AFIN8003 - Workshop 3

Banking and Financial Intermediation

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THE APRA WAR ROOM

A Capital Adequacy Crisis Simulation

CONFIDENTIAL — ADRIABANK INTERNAL MEMO

To: All Risk and Finance Division Staff

From: Group CEO

Date: Monday, 17 March 2026, 07:14 AM

Subject: APRA Urgent Capital Review — 48-Hour Response Required

Overnight, AdriaBank received formal notification from APRA that it will conduct an unannounced capital adequacy assessment commencing **Wednesday morning**. APRA has flagged concerns about our reported capital position following our latest quarterly statistical return.

I have assembled four specialist teams. Each team must complete its section of the analysis **by end of workshop today** and deliver a **3-minute board briefing** on their findings. The Board meets at the end of the session.

The future of AdriaBank — and your year-end bonuses — may depend on what you find.

Good luck.

Background: AdriaBank at a Glance

AdriaBank is a mid-sized Australian authorised deposit-taking institution (ADI) regulated by APRA. It uses the **standardised approach** to calculate risk-weighted assets. The bank has been planning to announce a **$4 million dividend** to shareholders at the end of the quarter.

Workshop format:

Phase	Activity	Time
1	Briefing and group formation	5 min
2	Team investigations (work within your group)	35 min
3	Board presentations (3–4 min per team)	20 min
4	Class debrief and key takeaways	10 min

Your team assignment:

Team	Name	Your Mission
A	Capital Accounting Unit	Classify capital instruments; compute CET1, Tier 1, and Total capital
B	Credit Risk Division	Compute on-balance-sheet risk-weighted assets
C	Markets & Derivatives Desk	Compute off-balance-sheet risk-weighted assets
D	Strategy & Regulatory Affairs	Assemble all results; assess capital adequacy; stress test; recommend action

Team A — Capital Accounting Unit

Your mission: AdriaBank's Head of Financial Reporting has left you a data file listing all potential capital instruments on the balance sheet. Some of them do **not** qualify as regulatory capital under Basel III. Your job is to classify each instrument correctly and compute the bank's CET1, Tier 1 and Total regulatory capital.

Background: Capital Tiers Under Basel III

Recall the hierarchy:

- **CET1 (Common Equity Tier 1)**: Highest quality capital. Includes common shares, retained earnings, and accumulated other comprehensive income (AOCI) — **net of regulatory deductions** (e.g., goodwill and intangible assets must be deducted).
- **Additional Tier 1 (AT1)**: Includes instruments that can absorb losses while the bank is a going concern — for example, **non-cumulative perpetual preferred shares** and qualifying **contingent convertible bonds (CoCos)**. Critically, preferred shares must be **non-cumulative** to qualify as AT1. If cumulative, missed dividends accumulate — the instrument is too debt-like.
- **Tier 2**: Supplementary capital — subordinated debt, certain loan loss provisions (up to 1.25% of credit risk RWA), and other qualifying instruments.

Task A1: Classify the Instruments

AdriaBank's balance sheet includes the following items. For each instrument, determine: **(i)** Does it qualify as regulatory capital? If so, which tier? **(ii)** Is there anything that must be **deducted** from CET1?

#	Instrument	Amount ($M)	Classification (fill in)
1	Common shares (fully paid, issued)	22	
2	Retained earnings	8	
3	Accumulated other comprehensive income (AOCI)	2	
4	Goodwill (intangible asset, carried on balance sheet)	3	
5	Deferred tax assets (relying on future profitability)	1	
6	Non-cumulative perpetual preferred shares	6	
7	CoCo bonds (mandatory conversion to equity if CET1 ratio $< 5.5\%$)	4	
8	**Cumulative** preference shares	5	
9	Subordinated notes (5 years remaining maturity)	15	
10	General loan loss provisions	4	

Hint on item 8: Read the Basel III definition of AT1 carefully. The word "cumulative" is the key. What does it imply for the nature of missed dividends?

Hint on item 10: Loan loss provisions qualify for Tier 2 only up to **1.25% of credit risk RWA**. Credit risk RWA **$476 million** (from Teams B and C). Calculate the cap and apply it.

Task A2: Compute Regulatory Capital

Using your classifications from Task A1, complete the capital waterfall:

Capital Component	Calculation	Amount ($M)
Common shares + Retained earnings + AOCI		
Less: regulatory deductions (goodwill + DTA)		
= CET1 Capital		_____
Additional Tier 1 capital		
= Tier 1 Capital (CET1 + AT1)		_____

Capital Component	Calculation	Amount ($M)
Tier 2 capital		
= Total Capital (Tier 1 + Tier 2)		_____

Team A Board Briefing Preparation

Using the template on the last page, prepare your **3-minute board briefing**.

Key questions to address:

1. How much CET1, Tier 1, and Total capital does AdriaBank have?
2. Were there any instruments that looked like capital but didn't qualify? Why not?
3. What should the board know about the quality of AdriaBank's capital base?

