ICE gideon lens

Intercontinental Exchange (ICE) - Gideon Lens Verdict

Report date: 2026-08-14 **Price anchor:** USD 155.24, regular session 2026-08-13 **Operating anchor:** TTM ended 2026-06-30 **Exact horizon:** 2031-06-30, 5.0 years **Mode:** Full Production ER2, research only

Executive conclusion

ICE earns a **PASS**, not because the franchise is poor, but because the required entry economics fail. Exchanges is an exceptional regulated network with benchmark liquidity, clearing infrastructure, authoritative data and high switching costs. Fixed Income and Data Services adds recurring workflow economics. Mortgage Technology has meaningful installed-base stickiness but still needs to prove that the Black Knight capital base can earn acceptable statutory returns. Management's record is credible, yet the founder-led succession question, acquisition-inclusive ROIIC, and the announced MarketAxess leverage/integration path remain unresolved.

The controlling organic/no-close model reaches 2031 statutory EPS of USD 9.8136 in base. At the mandatory 15x entry gate, that supports USD 147.20 per share, 5.18% below the sealed USD 155.24 price. Separately justified P/E return scenarios produce gross USD bear/base/bull IRRs of -5.12%, 6.01% and 14.94%. Probability-weighted terminal wealth produces a 5.41% gross USD CAGR. After the conservative SGD overlay, base and probability-weighted returns fall to 4.50% and 3.90%. Those results do not establish an improvement over cash or an incumbent on a risk-adjusted basis, and this research worker has no authority to rank, size or trade the security.

Verdict: PASS

Scorecard:

Gate	Result	Notes
Management	YELLOW	Strong stewardship; acquisition ROIIC, succession and MarketAxess remain unresolved
Moat	PASS	Benchmark liquidity and workflows pass the 2046 durability test
P/E <= 15 on confident EPS at TTM + 5 calendar years	FAIL	Base value USD 147.20; cushion -5.18%
Compounder Score	Audited 52 / 100	Reject diagnostic; incomplete all-in ROIIC and hard vetoes
Business Quality Score	Audited 51 / 80	Strong core, but not proven dream-business economics across acquisitions
20% Return UW Score	Audited 1 / 20	Current price cannot support the 20% hurdle

One-line reason to pass: ICE owns durable market infrastructure, but current-price return underwriting, acquisition-inclusive returns and the valuation gate do not clear.

Security return underwriting

Measure	Result	Notes
Primary valuation method	P/E	One audited method controls all scenarios, weighting, reverse return and net-SGD
Gross USD bear / base / bull IRR	-5.12% / 6.01% / 14.94%	Five-year annualized shareholder returns
Probability-weighted gross USD IRR	5.41%	CAGR of expected terminal wealth using 30% / 50% / 20% weights
Return bridge	USD 155.24 to USD 119.39 / 207.88 / 311.42	EPS x exit P/E plus distributions; no net-debt double count

The P/E method is appropriate because statutory diluted EPS is fully reconciled and the listed-unit bridge is 1:1. Bear/base/bull terminal EPS of USD 6.398456 / 9.813615 / 13.020555 is valued at 17x / 20x / 23x. Terminal diluted shares are 545.179461m / 535.627972m / 529.411555m, producing terminal equity values of USD 59.301bn / 105.129bn / 158.544bn

and equity value per share of USD 108.773754 / 196.272298 / 299.472764. Cumulative distributions are USD 10.616242 / 11.603826 / 11.950637 per share.

Current gross debt is USD 19.846bn and cash is USD 1.067bn, so current net debt excluding leases and short-term investments is USD 18.779bn. Short-term investments are USD 0.886bn and lease liabilities are USD 0.681bn. These balances affect earnings capacity and the selected P/E, but no current or terminal debt adjustment is applied after EPS x P/E. That avoids double counting.

Bear-case operating and return bridge

Bear case	Start 2026-06-30	Horizon 2031-06-30	CAGR / change	Justification
Revenue	USD 10.558bn	USD 11.222bn	1.23%	Exchange activity normalizes; recurring FIDS cushions weakness
Operating margin	51.78%	49.47%	-2.32 pp	Lower absorption while Mortgage stays low-margin
Operating earnings	USD 5.467bn	USD 5.551bn	0.31%	Issuer-disclosed statutory Operating income
Diluted share count	571.00m	545.18m	-0.92%	Reduced buybacks partly offset SBC
EPS	USD 7.0718	USD 6.3985	-1.98%	Statutory diluted EPS
Valuation	21.95x P/E	17.00x P/E	-4.95x	Slower growth and capital/regulatory risks
Share value	USD 155.24	USD 108.77	-6.87%	EPS x 17x; no net-debt adjustment
Annual dividend	USD 2.00	USD 2.21	2.00%	Progressive policy grows slowly
Dividend yield	1.29%	2.03%	0.74 pp	Annual dividend divided by endpoint share value
Five-year dividends	-	USD 10.62	cumulative	Five modeled annual distributions
Total ending value	USD 155.24	USD 119.39	-5.12% gross USD IRR	Terminal share value plus distributions

Base-case operating and return bridge

Base case	Start 2026-06-30	Horizon 2031-06-30	CAGR / change	Justification
Revenue	USD 10.558bn	USD 13.587bn	5.17%	Exchange recurring growth, organic FIDS and Mortgage recovery
Operating margin	51.78%	54.74%	2.96 pp	FIDS mix and Mortgage integration
Operating earnings	USD 5.467bn	USD 7.437bn	6.35%	Issuer-disclosed statutory Operating income
Diluted share count	571.00m	535.63m	-1.27%	Buybacks net of modeled SBC
EPS	USD 7.0718	USD 9.8136	6.77%	Reconciled statutory diluted EPS
Valuation	21.95x P/E	20.00x P/E	-1.95x	Quality persists, but maturity caps the multiple
Share value	USD 155.24	USD 196.27	4.80%	EPS x 20x; no net-debt adjustment
Annual dividend	USD 2.00	USD 2.55	5.00%	Progressive dividend grows with cash earnings
Dividend yield	1.29%	1.30%	0.01 pp	Annual dividend divided by endpoint share value
Five-year dividends	-	USD 11.60	cumulative	Five modeled annual distributions
Total ending value	USD 155.24	USD 207.88	6.01% gross USD IRR	Terminal share value plus distributions

Bull-case operating and return bridge

Bull case	Start 2026-06-30	Horizon 2031-06-30	CAGR / change	Justification
Revenue	USD 10.558bn	USD 15.645bn	8.18%	Benchmark adoption, recurring FIDS and Mortgage wins
Operating margin	51.78%	58.40%	6.62 pp	Fixed-cost absorption and Mortgage at 22% margin
Operating earnings	USD 5.467bn	USD 9.136bn	10.82%	Issuer-disclosed statutory Operating income
Diluted share count	571.00m	529.41m	-1.50%	Strong cash generation funds buybacks above SBC
EPS	USD 7.0718	USD 13.0206	12.98%	Reconciled statutory diluted EPS
Valuation	21.95x P/E	23.00x P/E	1.05x	Durable growth earns a modest premium
Share value	USD 155.24	USD 299.47	14.04%	EPS x 23x; no net-debt adjustment
Annual dividend	USD 2.00	USD 2.68	6.00%	Strong cash earnings support faster growth
Dividend yield	1.29%	0.89%	-0.40 pp	Annual dividend divided by endpoint share value
Five-year dividends	-	USD 11.95	cumulative	Five modeled annual distributions
Total ending value	USD 155.24	USD 311.42	14.94% gross USD IRR	Terminal share value plus distributions

CIO actionability

Measure	Result	Notes
Status	PASS	Base net-SGD return is below 8%; this is separate from ER2 underwriting
Bear / Base / Bull net-SGD IRR	-6.66% / 4.50% / 13.41%	Same P/E bridge after FX, costs and withholding
Probability-weighted net-SGD IRR	3.90%	CAGR of expected SGD terminal wealth; 30% / 50% / 20% weights
10% mandate hurdle	FAIL	Base and weighted cases both fail
15% stretch hurdle	FAIL	Even the bull net-SGD case is below 15%
Downside and portfolio fit	UNAVAILABLE	Downside fails; sanctioned current portfolio-fit context was not bound
Proposed sizing ceiling	none	Research has no sizing authority; owner approval remains mandatory

The overlay starts from USD/SGD 1.2804 on 2026-08-13, assumes 5% USD depreciation to 1.21638, applies 0.20% entry and exit costs, and applies 30% U.S. withholding only to distributions. It uses the same P/E terminal equity values as the gross bridge. Applying terminal FX to interim distributions is conservative under the depreciation assumption. No investor-specific wrapper or broker benefit is assumed.

