of their funding concentration, as noted earlier.

It is the responsibility of a bank's ALCO to manage the balance sheet for concentration risk, and to mitigate against funding outflow risk (for any reason). Of course, it is worth reiterating that the ultimate responsibility lies with the board. This paper proposes that the board would find it easier to discharge this responsibility if it was closer to the executive committee that is otherwise nominally responsible for managing the balance sheet (the ALCO). This can be achieved by a simple

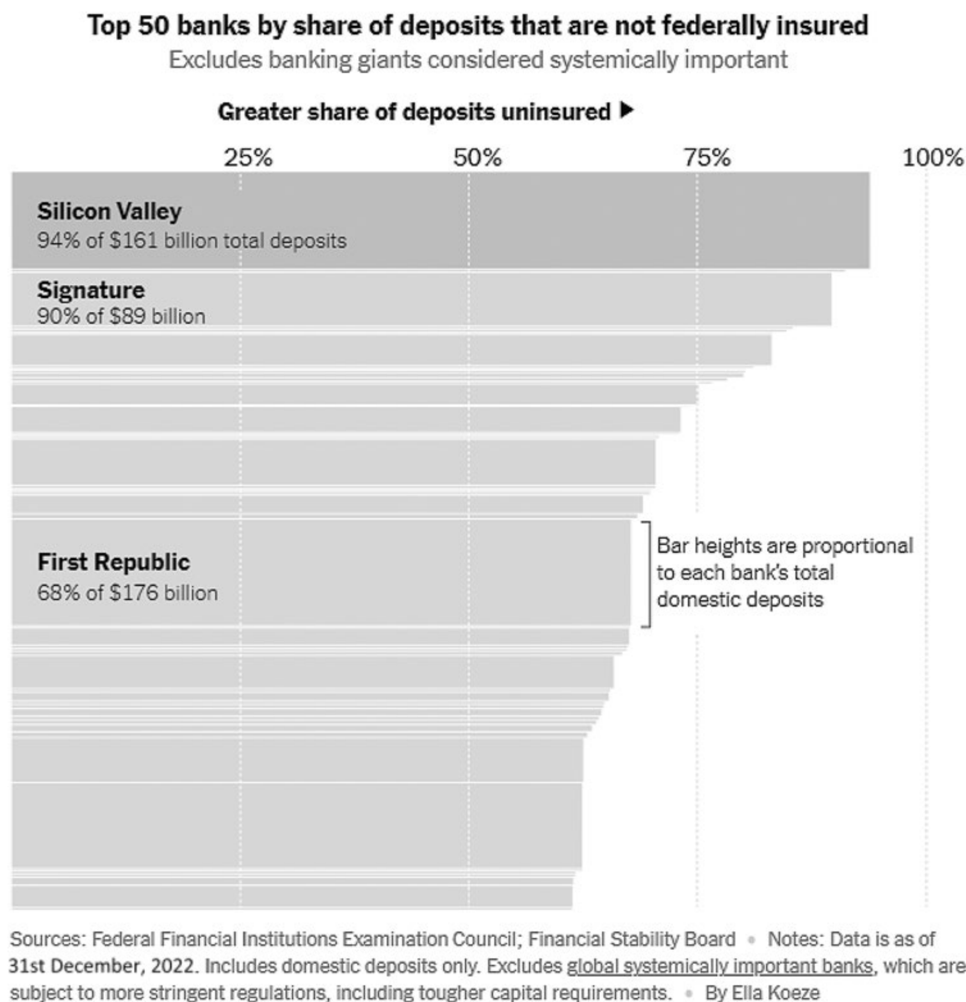


Figure 3: US failed banks in 2023 share of uninsured deposits
Source: ICAEW (2023).

adjustment to the orthodox operating framework, for example:

- making the ALCO a board sub-committee, chaired by an NED that is expert in the ALM discipline (expertise demonstrated by a successful track record managing bank balance sheets for ALM risk over time);
- making the ALCO report direct to the board rather than via EXCO and/or the board risk committee;
- having a board NED who is an expert in ALM as an attendee of the ALCO; or
- changing the governance model to a form that incorporates one or more of the above suggestions.