Team B — Credit Risk Division

Your mission: Compute the risk-weighted assets (RWA) for AdriaBank's **on-balance-sheet** assets. This forms the largest component of total RWA and determines how much "risky" activity the bank is running relative to its capital cushion.

Background: How On-Balance-Sheet RWA Works

Under the standardised approach, each asset is assigned a **risk weight** that reflects its credit risk. The RWA for each asset is simply:

$$\text{RWA} = \text{Asset value} \times \text{Risk weight}$$

Total on-balance-sheet RWA is the sum across all assets.

Task B1: Map Risk Weights and Calculate RWA

The following table lists AdriaBank's on-balance-sheet assets. Apply the correct risk weight and calculate the risk-weighted value.

Asset Type	Amount ($M)	Risk Weight	RWA ($M)
Cash, Australian Treasury bonds, and deposits at the RBA	50	0%	
Local government bonds (S&P: AA−)	80	20%	
Loans to other Australian banks (S&P: BBB+)	40	100%	
Standard eligible residential mortgages	300	35%	
Corporate loans (S&P: BB− to BBB+)	150	100%	
Corporate loans (S&P: B+ or lower)	80	150%	
Total	**700**		_____

Task B2: Reflect

Discussion question (2 min with your group): The residential mortgages receive a 35% risk weight while corporate loans to investment-grade companies (BB− to BBB+) receive 100%. Does this seem fair? What assumption does this embed about Australian housing?

Can you think of a scenario where this assumption breaks down?

Extra challenge: Suppose AdriaBank is considering selling its entire portfolio of low-rated corporate loans (B+ or lower) and replacing them with additional residential mortgages. How much would total on-BS RWA change? Is this a good idea purely from a capital ratio perspective? What are the risks?

Team B Board Briefing Preparation

Using the template on the last page, prepare your **3-minute board briefing**.

Key questions to address:

1. What is AdriaBank's total on-balance-sheet RWA?
2. Which asset classes are driving the most risk?
3. If the bank wanted to reduce RWA, where would you look first?

Team C — Markets & Derivatives Desk

Your mission: Compute the risk-weighted assets (RWA) for AdriaBank's **off-balance-sheet (OBS)** activities. OBS items don't sit on the balance sheet but can still create real credit losses — and regulators require capital to be held against them.

Background: Two Types of OBS Exposure

Type 1 — Contingent and guarantee-type contracts (e.g., loan commitments, letters of credit):

These are converted to an on-balance-sheet equivalent using a **Credit Conversion Factor (CCF)**:

$$\text{Credit Equivalent Amount (CEA)} = \text{Face value} \times \text{CCF}$$

Then: RWA = CEA × Risk weight

Type 2 — Market contracts and derivatives (e.g., interest rate swaps, FX forwards):

These carry **counterparty credit risk**. The CEA has two components:

- **Potential future exposure**: the risk if the counterparty defaults at some point in the future. = Notional × Potential Exposure Conversion Factor (PECF)
- **Current exposure**: the cost of replacing the contract today if the counterparty defaults now. = $\max(0, \text{Replacement cost})$

$$\text{CEA} = \text{Potential future exposure} + \text{Current exposure}$$

$$\text{RWA} = \text{CEA} \times 100\%$$

Task C1: OBS Contingent and Guarantee Contracts

OBS Item	Face Value ($M)	CCF	CEA ($M)	Risk Weight	RWA ($M)
18-month loan commitment	100	0.4		20%	
Standby letter of credit	50	1.0		20%	
Commercial letter of credit	40	0.2		75%	
Total					_____

Task C2: OBS Market Contracts and Derivatives

Step 1 — Calculate potential future exposure:

Contract	Notional ($M)	PECF	Potential Exposure ($M)
5-year interest rate swap (fixed-for-floating)	500	0.005	
3-year FX forward contract	200	0.050	

Step 2 — Calculate current exposure:

Contract	Replacement Cost ($M)	Current Exposure ($M)
5-year interest rate swap	+8	
3-year FX forward contract	−4	

Recall: Current exposure = Max(0, replacement cost). If the replacement cost is negative, the contract is out-of-the-money for AdriaBank — the counterparty owes AdriaBank nothing. There is no current credit exposure.

Step 3 — Calculate CEA and RWA:

Contract	Potential Exposure ($M)	Current Exposure ($M)	CEA ($M)	Risk Weight	RWA ($M)
5-year interest rate swap				100%	
3-year FX forward contract				100%	
Total					_____

Task C3: Total OBS RWA

OBS Category	RWA ($M)
Contingent and guarantee contracts	
Market contracts and derivatives	
Total OBS RWA	_____

Team C Board Briefing Preparation

Using the template on the last page, prepare your **3-minute board briefing**.

Key questions to address:

1. What is AdriaBank's total OBS RWA?
2. Why do we require capital against off-balance-sheet items? Aren't they off the balance sheet for a reason?
3. The FX forward has a negative replacement cost — does this mean AdriaBank has zero credit exposure? Explain.

