FNCE90047 Financial Markets and Instruments

FACULTY OF BUSINESS AND ECONOMICS · THE UNIVERSITY OF MELBOURNE · POSTGRADUATE

Full guide + ask Sia about FNCE90047

SIDE 1/2 · WHAT THE FINAL REWARDS · DEFINE → FORMULA → DECIDE → QUALIFY · EXAM REVISION SHEET · Semester 2, 2026 · v2 · 2026-10-25

0 · Exam Map

COURSE.JSON · BRIEF

30% GROUP | 70% EXAM

4,000-word Group Assignment 30% · End-of-semester Examination 70% · three hours during the examination period.

Permitted materials: not confirmed for this offering in the course materials we hold — check the exam instructions on the LMS.

ANSWER MOVE	WHAT EARNS MEANING
Define	Object, claim, unit, date
Compute	Symbols, signs, denominator
Decide	Mechanism + comparison
Qualify	Boundary that could reverse result

1 · System → Judgement

CH1 · FIG1



Trace the contractual claim through system function, distress transmission and oversight.

BALANCE-SHEET LEVERAGE · EXAM BITE: SCALE LOSS ABSORPTION

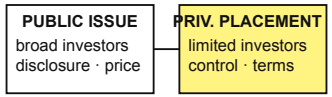
```
L = Total assets / Equity
```

Financial system = markets, intermediaries, instruments and infrastructure coordinating saving, investment and risk. *Systemic risk* = distress or disruption that impairs broad system function. *Regulatory perimeter* = boundary of specified oversight.

Limit: formal compliance does not establish economic resilience or fair outcomes. Leverage alone is not failure probability; inspect asset volatility, liquidity, funding and loss absorption.

2 · Capital Raising

CH2 · FIG1



compare dilution · pricing · control

Primary-market choice is a route comparison, not a label-recitation task.

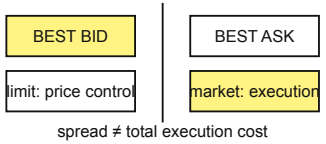
OFFER DISCOUNT · EXAM BITE: ISSUE-PRICE COMPARISON

```
Discount = (V - Poffer) / V
```

Primary market: issuers sell newly created securities. *Private placement*: issuance to a limited investor group under applicable rules. *Underpricing*: positive initial market return relative to offer price.

3 · Orders & Liquidity

CH3 · FIG1



Read quote side, then add size, impact, latency, fees and execution risk.

PROPORTIONAL BID-ASK SPREAD · EXAM BITE: QUOTED COST

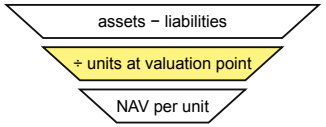
```
s = (Ask - Bid) / [(Ask + Bid)/2]
```

ORDER	GAINS	GIVES UP
Limit	Specified price or better	Execution certainty
Market	Prompt execution	Price certainty

Market liquidity means trading desired quantity promptly with limited price impact and cost. Trap: quoted spread omits impact, latency, fees and non-execution.

4 · Funds & NAV

CH4 · FIG1



Fund value depends on mandate, liabilities, units and valuation convention.

NET ASSET VALUE · EXAM BITE: PER-UNIT ACCOUNTING VALUE

```
NAV = (Assets - Liabilities) / Units
```

Managed fund pools capital under a mandate and fee structure; a *benchmark* is the reference portfolio or index used to interpret mandate and performance.

CHECK	QUESTION
Exposure	What claim and risk does the mandate create?
Price	Which valuation point and adjustments?
Evidence	Return versus matched benchmark and period?
Governance	Fees, liquidity, oversight, incentives?

Limit: past return and a familiar label establish neither skill, suitability nor liquidity.

5 · Active, Index, ETF

CH5 · FIG1

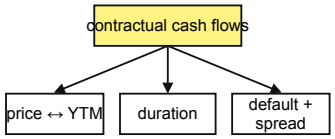
TRACKING DIFFERENCE · EXAM BITE: MATCHED-PERIOD RELATIVE RETURN

```
TD = Rfund - Rindex
```

PRODUCT	CORE TEST	RESIDUAL ISSUE
Active	After-cost outperformance?	Active risk; evidence window
Index	Tracks declared methodology?	Fee, tax, cash, sampling

6 · Fixed Income

CH6 · FIG1



Price promised cash flows, then separate rate sensitivity from credit and spread risk.

Fixed-income security = debt claim with contractual payment rules, maturity and priority. *Yield to maturity* = single rate equating price to promised cash flows under model assumptions.

