

# Cleveland-Cliffs Inc.

NYSE: CLF

## *Educational Case Study*

*The HALO Trade thesis applied: Heavy Assets, Low Obsolescence.  
An independent practitioner valuation built from public filings.*

Stock price (close May 22, 2026)	<b>\$11.23 / sh</b>
Shares outstanding (10-Q Apr 21, 2026)	<b>570.4M</b>
Market cap (\$B, Yahoo May 22, 2026)	<b>6.406</b>
FY 2025 revenue (\$B, 10-K)	<b>18.61</b>
FY 2025 Adj. EBITDA (\$M, 10-K)	<b>37 (trough)</b>
Net debt (\$B, LT debt less cash)	<b>~7.7</b>
Enterprise value (\$B, mkt cap + net debt + pen/OPEB)	<b>~14.8</b>
EV / EBITDA (trough FY25 / through-cycle ~\$1.75B)	<b>n.m. / ~8.5x</b>
52-week range (Yahoo May 22, 2026)	<b>\$5.63 - \$16.70</b>
Beta 5Y monthly (Yahoo May 22, 2026)	<b>2.01</b>
HRC avg 2025 (10-K MD&A)	<b>\$851 / ton</b>
HRC spot ref (CME front-month, late May 2026)	<b>~\$830 / ton</b>

**[DATA REFRESH]** Backfilled May 25, 2026 with real data from the FY 2025 10-K (filed February 2026), the Q1 2026 10-Q (filed April 2026), and the Q1 2026 earnings presentation (April 20, 2026). Live market data (CLF stock price \$11.23 close May 22, 2026; 52-week range \$5.63 - \$16.70; market cap \$6.406B; beta 2.01; peer EV/EBITDA; HRC ~\$830 / ton CME front-month) refreshed May 25, 2026 from Yahoo Finance + CME. All financial-statement numbers trace to a specific filing page.

**VALUATION VERDICT — why trough EV/EBITDA is the wrong question for CLF:**

Triangulated 3-lens + NOL: Bear \$8.62 / Base \$13 / Bull \$23 vs. \$11.23 close (Base +16%).

Floor is set by **(1)** replacement value of integrated BF/BOF + iron ore + DRI footprint (~\$25-35B vs. \$14.8B EV), **(2)** \$4.827B gross federal NOL (\$1.10/sh PV base), **(3)** strategic-buyer + asset-sales math, and **(4)** through-cycle EBITDA of \$1.5-2.0B (not trough \$37M). HALO Trade lens: heavy assets at low obsolescence risk. Section 8 walks it.

**FOUNDER'S VIEW — simply how the author sees it (opinion, not advice):** CLF reads, in the author's view, less like a steel producer at trough EBITDA and more like an irreplaceable strategic asset on the US reshoring trade. The atoms-not-bytes argument (Section 12): integrated BF/BOF + iron-ore + DRI footprint would take ~150-300 cumulative years to replicate from scratch under the current regulatory regime. The Anduril / Arsenal-1 / Freedom's Forge bridge (Section 13): defense-industrial reshoring needs domestic flat-rolled steel at scale; CLF is, in the author's view, the only US producer that can deliver. The author's lens; not a price target, not a recommendation.

**Method.** 10-yr DCF anchored on through-cycle EBITDA at 9.75% WACC; steel-comp set (NUE / STLD / X / MT / RS) refreshed May 22, 2026 from Yahoo Finance; SOTP values steelmaking, iron ore, and raw-materials/coal/DRI separately before integration credit. The HALO Trade lens treats heavy fixed assets at low obsolescence risk as the structural margin-of-safety floor.

**DISCLOSURE** - The author, principal of the Baratelli Institute, owns shares of Cleveland-Cliffs Inc. (CLF) and may buy or sell at any time without notice. The author is not an employee, officer, or director of Cleveland-Cliffs and has no insider obligations. This is an educational case study, not investment advice. Built from public SEC filings.

BARATELLI INSTITUTE - PRACTITIONER LIBRARY - baratelliinstitute.com

## About this case study

**This is an Educational Case Study** from the Baratelli Institute Library. It is not a research report, not a buy/sell rating, not a price target, not investment advice. It is a walk-through of how a senior practitioner would lay out a valuation using only public filings, anchored to the documents on the shelf - the Practitioner Library's *First Principles*, *PE Guide*, *CFO Controllers' Guide*, *Founder/Operator Guide*, and the *Bloomberg / FactSet / Financial Planning* volumes that develop the HALO Trade framework.

Cleveland-Cliffs is the working example. The reason is twofold. First, CLF is the cleanest North American expression of the **HALO Trade thesis** - Heavy Assets, Low Obsolescence. The blast furnaces, the iron-ore mines, the HBI plant, the rolling mills - these are assets that will be productive in 2050 because the world will still need flat-rolled steel and the cost of replacing them is prohibitive. Second, CLF is in the messy middle of post-acquisition deleveraging after losing the US Steel bid to Nippon - the right kind of analytical situation to teach valuation methodology on, because the answer is not obvious.

## Disclosure

**The author, principal of the Baratelli Institute, owns shares of Cleveland-Cliffs Inc. (CLF) and may buy or sell at any time without notice.** The author is not an employee, officer, or director of Cleveland-Cliffs and is not subject to any company trading window. The Institute does not represent that the author's CLF position will be held, sized, added to, or trimmed in any particular way relative to this case study.

The analysis here is built from public SEC filings (Forms 10-K, 10-Q, 8-K), public press releases, public earnings calls, and public market data. The math drives the conclusion. The reader gets the model so every assumption can be flexed and the answer re-derived. This is an educational case study, not investment advice.

## What a Baratelli Institute case study is

A live, public situation walked through with the Practitioner Library on the shelf. The filings are real, the math is anchored to documents, and every figure is tagged as disclosed (with the page reference), estimated (with the reasoning), or methodology (with the framework cited). The Library tie-in shows on every analytical page in the gold marginalia boxes.

## What it is not

Not a buy/sell rating. Not a price target. Not an allocation recommendation. Not an opinion of fairness for a corporate transaction. The Institute does not publish ratings; it publishes the math, the assumptions, the source tags, and the framework. The reader walks his own allocation. The framework travels.

# Executive Summary

Cleveland-Cliffs is the largest flat-rolled steel producer in North America and the only U.S. company that owns the full vertical from iron-ore mine through blast furnace, BOF/EAF steelmaking, hot-rolling, cold-rolling, coating, and stamping. After the 2020 acquisitions of AK Steel and ArcelorMittal USA, the 2021 acquisition of Ferrous Processing & Trading, and the 2025 STAMP (Stelco) acquisition, CLF has become the consolidator of the North American flat-rolled steel industry - even after losing the US Steel bid to Nippon Steel in 2024.

**[SOURCE NOTE]** Backfilled May 25, 2026 from CLF FY 2025 10-K (filed Feb 2026), Q1 2026 10-Q (filed Apr 2026), and the April 20, 2026 earnings presentation. Live market data (CLF \$11.23 close May 22, 2026; peer EV/EBITDA; HRC ~\$830 / ton; WACC inputs) refreshed May 25, 2026 from Yahoo Finance + CME front-month.

**METHOD - LIBRARY TIE-IN**

The executive summary frame (price -> through-cycle earning power -> multiple -> margin of safety) is the First Principles Ch 7 valuation triage adapted for a cyclical heavy-industry name via the Financial Planning & Bloomberg HALO Trade chapter. Decide whether the price implies a story that can be reasoned about, before opening the spreadsheet.

## The valuation triangulation (framework preview)

Three independent lenses produce the range. The 2026-05-25 data refresh calibrates each lens against real FY 2025 financials, the Q1 2026 quarter, and the live Yahoo Finance peer pull (NUE EV ~\$57.5B / 11.5x; STLD \$38.3B / 16.0x; X \$16.0B / 13.8x pre-close; MT ~\$60B / 14.5x; RS \$20.3B / 13.6x).

Method	Bear	Base	Bull
DCF (10-yr, through-cycle EBITDA ~\$1.8B, terminal g 1.5%, WACC 9.75%)	\$5	\$11	\$20
Trading comps (NUE / STLD / X / MT / RS, Yahoo May 22, 2026)	\$6	\$12	\$22
Sum-of-the-parts (steel + iron ore + DRI/HBI + processing)	\$8	\$14	\$24
Strategic-buyer operating floor (Section 8 build, pre-NOL pre-asset-sales)	\$7.70	n/a	n/a
+ NOL PV per share (10-K NOTE 13, see Section 7; Bear is \$382-haircut)	\$0.30	\$1.10	\$1.55
+ \$425M asset-sales process incremental (\$355M remaining / 570.4M sh)	\$0.62	n/a	n/a
Triangulated (3-lens avg + NOL; Bear = floor + NOL + asset-sales)	\$8.62	\$13	\$23

## NOL asset, separately credited (methodology)

The DCF, comps, and SOTP lenses all tax future operating income at a 25% normalized blended rate without separately recognizing CLF's carryforward tax shield, so the NOL is added as a discrete per-share line (the same treatment used in Case 03 Lyft). Mechanically: \$4.827B gross domestic NOL (10-K NOTE 13, p97) at the 21% federal rate yields a \$1.014B undiscounted shield, or **\$1.78 / sh** across 570.4M diluted shares. That gross figure is then discounted for cycle-recovery timing and the TCJA §172 80%-of-taxable-income cap that stretches utilization across multiple post-trough years. Two scenario architectures frame the carry: a public-market scenario where the equity continues to trade and there is no §382 ownership change, and a strategic-buyer scenario where the Bear case is anchored to the asset-replacement / Nippon-precedent floor in Section 8 and a §382 ownership change caps annual NOL utilization. **Bear (\$0.30 / sh)** reflects the strategic-buyer scenario where a §382 ownership change is triggered and only the §382-capped annual usage survives (consistent with the Section 8 strategic-buyer floor that anchors Bear-case equity); **Base (\$1.10 / sh)** assumes the public-market scenario with 2-3 year cycle recovery and utilization across 6-10 years; **Bull (\$1.55 / sh)** assumes the public-market scenario with 1-2 year recovery and utilization compressed into 6-8 years. Foreign NOL (\$347M) and the valuation-allowed state NOL (\$394M total allowance per 10-K NOTE 13) are excluded. **The Bear is no longer a \$0-equity wipeout** - the strategic-buyer floor (POSCO, Hyundai Steel, JSW; Nippon-precedent read as deal-specific, not categorical) means the down case is asset-floor monetization, not limited-liability extinction. The mechanics, the §382 walk, the strategic-buyer floor build, and the timing sensitivity live in Sections 7 and 8.

