Build an Integrated Three-Statement Model

Excel & Financial Modeling | Intermediate | 90-120 minutes (estimate)

Forecast income statement - USD

Line	Forecast
Revenue	500.00
COGS	300.00
Gross profit	200.00
Cash operating expenses	100.00
EBITDA	100.00
Depreciation	20.00
EBIT	80.00
Cash interest	10.00
Pretax income	70.00
Tax expense / cash tax	17.50
Net income	52.50

Cash-flow statement - USD

Line	Forecast
Net income	52.50
Add back depreciation	20.00
Increase in receivables	-20.00
Increase in inventory	-10.00
Increase in payables	10.00
Operating cash flow	52.50
Cash capex / investing	-40.00
Debt principal / financing	-20.00
Net cash change	-7.50
Opening cash	100.00
Closing cash	92.50

Balance sheet - USD

Line	Opening	Closing
Cash	100.00	92.50
Accounts receivable	80.00	100.00
Inventory	60.00	70.00
Net PPE	200.00	220.00
Total assets	440.00	482.50
Accounts payable	50.00	60.00
Debt	150.00	130.00
Equity	240.00	292.50
Liabilities and equity	440.00	482.50
Balance sheet residual	0.00	0.00

Supporting roll-forwards - USD

Line	Forecast
Opening PPE	200.00
Capex	40.00
Depreciation	20.00
Closing PPE	220.00
Opening debt	150.00
Principal repaid	20.00
Closing debt	130.00
Opening equity	240.00
Retained profit	52.50
Closing equity	292.50

Interpretation and recommended actions

Revenue 500 less COGS 300 and operating expenses 100 gives EBITDA 100, EBIT 80, pretax income 70 and net income 52.5. CFO is 52.5, investing cash flow -40 and financing -20; closing cash is 92.5. Closing assets and liabilities plus equity both equal 482.5. Increasing closing AR by 10 reduces cash by 10 and leaves profit unchanged. The balance sheet still balances because one asset replaces another.

Scoring rubric - 100 points

Dimension	Points	Awarding guidance
Calculation	40	Income statement 10; cash flow 15; balance sheet and roll-forwards 15.
Interpretation	25	Correct application of the case rules 10; explain the business decision 10; identify evidence or limitations 5.
Controls / audit trail	20	Traceable formulas 8; independent reconciliation 8; explicit units and signs 4.
Communication	15	Decision and numerical headline 5; actions with owners and evidence 5; concise response covering all required deliverables 5.

Award method credit after an isolated arithmetic error rather than repeatedly deducting for it. Equivalent account labels and well-supported alternative recommendations are acceptable. Numerical tolerance is 0.01 in the stated units; no universal passing score is prescribed.

Common mistakes

Using revenue as receipts; adding capex to depreciation expense; plugging cash; forgetting current profit in equity.

Staged hints

Roll working capital by closing less opening balances. Add depreciation back once. Cash must link from its roll-forward.

Instructor notes

Prerequisites: Accrual accounting and P&L / balance sheet / cash flow. The total duration of 90-120 minutes is a planning estimate, not a tested completion time. Allocate class time according to prior knowledge and reserve time for discussion of the decision and evidence.

For a simpler class, provide the model structure and work through one driver. For an extension, change one operational assumption and require a new reconciliation and recommendation. Verify the new key before distributing any variant. Open files in the intended spreadsheet application before class. Solutions are learning resources, not secure hiring examinations.

Decision

Review liquidity alongside profit and test how slower collections change the linked statements.

Evidence and reasoning

An increase in receivables uses cash without changing revenue in this case. Depreciation reduces profit but is added back in cash flow; capex and debt principal affect cash separately.

What would change the conclusion

Collection assumptions, inventory needs, supplier terms or financing could change cash. A balanced balance sheet proves internal linkage, not that the assumptions are commercially plausible.