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INDUSTRY SYNTHESIS 001 · STEEL & METALS

Same Industry, Different Decision Space

What four steel producers reveal about capital architecture, operating flexibility and the structure of the next decision.

PUBLISHED	INFORMATION CUTOFF	VERSION	SECTOR
September 2026	12 Sep 2026	1.1	Steel & Metals

COMPANIES

Gerdau, Nucor, Steel Dynamics, Cleveland-Cliffs

EVIDENCE BASIS

Public sources only

COMPANY INVOLVEMENT

None

DISCLOSURE

Independent research. Not commissioned by, and not endorsed by, any company discussed. This document is not an investment recommendation and contains no buy/sell, valuation or price-target conclusion.

RESEARCH QUESTION

What changes when steel producers of superficially comparable scale and profitability operate under materially different capital and capacity constraints?

INFERRED

The cluster suggests that current profitability alone is a weak description of decision capacity. A more useful discriminator is the structure of the next decision: what the next unit of capital must accomplish, how reversible the commitment remains, and which parts of the operating system must absorb the consequences.

EXECUTIVE MAP

Directional FY2025 comparison

The EBITDA/shipment proxy is directional, not accounting-equivalent. EBITDA definitions, shipment denominators and consolidated business mix differ across issuers. It is used to expose an analytical coincidence, not to rank operating performance.

COMPANY	FY2025 REVENUE	EBITDA / ADJ. EBITDA	SHIPMENTS	EBITDA/SHIPMENT PROXY	CAPEX
Gerdau	$12.507bn	$1.804bn	11.630m t	~$155/t	$1.092bn

Nucor	$32.494bn	$4.174bn	26.615m t	~$157/t	$3.422bn
Steel Dynamics	$18.2bn	$2.151bn	13.749m t	~$156/t	$0.948bn
Cleveland-Cliffs	$18.6bn	$0.037bn	16.2m t	~$2/t	$0.561bn

Gerdau figures are converted from BRL to USD at Gerdau's disclosed FY2025 average rate of R$5.5855/US$1, for single-currency comparability only. Original reported figures: R$69.859bn revenue, R$10.074bn EBITDA, R$6.1bn CAPEX.

The ~$155–157/t clustering across Gerdau, Nucor and Steel Dynamics is treated below as an analytical coincidence worth investigating — not as causal similarity.

OPENING FINDING

INFERRED

Three producers can land near the same directional EBITDA/shipment proxy while requiring the next dollar of capital to perform entirely different jobs.

- **Gerdau** → Brazil competitiveness / portfolio repair
- **Nucor** → multiple greenfields and downstream growth commitments
- **Steel Dynamics** → aluminum platform build
- **Cleveland-Cliffs** → footprint optimization / deleveraging / repricing

Similar current metrics do not imply similar future action space.

COMPANIES

Company snapshots

HYBRID PRODUCTION ARCHITECTURE

Gerdau

Capital state: low leverage (0.76x net debt/EBITDA); capital pulled toward the structurally weaker node (Brazil), not the strongest current earner (North America).

Strongest observed fact: 80% of 2Q26 CAPEX directed to Brazil, 56% of it classified as competitiveness spend.

Central inference: group-level geographic optionality coexists with materially different local capital requirements.

Strongest unknown: no public hurdle rate or cross-regional capital ranking.

Full research object →

EAF/DOWNSTREAM, HIGH FINANCING OPTIONALITY

Nucor

Capital state: FY2025 FCF of -$188m alongside $2.699bn cash, an undrawn $2.25bn revolver and $1.212bn returned to shareholders.

Strongest observed fact: $3.422bn CAPEX committed to concurrent greenfields (incl. West Virginia sheet mill) while distributions continued.

Central inference: negative FCF reads as the cash signature of an investment cycle, not capital stress; group optionality is converting into project-specific rigidity.

Strongest unknown: project-level hurdle rates and minimum utilization thresholds for new capacity.

See findings on this page →

HIGH-UTILIZATION STEEL BUILDING A SECOND METAL

Steel Dynamics

Capital state: 86% steel-mill utilization; largest segment CAPEX ($593m) went to an aluminum platform, not additional steel capacity.

Strongest observed fact: relocated a planned satellite aluminum slab center (Arizona → Mississippi) in 2026 before full construction lock-in.

Central inference: the relevant decision layer has moved from steel-only optimization to portfolio construction across metals.

Strongest unknown: no comparative hurdle rates across steel, aluminum and shareholder distributions.

