

GPU collateral: sizing to peak stressed LTV

Amortisation, stressed recovery curves and continuity risk in AI accelerator facilities

SUMMARY

- Size a GPU-backed facility to its **maximum stressed LTV across the term**. In the illustrative case below, stressed LTV is highest at the first anniversary and would be missed by an analysis based only on opening and terminal values.
- In the same illustrative stress, twelve months of interest-only reduces the opening advance consistent with an 80% peak LTV **from 60% to 40%**. An interest-only period may be agreed for cash-flow reasons, and it also changes collateral coverage.
- Recovery depends on more than the hardware. CoreWeave's investment-grade DDTL 4.0 takes security over the infrastructure, the customer contract **and the data-centre leases**. A lender needs to know which elements of the operating and contractual system around the units survive default.

1. Accounting life, economic life and recovery life

There is no settled view on how long AI-era compute assets retain economic value, and even accounting assumptions among large operators are moving in different directions. With effect from 1 January 2025 Amazon shortened the reported useful life of a subset of its servers and networking equipment from six years to five, citing "the increased pace of technology development, particularly in the area of artificial intelligence and machine learning". With effect from the same date, Meta extended most of its servers and network assets to 5.5 years.¹ Two large hyperscalers moved in opposite directions on overlapping categories of equipment. That does not tell a lender what an H100 or B200 will recover for; it does show why accounting life is not a market consensus on recovery life.

Lenders sit below both. Reuters quoted a portfolio manager at Impax Asset Management in October 2026 saying banks typically underwrite GPUs over a three-to-four-year depreciation schedule, against Nvidia's contention that top-tier GPUs can earn revenue for up to a decade; the same report said some lenders were seeking stronger guarantees and customer-contract support rather than relying on the chips alone.² Nvidia's move to an annual cadence for new AI architectures adds a further source of uncertainty, though it does not follow that a prior generation becomes unusable: CoreWeave has disclosed an A100 customer contract extending into 2029, and a secondary market for earlier parts exists.³

Accounting life reflects a reporting judgement, economic useful life reflects whether the part can still earn, and recovery life reflects what a secured lender could realise and when. None of the published figures resolves the third. The underwriting task is to select a defensible, generation-specific recovery curve, stress it, and set the debt profile against it.

2. Sizing to peak stressed LTV

Consider a facility advancing 65% against appraised value, three-year term, straight-line amortisation, tested against three recovery curves.

EXHIBIT 1 · PANEL A · SAME DEBT STRUCTURE, DIFFERENT RECOVERY CURVES

Year	Loan balance	Six-year linear	LTV	Three-year linear	LTV	Front-loaded	LTV
0	65	100	65%	100	65%	100	65%
1	43	83	52%	67	65%	50	87%
2	22	67	32%	33	65%	35	62%
3	—	50	n/a	—	n/a	25	n/a

Assumptions. Recovery value indexed to 100 at origination. The facility structure shown (a 65% opening advance, three-year term and straight-line amortisation) is a worked illustration chosen for clarity rather than a statement of market convention, and is not drawn from any specific transaction. The curve labels describe the shape of the assumed recovery path and do not refer to any depreciation policy. The linear paths are simplified reference baselines; the front-loaded path, a declining-balance shape, is the stress case. "Front-loaded" assumes recovery value declines by 50% in year one and by 30% of the prior year-end value in each subsequent year. These are hypothetical stress assumptions rather than observed residual data, and a different curve moves every figure in both panels.

At the annual test points shown, stressed LTV under the front-loaded curve is highest at the **first anniversary**, because principal amortises evenly while the recovery curve runs steep early. An analysis of opening and terminal values alone observes 65% and nil, and does not see the 87%.

Interest-only compounds the mismatch. An interest-only period may be agreed for borrower cash-flow reasons, but on a fast-depreciating asset it also changes the lender's collateral exposure. Panel B holds the recovery curve constant and varies the debt structure instead.

PANEL B · SAME FRONT-LOADED RECOVERY CURVE, DIFFERENT DEBT STRUCTURES

Debt structure	Opening advance	Principal repayment profile (% of original principal)	Year 1 balance / LTV	Year 2 balance / LTV
<i>Straight-line amortisation</i>	65	33⅓ / 33⅓ / 33⅓	43.3 / 87%	21.7 / 62%
<i>Twelve-month interest-only, then amortising</i>	65	0 / 50 / 50	65.0 / 130%	32.5 / 93%
<i>Straight-line, sized to 80% year-one LTV</i>	60	33⅓ / 33⅓ / 33⅓	40.0 / 80%	20.0 / 57%
<i>Twelve-month interest-only, sized to 80% year-one LTV</i>	40	0 / 50 / 50	40.0 / 80%	20.0 / 57%
<i>Front-loaded principal amortisation</i>	65	50 / 30 / 20	32.5 / 65%	13.0 / 37%

Assumptions. Recovery values are the front-loaded curve from Panel A: 100, 50, 35 and 25. Principal repayment profiles are percentages of original principal and sum to 100. They describe repayment of debt and are distinct from the recovery curve, which describes a decline in asset value and does not amortise to nil. Interest-only structures assume no principal repayment in year one and equal repayment across years two and three. All five structures fully amortise by the end of year three, which holds total credit exposure constant so that only the shape of repayment varies.