### The six key observations

- **HALO Trade thesis core.** CLF owns hard, immovable, irreplaceable assets: iron-ore mines on the Mesabi Range (Northshore, Tilden, Empire, Hibbing), a world-scale HBI plant in Toledo, integrated blast furnaces, BOF and EAF steelmaking, hot-rolling and cold-rolling mills, coating lines, and stamping operations. Replacement value runs into the tens of billions; permitting horizons are decades. This is the structural margin-of-safety floor.
- **Vertically integrated value chain.** Iron ore -> DRI / pellets -> steelmaking -> finished flat-rolled. Roughly half of CLF's steel revenue is auto-grade (Ford, GM, Stellantis) - the segment with the highest grade differential and stickiest customer relationships. The integration math is the SOTP section's central insight: each piece has a value, the integration premium is separately quantifiable.
- **Consolidator without consolidation.** CLF tried to buy US Steel in 2023 / 2024; Nippon Steel won. CLF closed the Stelco acquisition on November 1, 2024 (\$3.21B total consideration: \$2.45B cash + \$0.34B stock + \$0.42B assumed debt) and signed a non-binding MOU with POSCO on September 17, 2025. Management has publicly committed to debt reduction as the #1 capital-allocation priority and has set a 2.5x net-debt / TTM-EBITDA leverage target (SUP April 20, 2026).
- **Cyclical earning power.** HRC pricing has ranged from ~\$600 to ~\$1,200 / ton over the last five years. CLF's domestic HRC reference averaged \$851 / ton in FY 2025 (vs \$772 / ton FY 2024, per the 10-K MD&A); spot reference late May 2026 ~\$830 / ton (CME front-month). A defensible valuation uses through-cycle EBITDA, not spot-year EBITDA.
- **Tariff & policy tailwind.** Section 232 steel tariffs (Trump I, Biden, Trump II), USMCA enforcement, anti-dumping cases, and the IRA / OBBBA 45X advanced-manufacturing PTC and 48C investment credits are structurally supportive. The risk is policy reversal; the upside is policy entrenchment as bipartisan industrial-base concern hardens.

- **Leverage cadence.** Net debt at March 31, 2026 was approximately \$7.7B (long-term debt \$7.76B less cash \$0.05B, per 10-Q). FY 2025 Adjusted EBITDA was \$37M (a cycle trough); through-cycle EBITDA in the \$1.5 - \$2.0B range implies a deleveraging path from current ~4x (through-cycle basis) toward management's stated 2.5x ND/TTM-EBITDA target. The bear case is the cycle staying at trough long enough that absolute debt cannot be reduced.

### Why the case study is interesting now

After the US Steel deal collapsed (Nippon Steel won in 2024 under CFIUS scrutiny that was eventually waived; deal closed June 18, 2025), CLF traded down as the consolidation story compressed. The 2025 STAMP acquisition of Stelco restored some of the scale thesis. The question this case study works through is: what is the honest math on the integrated business at through-cycle pricing, separate from the M&A optionality? The answer the methodology arrives at is the central output - not the answer itself, but the framework that produces answers as inputs change.

*A practitioner note. Steel is one of the few industries where the spot price is published daily and the public watches it the way crypto investors watch BTC. That dynamic creates a structural reflexivity gap: when HRC pops, the stocks pop; when HRC dumps, the stocks dump. The fundamental value of an integrated North American producer with auto exposure is less volatile than the HRC ticker - the contract book, the iron-ore self-sufficiency, and the customer mix damp the spot cycle. That gap between perceived volatility and actual earning power is the analytical opportunity this case study points at.*

# 1. Company at a Glance

Metric	FY 2023	FY 2024	FY 2025	Q1 2026	Source
Revenue (\$B)	22.00	19.19	18.61	4.92	10-K p61 / 10-Q p3
Steel shipments (k net tons)	n/a	15,596	16,229	4,108	10-K p45 / 10-Q p26
Avg selling price (\$/ton)	n/a	1,081	1,005	1,048	10-K p45 / 10-Q p26
Adj. EBITDA (\$M)	1,893	773	37	95	10-K p73 / SUP p17
Adj. EBITDA / ton (\$)	n/a	~50	~2	~23	calc
Net cash from operating activ (\$M)	2,267	105	(462)	(325)	10-K p63 / 10-Q p5
Capex (\$M)	646	695	561	152	10-K p63 / 10-Q p5
Free cash flow (calc, \$M)	1,621	(590)	(1,023)	(477)	calc
GAAP net income (loss) (\$M)	436	(714)	(1,428)	(229)	10-K p61 / 10-Q p3

**[SOURCE NOTE]** Every number above sources to a specific page in the FY 2025 10-K (filed February 2026) or the Q1 2026 10-Q (filed April 2026). FY 2023 ASP and shipments are not directly reproduced from the FY 2025 10-K (which shows two comparative years); the FY 2024 baseline reflects the post-Stelco partial-year inclusion (Stelco closed November 1, 2024 and contributed \$329M revenue in the stub period).

## Business model in one paragraph

Cleveland-Cliffs Inc. is a fully integrated North American flat-rolled steel producer and the largest iron-ore pellet producer in the United States. The company operates iron-ore mines and pelletizing plants on Minnesota's Mesabi Range and in Michigan's Upper Peninsula (Northshore, Tilden, Empire, Hibbing), a world-scale hot-briquetted-iron (HBI) plant in Toledo, Ohio, integrated steelmaking operations using both blast-furnace / BOF and electric-arc furnace (EAF) routes, downstream hot-rolling, cold-rolling, coating, and stamping operations, and a recycled-metallics business via Ferrous Processing & Trading (acquired 2021). The customer mix is heavily weighted to automotive (Ford, GM, Stellantis - roughly half of revenue), with the balance to infrastructure, construction, machinery, appliance, and distribution.

## Acquisition history (the consolidation arc)

Year	Deal	Strategic move	Source
2020	AK Steel acquisition (~\$1.1B)	Iron-ore supplier becomes downstream steelmaker	8-K Mar 2020
2020	ArcelorMittal USA (~\$1.4B + assumed pension)	Becomes largest US flat-rolled producer	8-K Dec 2020
2021	Ferrous Processing & Trading (~\$775M)	Vertical into scrap / EAF feedstock	8-K Nov 2021

2023-24	US Steel bid attempted; lost to Nippon (closed June 18, 2025)	Consolidation pause; thesis intact	Press 2023-25
Nov 1, 2024	Stelco acquisition (\$3.21B total cons.)	Canada flat-rolled + 25.9M Cliffs shares issued	10-K p72 (NOTE 3)
Sep 17, 2025	POSCO MOU signed (non-binding)	Potential JV; UBS engaged as advisor	SUP p7 (April 2026)

**METHOD - LIBRARY TIE-IN**

*Acquisition-arc read: a company that has acquired its way to scale carries post-acquisition leverage, integration cost, purchase-accounting goodwill, and (potentially) a meaningful NOL inventory from acquired entities. See PE Guide Ch 4 (acquisition accounting), Ch 4B (NOL / Sec 382 mechanics on acquired NOLs), and CFO Controllers' Guide Ch 13 (post-deal capital-structure normalization).*

## Palantir partnership - AI in the steel mill

On April 28, 2026, Cleveland-Cliffs announced a three-year multi-year partnership with Palantir Technologies to deploy Palantir's enterprise AI platform across the Cliffs footprint. Per the press release, the deal embeds Palantir's AI into production planning, order entry, and operational workflows to integrate data, anticipate constraints, and coordinate activities across Cliffs' facilities in real time.

**Why it matters for the case study.** AI in steel ops is genuinely novel. The financial terms are not disclosed, so this is not a near-term EBITDA line item. The relevance is structural: technology added to heavy assets makes them *more* valuable, not less. The HALO Trade thesis treats irreplaceable physical assets as the floor; software / AI on top of those assets is leverage on top of the floor. The model does not embed Palantir-driven margin expansion in any scenario.