Such an operating model is against the traditional (and current) orthodoxy of the ALCO governance framework. But when one notes that the historical model has a poor track record given the number of banks in the 21st century that have failed for balance sheet mismanagement reasons, one would not be unreasonable in asking why the industry is still following this traditional model (and regulators are still expecting it to be followed).

Incidentally, note that the UK regulator, the Prudential Regulation Authority, had previously identified the risks associated with excessive funding concentration; it issued 'Pillar 2 guidance' for liquidity risk in 2018 that required banks exhibiting such concentration to hold larger liquid asset buffers in

			Uninsured deposits		
			Call report data before exclusions, public filings data		
	Company (top-level ticker)	Total assets ($B)	($B)	Proportion of total deposits after exclusions (%)	Loans + HTM securities/ total deposits (%)
•	Silicon Valley Bank	209.0	151.6	93.8	94.4
	Bank of New York Mellon (BK)	324.6	175.1 / 156.6	92.0 / 82.3	31.2
	State Street Bank and Trust Co. (STT)	298.0	148.9	91.2	40.1
•	Signature Bank	110.4	79.5	89.3	93.3
	Northern Trust Co. (NTRS)	154.5	41.9	81.6	54.5
	Citibank NA (C)	1,766.8	598.2	73.7	64.6
	CIBC Bank USA (CM)	50.9	30.0	73.1	87.1
	HSBC Bank USA NA (HSBA)	162.4	94.2 / 86.9	70.6 / 65.2	47.4
	City National Bank (RY)	96.5	53.1	70.3	93.6
•	First Republic Bank (FRC)	212.6	119.5	67.4	110.6
	Banking industry aggregate	**23,599.4**	**7.9**	**45.9**	**78.2**
	• Failed companies				

Figure 4: Illustrative assets-deposits ratios
Source: S&P Global (2023).

mitigation (among other measures).[13] Similar such guidance was not issued to non-systemically important banks in the USA. Would a higher authority ALCO at the failed banks in 2023 have been able to bring the Pillar 2 liquidity risk that they were running to the board's attention and take action in good time? The surmise of this paper is that it would have.

