FINC6001 Finance: Theory to Applications

THE UNIVERSITY OF SYDNEY · SEMESTER 2, 2026

Full guide + ask Sia about FINC6001

SIDE 1/2 · RECALL CORE · definitions → formulas → decision rules → checks · CLOSED-BOOK MEMORY SHEET · **Priority:** valuation · bonds · portfolios · risk · market structure · governance

0 · Exam Map

COURSE + BRIEF

Final exam 50% | Report 30% | Video 20%

Final Exam (closed book): 50% *(FINC6001 Welcome slides, Semester 2 2026 (PDFRAW_FINC6001_Welcome.txt))*

TASK	WEIGHT	FORMAT
Final exam	50%	Closed book, formal exam period
Written group assignment report	30%	Group report, 3000 words
Video presentation	20%	Group video, 7 minutes

★ Retrieval order: define the object → name inputs/units/dates → predict direction → calculate → test sensitivity or limiting case → translate the number into a decision with stated assumptions.

1 · Statements → Firm Value

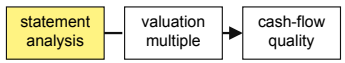
C1 · MODULE 1

Financial statement analysis fixes the relevant evidence and scale before interpretation. Separate operating performance from financing effects; a valuation multiple is a supported link, not a free-standing conclusion.

ROE · USE FOR THE PROFITABILITY CLAIM

ROE = Net income ÷ Average equity

CHECK	WHAT MUST MATCH
Policy	Accounting treatment is comparable
Business	Peer economics are comparable
Period	Dates and cycles align
Cash	Earnings claim survives cash-flow quality



C1 source map: evidence → valuation link → cash-flow diagnostic.

RECITE → *A ratio comparison is conditional on accounting policy, business model, period and peer selection. Name which condition fails before qualifying the conclusion.*

1b · Evidence Ledger

C1 · OVERVIEW

OBSERVATION	CONCEPT	INFERENCE	ALTERNATIVE
Supplied accounting signal	Ratio / cash-flow quality	Supported valuation link	Other reading of the evidence

Keep the four entries separate until the final sentence. A correct term attached to the wrong object, scale, comparison or decision is still wrong. If evidence changes the condition tied to the multiple, revise only the downstream claim.

DIRECTION AND SCALE

2 · Equity DCF

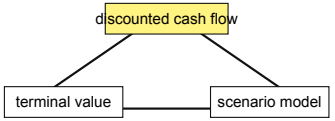
C2 · MODULE 2

Discounted cash flow separates assumptions, forecast mechanics and valuation output. Date every cash flow; keep inputs distinct from formulas and outputs so a scenario change has one visible path.

DCF · USE FOR EXPLICIT FORECAST + TERMINAL VALUE

$V_0 = \Sigma_{t=1\ldots T}\ FCF_t \div (1+r)^t + TV_T \div (1+r)^T$

LAYER	AUDIT QUESTION
Assumptions	Are growth, reinvestment and r economically consistent?
Forecast	Do signs, units and dates flow through?
Terminal	Does TV dominate; what changes under scenarios?
Output	Is the decision qualified by sensitivity?



C2 source map: value, terminal assumptions and scenarios remain mutually visible.

Failure condition: precision in the spreadsheet does not repair inconsistent growth, reinvestment and discount-rate assumptions. Rebuild the first affected link, then propagate only that repair.

2b · Valuation Answer Form

C2 · FAQ

1. State cash-flow definition and forecast horizon.
2. Write the discount rate and timing convention.
3. Separate explicit PV from terminal PV.
4. Reconcile differing models input by input.
5. Report sensitivity before the recommendation.

TRAP → *Two models can disagree because horizon, cash-flow definition, reinvestment, continuing value or discount rate differs. Compare inputs, not headlines.*

2c · Scenario Discipline

C2 · OVERVIEW

CHANGE ONE	HOLD FIXED	TRACE FIRST
Growth	Unrelated assumptions	Reinvestment support, then TV
Discount rate	Cash-flow definition	Every dated PV, then total
Forecast horizon	Economic meaning	Explicit/terminal split
Cash-flow definition	Decision question	Matching discount rate

3 · Term Structure + Bonds

C3 · MODULE 3

Spot rate fixes maturity; its *discount factor* converts that dated promise to present value. The price is the sum of the maturity-matched present values.