## Capital structure (as of March 31, 2026)

Item (as of Mar 31, 2026 unless noted)	Amount (\$M)	Source / Note
Shares outstanding (Apr 21, 2026)	570.4 (M sh)	10-Q cover
Cash + cash equivalents	45	10-Q p2
ABL Facility (drawn)	959	10-Q NOTE 7
ABL Facility (max capacity)	4,750	10-Q NOTE 7 (avail \$3.1B)
Senior unsecured notes (face, all tranches)	6,878	10-K NOTE 8
Long-term debt carrying value	7,763	10-Q p2
Pension + OPEB liabilities (net)	631	10-Q p2
Asset retirement & environmental obligations	693	10-Q p2
Net debt (LT debt less cash)	~7,718	calc
Liquidity (cash + ABL availability)	3,100	10-Q MD&A / SUP p14

Total stockholders' equity	6,019	10-Q p2
Net debt / FY 2025 Adj. EBITDA (trough)	n.m.	FY25 EBITDA \$37M
Mgmt target leverage (ND / TTM Adj. EBITDA)	2.5x	SUP p14

## 2. Revenue and EBITDA History - Reading the Cycle

*Steel is a cyclical business. A valuation that anchors on a spot year - either the recent peak or the recent trough - will be systematically wrong in the opposite direction. The Lyft case study could afford to project recent FCF forward because the rideshare business was approaching a structural inflection. The CLF case study cannot afford that simplification. The first move is to lay out the cycle and identify through-cycle earning power.*

Fiscal Year	Revenue (\$B)	Shipments (k nt)	Adj. EBITDA (\$M)	EBITDA/ton (\$)	Avg HRC (\$/t)
FY 2020 (FY 2021 10-K)	5.35	~6,200	353	~57	~840
FY 2021 (FY 2021 10-K)	20.44	~16,800	5,640	~336	~1,580
FY 2022	22.99	~16,400	3,169	~193	~990
FY 2023	22.00	~16,400	1,893	~115	~880
FY 2024	19.19	15,596	773	~50	772
FY 2025	18.61	16,229	37	~2	851
5-yr avg (FY21-25)	<b>20.65</b>	<b>~16,200</b>	<b>2,302</b>	<b>~141</b>	<b>~1,015</b>
Q1 2026 (annualized)	~19.69	~16,400	~380	~23	n/a

**[SOURCE NOTE] FY 2022 - 2024 revenue and Adj. EBITDA backfilled May 25, 2026 from the FY 2024 10-K (NOTE 5 segment reporting, p83). FY 2025 from the FY 2025 10-K (p61 income statement, p73 EBITDA reconciliation). FY 2020 and FY 2021 are pre-AMUSA full-year perimeter sourced from the FY 2021 10-K selected financial data. FY 2025 is the cleanest trough datapoint in the modern post-Stelco perimeter; FY 2023 is the cleanest recent mid-cycle datapoint.**

### Reading the cycle honestly

- **Spread between cycle peak and trough is dramatic.** FY 2021 Adj. EBITDA of ~\$5.64B vs FY 2025 Adj. EBITDA of \$37M is the structural definition of cyclicity. Valuation that uses either extreme as a forward anchor is broken.
- **Through-cycle EBITDA anchors mid-single-digit % of revenue.** The FY 2021 - 2025 average is ~\$2.30B Adj. EBITDA on revenue of ~\$20.65B - roughly 11% margin (heavily skewed by the 2021 peak). Stripping the 2021 peak, the FY 2022 - 2025 average is ~\$1.47B Adj. EBITDA - roughly 7% margin. Through-cycle EBITDA in the \$1.5 - \$2.0B range is defensible.
- **Shipments are surprisingly stable at ~16 Mt.** FY 2024 shipments 15.6 Mt; FY 2025 shipments 16.2 Mt (Stelco added a full year); Q1 2026 4.1 Mt. The cycle is a price cycle, not a volume cycle.
- **FY 2025 is the trough.** Revenue down 3% YoY; ASP down \$76/ton (\$1,081 to \$1,005) on product mix; idled facilities charges \$239M; restructuring \$86M; loss on debt extinguishment \$10M; net loss \$1.43B. Q1 2026 showed a \$116M QoQ improvement in Adj. EBITDA (\$95M in Q1 vs negative the prior quarter), and ASP recovered to \$1,048 / ton.

**METHOD - LIBRARY TIE-IN**

*Cycle valuation discipline is First Principles Ch 7 (through-cycle earning power as the unit of analysis) and PE Guide Ch 8 (normalized EBITDA construction). See Financial Planning & Bloomberg HALO Trade chapter for the asset-replacement-cost floor at trough EBITDA.*

### 3. Trading Comparables - Steel Peer Set

The North American steel peer set is small and well-defined. Each peer offers a clean reference point on one dimension or another; together they triangulate. Peer EV and EV/EBITDA below are sourced from Yahoo Finance as of May 22, 2026; CLF subject row is real FY 2025 10-K.

Peer (Ticker)	EV (\$B)	EV/EBITDA	Lens / what it teaches
Nucor (NUE)	57.5	11.5x	Best-in-class EAF; mini-mill cost discipline; conservative leverage
Steel Dynamics (STLD)	38.3	16.0x	EAF growth story; flat-rolled + structural mix; capex cycle
US Steel (X)*	16.0	13.8x	Integrated peer; Nippon acquisition closed June 2025 (frozen mark)
ArcelorMittal (MT)	60.0	14.5x	Global integrated; international leverage; commodity beta benchmark
Reliance (RS)	20.3	13.6x	Service center / distributor; not a producer; margin-stability comp
Cleveland-Cliffs (CLF)	~14.8	n.m. (trough)	Subject - FY 2025 Adj. EBITDA \$37M renders trailing multiple meaningless

**[SOURCE NOTE] Peer EV and EV/EBITDA sourced May 22-25, 2026 from Yahoo Finance with Grok cross-check. \*US Steel (X) values represent pre-close public trading; the Nippon Steel acquisition closed June 18, 2025 and X is frozen at last public trade. MT EV is the midpoint of a \$56.8B-\$61.5B range and MT EV/EBITDA is the midpoint of a 14.0x-14.9x range. CLF figures use FY 2025 Adj. EBITDA from the 10-K (p73): \$37M for the consolidated company. At that EBITDA, EV/EBITDA is not a meaningful trailing multiple - the model restates onto through-cycle EBITDA in the \$1.5 - \$2.0B range for any peer comparison to be informative.**

#### The multiple-discount evolution

CLF historically traded at a multiple discount to NUE and STLD because (i) blast-furnace assets carry more carbon-transition risk than EAFs, (ii) leverage is higher post-acquisition, and (iii) integration disclosure is messier than the cleaner EAF peers. The relevant question is whether the discount is permanent (justified by structural factors) or cyclical (will compress as deleveraging proceeds).

Year-end (peer data Yahoo)	CLF EV / Adj. EBITDA	NUE EV / EBITDA	Discount
2021 (cycle peak)	~2.5x	~3.5x	~30%
2022	~5x	~5x	~0%
2023 (CLF Adj. EBITDA \$1.89B)	~5x	~7x	~30%
2024 (CLF Adj. EBITDA \$773M)	~9x	~8x	premium (trough drift)
2025 (CLF Adj. EBITDA \$37M)	n.m.	~8x	trailing multiple meaningless

**Why the case applies 5 - 7x rather than the peer median 13.8x.** The five-peer median EV/EBITDA is 13.8x (mean 13.88x), but those peers are non-trough EAF producers and processors (NUE, STLD, RS) or take-out

frozen marks (X at 13.8x from the Nippon close). CLF is at cycle trough on integrated BF/BOF capacity, so applying a non-trough peer multiple to trough EBITDA would double-count the cycle. The Bear/Base/Bull triangulation in Section 8 deliberately uses a CLF-specific 5 / 6 / 7x band tied to through-cycle EBITDA, and the comp-set median is reserved for the precedent-deal check only.

The honest read: at trough EBITDA, EV/EBITDA is mechanically high (small denominator). The comp lens needs to switch to EV / through-cycle EBITDA or EV / replacement-cost-of-assets to be meaningful at the trough. That switch is exactly what the HALO Trade framework prescribes.

**METHOD - LIBRARY TIE-IN**

*Multiple selection at the trough is PE Guide Ch 17 (comp methodology) + Ch 19 (DCF sanity-check on trough comps). The HALO Trade chapter (Financial Planning & Bloomberg volume) adds the EV / replacement-cost lens as the third anchor when both trailing and forward multiples are unreliable.*

## Precedent comp - Nippon Steel / US Steel (closed June 2025)

The cleanest M&A precedent for the CLF question is the Nippon Steel acquisition of United States Steel Corporation. Announced December 2023 at \$55.00 / share cash, the deal carried an equity value of approximately \$14.9B and an enterprise value of approximately \$14.1B (after netting USS net debt). The transaction went through eighteen months of CFIUS review and political crosswinds before closing in June 2025 under a national-security agreement that committed Nippon to preserve U.S. production, U.S. management, and union jobs.

Deal parameter	Value
Buyer	Nippon Steel Corporation
Target	United States Steel Corporation (X)
Announced	December 2023
Closed	June 18, 2025 (after CFIUS review)
Price per share	\$55.00 / sh (all cash)
Equity value (\$B)	~14.9
Enterprise value (\$B)	~14.1
USS LTM Adj. EBITDA at announce (\$B)	~1.8
Implied EV / LTM EBITDA	~7.8x
USS through-cycle EBITDA estimate (\$B)	~1.6
Implied EV / through-cycle EBITDA	~8.8x

### Apply to CLF (illustrative read-across)

Read-across assumption (illustrative)	Value
CLF through-cycle EBITDA (\$B, base case)	1.8

Nippon-IMPLIED multiple on through-cycle EBITDA	~8.8x
IMPLIED CLF EV at Nippon multiple (\$B)	~15.8
Less: CLF net debt (\$B, Q1 2026 10-Q)	(7.7)
Less: CLF pension / OPEB (\$B)	(0.6)
IMPLIED CLF equity value (\$B)	~7.5
/ shares outstanding (M)	570.4
IMPLIED per-share value at Nippon multiple	<b>\$13.15 / sh</b>

**Caveats on the read-across.** Every M&A premium reflects specific circumstance: Nippon paid for U.S. market access, an integrated peer with specific union and political history, and an asset base partially overlapping but not identical to CLF's. The comp *informs* the discussion. It does not predict.

**Reframing the "blocked then closed" arc.** The Nippon-US Steel transaction was blocked by the Biden administration in January 2025 on national-security grounds and ultimately closed in June 2025 under a Trump-administration national-security agreement that restructured the deal with golden-share governance, U.S. management commitments, and union-jobs guarantees. The right read of this arc is *deal-specific, not categorical*: the block reflected the symbolism of US Steel, union politics, and 2024 election timing - not a categorical prohibition of foreign acquisition of integrated U.S. steel assets. Subsequent Treasury / CFIUS commentary, and the eventual closing under restructured terms, signal that transactions from treaty-ally provenance (Korea, Japan, India under post-2024 framework) structured with FOCI mitigation, U.S.-domiciled operating subs, board governance protections, and preserved-jobs commitments, would clear - allowing for a 12-18 month deal-process timeline. This is the Section 8 strategic-buyer floor foundation: the precedent multiple (13.8x EV / through-cycle EBITDA) is the right anchor; the "deal was blocked" headline is not a categorical no.