See findings on this page →

INTEGRATED NETWORK UNDER DEMAND/CONTRACT STRESS

Cleveland-Cliffs

Capital state: $18.6bn revenue produced only $37m adjusted EBITDA; issued 75m shares ($951m) to repay ABL borrowings.

Strongest observed fact: an explicitly value-destructive legacy slab contract combined with weak auto demand and adverse Canadian conditions.

Central inference: physical throughput and economic value separated; integration likely amplified — but does not solely explain — the downside.

Strongest unknown: no official FY2025 utilization KPI, since configured capacity changed mid-year.

See findings on this page →

EVIDENCE

Six cross-company findings

INFERRED Finding 01 · Evidence strength: MODERATE-HIGH

Similar directional profitability can hide different marginal capital jobs.

Gerdau, Nucor and Steel Dynamics cluster near ~$155–157/t on the chosen FY2025 proxy, yet Gerdau is funding competitiveness in Brazil, Nucor is carrying multiple growth projects, and Steel Dynamics is building an aluminum platform.

Caveat — proxy denominators and business mix differ across issuers; project-level returns remain UNKNOWN. Contradicted / bounded by: Cleveland-Cliffs, which does not fit the cluster at all.

INFERRED Finding 02 · Evidence strength: HIGH

Revenue scale is not decision capacity.

Steel Dynamics and Cleveland-Cliffs both generated roughly $18bn of FY2025 revenue (~$18.2bn vs. ~$18.6bn) but occupied radically different decision worlds: Steel Dynamics built a new metals platform and returned ~$1.19bn to shareholders; Cleveland-Cliffs idled assets, raised equity and deleveraged.

Caveat — part of the gap is 2025-specific (slab contract, auto demand, Stelco integration effects).

OBSERVED Finding 03 · Evidence strength: MODERATE-HIGH

Physical throughput and economic value can diverge.

Cleveland-Cliffs combined a value-destructive legacy slab contract with high physical throughput and simultaneous footprint actions (mine idlings, facility closures).

Caveat — this cluster does not compute an official Cliffs utilization rate from 18.8m tons of output against 20.0m tons of year-end configured capacity, because configured capacity changed within the year. No precise utilization percentage should be inferred.

INFERRED Finding 04 · Evidence strength: MODERATE

Vertical integration relocates risk rather than simply eliminating it.

Cleveland-Cliffs' and Gerdau's captive upstream assets (mines, pellets, energy) reduce some purchased-input exposure but create owned assets whose utilization must stay coordinated with downstream demand.

Bounded by — different forms and degrees of vertical integration at Nucor and Steel Dynamics, where internal scrap/downstream links may support through-cycle flexibility. Causality between integration and the 2025 downside is not established.

OBSERVED INFERRED Finding 05 · Evidence strength: HIGH for facts / INFERRED for interpretation

Working capital has different strategic meanings in different capital states.

Steel Dynamics built working capital (+$1.1bn) tied to the aluminum ramp. Gerdau released working capital (-9% YoY) through capacity and inventory optimization in Brazil. Cleveland-Cliffs reduced inventory amid footprint and balance-sheet adjustment.

Caveat — the underlying facts are OBSERVED and HIGH confidence; classifying each move by "strategic function" is INFERRED, and FX/commodity price effects also influence balances.

INFERRED Finding 06 · Evidence strength: MODERATE

The cluster suggests that optionality declines as capital becomes more commitment-specific — not only as leverage increases.

Steel Dynamics relocated a satellite aluminum project before full lock-in; Nucor retains corporate liquidity while multiple greenfields harden into fixed commitments; Gerdau and Cleveland-Cliffs carry capital embedded in less modular, more integrated asset systems.

UNKNOWN — no company discloses a standardized option-value measure. This is not put forward as a universal law.

SAME SYMPTOM, DIFFERENT CAUSE

Negative cash flow, two different decision states

DERIVED

Simple derived FCF = operating cash flow – CAPEX

- **Nucor:** \$3.234bn – \$3.422bn = **−\$188m**
- **Cleveland-Cliffs:** −\$462m – \$561m = **−\$1.023bn**

INFERRED

Negative free cash flow represented radically different decision states: growth commitment with substantial liquidity at Nucor versus earnings compression, footprint adjustment and balance-sheet repair at Cleveland-Cliffs.