Trade execution authorized: NO

What the evidence says

ICE's best economics are concentrated in Exchanges, which generated 98.9% of TTM segment operating income together with FIDS. The moat gate therefore passes, but the quality is not uniform. Mortgage generated USD 2.156bn of TTM revenue and only USD 62m of statutory operating income. The reviewed base case limits Mortgage's 2031 margin to 14%, down from the original worker's 17%, because no disclosed amortization or cash-return bridge supports a more aggressive recovery.

MarketAxess is strategically coherent but not part of the controlling forecast. SEC-derived TTM MarketAxess revenue and operating income are USD 870.025m and USD 352.390m. A separately governed 65%-close sensitivity raises expected gross IRR only from 5.41% to 5.89%. Purchase-price allocation, acquired-intangible amortization and exact financing remain unavailable, so the deal cannot rescue the current-price conclusion.

The audited score was reduced from 57/100 to 52/100 because comparable organic and acquisition-inclusive ROIIC evidence is incomplete across the Black Knight perimeter change. The score is diagnostic, not an ER2 gate, but it reinforces the economic concern: the core franchise is better than the all-in capital-allocation record can presently prove.

Red-team findings and monitoring

The most vulnerable valuation input is the 20x base exit P/E. At 17x, base terminal wealth falls to about USD 178.44 and gross IRR to 2.82%. The most vulnerable operating input is Mortgage's 14% statutory margin, which still requires roughly 1,110 basis points of improvement from the TTM anchor. Exchange normalization is the broadest ordinary EPS risk: a 200-basis-point miss to the base Exchange CAGR lowers base gross IRR to about 4.46%.

Monitor these numerical tests:

- **Exchange durability:** force thesis review if Exchanges recurring-revenue growth is below 4% for four consecutive quarters by Q4 2027.
- **Mortgage recovery:** retain PASS if Mortgage statutory operating margin remains below 8% by FY2028 or if recurring/transaction mix improvement does not translate into cash returns.
- **MarketAxess discipline:** treat the deal thesis as broken if combined leverage remains above 3.0x after the stated 18-24 month deleveraging window, or if disclosed PPA and financing reduce the expected acquisition contribution below the reviewed sensitivity.
- **Valuation:** USD 147.20 or below would make the base 15x gate non-negative, but with Management still YELLOW the ER2 outcome would improve only to WATCH. BUY would additionally require Management PASS and preserved return underwriting. This is a research trigger, not an order.

Final judgment

ICE is a durable operator, but the security does not earn a current-price exception. Management is YELLOW, moat is PASS, and the P/E-15 gate fails. Base and probability-weighted returns are below both the gross objective and the net-SGD mandate. The appropriate research conclusion is PASS, no sizing proposal, and no trade authority.

Governed provenance

- Quote packet SHA-256: `9ab8f732eef9a19de9ac6970dced3513ca2e6dabb89a44597159c4add3bd0c9d`
- Statutory bridge SHA-256: `f638ae8b4500da99eb70cc7dfc669e16eb3a77ba3f263f2c026759422c9c7157`
- Final reviewed data package SHA-256: `5707bc567914adc2fd452b2f31bb49a65fd1abda71ed5d625023e6406a650504`
- Synthesis SHA-256: `7417cdace0b1e47ee4b335754b38e1672fbc858c3ec5a4ce99ce8b680ef31535`
- Scoring audit SHA-256: `bd05ebd1244e298398483205886718864b43ceeb2ecc0e222459dd9673e0650b`
- Red-team SHA-256: `30f42bca7b4e8ecf9eca5394106bdb050e89a100d9be245937669656a24b8584`
- Net-SGD overlay SHA-256: `badc9bcc17a1c1f65a6e741f0a3581b3acfbf5d36d634a7406add2040d742a4d`

This report authorizes no ranking, sizing, message, order, broker action, portfolio mutation, BUY queue, or trade execution.

Appendix A - Company Primer

Intercontinental Exchange — Company Primer

Report ID: ICE-ER2-20260814T120350+0800 **Information cutoff:** 14 August 2026 SGT **Latest reported period:** Q2 2026, quarter ended 30 June 2026 **Exact trailing window:** Q3 2025 + Q4 2025 + Q1 2026 + Q2 2026 **Exact diligence horizon:** five years ending 30 June 2031

Executive orientation

Intercontinental Exchange, Inc. is best understood not as a single exchange but as a collection of regulated market networks and mission-critical workflow systems. Its core activities sit at points where customers need an accepted price, a trusted counterparty, a record that can survive regulatory scrutiny, or a system of record that many parties must use together. ICE operates three reportable segments: Exchanges; Fixed Income and Data Services, or FIDS; and Mortgage Technology. The first combines futures, cash equities, equity options, listings, clearing, and exchange-adjacent data/connectivity. The second combines bond and credit execution, credit-default-swap clearing, evaluated pricing, reference data, indices, analytics, and financial-network connectivity. The third digitizes the U.S. residential-mortgage lifecycle from application through closing, registration, servicing, and the secondary market.[S1][S2]

This architecture produces a useful but imperfect blend. Transaction revenue benefits when customers have more risk to transfer or more securities to trade; subscription, listing, connectivity, data, and software revenue is more contractual and recurring. Clearing and benchmark products can deepen as participation and open interest grow. Mortgage software can become embedded in customer operations, but mortgage transaction revenue remains exposed to origination, closing, default, and servicing activity. The quantitative foundation shows that the Exchanges segment is presently the profit engine, FIDS is a solid-margin recurring-data franchise, and Mortgage Technology has only recently crossed into positive statutory operating income after the 2023 Black Knight acquisition.[QF]

The central diligence question is therefore not simply whether ICE owns attractive assets. It is whether it can preserve benchmark liquidity and data differentiation, improve the economics of the mortgage network, and integrate MarketAxess without allowing acquisition leverage, regulatory constraints, or AI-enabled data substitution to erode the quality of consolidated returns. The MarketAxess transaction would add the institutional trading network that ICE says is missing from its fixed-income workflow, but the proposed all-debt financing also raises execution and balance-sheet stakes.[S3]

1. Business overview and customer workflows

ICE sells infrastructure to institutions rather than a consumer product. Customers include banks, brokers, trading firms, asset managers, commodity producers and consumers, corporations, governments, issuers, mortgage lenders and servicers, title and settlement agents, market-data distributors, and software users. Buying methods vary by product. Trading and clearing access generally flows through members, brokers, or direct market connectivity and is charged by activity, contract, or service. Data is commonly sold under subscriptions billed monthly, quarterly, or annually in advance. Mortgage origination and servicing systems are sold as SaaS and contractual workflow products, often with additional transaction- or success-based fees. Enterprise sales, integrations, certifications, and regulatory requirements make adoption more involved than a self-serve software purchase.[S1][S4]

Exchanges workflow

A commercial hedger, investment manager, or trading firm first selects a futures, options, equity, or other contract whose terms and liquidity fit its risk. The order reaches an ICE venue through a member or connected trading system. Once matched, an ICE clearing house becomes the central counterparty to the buyer and seller, collects margin, and manages default resources. ICE earns transaction and clearing fees and can also earn interest on certain cash margin balances. Customers and vendors then consume order-book, trade, historical-price, and reference data; low-latency connectivity links participants to venues and clearing services. Corporate and ETF issuers separately pay listing fees to access NYSE markets and their associated brand and investor ecosystem.[S1]