BOND PRICE · USE WITH A TERM STRUCTURE

$P = \Sigma_{t=1\ldots T}\ CF_t d_t$

STEP	REQUIRED MOVE
1	List every promised CF and its date
2	Match each date to d_t
3	Compute $CF_t d_t$
4	Sum; check price moves inversely when relevant rates rise



C3 source map: maturity-specific rate → discount factor → price.

Flat-curve exception: using one yield for every cash flow is only an approximation unless the curve is flat or the task explicitly permits it. Do not collapse dated cash flows prematurely.

4 · Advanced Firm Value

C4 · M4

ENTERPRISE VALUE · USE FOR FCFF

$EV = \Sigma_{t=1\ldots T}\ FCFF_t \div (1+WACC)^t + CV_T \div (1+WACC)^T$

BRIDGE	QUESTION
Operations	What FCFF follows from the forecast?
Discounting	Does WACC match the operating cash flow?
Continuing value	Are terminal inputs sound and sensitive?
Claims	How do financing claims reconcile to the decision?

A plausible total is not evidence that terminal assumptions are sound. If continuing value dominates, challenge the terminal inputs first.

Reconcile operating forecasts, financing claims and continuing value without mixing their roles. State which component changes first and which parts of the original bridge remain supported.

4b · Two Valuation Objects

C2 ↔ C4

OBJECT	CASH FLOW / RATE	DIAGNOSTIC
Equity-model value	Supplied FCF with matching r	Growth–reinvestment–rate consistency
Enterprise value	FCFF discounted at WACC	Continuing-value dominance and claims bridge

LIMITING CHECKS

5 · Trading + Liquidity

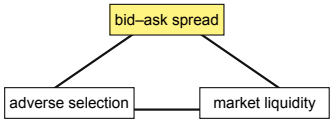
C5 · SECURITIES TRADING

QUOTED SPREAD · ONE COST COMPONENT

Spread = Ask - Bid

Order handling, information and inventory risk shape execution cost. *Adverse selection* links informed order flow to the price protection demanded by liquidity suppliers.

OBSERVE	WHY IT CHANGES THE ANSWER
Quoted spread	Immediate round-trip price gap
Depth	Executable quantity at quoted prices
Price impact	Order size moves execution price
Timing	Conditions change while executing
Information	Adverse-selection exposure changes



C5 source map: a quoted spread must be read with information and liquidity.

Trap: a narrow quoted spread does not guarantee low total cost when depth, price impact and timing differ.

6 · Asset Allocation

C6 · ASSET MANAGEMENT

PORTFOLIO EXPECTED RETURN · USE AFTER WEIGHTS

$E[R_p] = \Sigma_{i=1\ldots n}\ w_i E[R_i]$

BEFORE WEIGHTS	AFTER WEIGHTS
Objectives, horizon, liquidity, constraints	Expected return and inspectable risk contributions
Feasible opportunity set	Scenario and constraint consistency

Diversification reduces idiosyncratic exposure; it cannot remove common market risk or rescue inconsistent constraints. A portfolio label is not a substitute for inspecting the weights.

Connect every proposed weight to the stated objective and constraint set; then inspect how the change affects both expected return and concentration.

6b · Portfolio Decision Audit

C6 · OVERVIEW

QUESTION	EVIDENCE REQUIRED
What is the objective?	Return target and decision horizon
What is feasible?	Liquidity, mandate and supplied constraints
What drives return?	Weights × expected returns
What drives risk?	Risk contributions and common exposures

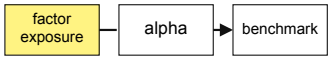
7 · Factors + Performance

C7 · LECTURE 8B

FACTOR MODEL · USE TO SEPARATE EXPOSURE FROM RESIDUAL

$R_i - R_f = \alpha_i + \Sigma_k \beta_{ik} F_k + \varepsilon_i$

TERM	INTERPRETATION CHECK
$\beta_{ik}F_k$	Systematic exposure to chosen factor k
α_i	Residual performance conditional on model
ε_i	Unexplained return component
Benchmark	Must fit mandate and opportunity set



C7 source map: exposure → conditional alpha → benchmark challenge.

Estimated alpha can change with factor choice, sample period, fees and trading assumptions. "Positive α" is not yet "skill": show model, benchmark and robustness.

8 · Risk Measurement

C8 · LECTURE 8B

VALUE AT RISK · LOSS-QUANTILE STATEMENT

$VaR_\alpha = q_\alpha(L)$

ALWAYS STATE	THEN CHALLENGE
Loss definition; horizon; confidence level	Tail dependence and regime change
Data window; model assumptions	Liquidity and calibration
Reported estimate	Stress scenarios and risk limit

A reported risk number is not a guarantee. Pair VaR with stress tests that probe cases the fitted distribution or recent window may not represent.

