

# AFIN8003 - Workshop 9

## Banking and Financial Intermediation

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### ! Workshop 9 — Liquidity in crisis

Last week we **measured** liquidity (LCR, NSFR). This week we **manage** it — and we do it in a crisis. Plan for the hour:

1. **Part A — Concept check** ( $\approx 15$  min). Nine MCQs. Self-mark.
2. **Part B — Short answers** ( $\approx 10$  min). Three discussion questions.
3. **Part C — The Treasurer's Tabletop** ( $\approx 25$  min). A three-round bank-run simulation. *This is the bulk of the workshop.*
4. **Part D — The big question** ( $\approx 10$  min). Open discussion.

Bring a pen. Mark up the handout.

## 1 Part A — Concept check

### 1.1 MCQ

1. The cost of holding reserves that pay no interest at the central bank is:
  - buffer reserves
  - a reserve requirement tax
  - the liquid assets ratio
  - required by law in all countries
2. A deep market is an important consideration in the management of FI liquidity in that:
  - the FI may wish to issue more loans
  - the FI may wish to issue more equity
  - the FI could be an inactive market participant
  - the FI will need to be able to sell short-term assets quickly to convert to cash
3. Which of the following is a determinant of an FI's optimal liquid asset ratio?
  - the variability of deposit inflows and outflows
  - the yield on non-liquid assets
  - the liquidation costs of highly non-liquid assets
  - All of the listed options are correct.
4. A facility that allows a DI to utilise RBA repos to obtain liquidity overnight to fund its settlement needs is called a(n):
  - RBA repurchase agreement
  - overnight repurchase agreement
  - intra-day repurchase agreement
  - committed liquidity facility
5. Covered bonds are:

- bonds issued by banks that have backing of a pool of high quality assets
  - bonds that are backed by the Australian government
  - bonds issued by sovereign nations and backed by the IMF
  - a pool of various assets
6. What is the primary method of meeting cash demands in modern financial institutions?
- Asset liquidity
  - Liability liquidity
  - Securitization
  - Cash reserves
7. A high quality liquid asset (HQLA) must be:
- well rated by the rating agencies
  - easy to obtain
  - a long-term investment
  - unencumbered and easily and immediately able to be converted into cash
8. Governments seek to protect depositors more than other DI creditors because:
- deposits are a critical part of the financial system
  - deposits are a primary form of savings for individuals
  - non-deposit creditors are usually better placed to assess and manage risk
  - All of the listed options are correct.
9. Which of the following instruments is considered a low-cost liability but carries high withdrawal risk?
- Negotiable certificates of deposit (NCDs)
  - Term deposits
  - Demand deposits
  - Savings accounts

## 2 Part B — Short answer questions

### 2.1 Q1 — When the two risks fight each other

How can liquidity-risk and interest-rate-risk management objectives **conflict** inside a DI? Give at least one concrete example. Are these conflicts resolvable? Explain.

### 2.2 Q2 — Why deposit guarantees stop runs

How do **deposit insurance** and **deposit guarantees** mitigate bank runs, and what schemes exist in Australia to protect DI deposits?

### 2.3 Q3 — Two crises, two failures

In 2007, **Northern Rock** failed in part because it relied too much on **wholesale funding** that suddenly disappeared. In 2023, **Silicon Valley Bank (SVB)** failed in part because its deposit base **walked out the door in a day**.

Both are liquidity crises — but the **mechanism is different**. In two paragraphs, contrast (i) where the liquidity drain came from in each case, and (ii) what each bank's liability mix would need to have looked like to survive.

### 3 Part C — The Treasurer’s Tabletop

! The scenario

**You are the Group Treasurer of Acacia Bank**, a mid-sized Australian ADI. Today is **Monday**. Yesterday everything was fine.

This is a **decision-making exercise**, not a calculation exercise. Discuss with your neighbour. Be willing to defend your choices in the debrief.

