Hire Now or Wait? A Headcount Investment Decision

FP&A | Advanced | 90-120 minutes (estimate) | Contribution margin and cash forecasting

Worked numerical schedule

Measure	Value	Unit
October incremental units	200.00	units
November incremental units	400.00	units
December incremental units	600.00	units
Base incremental contribution	48,000.00	USD
Base Q4 incremental profit	13,000.00	USD
End October incremental cash	3,000.00	USD
End November incremental cash	-11,000.00	USD
End December incremental cash	-17,000.00	USD
Minimum Q4 cash headroom	-27,000.00	USD
January receipts from December delivery	60,000.00	USD
Downside Q4 incremental profit	-23,000.00	USD
Profit to cash bridge residual	0.00	USD

Interpretation and recommended actions

Base incremental profit is $13,000 but month-end cash is $3,000 / -$11,000 / -$17,000. The minimum buffer shortfall is $27,000. January receipts are $60,000; they do not fund the Q4 trough. Downside profit is -$23,000. Do not approve solely on the positive base profit: confirm demand, arrange cash capacity, or remodel a later start or payment terms. The cash model is incremental; existing company cash flows could improve or worsen the full-company picture.

Scoring rubric - 100 points

Dimension	Points	Awarding guidance
Calculation	40	Capacity economics 15; base / downside profit 10; timing and cash 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

Selling more units than demand; omitting ramp-up; including December receipts early; treating contribution as cash available today.

Staged hints

Incremental units equal served demand with hire less served demand without hire. Delay receipts one month. Reconcile profit to cash through ending receivables.

Instructor notes

Prerequisites: Contribution margin and cash forecasting. Suggested use of the estimated 90-120 minutes: spend roughly 15% on the lesson and smaller example, 55% on the independent task, 20% on comparing approaches and 10% on the decision discussion. Timing is untested. Ask learners to explain why the numerical check is necessary but not sufficient.

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. Expert review remains pending.