The risk report should make loss definition, horizon, confidence level, data window and modelling assumptions visible before it recommends an action.

8b · Performance ↔ Risk

C7–C8 INTEGRATION

CLAIM	REQUIRED QUALIFICATION
Manager outperformed	Which benchmark, factors, fees and period?
Portfolio is within limit	Which loss, horizon, confidence and model?
Estimate is robust	What happens under another factor set, window or stress?

Keep measurement and decision separate. The factor model attributes return under a chosen benchmark; the risk model estimates loss exposure under chosen distributional and calibration assumptions. Neither number carries its own management action.

CHANGED CONDITIONS

9 · Governance + Claims

C9 · MODULE 5

LEVERED VALUE · RESTRUCTURING TRADE-OFF

$V_L = V_U + PV(\text{Tax shield}) - PV(\text{Distress})$

LENS	TRACE
Agency conflict	Who decides, pays and benefits?
Restructuring	Which claims, incentives and exposures move?
Securitisation	Who retains each exposure after repackaging?



C9 source map: incentives → claim redesign → retained exposure.

Risk is redistributed, not erased. The answer must identify the holder of each material exposure after the transaction.

10 · Hedge Funds + Negotiation

C10 · ALTERNATIVES TEXT

CALL PAYOFF · USE FOR ASYMMETRIC PAYOFF

Payoff = max(S_T - K, 0)

STRATEGY ANALYSIS	NEGOTIATION ANALYSIS
Payoff asymmetry, leverage, liquidity, path dependence	Interests, bargaining position, credible alternatives
Mandate constraints	Decision process and changed conditions

Strategy labels can conceal leverage, liquidity and path dependence; negotiation claims depend on credible alternatives. Define the object, trace the bargaining mechanism, then test the decision under one changed condition.

ONE-LINE CLOSE → *State the recommendation, the assumption carrying it, the first observation that would reverse it, and the narrower claim that survives.*

10b · Claims + Choices Matrix

C9–C10

QUESTION	GOVERNANCE / RESTRUCTURING	STRATEGY / NEGOTIATION
Object	Claims, control, incentives	Payoff, mandate, interests
Mechanism	Reallocation through transaction design	Asymmetry plus bargaining alternatives
Boundary	Risk may remain with another holder	Leverage, liquidity and path can dominate label
Decision	Who gains, pays and bears exposure?	Is the alternative credible and feasible?

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FINC6001 Self-Test Drills · Answer Paths · Traps

FINANCE: THEORY TO APPLICATIONS · THE UNIVERSITY OF SYDNEY

Full guide + ask Sia about FINC6001

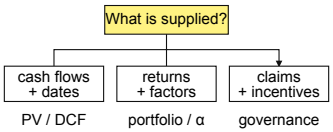
SIDE 2/2 CLOSED-BOOK DRILLS · answer path → changed condition → first failed move → repair

TEST BEFORE CHECKING

Use: cover the answer · speak the rule · write the formula · run the check

11 · Method Chooser C1–C10

IF THE PROMPT GIVES...	START WITH...	FINISH WITH...
Statements / ratios / peers	ROE + comparable basis	Cash-flow quality
Forecast FCF + terminal value	DCF timeline	Scenario sensitivity
Dated bond cash flows + curve	Maturity-matched d_t	Rate–price direction
FCFF + WACC + CV	Enterprise-value bridge	Terminal dominance
Bid, ask, order conditions	Spread	Depth/impact/timing
Objectives + constraints	Weights + $E[R_p]$	Risk contributions
Returns + factors	β exposures	Conditional α
Loss distribution	VaR quantile	Stress + limit
Claims / transaction design	Who pays/benefits?	Retained exposure
Asymmetric strategy	Payoff map	Mandate + path risk



Decision flow distilled from the ten chapter task statements.

RULE → *Do not begin with a memorised formula. First classify the object, scale, timing and decision; then select the method whose assumptions fit.*

11b · Universal Answer Scaffold ALL STUDY STRATEGIES

MOVE	WHAT TO WRITE FROM MEMORY
1 · Fix object	What is valued, priced, attributed, measured or negotiated?
2 · Map inputs	Variables, units, signs, dates, evidence and scale.
3 · Predict	Direction before arithmetic.
4 · Apply	Formula or mechanism with symbols defined.
5 · Diagnose	Changed condition; first failed premise.
6 · Decide	Retain, narrow or reverse; state assumptions.