The workflow is economically reinforcing. More reliable price discovery and liquidity can attract users; more users can improve execution quality; deeper activity generates proprietary data; data, connectivity, and clearing embed the venue further into customer systems. Yet the flywheel is contract-specific rather than universal. Liquidity can move to a competing venue, economically similar instruments can arise elsewhere, or customers can internalize flow. ICE itself describes intense

competition in equities, options, listings, data, and exchange technology.[S5]

Fixed-income and data workflow

The FIDS workflow begins before a trade. Customers use ICE pricing, reference data, indices, liquidity indicators, portfolio analytics, and compliance tools to identify a security and assess value. They may connect through ICE Global Network, data feeds, APIs, or desktop tools. ICE Bonds then supports click-to-trade, request-for-quote, and auction protocols; ICE Clear Credit clears eligible CDS. Post-trade, the same data and analytical stack can support valuation, index benchmarking, best execution, regulatory reporting, and portfolio operations. ICE reported that its evaluated-pricing coverage spans more than three million fixed-income securities across roughly 150 countries and 80 currencies; its connectivity network reaches more than 150 trading venues and 750 data sources.[S1]

This segment is more subscription-oriented than the label “fixed income” might imply. In FY2025, ICE classified $1.956 billion of FIDS revenue as recurring and $463 million as transaction revenue. Annual subscription value was $1.990 billion at year-end 2025, up 8.3% year over year, and represented nearly all segment data-services revenue. Ten percent of FIDS revenue was billed in sterling or euros, creating some translation exposure but leaving the franchise predominantly U.S.-dollar based.[S1]

Mortgage workflow

ICE Mortgage Technology connects a chain that historically passes documents and data among borrowers, originators, underwriters, service providers, title agents, county recorders, investors, and loan servicers. Origination technology acts as the system of record, gathers and verifies loan information, applies business rules, and connects lenders to third-party services and secondary-market participants. Closing products coordinate lenders, title and settlement agents, and recorders; MERS tracks servicing rights and beneficial ownership interests. Servicing software manages loan boarding, payments, escrow, investor reporting, compliance, borrower interactions, default, bankruptcy, foreclosure, and loss mitigation.[S1]

The pricing model mixes stability with cycle sensitivity. Origination SaaS and servicing software are largely recurring, while network activity, closing solutions, and default workflows are substantially transaction-based. ICE says closing revenue varies with loan-closing volume and default-servicing revenue with foreclosures. In FY2025, Mortgage Technology produced $1.574 billion of recurring and $527 million of transaction revenue. Contractual price increases and new implementations can offset some cyclicality, but client attrition and weak mortgage volumes remain real counterforces.[S1]

2. Segment and revenue architecture

The table below uses the reconciled quantitative foundation. “Net revenue” means gross revenue less transaction-based expenses, which are concentrated in Exchanges and mainly comprise liquidity payments, routing and clearing costs, and regulatory assessments. Segment operating income is the issuer’s statutory measure and sums directly to consolidated operating income; there is no unallocated corporate-profit plug.[QF]

Segment	FY2025 net revenue	FY2025 share	FY2025 operating margin	TTM net revenue	TTM operating margin
Exchanges	$5,411m	55%	73.6%	$5,874m	74.7%
Fixed Income and Data Services	$2,419m	24%	38.6%	$2,528m	40.2%
Mortgage Technology	$2,101m	21%	0.7%	$2,156m	2.9%
Consolidated	$9,931m	100%	49.6%	$10,558m	51.8%

Exchanges. This segment contains seven disclosed revenue families: energy futures and options; agricultural and metals futures and options; financial futures and options; cash equities and equity options; OTC and other; data and connectivity; and listings. On the exact TTM basis, energy futures and options contributed $2.362 billion of gross revenue, cash equities and equity options $3.356 billion, and the two major recurring lines—data/connectivity and listings—$1.094 billion and $507 million. The gross product total is reduced by $2.868 billion of consolidated transaction-based expenses to reach net revenue.[QF] ICE operates 13 regulated exchanges and six clearing houses across the U.S., U.K., EU, Canada, Asia-Pacific, and Middle East. Its flagship energy complex includes Brent and related oil products as well as natural gas, LNG, power, and environmental markets; the NYSE franchise contributes cash equities, options, issuer listings, and market data.[S1]

Fixed Income and Data Services. FIDS is a data-heavy workflow segment, not merely a bond venue. Exact TTM revenue consisted of $124 million from fixed-income execution, $357 million from CDS clearing, $1.284 billion from fixed-income data and analytics, and $763 million from data and network technology.[QF] The last two lines are largely recurring and use a

common sales force, making cross-selling and product bundling plausible. The smaller execution line demonstrates why MarketAxess could materially alter the segment's architecture: ICE has broad data, analytics, indices, retail/wealth bond protocols, and CDS clearing, but limited institutional cash-bond execution relative to the proposed target.[S1][S3]

Mortgage Technology. Exact TTM revenue comprised $765 million of origination technology, $240 million of closing solutions, $878 million of servicing software, and $273 million of data and analytics.[QF] The segment's $62 million of TTM statutory operating income on $2.156 billion of revenue remains modest because depreciation and amortization is large following acquisitions. In FY2025 alone, Mortgage Technology recorded $961 million of depreciation and amortization and $66 million of acquisition and integration costs. Its operating result improved from a $276 million loss in FY2023 and a $170 million loss in FY2024 to a $14 million profit in FY2025, then to a 2.9% TTM margin.[S1][QF] The improvement is encouraging but does not yet establish mature economics.

Geographically, ICE reports that most identifiable assets are in the U.S. and U.K., while its exchanges and data networks operate globally. Mortgage Technology is specifically tied to U.S. residential housing. FIDS has some sterling/euro billing and global instrument coverage. Geography is therefore less useful than asset-class and workflow exposure for understanding revenue, except for mortgage's U.S. concentration and the regulatory jurisdictions governing venues and clearing houses.[S1]

3. Economic engine and unit-economics logic

ICE's cost structure is dominated by technology, people, regulatory and risk infrastructure, depreciation and amortization, and acquisition-related costs. Many costs are shared across segments; the company directly allocates expenses where practicable and otherwise uses a revenue-based allocation. Once a venue, data set, or software platform is built and regulated, incremental revenue can carry attractive contribution economics, but this should not be confused with zero marginal cost. Capacity, resiliency, cybersecurity, market surveillance, clearing resources, data licenses, and continuous product development are essential rather than optional.[S2][S6]

Exchange economics are strongest because a benchmark market can combine transaction fees, clearing, market data, connectivity, and listing revenue on a shared technology and regulatory base. Liquidity creates a network effect: participants prefer the venue where counterparties and open interest already reside. Clearing adds operational and capital barriers, while benchmark status and contract specifications make substitution harder. At the same time, revenues vary with volumes, product mix, fee rates, and liquidity incentives. Cash-equity gross revenue is particularly misleading without transaction-based expenses; net revenue is the correct economic lens. Net interest on clearing margin adds sensitivity to balances and rates. The TTM segment margin of 74.7% demonstrates operating leverage, but a later worker must separate structural growth from periods of unusually elevated volatility, open interest, or interest income.[QF][S1]

FIDS economics mix high-gross-margin subscriptions with lower-scale execution and clearing. Evaluated prices, reference data, indices, and analytics can be sold repeatedly, and delivery obligations are commonly recognized ratably over subscription periods. The same instrument master and pricing observations can support valuation, index construction, compliance, and trading workflows. Scale matters because sourcing, cleaning, normalizing, and governing fixed-income data is expensive, while additional distribution can be efficient. However, some inputs are licensed from third parties, and competitors include large data vendors, financial consortia, in-house bank capabilities, alternative trading venues, and informal sources. The TTM 40.2% segment margin is healthy but well below Exchanges, reflecting its different product and cost mix.[S1][S6][QF]