DURATION APPROXIMATION · EXAM BITE: SMALL YIELD SHOCK

```
ΔP/P ≈ -Dmod × Δy
```

DIRECTION + UNITS

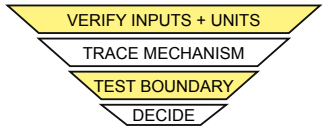
- Convert percentage-point yield change to decimal before multiplying.
- Yield ↑ ⇒ price ↓ under the local duration approximation; sign is negative.
- State: small, parallel yield change; convexity and spread changes omitted.

IF ASKED...	USE...	THEN QUALIFY...
Price sensitivity	Modified duration	Local first order
Promised-return rate	YTM	Cash flow, reinvestment, default assumptions
Scenario value	Reprice cash flows	Curve + spread path

Boundary: duration is not a full scenario valuation. A large/non-parallel move, changing cash flows or spread movement can break the shortcut.

Method Check

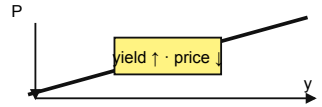
CH1–6



A computed number earns marks only when its mechanism and boundary are visible.

Yield-Risk Boundary

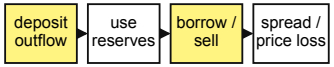
CH6 LIMIT



Inverse direction is the first check; the straight-line shortcut is only local.

7 · Banking & Runs

CH7 · FIG1–2



liquidity now ≠ expected solvency

A funding shock converts maturity transformation into immediate cash demand.

Intermediation transforms funding claims, information, liquidity and risk between savers and borrowers. *Bank run* = rapid withdrawal or non-renewal driven by liquidity need or confidence loss.

LIQUIDITY COVERAGE RATIO · EXAM BITE: STRESSED 30-DAY OUTFLOWS

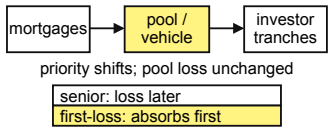
```
LCR = High-quality liquid assets / 30-day net cash outflows
```

CONSTRAINT	QUESTION	FAILURE CHANNEL
Liquidity	Can cash be paid now?	Run, frozen funding, forced sale
Capital	Can losses be absorbed?	Asset loss erodes equity

Do not merge them: capital and liquidity are related but distinct. Audit eligible liquid assets, stress horizon and outflow model.

8 · Mortgages → Tranches

CH8 · FIG2



Trace borrower cash flows one way and loss priority the other way.

Mortgage = property-secured loan with contractual repayment and default terms. *Securitisation* pools and finances receivables through securities backed by their cash flows. A *tranche* sets priority in losses and distributions.

POOL LOSS RATE · EXAM BITE: POOL CREDIT LOSS

```
Loss rate = (Defaulted balance × LGD) / Initial pool balance
```

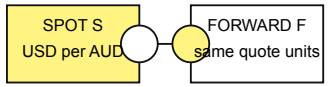
WATERFALL METHOD

1. State pool balance and realised loss.
2. Read contractual first-loss priority.
3. Allocate until that layer is exhausted.
4. Move residual loss upward; report remaining protection.

Limit: pooling and credit enhancement redistribute risk; they do not eliminate it. Prepayment changes timing; default changes amount; priority changes who bears loss.

9 · FX & Capital Flows

CH9 · FIG1



ratio: quote rate / base rate

Preserve quote direction before conversion or hedging; units control the rate placement.

Spot rate = current price of one currency in units of another. *Forward rate* = contracted future-delivery rate. *Capital flow* = cross-border acquisition or disposal of financial claims.

COVERED-INTEREST PARITY · EXAM BITE: PARITY FORWARD BENCHMARK

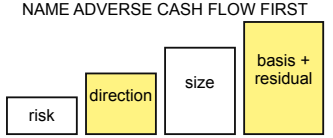
```
FUSD/AUD = SUSD/AUD × (1 + rUSD)/(1 + rAUD)
```

STEP	NON-NEGOTIABLE CHECK
1 Quote	Write "USD per AUD" beside every rate.
2 Match	Same horizon and compounding.
3 Place	Quoted-currency rate in numerator.
4 Qualify	Executable dealing and funding rates.

Trap: parity is a no-arbitrage benchmark under assumptions, not a forecast of future spot.

10 · Derivatives & Hedge

CH10 · FIG1



Choose hedge direction from the adverse cash-flow scenario, then size and qualify.

Derivative links value to an underlying price, rate, event or index. A *hedge* offsets a defined exposure under stated conditions. *Basis risk* remains when hedge and exposure do not move identically.