EVIDENCE LEDGER

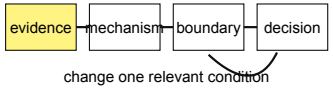
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Observation | concept | inference | alternative. Keep entries separate until the last sentence.
```

ORAL RECALL TEST

12 · Drill 1 · Ratio Audit C1 · PRACTICE 7

Prompt: translate accounting signals into a valuation claim while separating operating performance from financing effects; then change one condition.

PRACTICE ALLOCATION	ANSWER PATH
2	Define financial statement analysis at the case scale; specify period and comparison.
2	Trace the valuation-multiple link through observed evidence.
3	Use cash-flow quality to retain, narrow or reverse the result.
TOTAL 7	CLOSE WITH THE SUPPORTED, QUALIFIED VALUATION CLAIM.



C1 changed-case pattern: repair the first affected link, not the whole answer.

Self-check: did the numerator and denominator refer to the same period? Did the peer share the business model and accounting basis? Is the conclusion operating or financing driven?

ANSWER STEM

```
"The initial ratio supports ___ relative to ___ over ___. When ___ changes, the first failed premise is ___. Cash-flow quality therefore [retains / narrows / reverses] the valuation claim because ___."
```

13 · Drill 2 · DCF Repair C2 + COURSE PRACTICE 8

Given in the guide: a model reports high equity value after perpetual growth is increased while reinvestment is unchanged. Identify the inconsistency and repair the recommendation.

1. **2:** define the decision and relevant evidence.
2. **3:** check whether growth is supported by reinvestment and return assumptions; rebuild continuing value with consistent inputs.
3. **3:** report sensitivity to the discount-rate spread and qualify the recommendation.

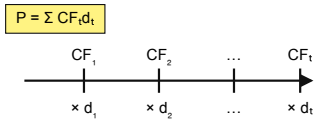
Total 8: end with the qualified recommendation.

Answer: do not treat the spreadsheet output as fact. Repair growth–reinvestment consistency, then test the discount-rate spread before discussing the headline value.

14 · Drill 3 · Bond Curve C3 · PRACTICE 9

Prompt: price every promised cash flow with the maturity-matched rate, explain the term structure, then change one condition.

PRACTICE ALLOCATION	ANSWER PATH
2	Define spot rate at the dated cash-flow scale.
2	Trace each maturity to its discount factor.
5	Use bond price to qualify the result under the changed curve.
TOTAL 9	STATE THE DIRECTION CHECK AND FLAT-CURVE BOUNDARY.



C3 method redrawn as a dated, maturity-matched present-value timeline.

SAY ALOUD BEFORE CALCULATING

