Booked, Financed, or Circular?

Oracle, NVIDIA, AMD and the Quality of AI Infrastructure Demand

Project Study | Student Handout

Oracle as the compact DCF spine; NVIDIA and AMD as demand-quality overlays

Corporate Valuation with LLMs
Miao Liu
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Case question

Should Oracle's AI-driven backlog be valued **at par**, or should an analyst apply a **revenue-quality, reinvestment, and continuing-value discount** once supplier concentration, financing interdependence, and incentive-based demand are taken seriously?
How much of today's AI infrastructure demand should flow through a DCF as if it were durable, cash-converting demand?

Working rule

This project is intentionally designed for **LLMs to be a crucial co-pilot**. The core difficulty is not arithmetic; it is **evidence synthesis across multiple companies and document types**. You will move across a background article, Oracle earnings releases and SEC filings, NVIDIA's concentration disclosures, and AMD's warrant and share-count disclosures. Use LLMs to **extract, organize, challenge, red-team, and edit**. They are **not data sources**. Every number in the workbook must come from an exhibit or be computed in your spreadsheet.

Case Overview

In October 2025, the *Financial Times* published a deeply reported article arguing that OpenAI had moved to the center of a dense and unusual network of AI infrastructure deals, linking together some of the largest technology companies as customers, suppliers, financiers, and strategic partners.[1] The article's central concern is not simply that AI demand is speculative. It is more subtle: when **demand, financing, and commercial dependency overlap**, the economic quality of reported demand becomes harder to assess. Contracts can be huge and technically non-cancellable, yet still be exposed to renegotiation, financing strain, supply bottlenecks, or ecosystem contagion.

This project turns that concern into a valuation problem. Oracle is the natural **DCF protagonist** because its public disclosures provide the cleanest bridge from AI enthusiasm to booked demand, conversion timing, reinvestment burden, and financing needs. But Oracle cannot be analyzed in isolation. NVIDIA and AMD are **not side stories**. They help you think more deeply about Oracle and the sector because they reveal whether the apparent demand signal is supported by diversified, cash-converting end demand—or whether it is entangled with concentration, working-capital fragility, supplier incentives, and sector-wide interdependence.

[1] Richard Waters, "How OpenAI put itself at the centre of a $1tn network of deals," *Financial Times*, October 10, 2025. Use the article as background framing, not as a primary numerical source.

NVIDIA matters because upstream concentration and working-capital signals tell you whether a small number of customers are driving too much of the build-out. AMD matters because equity-linked incentives and contingent deployment arrangements reveal that "winning demand" may involve real economic concessions. Together, these companies force the analyst to ask a harder question than "How much growth?" The deeper question is: *what kind of growth is this?*

You are asked to build a compact Oracle DCF and then decide whether NVIDIA and AMD should change the way you treat Oracle's backlog, margins, reinvestment burden, cost of capital, or continuing value. The point is to decide how much of the AI story deserves to be capitalized as if it were *high-quality, durable, cash-converting demand*.

Deepest valuation connection: WACC and terminal value

The hardest valuation issue in this case is not only how fast Oracle can grow. It is whether AI-sector interdependence changes the **riskiness** and **durability** of the cash flows you are discounting. If the AI build-out is more exposed to concentration, financing fragility, ecosystem contagion, or pull-forward demand than the headline backlog suggests, a disciplined analyst must ask two finance-native questions:

- Should Oracle's **WACC** rise?
- Should Oracle's **continuing value** fall through lower terminal growth, steeper margin fade, or higher mature-state reinvestment?

Case Setup and Learning Goals

Role and decision context

Assume you are an associate at a long-only public-equity fund. Your portfolio manager owns Oracle and wants a tight, decision-useful answer to a difficult question:

- How much of Oracle's AI backlog deserves full-value treatment in a DCF?
- What evidence suggests that some AI demand may be more contingent, concentrated, financed, or economically subsidized than a headline backlog number implies?
- Do NVIDIA and AMD change your Oracle forecast through **revenue realization, margin durability, reinvestment intensity, working-capital risk, cost of capital, or continuing value**?