INDEX FUTURES HEDGE · EXAM BITE: BETA-NEUTRAL CONTRACT COUNT

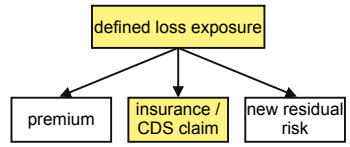
```
N* = β × VP / VF
```

EXPOSURE	ADVERSE MOVE	HEDGE DIRECTION
Long equity portfolio	Market falls	Short index futures
Foreign receipt	Foreign currency falls	Sell foreign forward
Foreign payment	Foreign currency rises	Buy foreign forward

Residual: basis, liquidity, counterparty, model and operational risk. Contract rounding and beta drift also change the result.

11 · Insurance & CDS

CH11 · FIG1–2



Risk transfer creates a new contractual claim; identify event, payment and counterparty.

Insurance premium prices defined protection. A *credit default swap* exchanges periodic premium for defined credit-event protection. *Moral hazard* is behaviour or care changing after risk is partly transferred or obscured.

EXPECTED CREDIT LOSS · EXAM BITE: LOSS BENCHMARK

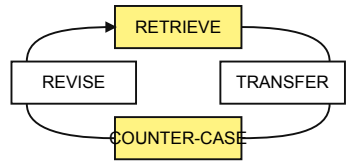
```
ECL = EAD × PD × LGD
```

CONTRACT CHECK	QUESTION
Trigger	Which insured loss or credit event?
Cash flows	Premium timing; protection payment?
Exposure	Notional, EAD, recovery / LGD?
Residual	Basis, legal, counterparty, incentives?

Do not price from ECL alone: a market premium can also reflect timing, capital, liquidity and risk pricing.

Integrated Method Chooser

CH1–11



Retrieve a method, transfer it to changed facts, counter-test it, then revise.

SEE THIS	USE THIS
Balance-sheet scale	Leverage + funding/liquidity map
Issue price versus value	Offer discount + route comparison
Quote / order book	Midpoint + proportional spread
Fund per-unit value	NAV; state valuation point
Bond yield shock	Duration, decimal Δy, negative sign
Currency hedge	Write quote units; parity / forward direction
Portfolio market risk	β-adjusted futures count
Credit protection	ECL benchmark + contract residuals

One sensitivity after every baseline: change the input most connected to the mechanism, hold the remaining assumptions fixed, recompute only affected steps, and explain whether the movement matches the theory. This exposes the assumption controlling the conclusion.

SIA → *The recurring answer route is: map issuer, investor, intermediary and claim → trace funding / risk transfer → apply a transparent metric → stress rates, liquidity, default, incentives and regulation.*

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SIDE 2/2 · SELF-TEST · FIVE WORKED DRILLS · IF X → Y · CLASSIC TRAPS · EXAM-MORNING PLAN · ANSWER PATH VISIBLE · Semester 2, 2026 · v2 · 2026-10-25

Drill 1 · Quoted Spread CH3 WORKED

Q. Best bid = **$19.90**; best ask = **$20.10**. Find midpoint and proportional spread.

BID 19.90 | MID 20.00 | ASK 20.10

spread = 20.10 − 19.90 = 0.20

0.20 / 20.00 = 0.01

ANSWER = 1%

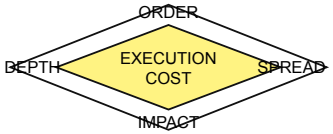
Answer path: midpoint → dollar spread → divide by midpoint → qualify.

1. Midpoint = (19.90 + 20.10)/2 = **$20.00**.
2. Quoted spread = 20.10 − 19.90 = **$0.20**.
3. Proportional spread = 0.20/20.00 = **1%**.
4. State: before market impact and fees; a large trade may cost more.

SIA → *A quote is a capacity-limited offer, not a universal transaction price.*

Trading Judgement Cards CH3 FAQ

IF YOU SEE…	DO…
"at specified price or better"	Name a limit order; execution may fail.
Prompt execution required	Market order; expose price uncertainty.
Best bid / best ask	Compute midpoint + proportional spread.
Large order	Add depth and price-impact analysis.
Wide spread	Infer higher quoted cost, not complete illiquidity.



Liquidity judgement needs order, spread, depth, impact and execution risk together.

Classic Traps · Quotes CH3

- Using ask alone as "the spread".
- Dividing by bid rather than midpoint.
- Reporting 0.01 without converting to 1%.
- Calling a narrow quote cost the total cost.
- Ignoring whether the desired quantity is displayed.

Rapid Recall · Early Methods CH1–5

PROMPT	FORMULA / DECISION
Assets + equity	L = assets/equity; state funding, volatility and loss absorption.
Value + offer	(V − Poffer)/V; qualify the valuation benchmark.
Fund assets, liabilities, units	NAV = (A − L)/units; name valuation point.