Mortgage Technology economics depend on implementation depth and transaction throughput. A system of record or servicing platform may be difficult to replace once configured around policies, integrations, compliance, and employee workflows; subscription revenue can persist even in a weak origination market. Yet customers can consolidate, build internally, negotiate price, or leave, and transaction lines fall when loans, closings, or defaults decline. Large acquired-intangible amortization currently obscures cash contribution but is still a real indicator of acquisition price paid. The segment's positive statutory result does not by itself prove high returns on Black Knight or earlier mortgage acquisitions. Diligence must reconcile adjusted margins, statutory margins, cash costs, capitalized software, churn, implementations, and purchase-accounting amortization.[S1][QF]

At the consolidated level, exact TTM operating cash flow was $5.514 billion. After $436 million of property capex and $437 million of capitalized software, statutory free cash flow was $4.641 billion, or 114.9% of attributable net income. This is strong cash conversion. However, statutory ROIC was approximately 8.7%, or roughly 10.4% on the foundation's adjusted operating-income treatment, because goodwill and intangibles average about $45.8 billion and comprise about 95% of invested capital. ICE is operationally asset-light but acquisition-capital heavy.[QF]

4. Industry structure and moat hypotheses

Moat hypothesis	Why it may be durable	What could falsify it
Benchmark liquidity	Established contracts concentrate counterparties, open interest, hedging conventions, and related data	Sustained share loss, migration to substitutes, weaker open-interest growth, or fee concessions
Regulated clearing	Licenses, default management, member connectivity, capital, and trust create high barriers	Clearing loss, regulatory restriction, member-capacity pressure, or major service failure
Proprietary data	Venue and workflow activity generates hard-to-replicate observations used in pricing and analytics	Commoditization, loss of input rights, in-house AI pricing, or customer pushback on fees
Workflow embedding	Data, APIs, software, compliance, and system-of-record roles raise switching costs	Churn, slow implementations, internal builds, vendor consolidation, or weak cross-sell
Network breadth	ICE links execution, clearing, data, indices, connectivity, and mortgage participants	Conglomerate complexity without measurable customer or cost synergies

In **listed derivatives and cash securities**, regulation and technology matter, but liquidity is usually the decisive economic asset. A contract that becomes the reference for hedging attracts commercial and financial users; associated spreads and options can expand the ecosystem. Clearing concentrates risk management and requires regulatory approval, member confidence, and operational resilience. Yet competition remains intense: other exchanges can launch alternatives, banks can internalize flow, and equities trade across exchanges, dark pools, market makers, and alternative systems. Listings compete on brand, issuer services, and market quality, principally against Nasdaq and other venues.[S5]

In **fixed income**, the industry remains more fragmented and bilateral than equities. Instruments are numerous and heterogeneous; many trade episodically, so price discovery depends on data, dealer networks, protocol choice, and analytics. ICE's strength is broad pricing/reference data and index infrastructure. MarketAxess's strength is an institutional electronic-trading network and proprietary trade data. Combining them could close a workflow gap, but "one ecosystem" is a hypothesis until customers adopt integrated products and liquidity improves. Institutional clients can multi-home across venues, dealers protect their economics, and regulators may scrutinize the combination of execution and data.[S3][S5]

In **mortgage technology**, regulation, document complexity, fragmented county recording, secondary-market standards, and numerous handoffs create demand for a common workflow. Embedding can create switching costs, especially in servicing and the loan-origination system of record. But mortgage customers are sophisticated institutions with bargaining power; some maintain proprietary systems, and third-party digital providers compete on individual modules. Mortgage volumes and rates affect transaction revenue, while consolidation among lenders or servicers can change customer counts and pricing leverage.[S1][S5]

The best current moat evidence is therefore indirect: dominant segment margins in Exchanges, recurring revenue and ASV growth in data, large workflow coverage, and improving mortgage results. The weakest evidence is customer retention, net revenue retention, contract duration by product, and quantified cross-sell. ICE does not separately disclose a consolidated retention rate or fee-rate bridge. Later workers should avoid turning product breadth into an assumed moat without measuring share, price, churn, and customer adoption.

5. Pricing, volume, and macro exposure

ICE's revenue responds to several distinct variables:

- **Futures and options:** contract volume, open interest, rate per contract, product mix, block versus screen activity, and clearing economics. Volatility can help, but structural hedging demand and new benchmark adoption matter more over five years.
- **Cash equities and equity options:** share/contract volume, market share, pricing tiers, liquidity payments, routing fees, and regulatory assessments. Gross revenue can rise without equivalent net benefit.
- **Listings, data, and connectivity:** issuer counts, renewals, number and type of data users, contractual pricing, new products, and regulatory limits on fees. These are more recurring but not immune to competition.
- **CDS and fixed-income execution:** trading and clearing activity, protocol penetration, credit-market conditions, dealer and institutional participation, and interest earned on margin balances.
- **Fixed-income data and indices:** annual subscription value, price realization, new content, assets and products linked to indices, customer retention, and currency translation.

- **Mortgage:** lender and servicer subscriptions, implementation activity, contractual pricing, origination and closing volumes, servicing portfolios, foreclosures/defaults, and client attrition.

The latest quarter illustrates the portfolio effect. Q2 2026 net revenue was $2.666 billion, up 5% year over year; recurring revenue was $1.353 billion, up 8%, while transaction net revenue was $1.313 billion, up 2%. All three segments grew. These figures support, but do not prove, the “all-weather” characterization because a single quarter cannot establish cycle neutrality.[QF][S2] Later modeling should build driver bridges by product rather than applying one consolidated growth rate.

6. Management and capital-allocation context

Jeff Sprecher founded ICE and has been CEO since inception and board chair since 2002. Warren Gardiner is CFO; Benjamin Jackson is President of ICE; Lynn Martin leads NYSE Group; and Christopher Edmonds leads FIDS. The combined Chair/CEO structure offers continuity and deep customer/regulatory knowledge but concentrates leadership. ICE’s 2026 proxy included a shareholder proposal seeking an independent chair, which the board opposed. This is a governance diligence item rather than an automatic disqualifier.[S7]

ICE’s capital-allocation pattern combines internal technology investment, acquisitions, debt financing, dividends, and repurchases. The exact TTM cash-flow record shows $2.000 billion of repurchases and $1.141 billion of dividends, alongside $873 million of property capex and capitalized software. At 30 June 2026, debt excluding leases was $19.846 billion, cash was $1.067 billion, and net debt was $18.779 billion.[QF] The board raised repurchase authorization to $4.0 billion effective 1 July 2026; through H1, ICE had returned $1.8 billion to shareholders.[S2]

The tension is MarketAxess. ICE proposes to pay $167 per MarketAxess share in cash, a 33% premium to the unaffected close, for about $6.0 billion of equity value and $5.7 billion of enterprise value. It plans 100% debt financing through bonds, a term loan, and commercial paper, while increasing baseline repurchases from $350 million to $400 million per quarter. Management expects opening gross leverage of 3.4x and targets 3.0x or less within 18–24 months after closing. That posture signals confidence in cash flow but reduces balance-sheet flexibility if integration, markets, or rates disappoint.[S3]

7. MarketAxess acquisition implications

Strategically, the transaction is coherent. ICE already owns pricing, reference data, indices, analytics, connectivity, CDS clearing, and retail/wealth bond execution. MarketAxess adds a network of roughly 2,100 institutional investors and broker-dealers in more than 90 countries, multi-protocol execution, Open Trading, and proprietary institutional transaction data. The proposed product chain runs from pre-trade pricing and liquidity analysis through execution and post-trade benchmarking, compliance, and settlement support.[S3]

Financially, management targets $100 million of annual run-rate expense synergies within three years, adjusted-EPS accretion in the first full year, and a purchase multiple of about 10.6x MarketAxess LTM EBITDA after full run-rate synergies. Those are management estimates, not verified outcomes. The announced valuation excludes the strategic value of revenue synergies from its headline economics, while the use of adjusted EPS excludes acquisition-related amortization, transaction/integration costs, and certain investment effects. Later workers should rebuild purchase-accounting, financing cost, amortization, cost saves, and deleveraging on a statutory basis.[S3]

The key integration risks are customer multi-homing, dealer reaction, data-use permissions, platform rationalization, employee retention, regulatory conditions, and whether ICE can unify workflows without disrupting MarketAxess’s network neutrality. Closing is expected in H1 2027 and requires MarketAxess shareholder approval, regulatory clearances, and customary conditions. Until those conditions are met, the correct base architecture is ICE standalone plus a clearly separated pending-transaction case.[S3]