Learning goals

By the end of the project, you should be able to:

- Translate a complex AI ecosystem story into an **economic exposure map**.
- Distinguish between **booked demand** and **high-quality cash flows**.
- Use Oracle as a **compact DCF case** rather than a full 3-statement build.
- Use NVIDIA and AMD as **valuation overlays** that change revenue quality, concentration, dilution, and continuing-value assumptions.
- Use an LLM as an **evidence and structure co-pilot** with a reproducible audit trail.

Workbook Map

Sheet	Purpose	What to do there
Read_Me	Orientation	Read the workflow, modeling rules, and exhibit philosophy before you begin.
Source_Log	Official exhibit list	Use the preloaded exhibit links and add notes only if a source becomes central to your analysis.
Risk_Map	System-level dependency map	Force the FT framing and the multi-company evidence into a causal map before you forecast Oracle.
Business_Architecture	Oracle engine map + monetization map	Define what Oracle is economically before you collect facts.
KPI_Spine	Oracle KPI / proxy ledger	Identify the few metrics or proxies that should later control forecast knobs.
Timeline	High-signal chronology	Build the dated bridge from booked demand to financing burden to valuation caution.
Calibration	Right/wrong numerical checks	Complete the mechanical cross-company calculations before you write about demand quality.
Fact_Bank	Evidence to assumption bridge	Use the Business Architecture Pack and KPI spine to extract exact facts with valuation consequences.
Driver_Tree	Forecast-ready logic	Translate evidence into growth, margin, reinvestment, WACC, and terminal-value logic.
ORCL_DCF	Oracle compact DCF core	Build a short-form enterprise DCF with explicit forecast and terminal assumptions.
Continuing_Value_Note	Mature-state economics	State how sector interdependence changes Oracle's WACC, fade, reinvestment, or terminal growth.
Multiple_Check	Relative-value cross-check	Use EV/Revenue and EV/EBIT to pressure-test the DCF, not replace it.
Valuation_Summary	Final range	Bring together DCF, cross-checks, net debt, shares, and your selected value range.
Prompt_Log	Optional organization	Use only if it helps you document material LLM-assisted steps.

Task Sequence

Q0 — Build the system-level Risk Map

Use the `Risk_Map` tab.

This step should make the deal network legible *before* you begin collecting facts. Focus especially on:

- **Exhibit 1** for the system-level concerns: overlapping roles, circularity, debt-backed build-out, and renegotiation risk.
- **Exhibits 6, 7, and 8** for Oracle-specific booked demand, conversion timing, financing burden, and external funding.
- **Exhibit 9** for NVIDIA concentration, receivables, customer advances, and future commitments.
- **Exhibits 10 and 11** for AMD incentive economics, contingent deployment, and dilution.

Create **5–7 rows**. For each row, specify:

Relationship / issue | What is being sold or promised | What financial commitment or dependency exists | What could fail or be renegotiated | Which Oracle valuation knob is affected

A strong Q0 answer should make it easier to explain later why NVIDIA and AMD matter for *Oracle's* valuation even though Oracle is the formal DCF protagonist.

Q1 — Build the Oracle Business Architecture Pack and KPI Spine

Use the `Business_Architecture` and `KPI_Spine` tabs.

Before building a fact bank, follow the course forecasting workflow: first decide what Oracle is economically, how it monetizes, and which KPIs actually matter for FCFF and continuing value.

For this task, focus your extraction primarily on:

- **Exhibit 3** (Oracle FY2025 10-K) for durable revenue definitions, segment structure, cash-flow mechanics, and recurring-vs-capacity-sensitive lines.
- **Exhibit 2** (Oracle FY2025 Q4 / full-year earnings release) for the FY2025 baseline and management framing before the later backlog step-up.
- **Exhibits 6 and 7** for the AI-specific demand, conversion, CapEx, and financing features that now matter most.
- Use **Exhibit 8** only if a financing KPI belongs in your Oracle spine.

Your Business Architecture Pack should include:

1. a **segment engine map**;
2. a **monetization map**;
3. a **KPI spine** with at least **8–10 metrics or defensible proxies**; and
4. a short note on **why Oracle should not be forecast as one undifferentiated engine** if AI backlog is the question.