Drill 2 · Duration Shock CH6 WORKED

Q. Modified duration = **4.5**; yield rises **0.50 percentage points**. Approximate the percentage price change.

Δy = +0.005

−4.5 × 0.005 = −0.0225

yield ↑ · price ↓

ΔP/P = −2.25%

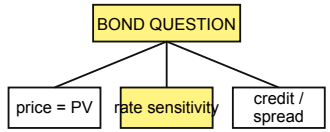
Convert the yield shock to decimal, apply the negative sign, then state omissions.

1. 0.50 percentage points = **0.005**.
2. ΔP/P ≈ −DmodΔy = −4.5(0.005).
3. Result = −0.0225 = **about −2.25%**.
4. State: small parallel increase; convexity and spread changes omitted.

SIA → *Duration is a local sensitivity, not a full scenario valuation.*

Bond Decision Cards CH6 FAQ

IF YOU SEE…	DO…
Small yield change + duration	Use −DmodΔy.
"0.50 percentage points"	Write 0.005, not 0.50.
Yield rises	Predict price fall before arithmetic.
Promised cash flows / price	Use discounting or YTM relation.
Large / non-parallel shock	Reprice; duration alone is weak.



First classify the question: valuation, rate sensitivity, or credit/spread mechanism.

Classic Traps · Fixed Income CH6

- Dropping the minus sign.
- Using 0.50 rather than 0.005.
- Calling duration the maturity.
- Treating YTM as realised return without assumptions.
- Ignoring default, reinvestment or spread changes.

Translate the Bond Prompt CH6 METHOD

WORDS IN QUESTION	WRITE FIRST
"Price promised cash flows"	Cash-flow dates, amounts and discount rates.

Drill 3 · Liquidity Coverage CH7 WORKED

Q. A bank has **$120m** liquid assets and projected **30-day net outflows of $100m**. Compute the simplified ratio.

LIQUID ASSETS = $120m

30-DAY OUTFLOWS = $100m

120 / 100 = 1.20 = 120%

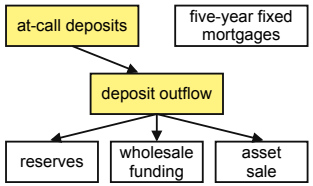
buffer = $20m under stated assumptions

Match the stress horizon, divide liquid stock by modelled outflow, audit eligibility.

1. Match numerator and denominator to the **30-day** stress horizon.
2. LCR = 120/100 = **1.20 = 120%**.
3. Interpret: $1.20 of stated liquid assets per $1 of projected outflow.
4. Qualify asset eligibility, continuing liquidity and the outflow model.

SIA → *A regulatory-looking number is only as credible as its stress definitions.*

Funding-Shock Answer Path COURSE WORKED



Claims mature differently: liquid par withdrawals can arrive before mortgage cash flows.

1. Map deposit and mortgage claims.
2. Name maturity and liquidity transformation.
3. Trace cash need to reserves, borrowing or sale.
4. Stress prices and funding spreads.
5. State capital, liquidity and conduct controls.

Conclusion: expected-cash-flow solvency does not ensure today's liquidity. Buffers and credible liquidity access reduce, but do not eliminate, the risk.

Capital ≠ Liquidity CH7 LIMIT

TEST	EVIDENCE	WRONG SHORTCUT
Liquidity	Cash resources versus near outflows	"Positive equity means cash is available"
Capital	Asset value less liabilities	"High LCR means no solvency risk"

Drill 4 · Parity Forward CH9 WORKED

Q. Spot AUD/USD = **0.66 USD per AUD**; one-year US rate = **4%**; Australian rate = **3%**. Use simple annual compounding.

QUOTE = USD PER AUD

F = 0.66 × (1.04 / 1.03)

F ≈ 0.6664 USD/AUD

USD rate numerator · AUD rate denominator

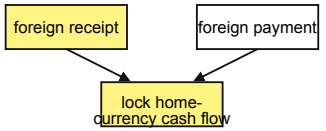
Carry quote units through every line; they determine the interest-rate ratio.

1. Write the units: **USD/AUD**.
2. FUSD/AUD = SUSD/AUD(1 + rUSD)/(1 + rAUD).
3. F = 0.66(1.04/1.03) ≈ **0.6664 USD/AUD**.
4. State matched one-year simple rates plus executable dealing and funding assumptions.