#### 3.1 The opening balance sheet (Monday, 9:00 AM)

Assets (A\$bn)		Liabilities & Equity (A\$bn)	
Cash & ESA balance at the RBA	3	Demand deposits (retail)	20
HQLA Level 1 — AGS, semis	8	Term deposits, $\leq 1$ yr	15
HQLA Level 2A — covered bonds	2	Short-term wholesale ( $\leq 1$ yr)	12
HQLA Level 2B — eligible RMBS	2	Long-term wholesale ( $> 1$ yr)	5
Residential mortgages	35	Equity (CET1 + other)	4
Business loans	6		
<b>Total assets</b>	<b>56</b>	<b>Total L&amp;E</b>	<b>56</b>

A few useful facts for the day:

- The RBA cash rate target is **4.10%**. The RBA’s standing overnight repo facility charges **cash rate target + 5 bp** under the ample-reserves framework.
- Acacia’s most recent LCR was **125%**. NSFR was **108%**.
- Acacia’s covered bonds and AGS are *unencumbered* (not already pledged). About **30%** of its eligible RMBS is already pledged in private repos.
- The FCS covers retail deposits **up to A\$250,000 per depositor**.

#### 3.2 Round 1 — Monday (the rumour)

! 11:00 AM Monday

*A senior business correspondent posts on X: “Sources inside Acacia tell me the bank is sitting on the same kind of duration mismatch that took down SVB. I’d be moving money this morning.”* The post has 40,000 reposts by lunchtime.

By 4 PM Monday, **A\$2 billion** of retail demand deposits has left. Wholesale lenders stop returning calls; your overnight wholesale lines do **not** roll.

Work through these decisions. Write your answers next to each question — you’ll be asked to defend them.

(a) Total cash needed by close of business Monday: \_\_\_\_\_ (Hint: don’t forget the wholesale that didn’t roll.)

(b) Rank the **stored-liquidity** options in the order you’d use them. Justify the ordering:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

- (c) Can you tap **purchased liquidity** today? Why or why not? Where is the friction?
- (d) Sketch the post-Monday balance sheet — which assets shrink, which liabilities shrink? What happens to your LCR?

### 3.3 Round 2 — Tuesday (the crisis intensifies)

 9:00 AM Tuesday

Outflows resume at the open. A further **A\$3 billion** of deposits walks out before noon. Two long-standing wholesale counterparties tell you they will *not* roll the A\$4bn of short-term notes maturing this week. **APRA calls.**

- (a) Which **RBA facility** do you call on? Be specific about the terms (rate, collateral, tenor) under the *ample-reserves framework*.
- (b) What **collateral** can you still pledge? Estimate the cash you can raise (apply rough haircuts: AGS 0%, covered bonds 5–10%, RMBS 15–25%).
- (c) APRA will likely require a **public statement**. List two things APRA could say or do that would **help** Acacia, and one that would make things **worse**.
- (d) Your unencumbered HQLA is running thin. What is the very next thing on your balance sheet you'd try to sell — and at what discount?

### 3.4 Round 3 — Wednesday (the turn)

 2:00 PM Wednesday

APRA, with Treasurer approval, **publicly invokes the Financial Claims Scheme** as a precautionary measure: all eligible deposits up to A\$250,000 are explicitly guaranteed. The RBA confirms ongoing liquidity support. Within an hour, outflows **stop**. Some deposits even begin to return.

- (a) Using the bank-run mechanism from class, explain in one sentence **why** the FCS announcement stops the run.
- (b) Write the **two-sentence headline** Acacia's CEO should issue at 4 PM. Be specific about what you do and do not say.

CEO statement (draft here):

- (c) Looking back from a calm Thursday morning: what could the treasurer have done **last quarter** to make this week easier? List three concrete actions.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

## 4 Part D — The big question

**i** Wrap-up — discuss together for the last 10 minutes

The SVB run in March 2023 wiped out US\$42 billion of deposits **in a single day** — faster than any historical run, in part because uninsured depositors coordinated via Twitter and Slack.

The Basel LCR was designed before social media. It assumes **30 days** of stress.

**Should the 30-day window be shortened, or the run-off factors raised, in the age of viral runs?**

What would your bank lose if regulators forced you to hold materially more HQLA against social-media risk? Who would *gain* from that change?

**💡** Take home — three lines to remember

1. There are only two sources of liquidity: **sell something** or **borrow something**.
2. The market you rely on for liquidity is the one most likely to **close** when you need it most.
3. Deposit guarantees stop runs because they remove the **private incentive** to be first in the queue — not because the depositor trusts the bank.