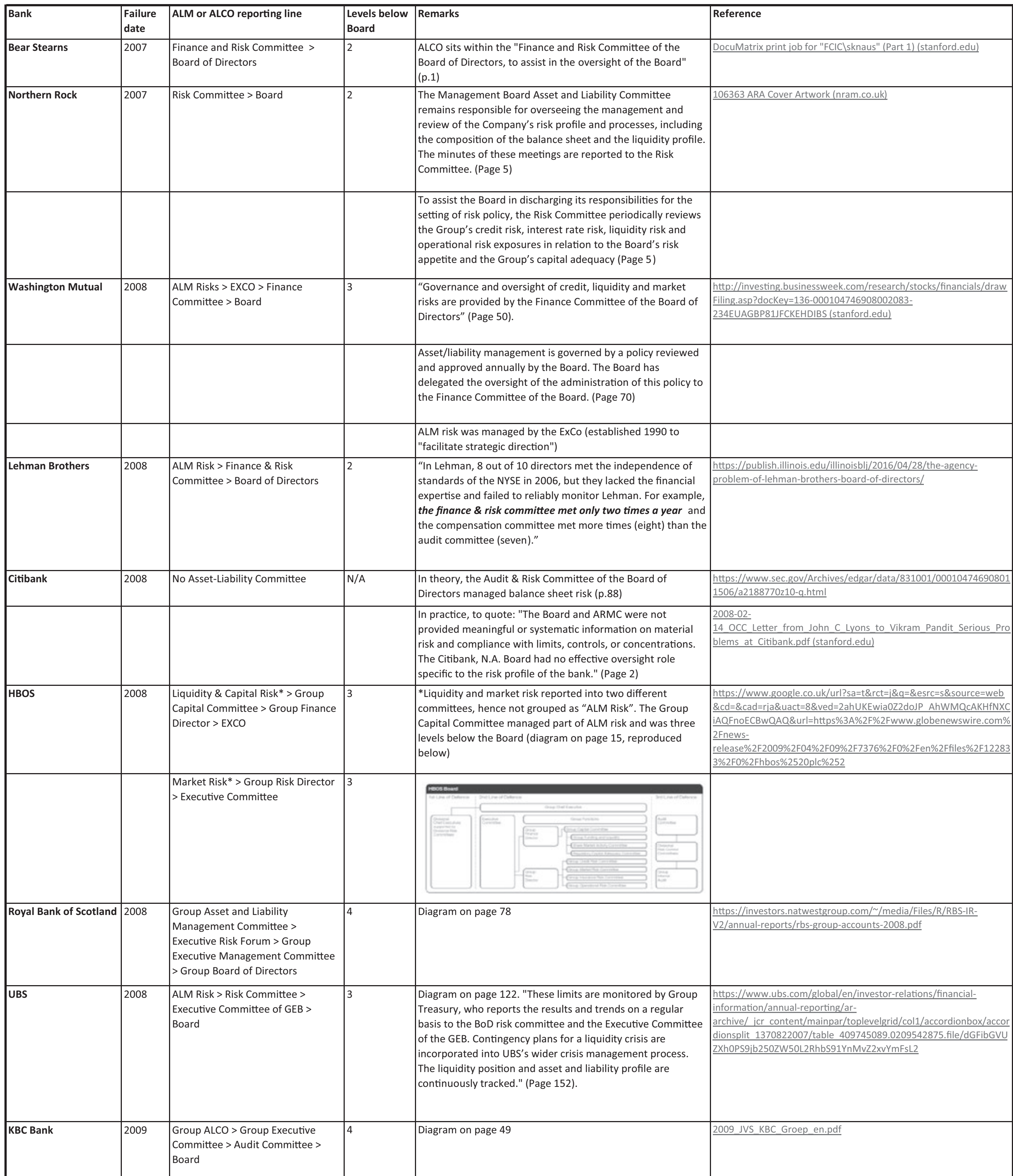
ALCO GOVERNANCE FRAMEWORK AT A SAMPLE OF FAILED BANKS

The authors reviewed the ALM discipline governance framework in place at 12 banks that failed in 2007–2009 and 2023. A summary of the operating model in place at each bank is shown in Figure 5. The banks were based in the USA, UK, Belgium and Switzerland.

All the banks in question had a version of the orthodox governance model for the management of ALM risks, with the ALCO sitting at least two levels below the board (and in some cases three or four levels below it). Even within this framework it is difficult not to conclude that at some banks the board did not accord balance sheet risk management the attention and concern it might be expected to receive; for example, at Lehman Brothers the relevant forum (Finance & Risk Committee) met only twice a year; at Silicon Valley Bank the chief executive officer (CEO) was not even a member of the ALCO and did not attend it.[14] At two failed UK banks the relevant ALM and balance sheet management committee was four levels below the board.

For the authors the inference is clear: the traditional, orthodox governance framework in place for the management of ALM risks, of which liquidity risk is arguably the most important segment, has a less than convincing track record and is no longer appropriate in an era of continuing market (and geo-political) volatility and the instant news transmission of the 'social media' age. In this century, the traditional operating model has not been able to prevent instances of severe capital and liquidity mismanagement, which resulted in the banks in question becoming unviable (in some cases at considerable taxpayer expense).