**METHOD - LIBRARY TIE-IN**  
*Precedent-comp methodology is PE Guide Ch 18 (precedent transactions). Key adjustments include change-of-control premium, deal-pending mark, synergy capture between buyer and target, and circumstance-specific premia (here: CFIUS risk + national-security agreement).*

## 4. Sum-of-the-Parts - The Integrated Value Chain

*CLF is the only North American steelmaker that owns its iron-ore supply end-to-end. A SOTP that values steelmaking, iron-ore mining, and DRI / raw-materials separately - then adds an integration credit - is the right lens for understanding what the integrated business is worth above the sum of its pieces.*

Segment	Through-cycle EBITDA (\$M)	Multiple	Value (\$M)
Steelmaking (integrated BF/BOF + EAF, flat-rolled)	1,450	5.5x	7,975
Iron-ore mining (4 active + Northshore, ~17-20 Mt LT)	400	5.5x	2,200
DRI / HBI (Toledo facility)	100	7.0x	700
Steel-processing / FPT (scrap, processing)	80	5.0x	400
Sum of pieces (pre-integration)	<b>2,030</b>		<b>11,275</b>
Less: corporate overhead (cap at 8x)	(150)	8.0x	(1,200)
Less: net debt (LT debt less cash)			(7,718)
Less: pension / OPEB (net liability)			(631)
+ Integration credit (iron-ore self-sufficiency)			600
Equity value (SOTP)			2,326
/ shares outstanding (M)			570.4
SOTP per share			<b>\$4.08 / sh</b>

**[SOURCE NOTE]** CLF reports through one reportable segment - Steelmaking - in the 10-K (NOTE 22, p75): FY 2025 Steelmaking Adj. EBITDA was negative \$16M and Other Businesses was positive \$53M; total consolidated \$37M. The split above is illustrative through-cycle (not trailing); see model for sensitivity.

### The integration credit

Standalone iron-ore producers (Vale, Rio Tinto iron-ore segment, Fortescue) sell to the merchant market and price off Platts. CLF's iron ore is captive: it feeds the steelmaking operations and the HBI facility, and the unit economics differ from merchant pricing. The integration credit (~\$600M in the shell above) reflects (a) the elimination of merchant pricing volatility in the upstream, (b) the cost-advantage from controlling DRI / HBI feed for EAFs, and (c) the strategic optionality of being the only US producer with self-supplied iron units.

#### **METHOD - LIBRARY TIE-IN**

*SOTP methodology is PE Guide Ch 20 (segment values + separate multiples) and First Principles Ch 15 (probability weighting). The integration credit construction is a HALO Trade extension - see Financial Planning & Bloomberg volume, vertical-integration chapter.*

## 5. Discounted Cash Flow - Through-Cycle EBITDA Anchor

The DCF below uses through-cycle EBITDA as the explicit-period anchor, with FCF derived from EBITDA less maintenance capex, less cash taxes, less working-capital. The growth assumption is muted (industry-grade scale; not a growth name); the terminal value uses a perpetuity-growth approach with  $g = 1.5\%$  to  $2.0\%$  (long-run real GDP analog) and WACC triangulated below.

WACC component	Value	Source / methodology
Risk-free rate (10-yr UST)	4.25%	Current 10-yr UST yield (assumption)
Equity risk premium	5.50%	Damodaran 2026 implied ERP (assumption)
Beta (5Y monthly)	2.01	Yahoo Finance May 22, 2026 (reflects steel cyclicality)
Cost of equity (CAPM)	15.31%	Rf 4.25% + Beta 2.01 x ERP 5.50%
Pre-tax cost of debt	7.50%	CLF senior notes trading yield (6.25%-7.50% longer tranches)
Tax rate	25%	Effective rate (assumption)
After-tax cost of debt	5.63%	$7.50\% \times (1 - 0.25)$
Equity weight (mkt cap \$6.4B / \$14.75B)	43%	MV equity / (MV equity + debt + pen/OPEB)
Debt + pension weight (\$7.72B + \$0.63B / \$14.75B)	57%	(Net debt + pen/OPEB) / total
WACC (calc)	9.79%	$0.43 \times 15.31\% + 0.57 \times 5.63\%$
WACC (rounded for model use)	<b>9.75%</b>	Used in DCF and sensitivity grid

**[SOURCE NOTE] WACC inputs refreshed May 25, 2026. Risk-free rate (4.25%) and ERP (5.5%) are assumptions, not verified market quotes; Rf reflects current 10-yr UST and ERP reflects Damodaran 2026 implied. Beta (2.01) is Yahoo Finance 5Y monthly as of May 22, 2026. Pre-tax cost of debt (7.5%) sits at the high end of CLF senior-note trading yields (6.25%-7.5% range for the longer tranches). Capital weights use market cap \$6.4B vs net debt \$7.72B + pension/OPEB \$0.63B = total \$14.75B, producing equity weight 43% and debt+pension weight 57%. WACC =  $0.43 \times 15.31\% + 0.57 \times 5.63\% = 9.79\%$ , rounded to 9.75% for model use. Sensitivity in the model XLSX flexes WACC 8% - 12%.**

### DCF output sensitivity (illustrative)

WACC \ Terminal g	1.0%	1.5%	2.0%	2.5%
8.5%	\$15	\$17	\$19	\$22
9.75%	\$12	\$13	\$15	\$17
11.0%	\$10	\$11	\$12	\$14

12.0%

**\$8****\$9****\$10****\$12**

Output is sensitive to assumptions. At a 9.75% WACC and 1.5% terminal growth on through-cycle FCF, the implied equity value lands in the low teens per share - modestly above the May 22, 2026 \$11.23 close. The Institute flexes the through-cycle EBITDA and capex assumptions in the model XLSX (Tab 5) to see the full sensitivity grid.

**METHOD - LIBRARY TIE-IN**

DCF construction follows PE Guide Ch 19 (WACC build, terminal value, sensitivity grid) + First Principles Ch 13 (discount-rate mechanics, NPV intuition). The through-cycle EBITDA anchor (vs spot EBITDA) is the First Principles Ch 7 cyclical discipline.

## 6. SBC vs Dilution - The Industrial Read

*Stock-based comp is the spine of the tech-name dilution story. For an industrial name like CLF, SBC is meaningful but smaller in absolute terms and proportionally lower against revenue. The right question is not whether SBC matters (it does) - it is whether SBC is consistent with the implied dilution that buybacks and ATM issuance jointly produce.*

Line item (FY 2025 per 10-K)	Amount	Reasoning / Source
FY 2025 SBC expense (P&L)	\$57M	10-K NOTE 17 (vs \$50M FY24, \$41M FY23)
FY 2025 SBC % of revenue (\$57M / \$18,610M)	0.31%	Industrial profile (vs Lyft ~5%, SaaS ~10-15%)
Performance shares granted FY 2025	2.1M	10-K NOTE 17 (avg GD fair value \$19.76)
RSUs granted FY 2025	2.6M	10-K NOTE 17 (avg GD fair value \$11.85)
Performance shares outstanding YE 2025	3.9M	10-K NOTE 17 (avg GD fair value \$25.71)
RSUs outstanding YE 2025	4.4M	10-K NOTE 17 (avg GD fair value \$15.38)
Unrecognized SBC at YE 2025 (over 1.7 yrs)	\$62M	10-K NOTE 17
Cash buybacks FY 2025	\$0	Cash conserved for debt paydown (10-K p64)
Equity issued FY 2025 (Stelco amalgamation)	75M shares	10-K p64 / NOTE 3
Shares outstanding (BoY 493.9M -> EoY 569.8M)	+75.9M	10-K p60 cover / equity statement
Remaining buyback authorization (YE 2025)	\$1.376B	10-K Item 5 / NOTE 16

For an industrial in deleveraging mode, dilution is modest and the priority stack is: (1) debt paydown, (2) selective capex, (3) opportunistic M&A, and only then (4) buybacks. SBC is a real expense to model, but it is not the thesis spine for CLF the way it was for Lyft.

**METHOD - LIBRARY TIE-IN**

*SBC-vs-dilution bridge methodology is First Principles Ch 11 and CFO Controllers' Guide Ch 9 (diluted EPS, treasury-stock method).*

## 7. NOL Position - Post-Acquisition Tax Asset

After three major acquisitions (AK Steel 2020, AMUSA 2020, FPT 2021) and the trough year of FY2024-25, CLF carries a meaningful NOL inventory plus deferred tax assets from acquired pension obligations, environmental reserves, and credit carryforwards.

Item (per 10-K NOTE 13, Income Taxes, YE 2025)	Amount (\$M)
Gross domestic NOL carryforwards (Federal + state)	4,827
Gross foreign NOL carryforwards	1,673
U.S. interest expense limitation carryforward (163(j))	789
Canadian interest expense limitation carryforward	141
Pension and OPEB DTA	154
Environmental DTA	77
State and local DTAs	93
Employee-based compensation DTA	<b>71</b>
Total deferred tax assets before valuation allowance	1,697
Less: valuation allowance (foreign \$347M + state \$47M)	<b>(394)</b>
Net deferred tax assets	1,303
Less: total deferred tax liabilities (PPE, mineral rights, intangibles, etc.)	<b>(1,615)</b>
Net deferred tax liability (post-DTL offset)	(312)

### Section 382 considerations

Each major acquisition (AKS, AMUSA, Stelco) triggered an ownership change for the acquired entity's NOLs and an annual Sec 382 limitation tied to the deal-date equity value of the target times the IRS long-term tax-exempt rate. The TCJA 80% utilization cap on post-2017 federal NOLs further constrains usage in profitable years.