8. Key controversies and risk questions

Clearing and operational concentration. A central counterparty reduces bilateral risk but concentrates it. Margin models, default resources, member failure, cyber events, capacity shortfalls, or extended outages can create losses and reputational damage. Bank-capital rules can also make client clearing more expensive and reduce member capacity or volumes.[S1][S6]

Market-data pricing and access. Exchange and evaluated-pricing data can be valuable and proprietary, but customers and regulators may challenge fees, licensing, exclusivity, or access. ICE also depends on third-party data and content; loss of a license or exclusive input could degrade products or raise cost. This complicates any simple claim that all data is owned and defensible.[S6]

Mortgage acquisition returns. Black Knight expanded the mortgage network, but statutory profitability remains low and acquisition amortization is substantial. The relevant question is not whether adjusted EBITDA improved; it is whether realized cash flows and durable client economics justify the acquisition capital and continuing software investment.[QF][S1]

Regulation and privacy. ICE operates exchanges, clearing houses, benchmarks, data products, and mortgage systems across multiple regulatory regimes. Mortgage platforms handle sensitive borrower and client information. AI and machine-learning rules, data localization, privacy, benchmark regulation, market-structure reform, and capital requirements can change product design or customer economics.[S1][S6]

Founder governance and succession. Sprecher's long tenure is inseparable from ICE's record, yet combined Chair/CEO authority raises oversight and succession questions. The board's opposition to an independent-chair proposal makes board challenge, lead-independent-director effectiveness, and succession planning explicit diligence topics.[S7]

Acquisition and leverage discipline. ICE has repeatedly expanded by acquisition. Goodwill and intangibles dominate invested capital, and the pending MarketAxess transaction adds debt while repurchases continue. The bear case is not necessarily a liquidity crisis; it is that serial acquisition premiums and adjusted reporting can mask mediocre incremental returns.[QF][S3]

9. AI disruption and opportunity

AI is both a product-enabler and a threat to some data economics. ICE says it is using AI to automate customer workflows and deliver analytical insight, including continued investment in mortgage automation. Existing mortgage offerings already use automated document recognition and data extraction. In fixed income, better entity resolution, document parsing, anomaly detection, evaluated-pricing assistance, liquidity prediction, and natural-language interfaces could make ICE data easier to consume. Within ICE, AI may improve surveillance, service, software development, and operational exception handling, although those benefits are not quantified in the verified foundation.[S1]

The disruption case is clearest in evaluated pricing and basic analytics. ICE explicitly warns that AI could commoditize some pricing products or let clients create in-house pricing, reducing demand and pressuring fees. New entrants can build cheaper interfaces atop public, customer-owned, or licensed data. Generative systems also raise accuracy, bias, explainability, intellectual-property, privacy, and cybersecurity risks—particularly dangerous in regulated valuation, trading, clearing, and mortgage decisions.[S6]

The moat response depends on the layer. AI can lower the cost of analysis, but it does not automatically recreate proprietary order flow, cleared positions, contractual reference data, regulated licenses, or a deeply integrated system of record. Conversely, proprietary data is not sufficient if customers cannot use it flexibly or regulators force broader access. Diligence should distinguish data that ICE uniquely creates from data it licenses, data customers can reproduce, and workflow rights that permit AI training or redistribution. No current source quantifies AI-related revenue, cost savings, or displacement; any forecast should therefore be explicit and scenario-based rather than embedded as an unexplained growth premium.[S6]

10. Explicit diligence map for later workers

Workstream	Questions to resolve	Evidence or test required
Exchange drivers	Which TTM gains came from share, volume, open interest, mix, rates, or fees?	Monthly statistics, contract-level ADV/OI, fee schedules, and net-revenue bridges
Benchmark durability	Are Brent, gas, environmental, agricultural, and financial franchises deepening?	Multi-year volume/OI share, new-client participation, related-contract growth
FIDS recurring quality	How much growth is price, seats, content, indices, or FX?	ASV bridge, retention/churn, renewal timing, product-level organic growth
Mortgage economics	Is low statutory profit temporary or structural?	Client counts, retention, implementations, transaction sensitivity, cash-cost bridge
MarketAxess	Does the deal earn its cost after financing and amortization?	Standalone model, purchase accounting, regulatory case, synergy milestones, adoption KPIs
Capital allocation	Are acquisitions and buybacks compounding per-share value?	Incremental ROIC, debt schedule, interest cost, deleveraging and repurchase scenarios
Regulation/operations	Where are tail risks concentrated?	Clearing waterfalls, stress tests, outages, cyber controls, fee and market-structure reviews
AI	Which datasets/workflows are enhanced versus substitutable?	Data-rights map, AI product revenue, in-house substitution interviews, error/governance metrics

Workstream	Questions to resolve	Evidence or test required
Governance	Is oversight and succession adequate?	Proxy, board independence/tenure, lead-director powers, succession disclosures

The financial model should retain the exact TTM anchor ending 30 June 2026 and forecast exactly five years to 30 June 2031. It should model the three reportable segments separately; maintain the gross-to-net bridge for Exchanges; distinguish recurring from transaction revenue; and hold MarketAxess in a separate pending-acquisition case until closing. Segment margins should be statutory first, with any adjusted view reconciled. The valuation worker should explicitly charge acquisition financing and avoid adding management's $100 million synergy target both to EBITDA and to a multiple already stated after synergies.[QF][S3]

The moat worker should seek falsifiable evidence rather than repeat management's network language. The management worker should compare promised Black Knight milestones with realized mortgage economics and establish a scorecard for MarketAxess. The risk worker should quantify clearing, cyber, data-rights, mortgage-cycle, and leverage sensitivities. The AI worker should map each product to proprietary inputs, customer switching costs, regulatory constraints, and possible substitution. The red-team worker should test a scenario in which exchange activity normalizes, data price realization slows, mortgage margins stall, and MarketAxess deleveraging takes longer—without assuming all stresses peak simultaneously.

Constrained conclusion

ICE owns a rare collection of benchmark markets, clearing infrastructure, proprietary and licensed data, financial connectivity, and mortgage systems. The verified economics show a high-margin Exchanges core, a recurring and improving FIDS franchise, strong consolidated cash conversion, and a Mortgage Technology segment that has moved from losses to slight profitability. They also show acquisition-heavy invested capital, material leverage, limited disclosed retention evidence, and a wide gap between Exchange and Mortgage returns.[QF]

MarketAxess fits ICE's strategic direction and could create a more complete fixed-income workflow, but it should be treated as a high-stakes integration and capital-allocation test rather than an automatic moat extension. AI can improve ICE's products and internal processes while simultaneously weakening commodity pricing and interface layers. The appropriate posture for later research is therefore evidence-seeking and conditional: benchmark depth, subscription retention, mortgage cash returns, regulatory resilience, and post-deal deleveraging must be demonstrated, not inferred from breadth alone.

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- **[S3]** Intercontinental Exchange, ["Intercontinental Exchange to Acquire MarketAxess, Creating a Premier Fixed Income Marketplace"](https://ir.theice.com/press/news-details/2026/Intercontinental-Exchange-to-Acquire-MarketAxess-Creating-a-Premier-Fixed-Income-Marketplace/default.aspx), 30 July 2026.
- **[S4]** Intercontinental Exchange, 2025 Form 10-K, Note 5, revenue-recognition discussion for subscription data, listings, risk-management services, and mortgage technology.
- **[S5]** Intercontinental Exchange, 2025 Form 10-K, Item 1 "Competitors" and Item 1A "Competition and Reputational Harm."
- **[S6]** Intercontinental Exchange, 2025 Form 10-K, Item 1A, technology, data-supplier, capacity, cybersecurity, privacy, and artificial-intelligence risk factors.

- **[S7]** Intercontinental Exchange, [2026 Definitive Proxy Statement](https://www.sec.gov/Archives/edgar/data/1571949/000119312526134700/ice-20260330.htm), filed 30 March 2026, including board leadership and the independent-chair shareholder proposal.