The authors further conclude that there is an apparent paradox in that possibly the most important risk type to manage at a bank — balance sheet risk incorporating ALM risks — is the responsibility of the board and yet the delegated forum that actually manages it (ostensibly, at least) is too far removed from the board itself. This has made it difficult for the ultimate responsible authority — the board of directors — to exercise effective ownership and stewardship of the balance sheet. This has resulted in banks creating balance sheet structures (such as excessive leverage in 2007–2009 and excessive funding concentration in 2007–2009 and 2023) that are particularly vulnerable during times of market volatility. A change to the existing governance structures,



Bank	Failure date	ALM or ALCO reporting line	Levels below Board	Remarks	Reference
Bear Stearns	2007	Finance and Risk Committee > Board of Directors	2	ALCO sits within the "Finance and Risk Committee of the Board of Directors, to assist in the oversight of the Board" (p.1)	DocuMatrix print job for "FCIC\sknaus" (Part 1) (stanford.edu)
Northern Rock	2007	Risk Committee > Board	2	The Management Board Asset and Liability Committee remains responsible for overseeing the management and review of the Company's risk profile and processes, including the composition of the balance sheet and the liquidity profile. The minutes of these meetings are reported to the Risk Committee. (Page 5)	106363 ARA Cover Artwork (nram.co.uk)
				To assist the Board in discharging its responsibilities for the setting of risk policy, the Risk Committee periodically reviews the Group's credit risk, interest rate risk, liquidity risk and operational risk exposures in relation to the Board's risk appetite and the Group's capital adequacy (Page 5)	
Washington Mutual	2008	ALM Risks > EXCO > Finance Committee > Board	3	"Governance and oversight of credit, liquidity and market risks are provided by the Finance Committee of the Board of Directors" (Page 50).	http://investing.businessweek.com/research/stocks/financials/drawFiling.asp?docKey=136-000104746908002083-234EUAGBP81JFCKEHDIBS (stanford.edu)
				Asset/liability management is governed by a policy reviewed and approved annually by the Board. The Board has delegated the oversight of the administration of this policy to the Finance Committee of the Board. (Page 70)	
				ALM risk was managed by the ExCo (established 1990 to "facilitate strategic direction")	
Lehman Brothers	2008	ALM Risk > Finance & Risk Committee > Board of Directors	2	"In Lehman, 8 out of 10 directors met the independence of standards of the NYSE in 2006, but they lacked the financial expertise and failed to reliably monitor Lehman. For example, ***the finance & risk committee met only two times a year*** and the compensation committee met more times (eight) than the audit committee (seven)."	https://publish.illinois.edu/illinoisblj/2016/04/28/the-agency-problem-of-lehman-brothers-board-of-directors/
Citibank	2008	No Asset-Liability Committee	N/A	In theory, the Audit & Risk Committee of the Board of Directors managed balance sheet risk (p.88)	https://www.sec.gov/Archives/edgar/data/831001/000104746908011506/a2188770z10-q.html
				In practice, to quote: "The Board and ARMC were not provided meaningful or systematic information on material risk and compliance with limits, controls, or concentrations. The Citibank, N.A. Board had no effective oversight role specific to the risk profile of the bank." (Page 2)	2008-02-14_OCC_Letter_from_John_C_Lyons_to_Vikram_Pandit_Serious_Problems_at_Citibank.pdf (stanford.edu)
HBOS	2008	Liquidity & Capital Risk* > Group Capital Committee > Group Finance Director > EXCO	3	*Liquidity and market risk reported into two different committees, hence not grouped as "ALM Risk". The Group Capital Committee managed part of ALM risk and was three levels below the Board (diagram on page 15, reproduced below)	https://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwia0Z2doJP_AhWMQcAKHfNXCiAQFnoECBwQAQ&url=https%3A%2F%2Fwww.globenewswire.com%2Fnews-release%2F2009%2F04%2F09%2F7376%2F0%2Fen%2Ffiles%2F122833%2F0%2Fhbos%2520plc%252
		Market Risk* > Group Risk Director > Executive Committee	3		
Royal Bank of Scotland	2008	Group Asset and Liability Management Committee > Executive Risk Forum > Group Executive Management Committee > Group Board of Directors	4	Diagram on page 78	https://investors.natwestgroup.com/~/media/Files/R/RBS-IR-V2/annual-reports/rbs-group-accounts-2008.pdf
UBS	2008	ALM Risk > Risk Committee > Executive Committee of GEB > Board	3	Diagram on page 122. "These limits are monitored by Group Treasury, who reports the results and trends on a regular basis to the BoD risk committee and the Executive Committee of the GEB. Contingency plans for a liquidity crisis are incorporated into UBS's wider crisis management process. The liquidity position and asset and liability profile are continuously tracked." (Page 152).	https://www.ubs.com/global/en/investor-relations/financial-information/annual-reporting/ar-archive/_jcr_content/mainpar/toplevelgrid/col1/accordionbox/accordionsplit_1370822007/table_409745089.0209542875.file/dGFibGVUZXh0PS9jb250ZW50L2RhbS91YnMvZ2xvYmFsL2
KBC Bank	2009	Group ALCO > Group Executive Committee > Audit Committee > Board	4	Diagram on page 49	2009_JVS_KBC_Groep_en.pdf