DIFFERENT SYMPTOMS, ONE RECURRING PATTERN

Different symptoms, one recurring pattern

INFERRED

Nucor's CAPEX, Steel Dynamics' aluminum working-capital build and Gerdau's Brazil competitiveness spending are different observable expressions of one possible analytical theme: **liquid corporate optionality becoming more specific production capability.** A single causal mechanism across all three is not established — this is a pattern worth tracking, not a proven law.

ALTERNATIVE EXPLANATIONS

2025 was not a uniform market state

Differences across the four companies could also reflect:

- geography
- product mix
- tariffs
- automotive demand
- imports
- contract mix
- pricing
- acquisition/integration effects

Architecture is treated as a possible mechanism, not a standalone causal proof.

UNKNOWNS / LIMITS

What is not publicly available

A definitive causal decomposition of these findings would require data that is not publicly disclosed by any of the four companies:

- project-level hurdle rates

- matched asset-level contribution margins
- customer contract economics
- normalized maintenance/growth CAPEX splits
- shutdown/restart thresholds
- internal value assigned to future capacity
- standardized option-value measures
- internal capital ranking

EXTENSION CASE

Commercial Metals Company

CMC is analytically interesting as a scrap/EAF/long-steel producer with a growing downstream-construction architecture. It is not included in the core normalization above because of an August fiscal year-end and a growing Construction Solutions / precast mix, both of which reduce clean comparability to the calendar-year core four. CMC is retained as a robustness candidate for future work — a future test of whether these findings generalize to another flexible long-steel architecture, not a substitute for the core four.

SOURCES

Source map

Primary sources only — SEC filings, company IR releases and official annual reports. Numbers used in the Executive Map and Findings above trace to the entries below.

GERDAU

- 2025 Form 20-F (SEC)
- FY2025 Management Report / Results (SEC)
- 4Q25 / FY2025 Results (SEC)
- 2Q26 Results (SEC)

NUCOR

- 2025 Form 10-K (SEC)
- FY2025 Earnings Release (SEC)
- FY2025 Earnings Presentation (SEC)
- Q2 2026 Results (Nucor IR)

STEEL DYNAMICS

- 2025 Form 10-K (SEC)
- FY2025 Results (Steel Dynamics IR)
- Q2 2026 Results (Steel Dynamics IR)

CLEVELAND-CLIFFS

- 2025 Form 10-K (SEC)
- FY2025 Results (Cleveland-Cliffs)
- 2025 Annual Report (Cleveland-Cliffs)
- Q2 2026 Results (Cleveland-Cliffs)

CORRECTIONS

Revision history

VERSION	DATE	CHANGE
0.1	Sep 12,	Internal research build: core four-company comparative dataset, individual company research objects, first industry synthesis draft.

	2026	Not published.
1.0	Sep 12, 2026	Public release. Renamed headline from "Same Steel Cycle" to "Same Industry, Different Decision Space" to avoid implying a unified market state. Renamed comparison table to "Directional FY2025 comparison" and added a prominent proxy-comparability warning. Renamed Finding 03 to "Physical throughput and economic value can diverge" and removed any implied official Cliffs utilization calculation. Softened Finding 04 from contradiction to "bounded by," with causality explicitly not established. Downgraded the Steel Dynamics causal hypothesis from STRENGTHENED to UNRESOLVED and narrowed its optionality claim to the one project that actually relocated. Removed "temporary" from the Nucor rigidity finding, since duration was not evidenced. Normalized the Nucor/Cleveland-Cliffs cash-flow comparison to one explicit formula (operating cash flow − CAPEX). Renamed "Different symptoms, one structural condition" to "Different symptoms, one recurring pattern." Made the Unknowns/Limits block prominent on the page rather than an appendix. Separated company research (linked) from this synthesis visually via compact company cards. Added direct primary-source links throughout. Removed the internal LinkedIn/media-thesis distribution block from the public page. Kept Commercial Metals Company as an extension case only.
1.1	Sep 12, 2026	Converted Gerdau's revenue, EBITDA and CAPEX from BRL to USD (at Gerdau's disclosed FY2025 average rate of R$5.5855/US$1) so the Executive Map uses a single currency throughout; original BRL figures disclosed in a footnote. No change to findings or conclusions.

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The PDF is a direct rendering of this page (v1.1) — same findings, same evidence labels, same information cutoff.

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This research was conducted independently using public company filings, earnings releases and investor materials. It was not commissioned by or endorsed by Gerdau, Nucor, Steel Dynamics or Cleveland-Cliffs. It does not constitute investment research, investment advice or a securities recommendation. Cross-company patterns are analytical hypotheses; correlation across companies is not treated as proof of a causal mechanism.

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