Appendix M - Management Assessment

Intercontinental Exchange, Inc. — Management Assessment

As of 14 August 2026 / ticker ICE / USD Management gate: YELLOW — investable stewardship history, but not yet cleared for the Gideon compounder gate.

ICE has one of the strongest founder-led operating histories in financial infrastructure. Jeffrey Sprecher built the company from a small electronic energy market into a global exchange, clearing, data and mortgage-workflow group, and the present leadership bench is deep, internally developed and demonstrably able to integrate complex regulated assets. The management question is nevertheless harder than "has ICE created value?" The Gideon test is whether this team can allocate the *next* dollar at durable returns above 20%, protect per-share value, and survive a founder transition. On that stricter standard, management is **YELLOW**. The historical NYSE transaction was excellent; Black Knight cost execution and deleveraging are ahead of plan; disclosure in earnings calls is generally direct. Against that, statutory ROIC was only 7.9% in FY2025 and 8.7% TTM, goodwill and intangibles dominate invested capital, compensation contains no ROIC or free-cash-flow measure, mortgage statutory profitability remains low, and the announced MarketAxess transaction will again increase leverage while buybacks continue. MarketAxess is an announced, unclosed transaction—not evidence of completed execution.

1. Who is running ICE

Jeffrey C. Sprecher, 71, has been CEO and a director since ICE's inception and Chair since November 2002. He acquired predecessor CPEX in 1997 and owns the strategic record: electronic energy trading, vertical integration into clearing, the 2013 NYSE Euronext acquisition, the buildout of fixed-income data, and the mortgage workflow strategy. Before CPEX he spent fourteen years at Western Power Group, including as president and with responsibility for major financings. ICE states that the CEO is responsible for strategic direction and operational and financial performance. Sprecher is therefore not merely the current custodian; he is the principal architect of virtually every load-bearing choice.[1]

A. Warren Gardiner has been CFO since May 2021. He joined ICE in 2017 as vice president of investor relations after covering exchanges and financial-information companies at Evercore and Barclays. His remit includes accounting, treasury, tax, audit, controls and investor relations. Gardiner owns the financing, deleveraging, repurchase and guidance record surrounding Black Knight and now the announced MarketAxess transaction. His answers across the eight reviewed calls were numerically specific and typically separated known costs from assumptions.

Leadership depth is real rather than nominal. Benjamin Jackson is ICE President and has been with ICE since 2011 after running SunGard's energy and commodities business. Lynn Martin leads NYSE Group and chairs FIDS; she previously led FIDS, ICE Data Services and clearing businesses. Christopher Edmonds has led FIDS since January 2024 and has been at ICE since 2010 across clearing, risk and development. Bob Hart leads ICE Mortgage Technology and has approximately ten years across ICE and Ellie Mae. Mayur Kapani, the CTO, oversees global development and technology diligence on acquisitions. Elizabeth King combines global clearing and regulatory leadership. This is a credible set of internal successors and domain specialists, not a founder surrounded by transient outside hires.[2]

The board has eleven nominees, nine of whom the 2026 proxy classifies as independent. Sprecher is the only management director. Thomas Noonan has served as lead independent director since 2022 and can call and chair non-management sessions, approve agendas and board materials, add agenda items, liaise with shareholders and lead CEO succession discussions. Those powers are meaningful. They do not fully neutralize the Chair/CEO concentration: the same person proposes strategy, leads management, chairs board debate and has held both offices for more than two decades. Lord Hill was classified non-independent because ICE Futures Europe paid him consulting fees through May 2025. The board opposed a 2026 shareholder proposal for an independent chair.[3]

2. Tenure, execution history and leadership bench

Sprecher has more than enough tenure to own the strategy. Three decisions define the record.

- **NYSE Euronext, closed in 2013:** ICE agreed to pay approximately $8.2 billion. Management initially highlighted merger synergies and, by early 2014, expected to exit that year with 70% of a $500 million run-rate target. The acquired franchise became the core of a segment producing $5.54 billion of FY2025 net revenue and $4.15 billion of statutory operating income, a 75% margin. The asset also provided listings, equity options, data, clearing relationships and the

OCC interest. This is the clearest evidence that Sprecher can buy a large, iconic, regulated asset, simplify it and create enduring value.[4]

- **Ellie Mae, closed in 2020:** ICE paid $11.4 billion, including $9.5 billion cash and approximately 18.4 million ICE shares. At announcement, management underwrote a 10% IRR, ROIC above WACC in year one and $50–65 million of year-three cost synergies. Ellie Mae established origination software as the center of the mortgage network, but the later need for Black Knight and continuing integration costs makes the ultimate per-dollar return difficult to isolate. Mortgage Technology generated $2.15 billion of FY2025 revenue but only $59 million of statutory operating income because acquisition amortization and integration costs remain substantial. The strategic logic is coherent; the statutory return evidence is not yet commensurate with an $11.4 billion purchase price.[5]

- **Black Knight, closed 5 September 2023:** the net purchase price was approximately $11.36 billion after required divestitures; ICE issued 10.9 million shares and took on substantial debt. The closing plan called for $200 million of expense synergies and $125 million of revenue synergies by year five, adjusted-EPS accretion in the second half of 2024, and resumption of repurchases after gross leverage fell below roughly 3.25x. By FY2025 ICE had reached approximately $230 million of annualized expense savings, raised the goal to $275 million by 2028, and reached its 3.0x leverage target ahead of schedule in Q2 2025. These are strong execution data. The counterweight is economic: mortgage margins are still weak on a statutory basis; ICE recorded a $160 million fair-value loss on the Optimal Blue divestiture note; customer minimums reset lower; and announced departures such as PennyMac will affect recurring growth later. Expense takeout and deleveraging are proven, but full ROI is not.[6]

The clearest failed or unresolved initiative is Bakkt. ICE's 2025 10-K says Bakkt continued to flag going-concern uncertainty, ICE's economic interest was diluted from 54% to 31% during 2025, its carrying value was only $9 million at year-end, and ICE recognized equity-method losses in 2023–2024. Management disclosed rather than hid the deterioration and reduced its exposure, but this was a strategically adjacent founder-led bet that did not mature into an ICE-quality network. It is evidence that "seeing around corners" can also produce low-return optionality.[7]

3. Capital allocation, per-share conduct and return implications

The reviewed data package (SHA-256 `5707bc567914adc2fd452b2f31bb49a65fd1abda71ed5d625023e6406a650504`) shows a consistent hierarchy: invest in technology, acquire scarce networks, deleverage, then resume dividends and repurchases. Capex including capitalized software rose from $452 million in FY2021 to $791 million in FY2025 and $873 million TTM. Dividends increased from $747 million to $1.105 billion over FY2021–FY2025. Buybacks were suspended in FY2023–FY2024 around Black Knight, then rose to $1.294 billion in FY2025 and $2.0 billion TTM. That sequence supports creditor discipline; it is not indiscriminate simultaneous spending.

The share record is mixed but understandable. Diluted shares moved from 565 million in FY2021 to 576 million in FY2024 after acquisition issuance, then fell to 575 million in FY2025 and 571 million TTM. Stock-based compensation was $257 million, $231 million, $238 million and $268 million in FY2023, FY2024, FY2025 and TTM. Relative to gross revenue, SBC declined from about 2.6% in FY2023 to 1.9% in FY2025 and roughly 2.0% TTM. This is disciplined versus many software businesses, but repurchase dollars must be judged net of SBC and acquisition shares.

The main problem is returns. FY2021–FY2025 statutory ROIC ranged from 6.8% to 8.0%; TTM ROIC was 8.7%, or approximately 10.4% using adjusted operating income. Goodwill plus intangibles averaged roughly 95% of invested capital. Those figures do not prove that every acquisition destroyed value—accounting goodwill penalizes an acquisitive network business—but they do show that scale, adjusted EPS accretion and synergy realization cannot substitute for ROIIC evidence. The next management scorecard must publish acquisition-specific cash returns, not just adjusted EPS.