### PV of the NOL asset - public-market vs take-private

The gross federal NOL (\$4.827B per 10-K NOTE 13) at the 21% federal rate produces a \$1.014B undiscounted shield - approximately **\$1.78 / sh** across 570.4M diluted shares (10-Q cover, April 21, 2026). That gross figure is then discounted for (a) the multi-year wait until CLF returns to material federal taxable income from the FY 2025 trough (\$37M Adj EBITDA), (b) the TCJA §172 80%-of-taxable-income cap that stretches utilization across multiple post-recovery years, and (c) the 9.75% blended WACC. In the *public-market* (status quo) scenario, no §382 ownership change is triggered and the full federal NOL pool remains available; in the *take-private LBO* scenario, §382 caps annual utilization at the deal-date equity value times the IRS long-term tax-exempt rate, which destroys most of the shield's economic value.

Scenario	Bear	Base	Bull	Notes
Public-market PV (\$M, no §382)	400	627	884	Status quo; full \$4.83B federal NOL available
Public-market PV (\$ / sh, no §382)	\$0.70	\$1.10	\$1.55	On 570.4M diluted shares
Take-private PV (\$M, §382 triggered)	200	400	500	LBO ownership change caps annual use
Take-private PV (\$ / sh, §382)	\$0.35	\$0.70	\$0.88	Sponsor harvest; public holder gets nothing
Value destroyed by take-private (\$ / sh)	\$0.35	\$0.40	\$0.67	Public holder forgoes this on take-private

**The take-away.** A public-market holder of CLF is credited with the full \$1.10 / sh base-case NOL value in the cover-page triangulation (Executive Summary). A take-private at the current market clearing range would forfeit approximately \$1.10 / sh of NOL shield value to the §382 annual-limitation mechanic - a structural reason why the public-market value can rationally exceed the LBO clearing price even before any control-premium argument.

**METHOD - LIBRARY TIE-IN**

*NOL valuation methodology is PE Guide Ch 4B (NOL / §382 mechanics, TCJA 80% cap, valuation allowance release framework) and CFO Controllers' Guide Ch 11 (deferred tax asset accounting under ASC 740). The public-market vs take-private PV bridge follows the Case 03 Lyft NOL treatment (see Lyft Section 12).*

## 8. Strategic Alternatives - Consolidator or Consolidated?

*CLF spent 2023-2024 as the would-be consolidator of the North American steel industry, pursuing US Steel under a bid that the market priced as a 60%+ probability of completion. CFIUS scrutiny and political crosswinds opened the door for Nippon Steel; the deal closed June 18, 2025 under Nippon. CLF's strategic position now has three distinct paths.*

Path	Trigger	Implication for valuation
Run the assets, deleverage, capital return	Status quo; HRC stabilizes mid-cycle	Cash-flow story; multiple expansion as leverage compresses; mid-cycle value \$14-18
Tuck-in acquisition (specialty steel, EAF asset, downstream)	Cyclical recovery + opportunistic seller	Multiple-arb thesis intact; integration risk rises again; range widens
CLF as target (PE / SWF / strategic)	Cycle bottom + strategic bid for HALO assets	Take-private at premium to current; floor estimate \$14-17; precedent multiples 6-8x EBITDA
Spin / sale of iron-ore mining	Activist pressure / strategic monetization	Pure-play iron-ore listed at higher multiple; integration credit forfeited; net depends

### LBO feasibility sanity check

Could a sponsor or strategic take CLF private? The standard cap-stack would be ~6x through-cycle EBITDA in total debt. At through-cycle EBITDA of ~\$1.8B that implies ~\$10.8B of total debt capacity. Existing long-term debt is \$7.76B (10-Q March 31, 2026), so incremental debt capacity is roughly \$3.0B. Combined with equity check from a sponsor (~\$4-5B) and rollover from existing holders, a deal at \$14 - \$17 / share (market cap \$8.0 - \$9.7B against 570.4M shares) plus debt assumption is mechanically feasible.

**METHOD - LIBRARY TIE-IN**

*Strategic-alternatives analysis is PE Guide Ch 17 (take-private precedents) + Model 05 (LBO feasibility). The 'consolidator without consolidation' framing borrows from Founder/Operator Guide Ch 12.*

### Strategic-buyer floor - POSCO, Hyundai Steel, and the Nippon-precedent

*The Bear case is not a \$0-equity wipeout - it is a strategic-buyer monetization floor. The case argues throughout that CLF's integrated BF/BOF + iron ore + DRI vertical is structurally irreplaceable on a 150-300 year cumulative replication horizon (Section 12), that U.S. steel capacity is a Defense Production Act strategic-and-critical material (Section 13), and that the Nippon-US Steel transaction established a precedent EV / through-cycle EBITDA multiple of ~13.8x (Section 3 trading comps; Section 6 acquisition precedent). A Bear case modeled as trough EBITDA × 5x and floored at \$0 equity would contradict every one of those framings. The honest Bear is the asset-replacement / strategic-buyer floor, less transaction friction, probability-weighted against deal failure.*

### The strategic-buyer set

**POSCO (South Korea, treaty ally).** The world's 6th-7th largest steel producer by crude-steel output, POSCO has been actively acquiring upstream iron-ore and downstream finishing assets globally (Australian iron-ore JVs, Latin-American DRI, Indonesian DRI). An integrated BF/BOF + iron ore + DRI vertical purchased at trough cycle multiples is precisely the asset profile POSCO pursues. South Korea is a U.S. treaty ally with mature CFIUS / FOCI mitigation precedent. CLF and POSCO already signed a non-binding MOU on September 17, 2025 (SUP p7, April 2026) with UBS engaged as advisor - publicly evidenced strategic dialogue.

**Hyundai Steel (South Korea, treaty ally).** Hyundai Steel already operates U.S. production (Louisiana plate mill, supplying Hyundai / Kia U.S. auto assembly). Upstream vertical integration into iron-ore self-sufficiency through a CLF transaction is strategically logical and materially capital-efficient versus a greenfield build. CFIUS treatment tracks the POSCO precedent. The Hyundai-Kia auto-supply linkage is the specific commercial logic: CLF's flat-rolled auto-grade steel feeds the same OEM customer set Hyundai Steel already serves.

**JSW Steel (India, increasingly treaty-ally-equivalent).** JSW has been an active U.S. acquirer - the 2018 acquisition of Acero Junction (Mingo Junction, Ohio EAF) and subsequent investment in U.S. plate / pipe capacity establish the pattern. Under the post-2024 CFIUS framework and the broader U.S.-India industrial-realignment posture, treaty-ally-equivalent treatment for an Indian strategic buyer of integrated U.S. steel capacity is increasingly likely on a 2-3 year view, particularly with FOCI mitigation structured around U.S.-domiciled operating subsidiaries and board governance protections.

### The Nippon-US Steel precedent, read correctly

The Nippon Steel acquisition of United States Steel Corporation was blocked by the Biden administration on national-security grounds in January 2025 and ultimately closed in June 2025 under a Trump administration national-security agreement that restructured the deal with golden-share governance, U.S. management commitments, and union-jobs guarantees. **The right read of this precedent is deal-specific, not categorical.** The Nippon-US Steel transaction was blocked on its specific facts (the symbolism of US Steel, the union politics, the 2024 election timing) - not on a categorical prohibition of foreign acquisition of integrated U.S. steel assets. Subsequent Treasury / CFIUS commentary, and the eventual closing of the Nippon deal under restructured terms, signal that transactions from treaty-ally provenance, structured with FOCI mitigation, U.S.-domiciled operating subs, board governance protections, and preserved-jobs commitments, would clear - allowing for a 12-18 month deal-process timeline.

### The Bear floor build

Component	Value (\$B)
Replacement cost - integrated BF/BOF + iron ore + DRI vertical (low end)	25.0
Less: net debt (LT \$7.76B + ST \$1.30B - cash \$0.80B, 10-Q)	(8.30)
Less: pension / OPEB net liability (10-Q Mar 31, 2026)	(0.63)
Asset-cover undiscounted equity floor (\$B)	16.07
/ shares outstanding (M)	570.4
Asset-cover undiscounted per-share floor (\$/sh)	\$28.18

Alternative: Nippon multiple 13.8x × mid-cycle EBITDA \$1.2B EV	16.56
Less: net debt + pension (\$B)	(8.93)
Nippon-precedent undiscounted equity floor (\$B)	7.63
/ shares outstanding (M)	570.4
Nippon-precedent undiscounted per-share floor (\$/sh)	\$13.38
Anchor strategic-offer floor (blend of two methods, \$/sh)	\$15.00
P(deal materializes in 2-3 yrs, treaty-ally buyer clears CFIUS)	55%
P(no deal, cycle stays bad, equity trades to cash-burn floor)	45%
No-deal scenario per-share anchor (\$/sh)	\$2.00
Probability-weighted Bear (\$/sh, pre-NOL)	\$9.15
Less: transaction-friction further haircut for memo Bear	(\$1.45)
Operating-equity Bear (\$/sh, post-friction)	\$7.70
+ NOL/DTA Bear (\$382-capped strategic-buyer scenario, \$/sh)	\$0.30
+ Asset sales process incremental (\$355M remaining / 570.4M sh)	\$0.62
<b>Bear case per share (\$/sh)</b>	<b>\$8.62</b>

### Why this floors the Bear case

Even if the steel cycle stays at trough for three to five more years - the genuine bad-cycle scenario - a strategic-buyer offer in the \$7 - \$9 per share range is highly probable on a two-to-three year view from at least one of POSCO, Hyundai Steel, JSW Steel, or another treaty-ally integrated producer. The asset profile (integrated iron ore through finished flat-rolled, auto-grade quality, U.S. tariff perimeter, DPA-strategic designation) is precisely what a non-U.S. integrated producer seeking U.S. market access cannot build greenfield in any reasonable timeframe (Section 12, 150-300 year cumulative replication math). The "Bear = \$0" framing the prior iteration of this case used implicitly assumed zero strategic interest in an asset every other section of the case argues is strategically irreplaceable. That was a load-bearing inconsistency. The Bear case in this version reflects the strategic-acquisition floor that the rest of the case implies must exist.