Team D — Strategy & Regulatory Affairs

Your mission: You are the Chief Risk Officer. Once the other teams have finished, collect their results and assemble the complete capital adequacy picture for AdriaBank. Then run a stress test and advise the Board on what must be done — including whether the planned dividend can proceed.

For Team D only: You will receive Group A, B, and C's results mid-workshop. You also have the following additional information: AdriaBank's **RWA for market risk = $35 million** and **RWA for operational risk = $25 million**. The bank's total on- and off-balance-sheet exposure (for leverage ratio purposes) is **$1,050 million**. APRA has currently set the **Countercyclical Capital Buffer (CCyB) at 1.0%**.

Task D1: Assemble Total RWA

Collect figures from Teams B and C, then add the market risk and operational risk RWA provided separately.

RWA Component	RWA ($M)
On-balance-sheet credit risk (from Team B)	
Off-balance-sheet credit risk (from Team C)	
Market risk (provided)	35
Operational risk (provided)	25
Total RWA	_____

Task D2: Calculate Capital Ratios

Using the capital figures from Team A and total RWA from Task D1:

Ratio	Formula	Calculation	Result	Minimum Required
CET1 capital ratio	CET1 / Total RWA			4.5%
Tier 1 capital ratio	Tier 1 / Total RWA			6.0%
Total capital ratio	Total capital / Total RWA			8.0%
Tier 1 leverage ratio	Tier 1 / Total exposure ($1,050M)			3.0%

Does AdriaBank pass all four minimum requirements? Circle: **YES / NO**

Task D3: The Capital Buffer Test — Here's Where It Gets Interesting

Meeting the minimum ratios is not enough. Under Basel III, banks must also maintain the **Capital Conservation Buffer (CCB)** and any applicable **Countercyclical Capital Buffer (CCyB)**.

APRA has currently set the CCyB at **1.0%**.

Step 1 — Calculate the required CET1 ratio including all buffers:

$$\text{Required CET1} = \text{Minimum CET1} + \text{CCB} + \text{CCyB} = 4.5\% + 2.5\% + \_\_\_\_\_\% = \_\_\_\_\_\%$$

Step 2 — Compare AdriaBank's actual CET1 ratio to the required level:

	Required (with buffers)	Actual (from D2)	Outcome
CET1 capital ratio			

Step 3 — Consequences:

If a bank's CET1 ratio falls short of the required level (including buffers), what constraints does Basel III impose on the bank?

Step 4 — The Dividend Question:

AdriaBank's board was planning to pay a **$4 million dividend** this quarter. Based on your analysis, should this dividend proceed?

Task D4: Stress Test — What if Things Get Worse?

APRA is conducting its review precisely because the economy is showing stress. Consider the following scenario:

> House prices in major Australian cities have fallen 15%. As a result, AdriaBank estimates that **3% of its residential mortgage portfolio will default**, with an average **loss given default (LGD) of 40%**.

How much additional capital loss does this represent?

$$\text{Mortgage portfolio} = \$300M \quad \Rightarrow \quad \text{Expected loss} = 300 \times 3\% \times 40\% = \$\_\_\_\_\_\text{M}$$

What happens to CET1 capital after absorbing this loss?

$$\text{New CET1} = \$28M - \$\_\_\_\_\_M = \$\_\_\_\_\_M$$

What is the new CET1 ratio? (Assume RWA is unchanged for simplicity.)

$$\text{New CET1 ratio} = \frac{\$\_\_\_\_\_M}{\$535.5M} = \_\_\_\_\_\%$$

Is the bank now in breach of even the **minimum** CET1 requirement of 4.5%?

Task D5: Recommendations

Based on your analysis, draft three specific recommendations for the Board:

1. _____
2. _____
3. _____

Team D Board Briefing Preparation

Using the template on the last page, prepare your **3-minute board briefing**.

Key questions to address:

1. Does AdriaBank meet all minimum capital requirements? Does it meet the buffer requirements?
2. What is the consequence for the planned dividend?
3. What are your three recommendations for restoring an adequate capital position?

The Board Meeting — Presentation Guidelines

Each team delivers a **3-minute board briefing** in sequence: A → B → C → D.

Team D's presentation is the climax — they synthesise everything and deliver the verdict.

Board Briefing Template

Use this structure for your presentation:

Section	Your notes
1. What we found (30 sec)	
2. What it means (60 sec)	
3. The key risk / concern (30 sec)	
4. Our recommendation (60 sec)	

Peer Assessment — Audience Scorecard

While each team presents, **other teams fill in this scorecard**. Be honest — the teams presenting to a real APRA panel will need to handle tough questions.

Criterion	Team A	Team B	Team C	Team D
Accuracy — Numbers/classifications are correct (1–5)				
Clarity — Explanation is clear and well-structured (1–5)				
Insight — Goes beyond the numbers to the "so what" (1–5)				
Composure — Confident delivery, handles questions well (1–5)				
Total /20				