ICE's dividend policy is progressive and well covered by cash flow. Buybacks appear partly price-aware: Sprecher has explicitly compared prospective M&A with buying ICE shares, and repurchases were paused during deleveraging. However, the announced plan to raise baseline repurchases from $350 million to $400 million per quarter while debt-financing MarketAxess weakens that price sensitivity. Returning cash is defensible; committing to a higher mechanical baseline before an unclosed integration and refinancing cycle reduces optionality.

4. Compensation and owner alignment

Alignment is strong in form and ownership, weaker in the choice of performance measures. The proxy reports that 90% of named-executive target pay is variable and 69% equity-based. For 2025, long-term incentives were 30% three-year relative-TSR PSUs, 40% year-three EBITDA PSUs and 30% time-vested RSUs. Annual bonuses were 30% net revenue and 70% adjusted operating income; M&A completed mid-year is excluded from quantitative targets. The 2025 bonus funded at 108%, with no discretionary uplift. The transition away from one-year EBITDA PSUs to three-year goals is positive.[3]

The weakness is conspicuous: there is no ROIC, ROIIC, free-cash-flow-per-share, leverage or statutory-EPS measure. EBITDA, adjusted operating income and relative TSR can reward scale and adjusted accretion even when a large acquisition dilutes statutory capital returns. The 2023 one-time acquisition PSUs were tied to Black Knight synergy targets; following shareholder criticism, ICE granted no similar one-time awards in 2024–2025. That response is constructive, but the original design aligned executives to cost savings rather than acquisition IRR.

Sprecher's economic alignment is genuine. As of 19 March 2026 he beneficially owned 3,481,234 shares, including 1,651,705 through CPEX and 81,570 held by his spouse, or less than 1% of the company but worth hundreds of millions of dollars. His ownership measured 318 times salary under ICE's policy; other named executives averaged ten times salary. The policy requires 10 times salary for the CEO and four times for other named executives. ICE excludes options and performance awards from the ownership calculation, though unvested time-based RSUs still count; this is good, not perfect. Hedging, shorting, derivatives, margin-account holding and pledging are prohibited. ICE maintains mandatory restatement clawbacks plus a broader misconduct/fraud policy. Change-in-control benefits require a double trigger and have no excise-tax gross-up.[3]

Sprecher's 2025 total compensation was $22.1 million, including $16.7 million in stock awards and $4.05 million cash incentive compensation. That is high in absolute terms and positioned at the 75th percentile of ICE's peer group, but the large personal shareholding makes short-term pay less important than the missing return metric.

5. Disclosure quality and candor

Eight calls were reviewed: Q3 2024 through Q2 2026. Overall disclosure quality is **GREEN**. Gardiner consistently gave expense ranges, recurring-revenue guidance and implementation timing rather than broad adjectives. In Q3 2024, he isolated $10–15 million of one-time Q4 expenses and gave a normalized run-rate bridge. In Q4 2024, he quantified Flagstar attrition at roughly half a point of mortgage growth and described remaining 2020–2021-vintage contract-minimum pressure. In Q1 2025, management quantified Rocket/Mr. Cooper at less than 3% of Mortgage Technology revenue and stated that contract terms delayed any impact beyond 2025. In Q3 2025, when PennyMac and weaker-than-expected mortgage revenue were raised, Gardiner acknowledged inactive-loan runoff and lower renewals, then quantified PennyMac at about half a point of recurring growth beginning in 2028. These are direct answers to adverse questions, not narrative pivots.

Guidance discipline also appears credible. Initial guidance was generally conservative and updated when evidence changed: the FY2026 Exchanges recurring-growth expectation moved from mid-single digits to high single digits after Q2 strength, while FIDS moved to 7–8%. Mortgage guidance preserved explicit customer-rolloff and contract-minimum headwinds rather than embedding a housing recovery. Across the eight calls, "headwinds" was used, but usually with a numerical bridge or date. I do not classify any of the eight quarters as materially hedged on a load-bearing question.

There are limits. ICE does not disclose consolidated client retention, product-level renewal rates, a complete price/volume bridge or acquisition-specific cash ROIC. Adjusted EPS is the default acquisition headline even though it excludes amortization and transaction/integration costs. On MarketAxess, Gardiner disclosed that deal accretion used consensus EPS as the base, that mid-single-digit revenue growth was underwritten, and that acceleration would take time; that candor is useful, but consensus-based adjusted accretion is not a return proof.

6. Strategic coherence and acquisition discipline

ICE's stated purpose is remarkably stable: build digital networks that make opaque, manual financial workflows more transparent and efficient. Investment follows the statement. Exchange and clearing assets created proprietary transaction data; Interactive Data and other assets extended analytics; Ellie Mae and Black Knight joined origination and servicing workflows; capex funds software, networks and data centers. This is not a sequence of unrelated pivots.

The announced MarketAxess agreement fits that strategy but raises the hurdle. ICE agreed to pay $167 per share in cash, a 33% premium, representing approximately $6.0 billion equity value and $5.7 billion enterprise value. Financing is 100% new debt. Management estimates a 10.6x LTM EBITDA multiple *after* full synergies, $100 million of annual expense savings by year three and adjusted-EPS accretion in the first full year. Gross leverage would open around 3.4x and is targeted at 3.0x or

less within 18–24 months. Closing is expected in H1 2027 and requires shareholder and regulatory approvals.[8]

That transaction must remain distinct from closed-deal history. No integration credit is earned today. It should be upgraded only when ICE demonstrates customer retention, neutral treatment of MarketAxess's dealer/institutional network, revenue cross-sell, statutory earnings after amortization, and deleveraging without starving investment. The decision to sustain $400 million quarterly buybacks while increasing debt magnifies the test.

7. Governance and regulatory conduct

Governance is **YELLOW**. Positives include nine independent nominees, an empowered lead director, annual director elections, majority voting, independent committees, strong ownership rules and effective internal control reporting. The 2025 10-K received an unqualified audit opinion; no material weakness or restatement was identified in the reviewed controlling filing.[1]

The combined Chair/CEO role and founder age are the main structural risks. The board says Noonan leads succession planning, and the executive bench is credible, but it has not named an emergency or long-term successor. Founder judgment is embedded in customer relationships, regulatory credibility and acquisition pattern recognition. A transition could therefore affect both operations and capital allocation.

Related-party items are disclosed and bounded but not nonexistent. Sprecher and his wife own 4% of an aircraft-management subsidiary; they paid $1.199 million of operating charges and $141,630 for hangar use in 2025, and ICE states it makes no payment to them for their aircraft. Lord Hill received £90,000 of consulting fees in 2025 before the arrangement ended, and the board classified him non-independent because prior-year payments exceeded $120,000. CPEX retains registration rights over 1,651,705 ICE shares. These are transparency items rather than financial disqualifiers.[3]

Regulatory conduct is not pristine. Black Knight required FTC divestitures and continuing consent-order certifications. The Optimal Blue note was ultimately sold for $75 million after a $160 million write-down. ICE recorded regulatory accruals of $11 million in 2023, $15 million in 2024 and $4 million in 2025; a June 2024 NYSE equity-trading issue generated $10 million of net valid-claim expense. These amounts are not material to the group, but they are monitoring signals for a company that operates critical infrastructure.[1]

8. Peer comparison

CEO	Capital allocation and integration	Disclosure	Directional five-year rank
Terry Duffy, CME	Higher visible organic return and shareholder distributions; fewer recent mega-deals; NEX integration is proven	Clear and conservative; succession to Lynne Fitzpatrick is already dated for March 2027	Ahead of ICE on return purity and succession; ICE ahead on platform breadth
Adena Friedman, Nasdaq	Adenza expanded recurring workflow revenue; Nasdaq surpassed its 3.3x leverage milestone 16 months early	Strong ARR, cross-sell and leverage KPIs	Comparable integration discipline; ICE has longer founder record, Nasdaq has clearer recurring KPIs
David Schwimmer, LSEG	Refinitiv is a larger, transformative integration with strong organic growth and margin expansion	Best peer disclosure of ASV, retention and transformation milestones	Ahead of ICE on KPI transparency; ICE's NYSE record is at least comparable operationally