### Additional asset support - the \$425M non-EBITDA-contributing portfolio

Beyond the operating-business equity floor built above, CLF discloses a separate pool of **non-EBITDA-contributing assets under active monetization** that floors the asset-cover math further. Per the Q1 2026 earnings presentation (April 20, 2026, p8, "Asset Sales Process"), CLF has **~\$425M of total value under contract, closed, or in agreements-in-principle** for 8 non-EBITDA-contributing assets, of which **~\$70M** has been received as of Q1 2026 - leaving **approximately \$355M of asset value still expected to close**. The company describes these as "assets that are well-positioned geographically with infrastructure in place and access to power and water," with the related disclosure that CLF holds **1GW+ of powered land currently idled**. J.P. Morgan was engaged in Q3 2025 as sell-side advisor and 100% of net cash proceeds is earmarked for debt

paydown (10-K Item 7 p5; Q1 2026 10-Q Item 2 MD&A).

For a strategic buyer with the operational footprint to redeploy these assets - POSCO's planned U.S. expansion under the September 17, 2025 MOU, Hyundai Steel's vertical-integration logic, JSW's brownfield-restart playbook (Acero Junction precedent) - this represents **incremental asset value beyond the operating-business equity floor**. It does not flow through the EBITDA × multiple lens because these assets are by definition non-EBITDA-contributing. It floors the asset-cover math: on 570.4M diluted shares, the remaining ~\$355M of yet-to-close proceeds translates to **~\$0.62 / sh of additional support credited to the Bear case**. The memo credits the \$355M remaining proceeds explicitly into the Bear build, lifting Bear to **\$8.62 / sh** (\$7.70 operating-equity floor + \$0.30 \$382-capped NOL + \$0.62 asset-sales incremental). The \$70M already received per Q1 2026 disclosure is treated as run-rate deleveraging support and not separately credited; if the full \$425M of disclosed proceeds materializes, the asset-sales increment would scale to **~\$0.74 / sh** - the memo holds at the conservative \$0.62.

### **Additional optionality: hyperscaler / data-center conversion value**

The \$425M asset-sales portfolio includes **1GW+ of powered land currently idled** (Q1 2026 earnings deck p8). The disclosed language - "assets that are well-positioned geographically with infrastructure in place and access to power and water" - describes exactly the scarce input the AI training-compute buildout is now bidding for. Hyperscalers (Microsoft, Meta, Amazon, Google, Oracle, xAI) are paying multi-billion-dollar valuations for grid-connected campus sites with power, water, and cooling availability. A 1GW campus capex stack runs \$20-30B all-in (compute + buildings + power infrastructure), and the LAND-WITH-POWER component is now the binding constraint, not the chips. Recent reference points include Meta's ~\$10B Louisiana data-center campus announcement (December 2024), Microsoft's multi-site GW-scale buildout reported across 2024-2025, and Oracle's participation in the Stargate joint venture (announced January 2025). The memo cites these as directional context, not modeled comparables.

**For CLF specifically:** a 1GW+ idled industrial site with existing grid interconnect, water rights, and brownfield infrastructure has potential value as a data-center conversion that is *incremental to* the steel-buyer and asset-sale valuation - the buyer pool widens beyond integrated-steel strategics to include hyperscalers and co-location developers. The case **flags this as asymmetric upside, not modeled into the Bear/Base/Bull triangulation**. Site-specific factors (zoning, grid-interconnection-queue position, transmission capacity, water-rights specifics, environmental remediation status) determine actual realizable value, and CLF has not publicly disclosed which of the 8 non-EBITDA-contributing assets carry data-center-grade power profiles. Treated as an out-of-the-money option: zero in the Bear, zero in the Base, zero in the Bull, potentially material if the J.P. Morgan-led process surfaces a hyperscaler bid for one or more of the 1GW+ powered sites. Voice canon applies: flag the optionality, do not promote it.

#### **METHOD - LIBRARY TIE-IN**

*Strategic-buyer floor methodology builds on PE Guide Ch 17 (take-private precedents), Ch 18 (precedent transactions), and the Bloomberg / FactSet / Financial Planning HALO Trade chapter (replacement-cost floor at trough EBITDA). CFIUS / FOCI mechanics are discussed in the post-2024 framework commentary; the POSCO MOU (September 17, 2025) is disclosed in CLF's April 20, 2026 earnings supplement (p7). The ~\$425M asset-sales process is disclosed at supplement p8 and re-stated in the Q1 2026 10-Q Item 2 MD&A ("sale of certain non-core operating assets").*

## 9. Bear / Base / Bull Triangulation

The three scenarios below differ on through-cycle HRC pricing, auto demand trajectory, and tariff / policy continuity. Base and Bull are anchored to through-cycle EBITDA  $\times$  multiple math. **Bear is anchored to the strategic-buyer floor** built in Section 8 (asset-replacement-cost less net debt and pension/OPEB, with transaction-friction discount, probability-weighted against deal-failure cash-burn), not to trough EBITDA  $\times$  multiple. The reason is internal consistency with the HALO Trade thesis: if CLF's integrated BF/BOF + iron ore + DRI vertical is irreplaceable on a 150-300 year cumulative replication horizon (Section 12) and the Nippon-US Steel precedent multiple is 13.8x, then a Bear case modeled as trough EBITDA  $\times$  5x and floored at \$0 equity would contradict every other section of the memo. The Bear must reflect strategic-buyer floor mechanics, not default-and-wipeout mechanics.

Variable	Bear	Base	Bull
Through-cycle HRC (\$/ton)	700	900	1,100
Through-cycle EBITDA/ton (\$)	50	110	160
Through-cycle shipments (k nt)	15,500	16,500	17,500
Implied EBITDA (\$M)	775	1,815	2,800
EV/EBITDA multiple	5.0x	6.0x	7.0x
Operating-lens EV (\$M)	3,875	10,890	19,600
Less: net debt (\$M)	(7,718)	(7,000)	(6,000)
Less: pension/OPEB liability (\$M)	(631)	(631)	(631)
Operating-lens equity value (\$M)	(4,474)	3,259	12,969
EBITDA-x-multiple per share (\$, 570.4M)	(7.55)	6.81	24.28
Operating-lens equity / share (Bear=Sec 8 floor; Base/Bull=3-lens avg, pre-NOL)	\$7.70	\$11.90	\$21.45
+ NOL PV / share (10-K NOTE 13; Bear is §382-capped)	\$0.30	\$1.10	\$1.55
+ Asset sales process incremental (\$355M / 570.4M sh; Bear only)	\$0.62	n/a	n/a
Total per share (\$/sh)	\$8.62	\$13.00	\$23.00
Probability weighting	25%	50%	25%
Weighted value contribution (\$ / sh)	2.16	6.50	5.75
Probability-weighted equity value			<b>\$14.41 / sh</b>

**METHOD - LIBRARY TIE-IN**

*Bear/Base/Bull construction and probability weighting is First Principles Ch 15 + PE Guide Ch 14 + CFO Controllers' Guide Ch 17. The HALO Trade chapter adds the asset-cover floor.*

## 10. Risk Inventory

The risk inventory below organizes the live risks by category, with a mechanism column (how the risk transmits to earnings) and a filing-reference column (where in the 10-K / 10-Q the risk is disclosed).

Risk	Category	Mechanism	10-K reference
HRC pricing volatility	Commodity	Spot price -> ASP -> EBITDA	Item 1A p17-29 / NOTE 15
Iron-ore pellet pricing	Commodity	Captive vs merchant pricing arbitrage	Item 1A p17-29
Auto demand & EV transition	Customer	Direct auto \$5.05B = 27% of FY25 rev	Item 1A p17-29 / p45
Tariff policy reversal	Policy	Sec 232 / USMCA; 50% steel tariff Mar 2025	Item 1A p17-29 / SUP p10
IRA / 45X PTC sunset	Policy	PTC credits direct to EBITDA	Item 1A p17-29
Carbon transition cost	ESG	Blast-furnace replacement capex cycle	Item 1A p17-29
Pension / OPEB volatility	Legacy	Disc rate 7.85% pen / 5.89% OPEB	NOTE 9 / Item 7 p65
Environmental / ARO liabilities	Legacy	ARO \$682M YE25; site remediation	NOTE 11
Leverage / refinancing	Capital	Notes mature 2029-2040; ABL June 2028	NOTE 8 / Item 7
Labor / USW contract	Operational	Plant downtime + wage rate	Item 1A p17-29
Single-mine concentration	Operational	Idled Minorca + partial Hibbing FY25	Item 2 p31-40
Global steelmaking overcapacity	Commodity	Import surge -> domestic HRC pressure	Item 1A p17-29
Stelco integration risk	Strategic	Cdn tariff exposure post-Cdn 50% Mar25	Item 1A p17-29

# 11. The HALO Trade Framework Applied

**HALO = Heavy Assets, Low Obsolescence.** The framework, developed in the Bloomberg / FactSet / Financial Planning volume of the Practitioner Library, identifies a structural opportunity set: businesses whose value is anchored in physical assets that the market cannot replicate quickly (capital intensity + permitting + regulatory + technology lock-in) but that are not at risk of being made obsolete by technology.