Figure 5: Sample of failed banks ALCO governance structures

Silicon Valley Bank	2023	ALCO > Finance Committee & Risk Committee > Board of Directors	2	ALCO provides oversight to the liquidity management process and recommends policy guidelines for the approval of the Finance Committee and Risk Committee of our Board of Directors, and courses of action to address our actual and projected liquidity needs. Additionally, we routinely conduct liquidity stress testing as part of our liquidity management practice (page 87)	0000719739-23-000021 (d18rn0p25nwr6d.cloudfront.net)
				CEO was not a member of ALCO (CEO testimony to Senate Committee)	
Credit Suisse	2023	ALM Risk > Group Capital Allocation and Liability Management Committee > Executive Board	2	No specific entity level ALCO. "Our liquidity and funding profile is regularly reported to Group CALMC and the Board of Directors, who define our risk tolerance, including liquidity risk, and set parameters for the balance sheet and funding usage of our businesses. The Board of Directors is responsible for defining our overall risk tolerance in the form of a risk appetite statement (page 106)	https://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwix18f1pJP_AhVcTkEAHdirBSAQFnoECAkQAQ&url=https%3A%2F%2Fwww.credit-suisse.com%2Fmedia%2Fassets%2Fcorporate%2Fdocs%2Fabout-us%2Finvestor-relations%2Ffinancial-disclosures%2Ffinancia
First Republic Bank	2023	ALM Risk > Bank Enterprise Risk Management Committee > Directors' Enterprise Risk Management Committee > Board	3	No specific "ALCO" forum. "Liquidity risk is actively monitored and managed by the Treasury department, Chief Financial Officer and senior management through the Bank Enterprise Risk Management Committee, with independent oversight provided by the Board through the Directors' Enterprise Risk Management Committee. (page 123)	printmgr file (firstrepublic.com)

Figure 5: *(continued)*

which might have been expected to take place after 2007–2009, is therefore now long overdue.

CONCLUSIONS

The failed firms reviewed in this paper are notable for their diversity. The size, culture, operating location, market participation and strategy of these banks differed considerably; what the firms all had in common was that they exhibited a failure of basic ALM discipline and balance sheet management principles. They also all operated under (more or less) the same balance sheet risk governance framework. Balance sheet management at these firms was the responsibility of the board of directors; like all risk management processes at a bank, the board in each case had delegated day-to-day responsibility to the ALCO (in some cases to a finance or audit and risk committee).

It is expected and orthodox practice for the senior management committee of a bank (the management committee or EXCO) to report directly to the board of directors.[15] The executive forum that manages ALM risk, however, is expected to sit at least one if not two or three levels below the board. This, for the committee that has ownership of arguably the most important and vital risk on a bank's risk register: liquidity risk.