SIA → *Quote direction determines which interest rate belongs in the numerator.*

FX Direction Cards CH9 FAQ

IF YOU SEE…	DO…
AUD/USD = 0.66	Read 0.66 USD per AUD.
Need AUD from USD quote	Invert only if required; relabel units.
Future foreign receipt	Sell that foreign currency forward.
Future foreign payment	Buy that foreign currency forward.
CIP forward	Match horizon + compounding; do not forecast.



Start from the foreign-currency cash flow, then choose the offsetting forward direction.

Classic Traps · FX CH9

- Dropping quote units after line one.
- Putting the base-currency rate in the numerator.
- Mixing compounding or horizons.
- Treating a parity benchmark as expected future spot.
- Hedging a receipt in the same direction as the exposure.

Product Comparison Sprint CH4–5

CLAIM	REQUIRED QUALIFICATION
"Active fund is better"	After-cost return versus named benchmark and matched window; active risk.

Drill 5 · Index Hedge CH10 WORKED

Q. Portfolio value = **$5m**; beta = **1.1**; each futures contract = **$250,000** index exposure. Estimate a beta-neutral hedge.

βVP = 1.1 × $5m = $5.5m

N* = $5.5m / $0.25m = 22

ANSWER = 22 SHORT CONTRACTS

market falls → short futures gain

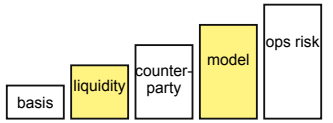
Beta-adjust the exposure, divide by contract exposure, then choose direction.

1. Beta-adjusted exposure = 1.1 × $5m = **$5.5m**.
2. N* = 5.5m/250,000 = **22 contracts**.
3. Long equity portfolio is hurt by a fall ⇒ take **22 short**.
4. Qualify beta drift, futures basis and contract rounding.

SIA → *Hedge direction follows the adverse cash-flow scenario.*

Hedge Failure Map CH10 LIMIT

HEDGE ≠ REMOVE ALL RISK



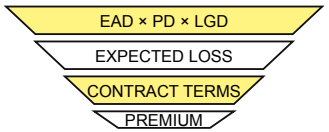
Residual risk survives through basis, liquidity, counterparty, model and operations.

FAILURE	DIAGNOSTIC
Basis	Underlying and hedge move differently.
Liquidity	Cannot trade size at assumed price.
Counterparty	Protection promise may fail.
Model	Beta, duration or exposure estimate shifts.
Operational	Wrong contract, date, amount or direction.

Fast Credit Check CH11 WORKED

SOURCE NUMBERS · EXPECTED-LOSS BENCHMARK

`$10m × 2% PD × 60% LGD = $120,000 ECL`

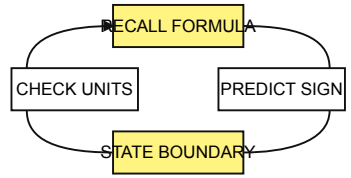


Expected loss is a benchmark inside, not equal to, the complete contract price.

Classic Traps · Whole Course CH1–11 FAQ

TRAP	REPAIR SENTENCE
Leverage = failure	"Leverage scales exposure; inspect volatility, liquidity, funding and loss absorption."
First-day return proves mispricing	"The inference inherits valuation uncertainty and issue constraints."
Past return = skill	"Match benchmark, window, exposure, fees, governance and liquidity."
Tracking difference = tracking error	"One is a signed period gap; the other concerns relative-return volatility."
Pooling eliminates risk	"Pooling and subordination redistribute who bears loss."
Hedge removes all risk	"Name basis, liquidity, counterparty, model and operational risk."
ECL = premium	"Premium can also reflect timing, capital, liquidity and risk pricing."

Exam-Morning Plan STUDY STRATEGY



Closed-notes self-test loop: formula, sign, units, boundary—then change the facts.

1. Recall: write all 11 formula names, symbols and denominators from memory.
2. **Units:** say decimal versus percentage points; currency quote direction; stock versus flow; per-unit denominator.
3. **Direction:** predict sign before calculator work.
4. **Transfer:** alter one input; recompute only affected steps; explain whether movement matches mechanism.
5. **Counter-case:** name the assumption that would reverse or weaken the conclusion.
6. **Error log:** classify first divergence as translation, calculation or interpretation; repair that line.

SIA → *Recite this answer frame: "I identify __; use __ because __; calculate __ with units; interpret it as __; the conclusion is limited by __."*

Final Retrieval Pass ALL CHAPTERS

PASS	SAY ALOUD
Formula	Numerator, denominator, sign and units for all 11 checkpoints.
Mechanism	Who owes what, when, with what priority and funding source?
Stress	Rates, liquidity, default, incentives, regulation and counterparty.
Boundary	Which assumption or market friction could reverse the conclusion?