HALO criterion	CLF assessment	Strength
Replacement value of physical assets	Iron-ore mines + HBI plant + integrated mills + coating lines	STRONG
Capital intensity of greenfield replacement	New blast furnace ~\$3B; iron-ore mine permitting ~10-15yr	STRONG
Low risk of technology-driven obsolescence	Flat-rolled steel demand persists in 2050 (autos, infra, machinery)	STRONG
Regulatory / permitting moat	Mining permits decades; EPA air permits for steelmaking; CCS / hydrogen path	STRONG
End-market visibility (not fashion-driven)	Auto / infra / construction; cyclical but visible	STRONG
Carbon-transition risk (the HALO caveat)	BF/BOF route carbon-intensive; EAF transition + DRI / H2 mitigant	MEDIUM
Capital allocation discipline	Post-acquisition deleveraging required; capital return modest until 2-3x	MEDIUM
Customer concentration	Auto top-3 ~half of revenue (advantage + risk)	MEDIUM

## The HALO floor: replacement value vs current EV

Estimating asset replacement cost honestly: each integrated steel mill (blast furnace + BOF + hot strip mill + cold mill + coating lines) has a replacement cost in the \$5-8B range; an iron-ore mine + pellet plant in the \$2-4B range; the Toledo HBI facility cost ~\$700M at the original build and would be materially more today. Add the Stelco assets and the AKS / AMUSA inheritance and the conservative replacement value of CLF's asset base is plausibly \$25-35B. Current EV at ~\$14.8B is roughly 40-60% of replacement cost. *That gap is the HALO Trade margin of safety.*

### **METHOD - LIBRARY TIE-IN**

HALO Trade framework: Bloomberg / FactSet / Financial Planning volume of the Practitioner Library. CLF is a near-prototypical HALO name.

## 12. Atoms, Not Bytes - The Replication-Time Argument

*Author's note on attribution.* The atoms-not-bytes framing in this section is our analytical framework, not a Cleveland-Cliffs disclosure. The company does not publish replication-time estimates for its asset base. We have come to think of HALO assets in two dimensions: replacement value and replacement time. Replacement value is the more commonly discussed; replacement time, in our view, is the deeper constraint. The HALO Trade thesis is usually framed as a replacement-value argument - the cost of rebuilding the asset base is multiples of current enterprise value. That framing is true but it is the smaller of the two arguments. The bigger argument, the one we want to surface, is replacement time.

**It is not just what it would cost to build this company from greenfield. It is how long it would take.** Beginning from idea, studies, permits, environmental impact statements, community hearings, regulatory approvals, contractor selection, land acquisition, water rights, rail access, port access, and union negotiations - and only then actual construction - it would take a decade at minimum to build Cleveland-Cliffs. Probably fifteen to twenty years for the full perimeter.

Software competitors can clone a SaaS feature set in months. CLF is the opposite kind of company. CLF is atoms. Mines, mills, HBI plants, rail spurs, port access on Lake Superior, water rights from the Mesabi Range, air permits issued by EPA Region 5, environmental impact statements decades in the making, master contracts with the United Steelworkers, established supplier networks with limestone and metallurgical coal producers. Each of these takes years to acquire, permit, and construct. The cumulative system is what compounds.

### **SIDEBAR - The CSX Railroad Test (our analogy)**

*By way of analogy - and this is our opinion, not anyone else's - we believe CSX Railroad could not be built in the United States today. Our rough estimate is that it would take on the order of 100 years to assemble the rights-of-way and lay the tracks under the current regulatory, environmental, and litigation overhead. The same dynamic applies, in compressed form, to integrated steel. Rights-of-way, easements, river crossings, port access, environmental clearance, eminent-domain proceedings - the system is not built today to allow a greenfield CSX. It is barely built to allow a greenfield steelmaker. That, in our framing, is the structural scarcity inside the HALO Trade thesis. The analogy is ours; CSX Corporation has not made this comparison publicly.*

### **METHOD - LIBRARY TIE-IN**

*Replication-time as a moat measure is a sharper analytical instrument than replacement value. Replacement value can be paid by anyone with capital. Replication time can be paid by no one.*

## 12a. Historical Evidence - How Long Things Used to Take, vs Today

**Attribution note.** The dates and durations in the table below are historical facts (sourced from Wikipedia, History.com, USBR, GAO, ConstructionCoverage, WisconsinDOT). *The interpretation - that replication time for physical assets in the United States has lengthened dramatically since the 1930s - is our analytical contribution.* Cleveland-Cliffs does not publish replication-time estimates for its asset base; we built this comparison to make the atoms-not-bytes argument concrete.

Project	Era	Time to build	Modern equivalent	Time today
<b>Empire State Building</b>	1931	13-14 months (410 days)	Comparable large Class A office tower (NYC, SF, similar Tier-1 US cities)	5-10 years construction; 8-15 years total timeline (planning + zoning + permits + design + build). One World Trade Center took ~8 years construction after multi-year site prep
<b>Hoover Dam</b>	1936	~5 years (2 yrs ahead of contract)	Comparable large concrete arch/gravity dam	10-20+ years (planning + EIS + permits + build)
<b>US Interstate Highway System</b>	1956-1992	~35-36 years (41,000 miles)	A major new highway segment in one state	7-15+ years (planning + environmental review + design + build)

Sources: *Empire State Building* - 1 year and 45 days construction (Wikipedia, History.com). *Hoover Dam* - 5 years construction, completed 2 years ahead of contract (U.S. Bureau of Reclamation, Wikipedia). *US Interstate Highway System* - 35-36 years for original network, Federal-Aid Highway Act 1956, declared complete October 14, 1992 (Wikipedia). *Modern Class A office tower comparable* - **One World Trade Center** is the most recognizable contemporary benchmark: 104 stories, 1,776 ft, ~3M sqft, construction 2006-2014 (~8 years) following multi-year site preparation and design that began shortly after 2002; total timeline from concept to occupancy ran more than a decade. Other comparables: *Salesforce Tower SF* (61 stories, construction 2013-2018 = ~5 years, with site approval/design starting ~2007, total timeline ~11 years); *Hudson Yards Phase 1* (construction 2012-2019 = ~7 years, planning/zoning from ~2008); *432 Park Avenue NYC* (construction 2011-2015 = ~4 years after lengthy zoning fights). Sources: building company disclosures, Wikipedia, Skyscraper Center / CTBUH. *Modern comparable dam* - 10-20+ years (multiple practitioner sources). *Modern highway in one state* - 7-15+ years for major projects (GAO, WisconsinDOT). Data factual; interpretation is ours.

### What the comparison says, and what it doesn't

Our point is not that the past was better. Our point is that the regulatory, environmental, and litigation overhead on physical asset construction in the United States has increased considerably since the 1930s. The Empire State Building went up in 13 months in 1931 - 102 stories, 1,250 feet, a true skyscraper. The closest apples-to-apples modern comparable is a major Class A office tower in a Tier-1 US city. **One World Trade Center** - the most recognizable contemporary skyscraper - took about 8 years of construction (2006 to 2014) after several years of site preparation and design, with the full timeline from concept to ribbon-cutting running well over a decade. That is the honest comparison: skyscraper vs skyscraper, 13 months in 1931 vs 8-plus years today, with much of the added timeline absorbed by planning, zoning, design review, and permitting. The Hoover Dam, completed in 5 years in 1936, is not something that could be built on that timeline today - a comparable modern dam project would take 10 to 20 years or more from planning to commissioning. The Interstate Highway System took 35 years to build out 41,000 miles in the era when it was politically possible to do so. A single new highway segment in one state today takes 7 to 15 years.

We surface this not as nostalgia. We surface it because integrated steel capacity - mines, mills, HBI plants, port access, rail, environmental permits, water rights, air permits, union contracts - is the kind of asset base that takes the longer timeline, not the shorter one. The Greenfield Replication Time table that follows is our estimate of how long the Cleveland-Cliffs perimeter would take to rebuild from idea to commissioned, summed across the 32 properties disclosed in the 10-K (Item 2). The total - 1,800 to 3,600 months in our estimate - is not a forecast. It is an illustration of how far the replacement-time clock runs. The HALO Trade thesis depends on the proposition that this clock matters; the construction-timeline comparisons above are evidence that it does.

## 12b. Greenfield Replication Time - The Cleveland-Cliffs Perimeter

**Attribution note.** We built this table to illustrate the replication-time concept. The estimates are practitioner judgment based on published permitting timelines, industry build histories, and EIS/NEPA averages. Cleveland-Cliffs does not publish this data; we constructed the table to make the atoms-not-bytes argument concrete.

Asset class	# Properties	Replication time per asset (months)	Aggregate range (months)
Iron-ore mine + pellet plant (Mesabi-style)	4	120-240	480-960
Integrated steel mill (BF/BOF, hot-strip mill)	5	108-216	540-1,080
EAF / mini-mill complex	6	48-96	288-576
HBI / DRI plant (Toledo-style)	1	60-120	60-120
Coke battery / cokemaking facility	2	60-120	120-240
Finishing / coating / stamping plant	10	24-48	240-480
Service center / processing site	4	18-36	72-144
<b>TOTAL across 32 properties</b>	<b>32</b>	—	<b>1,800-3,600</b>
<b>= cumulative replication-time equivalent</b>	—	—	<b>~150-300 years</b>

Source: practitioner-built. Property count traces to CLF 10-K Item 2 (Properties), which lists 32 owned/leased operating sites. Replication-time estimates are our judgment based on published mining-permit averages (USGS/NEPA), integrated-steel-mill build histories (Big River Steel, Nucor Brandenburg precedents), HBI / DRI build timelines (Cliffs Toledo, Voestalpine Corpus Christi), and EIS/NEPA averages. The total aggregate range is illustrative, not forecast. Cleveland-Cliffs does not publish this data.

The aggregate range is wide because the inputs are estimates, not engineering quotes. What matters for the HALO Trade application is not the precise total - it is the order of magnitude. A perimeter that runs roughly 150 to 300 years of cumulative replication time is the kind of perimeter that cannot be re-created by a balance sheet event. That is the structural scarcity our framework is pointing at.

**METHOD - LIBRARY TIE-IN**  
 The replication-time table is our analytical instrument, not company disclosure. The library application is Bloomberg / FactSet / Financial Planning HALO Trade chapter, plus First Principles Ch 8 (replacement cost as a sanity check on growth narratives).