This paper concludes that the orthodox governance framework within which the ALCO operates is no longer fit for purpose; indeed it has not been so since at least the 2008 crash. The authors recommend changes to enable a process of more effective management of balance sheet risk.

POLICY RECOMMENDATIONS

The following policy recommendations are suggested for consideration:

- Technical expertise in ALM discipline at board level: the authors have assumed a sufficient level of ALM expertise at the ALCO level. The board must also possess sufficient depth of technical knowledge in order to understand balance sheet risk (particularly the sensitivity of the balance sheet to unforeseen changes in external factors such as interest rates).
- Seniority of ALM discipline responsible committee: to enable more effective two-way communication between the ALCO and the board the authors recommend that ALCO be raised in seniority so that it reports directly to the board; alternatively it can be set up as a sub-committee of the board and chaired by an NED. The authors' view is that the latter structure enables the most effective two-way communication and understanding of balance sheet risk exposures at the appropriate level.
- Attendance at the ALCO: the authors recommend that supervision authorities

worldwide adopt the guidance of the UK Prudential Regulation Authority (PRA) and make attendance at the ALCO a mandatory requirement for the C-suite executives, particularly the CEO, and the executive heads of the business lines.

At many banks the performance of senior management and boards during the crisis of 2007–9 was observed to be unsatisfactory, particularly with respect to managing liquidity risk. This was observed again to be the case in 2023. It is apparent that the orthodox corporate governance structure for management of the balance sheet is not sufficiently robust to handle market volatility and to prevent the creation of excessively concentrated funding structures. This paper outlines a range of recommendations that should, if implemented by banks and enforced by regulators, assist senior executive management to better manage balance sheet risk and thereby better handle market stress events during periods of volatility.

References and notes

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7 The Basel Committee for Banking Supervision, in its guidance for managing interest-IRRBB, does refer in its paper BCBS 368 (Basel Committee for Banking Supervision 368, 2016, 'Standards — Interest Rate Risk in the Banking Book', April 2016) to the 'strategic importance' of the ALCO with respect to managing IRRBB; that said, this is a narrow technical paper addressing specifically the management of market risk. It makes no comment on level of seniority or broader terms of reference of the ALCO.
8 That the guidance issued in the FSA 'Dear CEO' letter remains the official view of the UK Prudential Regulation Authority (PRA), the bank supervision authority that is part of the Bank of England, can be assumed because the PRA re-issued the Letter as a Supervisory Statement (LSS1/13) when it replaced the FSA in April 2013. The original paper is: Financial Services Authority (2011) 'Guidelines for Effective ALCO Practice', Dear CEO Letter. The PRA re-issue is: Prudential Regulation Authority (2013) 'Asset and Liability Management: Suggestions for Greater Effectiveness', *Supervision Statement LSS1/13.*
9 Choudhry, M. (2017) 'Strategic ALM and Integrated Balance Sheet Management: The Future of Bank Risk Management', *The European Financial Review*, Aug.–Sep., pp. 53–60.
10 *Ibid.*
11 By their very nature, the contents of any communication between a regulatory authority and a supervised bank are required to be kept confidential. Therefore, the authors cannot state the date, source, specific bank or supervision authority in question here, other than to note that the regulator jurisdiction country is in the Organisation for Economic Co-operation and Development and that the date of the letter is some years after the 2007–9 crash.
12 SVB report and accounts, 'Annual Report', 1st March, 2022.
13 Published as *PRA Policy Statement 2/18* (February 2018).
14 Note here again the 'Dear CEO' letter from the UK FSA in 2011 that stated explicitly that ALCO members should include the CEO.
15 This in the case of the unitary board structure observed in 'Anglo-Saxon' countries. In continental Europe the dual board structure is more common, with the executive board reporting to the supervisory board. The practical difference in operation between these two approaches is actually quite insignificant.