A good KPI spine should help you later extract facts that matter for **revenue realization, margin durability, reinvestment intensity, working-capital quality, and continuing value**.

Q2 — Build the high-signal timeline

Use the `Timeline` tab.

Build a **6–8 row timeline** from March 2025 through February 2026. Each row should include:

- date,
- event,
- primary company,
- one exact quote or one exact number,
- source ID,
- why the event matters analytically,
- one KPI or proxy affected, and
- one forecast or valuation knob affected.

Do not try to use every exhibit. In practice, most strong timelines will rely most heavily on **Exhibits 4, 6, 7, 8, 9, 10, and 11**.

A strong timeline should not read like a news digest. It should make visible the progression from **booked demand** to **conversion timing** to **financing and concentration** to **valuation caution**.

Q3 — Complete the right-or-wrong numerical checks

Use the `Calibration` tab.

This section is intentionally mechanical. Complete the following three groups of calculations directly from the exhibits:

1. **Oracle backlog math** using **Exhibits 4, 5, 6, and 7**.
2. **NVIDIA concentration and commitments** using **Exhibit 9**.
3. **AMD warrant economics** using **Exhibits 10 and 11**.

The workbook will calculate the exact-answer checks automatically once you enter the inputs. After completing the sheet, write a short note (approximately 150–250 words) answering:

> *Which of these calibration metrics most changes how you think about Oracle's valuation, and why?*

Q4 — Build the Fact Bank using the Business Architecture Pack and KPI spine

Use the `Fact_Bank` tab.

This is the core evidence-building step. Use your Oracle Business Architecture Pack and KPI spine to decide what facts matter. Do *not* simply collect impressive numbers. Extract **12–16 exact facts** and organize them

with a focus on the following categories:

- **Oracle booking visibility and conversion timing**
- **Oracle financing and reinvestment burden**
- **NVIDIA concentration and working-capital signals**
- **AMD incentive economics and potential dilution**
- **System-level interdependence and renegotiation risk**

Each row should include:

Category | Fact ID | Statement / quote | Label | KPI / proxy or valuation channel | Forecast knob | Valuation effect | Source ID | Verification note

Use the labels carefully:

- **FACT**: directly stated in the exhibit;
- **PROXY**: not directly disclosed, but a defensible measurable stand-in;
- **ASSUMPTION**: your modeling choice; and
- **INFERENCE**: your conclusion from the evidence.

For Oracle, your Business Architecture Pack and KPI spine should tell you what facts are actually decision-relevant. For NVIDIA and AMD, there is no separate business-architecture exercise. Their value is precisely that they expose the *quality* of the sector demand signal sitting behind Oracle's backlog story.

Q5 — Build the Driver Tree

Use the `Driver_Tree` tab.

The purpose of the driver tree is to translate the Business Architecture Pack and Fact Bank into logic that is ready for two later uses:

1. the `ORCL_DCF` and `Continuing_Value_Note`, where each node should help you decide *what* to change and *why*; and
2. the investment memo, where the same nodes should give you a clean professional chain of reasoning to cite.

Each row should connect one driver node to one KPI or proxy, one forecast or valuation knob, and one short explanation of why that link matters economically. Oracle rows will usually map to growth, margin, reinvestment, or terminal-value assumptions. NVIDIA and AMD rows will often map to **risk overlays**: concentration, financing fragility, dilution, WACC, or lower confidence in terminal durability.

Q6 — Complete the compact Oracle DCF and the continuing-value note

Use the `ORCL_DCF` and `Continuing_Value_Note` tabs.

This is a **compact DCF**. Your job is to make a disciplined call on a small set of explicit knobs. In particular, your DCF should force you to answer:

- How much of Oracle's AI backlog translates into realized near- and medium-term revenue?
- Does AI improve Oracle's long-run margins, or does the current phase primarily increase the reinvestment burden?
- Does the evidence justify a **higher WACC**, a **lower terminal growth rate**, **steeper fade**, or **higher mature-state reinvestment**?

In addition:

- Use NVIDIA evidence to decide whether Oracle deserves a **higher required return**, a **lower-confidence terminal value**, or a more conservative view of demand conversion and margin durability.
- Use AMD evidence to decide whether some current AI demand should be treated as **economically subsidized**, diluted, or otherwise less informative about long-run value than the headline demand signal suggests.