## 13. Strategic Asset - National Defense and Freedom's Forge

*Author's note on attribution.* Drawing on Arthur Herman's history of WW2 industrial mobilization, we extend the thesis to today's integrated U.S. steel base. This is our analytical framework; it is not part of Cleveland-Cliffs' investor disclosure or public statements. The cleanest historical reference for the role American heavy industry plays in a major-power conflict is Arthur Herman's *Freedom's Forge: How American Business Produced Victory in World War II* (Random House, 2012). Herman's argument: the productive capacity of the American industrial base in the early 1940s was the decisive factor of the war. The automakers - Ford at Willow Run building B-24 Liberator bombers, Chrysler building tanks in Detroit, Willys-Overland and Ford building Jeeps, GM and Studebaker building trucks - converted from civilian production to military production at a speed and scale that no other belligerent matched.

**All of it required steel.** Steel was the strategic input. The B-24s, the Sherman tanks, the Liberty ships, the Jeeps, the artillery shells, the rifle barrels, the rebar for airfields, the rails for forward supply, the ammunition casings - every one of them required steel, and the integrated American steel industry of 1942 (US Steel, Bethlehem, Republic, Inland, National, Jones & Laughlin, Armco, Wheeling, Youngstown) produced it at a tempo the Axis powers could not approach.

In a future major-power conflict scenario - a Taiwan contingency, a major European land war, or a sustained Indo-Pacific confrontation - U.S. steel production capacity becomes the strategic input again. Tanks, ships, missiles, ammunition, military vehicles, fortified infrastructure, and reconstituted shipbuilding all require steel produced inside U.S. borders by U.S. workers from secure U.S. supply chains. The Department of Defense has identified steel as a strategic-and-critical material under the Defense Production Act framework.

### Where CLF sits in this picture

Cleveland-Cliffs is the largest North American flat-rolled steel producer and the only fully integrated iron-ore-to-finished-steel company in the United States. In a strategic-asset framing, CLF is not just a steel company; it is a strategic reserve. The integrated chain - iron ore from Mesabi, HBI from Toledo, BF/BOF and EAF steelmaking, hot-rolling, cold-rolling, coating, stamping - means CLF can deliver finished steel into U.S. defense industrial supply chains without depending on any imported raw material, any imported intermediate, or any foreign processing step.

Policy support reflects this thinking. Section 232 steel tariffs (imposed by both Trump administrations and substantially preserved by the Biden administration), the Inflation Reduction Act 45X advanced-manufacturing production tax credit, the 48C investment tax credit, and the strategic-metals provisions in the One Big Beautiful Bill Act of 2025 all reflect a bipartisan reading of U.S. industrial-base security. The HALO Trade framework reads this as policy support compounding on irreplaceable physical assets.

**SIDEBAR - Freedom's Forge**

*Freedom's Forge: How American Business Produced Victory in World War II* by Arthur Herman (Random House, 2012). The thesis: American industrial capacity - automakers, steelmakers, shipbuilders, aluminum producers - was the decisive Allied advantage. Henry Kaiser's Liberty Ships, Henry Ford's Willow Run B-24 line, William Knudsen's GM-to-Pentagon transition, Charles Sorensen's mass-production gospel applied to bomber assembly. Steel was the input that made all of it possible. CLF is the modern expression of that same integrated, vertically secure, domestic industrial spine.

**The Freedom's Forge thesis is happening again - Anduril and Arsenal-1**

**Attribution note.** The Anduril facts below are public reporting (Wired, NYT, Fortune coverage). *The connection from Anduril's Arsenal-1 build-out back to integrated U.S. steel capacity is our analytical framework - neither Cleveland-Cliffs nor Anduril has linked these stories publicly.* Palmer Luckey founded Anduril Industries with the explicit goal of doing for defense what Henry Ford did for the automobile. Anduril's Arsenal-1 megafactory in Pickaway County, Ohio - five million square feet, modular and reconfigurable, capable of shifting between aircraft and missiles the way an auto plant retools for new models - is designed to mass-produce autonomous defense systems (Roadrunner, Fury jets, drones, interceptors) on assembly lines that look like car factories because they ARE car factories in their bones. The manufacturing philosophy is software-defined, highly modular, mass-produced - a deliberate inversion of the traditional low-volume, specialized-tooling model.

What does an auto-style assembly line require? Steel. Sheet steel for body panels and structural components, plate steel for tooling and fixtures, electrical steel for the motors that drive the lines, tubular steel for the air and hydraulic systems. The strategic dependency that Arthur Herman documented in *Freedom's Forge* - defense capacity riding on civilian industrial steel capacity - is not just history. It is the forward-looking model that the next generation of defense manufacturers is explicitly building toward.

CLF supplies steel to GM, Ford, Stellantis, and the broader US auto OEM base - the very factories whose architectures the next wave of defense manufacturing is being designed to inherit. If Anduril is right about how 2030s defense production will look, the integrated US flat-rolled steel base is not just an industrial asset. It is a strategic prerequisite.

*Caveat: forward-looking projections about defense procurement, factory architecture, and policy priorities carry real uncertainty. This is a directional argument, not a forecast.*

**SIDEBAR - Arsenal-1 / Anduril**

*Palmer Luckey founded Anduril Industries with the stated aim of doing for defense what Henry Ford did for the automobile. Arsenal-1 is Anduril's five-million-square-foot manufacturing campus in Pickaway County, Ohio - explicitly designed to be modular and reconfigurable, auto-assembly-line style, so it can shift between aircraft, missiles, drones, and interceptors (Roadrunner, Fury jets, etc.). The manufacturing philosophy is software-defined, highly modular, mass-produced - Tesla-style. The argument lands cleanly on CLF: an auto-style assembly line runs on sheet, plate, electrical, and tubular steel. CLF is the largest North American flat-rolled supplier to the auto OEM base. Auto production is so important for defense that the next-generation defense primes are designing their products so they can be built at auto factories.*

**Speculation disclosure.** Forward speculation about future U.S. policy - tariffs, defense procurement, industrial-base subsidies - is just that. Speculation. Policy can move in either direction. The strategic-asset

framing is well supported by historical precedent (Freedom's Forge), by current policy direction (Section 232, IRA, OBBBA), by Department of Defense doctrine (strategic-and-critical material designations), and by the forward-looking manufacturing architecture of next-generation defense primes (Anduril / Arsenal-1). It is not supported by any guarantee about how those frameworks evolve, and the Arsenal-1 build-out is itself still in execution. The case study treats the strategic-asset premium as a supportive lens, not a load-bearing modeling assumption.

**METHOD - LIBRARY TIE-IN**

*Strategic-asset framing is the First Principles Ch 18 (non-financial value drivers) and the Bloomberg / FactSet / Financial Planning volume's policy-tailwind chapter. The historical analogy (Freedom's Forge) is cited because it is the cleanest documented case of the dynamic at scale; the Anduril / Arsenal-1 extension is cited because it is the cleanest live expression of the same dynamic playing out in 2026. CLF is not 1942 US Steel, but the structural role of integrated North American steel capacity in a strategic scenario is the same dynamic in compressed form - and the next generation of defense primes is explicitly designing their factories to inherit auto-industry manufacturing architecture.*

## Sources and methodology notes

Every financial figure in this case study traces to one of the source documents below. The 2026-05-25 data refresh sourced FY 2025 figures from the FY 2025 10-K (filed February 2026), Q1 2026 figures from the Q1 2026 10-Q (filed April 2026), and forward guidance from the April 20, 2026 earnings presentation. Live-market data (stock price, peer EV/EBITDA, HRC, WACC inputs) refreshed May 22-25, 2026 from Yahoo Finance + CME front-month + Grok cross-check.

Abbreviation	Document	Issuer	Status
10K	Form 10-K for fiscal year ended December 31, 2025	Cleveland-Cliffs Inc.	Filed February 2026 - used
10Q	Form 10-Q for quarterly period ended March 31, 2026	Cleveland-Cliffs Inc.	Filed April 2026 - used
SUP	First-Quarter 2026 Earnings Presentation (April 20, 2026)	Cleveland-Cliffs Inc.	Used
Comps	Trading multiples for NUE / STLD / X / MT / RS	Yahoo Finance + Grok	Refreshed May 22-25, 2026
Cmdty	HRC spot pricing reference (~\$830 / ton)	CME front-month	Refreshed late May 2026
WACC	Rf 4.25% / ERP 5.5% (assump) / Beta 2.01 (Yahoo)	Yahoo + Damodaran 2026	Refreshed May 25, 2026

### Methodology summary

DCF uses through-cycle EBITDA explicit-period anchor, FCF derived from EBITDA less maintenance capex less cash taxes less working-capital change, WACC triangulated via CAPM with cyclical-name beta, perpetuity-growth terminal at 1.5-2.0%. Trading comps use EV/EBITDA on TTM and forward estimates against the steel-peer set, with cycle-aware adjustment at the trough. SOTP separates steelmaking, iron-ore mining, DRI/HBI, and steel-processing using pure-play multiples, then adds an integration credit for iron-ore self-sufficiency. LBO feasibility uses 6x through-cycle EBITDA debt-capacity assumption with sponsor IRR built off 5-year hold and exit multiple. NOL valuation uses TCJA 80% utilization cap with Sec 382 constraint on acquired carryforwards.

### Final disclosure

**The author, principal of the Baratelli Institute, owns shares of Cleveland-Cliffs Inc. (CLF) and may buy or sell at any time without notice.** The author is not an employee, officer, or director of Cleveland-Cliffs. This is an educational case study, not investment advice, not a research report, not a buy/sell rating, not a price target, not an allocation recommendation, not an opinion of fairness for any corporate transaction. Built from public SEC filings.

## BARATELLI INSTITUTE - baratelliinstitute.com - Mentoring at Scale