Rows three and four reach the same collateral position from the first anniversary onwards. Sized to the same 80% constraint, the straight-line and interest-only structures differ only in opening advance, 60 against 40. Front-loading principal to 50/30/20 holds LTV at or below the opening advance throughout.

3. Recovery states

Three recovery states are useful for underwriting. **In place:** functioning compute with power, cooling, network fabric, control-plane access and customer economics intact. **Redeployed or recontracted:** the cluster continues operating under a different operator or contract. **De-racked:** what the hardware realises once removed and remarketed. Actual outcomes may fall between them, and a workout can move between these states quickly.

An appraisal is only as useful as the recovery premise behind it. Where the assumed value depends on the cluster remaining powered, connected and contracted, the lender needs to know whether those conditions can survive borrower distress. Assignment and step-in rights over colocation, power and customer contracts help determine which outcome is available.

Transaction structure is instructive here. CoreWeave's \$8.5B DDTL 4.0, rated A3 by Moody's and A (low) by DBRS, takes first-priority security over the borrower's tangible and intangible assets including cloud infrastructure, **the underlying customer contract and the corresponding data-centre leases**; CoreWeave described it as the first investment-grade-rated GPU-backed financing.⁴ The collateral package does not stop at the accelerators. Residual-value uncertainty is also beginning to be addressed explicitly: Nvidia has said it may provide residual-value support for up to 25% of an opportunity on a project-by-project basis, designed to complement rather than replace independent underwriting, and specialist GPU residual-value insurance is emerging.⁵

The continuity comparison from robotics is limited but useful. When Picnic failed in May 2026, one customer was left with roughly \$250,000 of installed but idle equipment; public reporting does not establish which dependency prevented continued operation.⁶ Whatever the cause, the equipment was recoverable and its productive use was not. The GPU case differs: standardised hardware and an active secondary market make vendor dependence less binary than in proprietary robotics, while recovery may still turn on power, colocation, networking, control-plane access and customer arrangements.

Generation concentration can also create correlated liquidation risk, since the shock that weakens utilisation economics may bring similar units to market at the same time. That should be stressed rather than assumed: older accelerators can remain useful for inference, and the residual path may differ materially by generation.

4. What to establish before advancing

- **Serial-level asset register** reconciled to the borrowing base;
- **Title, lien and location.** Reconcile serials, title, physical location, and any host or bailee arrangements against the borrowing-base records;
- **Contracted capacity reconciled to actual utilisation**, with telemetry independently validated where practicable;
- **Power, colocation and site-access rights:** what survives default, what requires consent, and what can be assigned or stepped into;
- **Customer contract assignability and step-in** in the event of borrower failure;
- **Secondary-market depth for the specific generation** pledged;
- **Control-plane, firmware and orchestration dependency:** what ceases to function, and under whose credentials;
- **Amortisation profile tested against a deliberately selected recovery curve.**

5. Conclusions

Size to peak stressed LTV. Opening LTV is a starting point rather than the exposure test.

Match principal amortisation to a selected recovery curve. Under the annual stress points in Exhibit 1, a 50/30/20 principal repayment profile keeps LTV at or below its opening level, whereas straight-line amortisation allows it to rise.

Treat interest-only as collateral structure as well as economics. In the illustrated stress, twelve months of interest-only costs twenty percentage points of permissible opening advance.

Underwrite the recovery mechanism alongside the asset.

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Notes. (1) Amazon.com Inc. and Meta Platforms Inc., Form 10-K disclosures on changes in estimated useful lives of servers and network equipment effective 1 January 2025. (2) Reuters, "Nvidia's bet that its chips can finance the AI boom gets a Wall Street reality check", 1 October 2026. (3) CoreWeave Inc., Q2 2026 earnings call and related investor presentation. (4) CoreWeave Inc., DDTL 4.0 facility announcement and transaction overview, March 2026; ratings assigned by Moody's and DBRS. (5) NVIDIA, "NVIDIA AI Factory Compute Is Becoming an Investable Asset Class", August 2026; The Insurer, on GPU residual-value insurance, August 2026. (6) GeekWire, "Robot pizza startup runs out of dough: Picnic shuts down, sells assets to mystery buyer", May 2026. This note sets out a risk decomposition and the evidence required to support it, as a basis for discussion rather than a rating framework.

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