Use the `Continuing_Value_Note` tab to make that logic explicit before you finalize the DCF. This is the deepest conceptual payoff of the case. If some current AI demand is concentrated, financially fragile, or partly pull-forward, then the most defensible adjustment may sit not in the next quarter's revenue growth, but in the **WACC** or **terminal value**.

If the exhibits do not support a highly detailed build, keep your assumptions simple and explicit. A simple model is fine. A vague model is not.

Q7 — Write the IC memo

Write a **1000–1500 word investment memo** from an investment-committee perspective.

IC memo guideline

A strong memo should open with the answer, identify the few pieces of evidence that matter most, explain the logic of the Oracle forecast and continuing-value judgment, discuss the principal downside triggers, and end with a clear recommendation or valuation range. Keep it concise, decision-oriented, and explicit about uncertainty.

Deliverables

Deliverable	Format	Required content
Main project memo	PDF.	Max 4 pages.
Workbook	XLSX	Completed template.

Appendix. Official Exhibit List and Source Links

These are **raw exhibits**. You are expected to extract the relevant figures and quotations yourself. The linked documents are official company, SEC, or source-article materials.

Exhibit	Document	Why it matters	Official link
Exhibit 1	*Financial Times*: "How OpenAI put itself at the centre of a $1tn network of deals"	Background framing on interdependence, circularity, and debt-backed AI infrastructure.	https://www.ft.com/content/4e39d081-ab26-4bc2-9c4c-256d766f28e2?syn-25a6b1a6=1
Exhibit 2	Oracle FY2025 Q4 / full-year earnings release	FY2025 baseline revenue, operating income, and management's pre-step-up cloud framing.	https://www.sec.gov/Archives/edgar/data/1341439/000095017025084831/orcl-ex99_1.htm
Exhibit 3	Oracle FY2025 Form 10-K	Annual baseline financial statements, debt, cash flow, and risk factors.	https://www.sec.gov/Archives/edgar/data/1341439/000095017025087926/orcl-20250531.htm
Exhibit 4	Oracle FY2025 Q3 earnings release	Oracle RPO before the later backlog jump and the first clear AI demand signal.	https://www.sec.gov/Archives/edgar/data/1341439/000095017025036295/orcl-ex99_1.htm
Exhibit 5	Oracle FY2025 Q3 10-Q	Oracle RPO conversion timing as of February 28, 2025.	https://www.sec.gov/Archives/edgar/data/1341439/000095017025037143/orcl-20250228.htm
Exhibit 6	Oracle FY2026 Q1 earnings release	Oracle RPO step-up and OCI five-year revenue preview.	https://investor.oracle.com/investor-news/news-details/2025/Oracle-Announces-Fiscal-Year-2026-First-Quarter-Financial-Results/default.aspx
Exhibit 7	Oracle FY2026 Q1 10-Q	Oracle RPO conversion timing as of August 31, 2025, CapEx, and financing-receivable disclosures.	https://www.sec.gov/Archives/edgar/data/1341439/000119312525200095/orcl-20250831.htm
Exhibit 8	Oracle 8-K on $18 billion notes issuance	Direct evidence that the AI build-out was connected to very large external financing.	https://www.sec.gov/Archives/edgar/data/1341439/000119312525220445/d31817d8k.htm
Exhibit 9	NVIDIA FY2026 Q2 Form 10-Q	Customer concentration, AR concentration, customer advances, and future commitments.	https://www.sec.gov/Archives/edgar/data/1045810/000104581025000209/nvda-20250727.htm
Exhibit 10	AMD FY2025 Form 10-K	OpenAI 6-gigawatt agreement, warrant details, share count, and accounting treatment.	https://www.sec.gov/Archives/edgar/data/2488/000000248826000018/amd-20251227.htm
Exhibit 11	AMD 8-K / press release on OpenAI partnership	Official transaction language on the strategic partnership and warrant milestone logic.	https://www.sec.gov/Archives/edgar/data/2488/000119312525230895/d28189d8k.htm