```
Each CF_t uses its own d_t; if a relevant rate rises, its PV falls. One yield is an approximation unless the curve is flat or permitted.
```

CHANGED CONDITION	FIRST MOVE TO REVISIT
Curve shape changes	Maturity match, not the cash-flow promise
Cash-flow date changes	Both date and corresponding d_t
Flat curve allowed	State the approximation explicitly

15 · Drill 4 · Enterprise Value C4 · PRACTICE 6

Path 2+2+2: define enterprise value at the case scale → trace FCFF through the forecast and WACC → use continuing value to qualify the result. A total that "looks plausible" does not validate terminal assumptions.

Total 6: finish with the reconciled bridge and terminal-value qualification.

FAST CHECK → *Explicit forecast PV + discounted continuing value = EV. If CV dominates, challenge terminal inputs and show sensitivity before reconciling claims.*

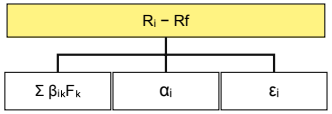
15b · Value-Bridge Recall C4 · OVERVIEW

SAY	CHECK
"FCFF is the operating forecast."	Signs, units and dates
"WACC discounts matching operating cash flow."	Cash-flow/rate consistency
"CV captures value beyond T."	No overlap with explicit forecast

16 · Drill 5 · Factor Alpha C7 · PRACTICE 9

Prompt: separate systematic exposure from manager-specific performance using an appropriate benchmark; then change one condition.

PRACTICE ALLOCATION	ANSWER PATH
2	Define the return and factor-exposure scale.
2	Trace α only after β exposures and benchmark.
5	Change factor choice, sample, fees or trading assumptions; qualify.
TOTAL 9	DO NOT CALL RESIDUAL PERFORMANCE SKILL WITHOUT ROBUSTNESS.



C7 model: observed excess return decomposes into exposure, alpha and residual.

IF YOU SEE...	DO THIS
Positive α	State "conditional on this model/benchmark"
Different benchmark	Re-estimate exposure and α
Gross performance	Check fees and trading assumptions
Short sample	Challenge period sensitivity

ANSWER STEM

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"The estimated α is the residual after exposures to the selected factors. Its interpretation changes when ___; therefore the evidence supports ___ only under ___."
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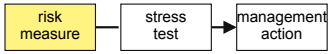
17 · Risk Recall Card C8 · PRACTICE 6

Path 2+2+2: define VaR at the loss, horizon and confidence scale → trace the stress test through the evidence → connect the revised result to a risk limit. Change liquidity, tail dependence or regime and identify the first invalid calibration premise.

PROMPT ELEMENT	REQUIRED STATEMENT
VaR number	Loss, horizon, confidence, data window, model
Stress scenario	Which calibration assumption it challenges
Limit breach / headroom	Action supported by both measures
Changed regime	Why recent calibration may not travel

18 · Judgement Cards C1–C10 FAQ

IF YOU SEE X...	→ DO Y
ROE or multiple differs	Check policy, business model, period, peers; separate financing.
High value after higher perpetual growth	Test reinvestment/return consistency and discount-rate spread.
Non-flat term structure	Match every dated cash flow to d_t.
Continuing value dominates	Stress terminal assumptions before recommendation.
Narrow spread	Add depth, impact, timing and information.
"Diversified" portfolio	Inspect weights, constraints and common risk.
Positive alpha	Challenge factors, benchmark, sample, fees and trading.
Single VaR number	Add horizon/confidence/model plus stress scenarios.
Risk moved off balance sheet	Trace retained and transferred exposure.
Strategy label	Expose leverage, liquidity, payoff and path dependence.



estimate ≠ guarantee

C8 source map redrawn as the required measure → challenge → action chain.

MARKING LOGIC → *A limitation earns little unless you name the affected premise, direction of the repair and revised decision.*

19 · Classic Traps CHAPTER BOUNDARIES

WRONG SHORTCUT	REPAIR
Precise sheet = correct model	Audit economic consistency.
One yield discounts all CFs	Use maturity-specific factors.
Low spread = liquid	Add depth/impact/timing.
Diversification removes all risk	Common market risk remains.
Alpha proves skill	Alpha is model-dependent.
VaR is a worst-case loss	It is a modelled loss quantile.
Securitisation eliminates risk	Trace who retains exposure.

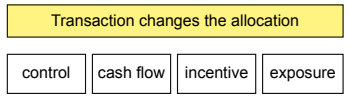
19b · Error Language ALL CHANGED CASES

WEAK LINE	DECISION-GRADE REPAIR
"The assumption may be wrong."	Name it, contrary evidence and first affected calculation.
"The model is sensitive."	Name input and direction of the decision change.
"There are limitations."	State operational boundary and narrower claim.

20 · Governance Card C9 · PRACTICE 7

Prompt: evaluate how governance and transaction design redistribute incentives, claims and risk; then change one condition.

PRACTICE ALLOCATION	ANSWER PATH
2	Define the agency conflict at the case scale.
2	Trace how restructuring changes claims and incentives.
3	Use securitisation to locate retained and transferred exposures.
TOTAL 7	RETAIN, NARROW OR REVERSE THE CONCLUSION.



Who gains? Who pays? Who still bears risk?

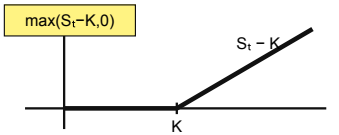
C9 ledger: transaction design must be followed through every claim and exposure.

ANSWER STEM

```
"The agency conflict is ___. Restructuring reallocates ___ from ___ to ___. Securitisation transfers ___ but leaves ___ with ___. The recommendation therefore ___."
```

21 · Payoff + Negotiation Card C10 · PRACTICE 8

PRACTICE ALLOCATION	ANSWER PATH
2	Define strategy and payoff at the case scale.
2	Trace bargaining position through interests and alternatives.
4	Use the decision process to qualify under changed leverage, liquidity or path.
TOTAL 8	COMPARE PAYOFF ASYMMETRY WITH MANDATE CONSTRAINTS.



C10 payoff: limited downside in the expression does not erase leverage, liquidity or path risk.

Negotiation check: strategy value and bargaining claims depend on credible alternatives. Name the interest and changed decision condition.

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