Sprecher ranks near the top of realistic peers on strategic architecture and regulated-asset integration. He ranks below the best on acquisition-specific return disclosure, and ICE's succession visibility is weaker than CME's. Nasdaq's accelerated deleveraging provides a direct benchmark for MarketAxess; LSEG's retention and ASV reporting is the benchmark for voluntary disclosure.[9]

9. Management scorecard and monitoring tests

Dimension	Status	Evidence	Upgrade / downgrade test
Leadership and execution	GREEN	Founder record; NYSE outcome; deep internal bench	Downgrade if two key operating leaders leave or no credible successor is visible by the 2027 proxy
Capital allocation	YELLOW	Black Knight savings and debt paydown ahead; statutory ROIC only 8.7% TTM	Upgrade if acquisition-level cash ROI exceeds WACC and group ROIC rises above 12%; RED if MarketAxess misses synergy/debt targets without reduced buybacks

Dimension	Status	Evidence	Upgrade / downgrade test
Incentives	YELLOW	High equity mix, ownership and clawbacks; no ROIC/FCF metric	Upgrade if 2027 compensation adds multi-year ROIC/FCF-per-share and leverage hurdles
Disclosure and candor	GREEN	Direct numerical answers across eight calls	Downgrade if retention, mortgage attrition or MarketAxess economics are reframed without reconciled KPIs
Governance and succession	YELLOW	Strong lead director but combined Chair/CEO and unnamed successor	Upgrade with a disclosed succession architecture or independent chair at transition; RED after an unplanned departure without ready bench
Regulatory conduct	YELLOW	Effective controls; recurring small accruals and FTC oversight	RED upon material consent-order breach, material weakness, restatement or repeated critical-market outage
Owner alignment	GREEN	Sprecher 3.48 million shares; 318x salary ownership; modest SBC	Downgrade if net dilution persists above 1% annually outside value-accretive consideration

Specific MarketAxess tests are: close only after required approvals; retain key platform leadership and top clients; realize at least one-third of the $100 million run-rate expense target in year one and two-thirds in year two; disclose revenue growth separately from purchase accounting; reach gross leverage at or below 3.0x within 24 months; and demonstrate statutory per-share accretion or a cash ROIC bridge, not only adjusted EPS. Black Knight tests are: reach the raised $275 million expense-synergy goal by 2028; quantify progress toward the original $125 million revenue-synergy objective; lift Mortgage Technology's statutory operating margin into sustained double digits; and absorb known customer exits without recurring-revenue contraction.

10. Verdict on the management gate

YELLOW. Sprecher and team are credible, candid and demonstrably capable of operating and integrating complex financial infrastructure. The NYSE outcome, Black Knight deleveraging and cost execution, real executive ownership, disciplined SBC and quality of the internal bench keep this well above FAIL. The gate does not yet PASS because statutory returns remain far below the Gideon 20% aspiration, compensation rewards EBITDA/adjusted operating income rather than capital efficiency, founder succession is not de-risked, and MarketAxess adds a new debt-financed integration while repurchases accelerate. Upgrade to PASS requires acquisition-specific cash-return evidence, a stronger ROIC/FCF incentive architecture and a credible succession transition; downgrade to FAIL if MarketAxess misses both synergy and 24-month leverage targets while ICE maintains mechanical buybacks, or if mortgage statutory profitability fails to improve despite completion of the Black Knight program.

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Local reviewed evidence: `data_package.md` (SHA-256 `5707bc567914adc2fd452b2f31bb49a65fd1abda71ed5d625023e6406a650504`), `data_package_review.md` (SHA-256 `c258dfd84517e1f46339a1f16d6b3db313d8b22903aef21e44535b4c3010ab1e`), `quant_foundation.md`, `primer.md`, and eight live FMP transcript pulls spanning Q3 2024 through Q2 2026. No warehouse file was used as research input.

Appendix W - Moat and 2046 Durability

Intercontinental Exchange, Inc. (ICE) — Moat and 2046 Durability

Assessment date: 14 August 2026 **Financial anchor:** TTM ended 30 June 2026; USD millions unless stated otherwise **Evidence rule:** the reviewed `data_package.md` (SHA-256 `5707bc567914adc2fd452b2f31bb49a65fd1abda71ed5d625023e6406a650504`; review SHA-256 `c258dfd84517e1f46339a1f16d6b3db313d8b22903aef21e44535b4c3010ab1e`) controls historical values. The 2025 Form 10-K, Q2 2026 Form 10-Q/release, and MarketAxess announcement were re-opened live. MarketAxess is **announced but not closed** and is treated only as a contingent future addition. **Scope:** business durability only; no portfolio, valuation, sizing, or trade conclusion.

1. Moat taxonomy applied

Network effects — strong but contract-specific. ICE's strongest network effect is not "more users of ICE" in the abstract. It is the concentration of counterparties, market-maker attention, open interest, related options, clearing positions, and reference-price usage around particular contracts such as Brent, European natural gas, Euribor, and agricultural benchmarks. More liquidity improves execution and risk-transfer utility; that attracts more hedgers and traders, which generates more proprietary order-book and transaction data. The effect is hardest to dislodge where commercial contracts, risk systems, and physical pricing conventions reference the ICE benchmark. It is much weaker in cash equities and options, where customers routinely route among venues, dark pools, wholesalers, and internalizers. FIDS has a data-distribution network and CDS-clearing network, but institutional cash-bond execution is presently small. The proposed MarketAxess acquisition could add a roughly 2,100-firm institutional network, but no MarketAxess liquidity, data, or revenue is part of ICE's current moat until the deal closes and clients actually adopt combined products.[S1][S4]

Switching costs — high in systems of record; moderate in data; low in multi-homed execution. A clearing member or futures user can technically connect elsewhere, but migrating a hedge from a liquid benchmark entails basis risk, fragmented collateral, new legal and operational arrangements, and worse execution if the alternative lacks depth. FIDS data are embedded in valuation, index, compliance, risk, and downstream client systems; switching requires mapping identifiers, validating histories and models, changing controls, and surviving audit. Yet institutions can and do buy multiple data feeds, and a subscription often bills monthly, quarterly, or annually rather than locking a client for many years. Mortgage Technology has the clearest contractual switching evidence: origination contracts generally run one to five years and servicing software/hosting contracts typically run five to seven years. Replacing a loan-origination or servicing system requires data conversion, integrations, training, regulatory testing, and a high-risk cutover. That friction is real, but 2025 origination growth was partly offset by client attrition, proving that switching costs are not captivity.[S1]

Scale economies — strong in exchanges and data, conditional in mortgage. ICE can spread exchange matching engines, surveillance, cybersecurity, clearing models, data centers, instrument masters, evaluated-pricing processes, and sales infrastructure across very large volumes and many products. Incremental benchmark volume and additional data subscriptions can therefore carry high contribution margins. The five-year margin record supports this in Exchanges and FIDS. Mortgage has similar software scale in principle, but its statutory result does not yet show that acquisition cost and amortization have been earned: the segment produced only $62 million of TTM operating income on $2.156 billion of revenue. Scale that was purchased at a high price is not automatically an economic moat.

Brand and trust — strong in NYSE, clearing, and benchmark administration; secondary elsewhere. NYSE's 230-plus-year identity, ICE's regulated-market reputation, and clearing-house credibility lower perceived counterparty and operational risk. NYSE hosted about 70% of S&P 500 constituents and 75% of U.S.-listed ETF AUM at year-end 2025, while disclosed listings retention exceeded 99%. Brand helps win issuers and reassures market participants, but it does not by itself prevent equity order flow from being routed elsewhere. In FIDS and mortgage, auditability, data quality, and operational reliability matter more than consumer-style brand awareness.[S1][S2]

Regulatory licenses — high entry barrier, not an unrestricted monopoly. ICE owns or operates designated contract markets, recognized investment exchanges, national securities exchanges, ATSs, clearing organizations and regulated benchmark/data entities across the U.S., U.K., EU, Canada, Singapore, and Abu Dhabi. ICE Clear Credit is designated a systemically important financial market utility and has Federal Reserve access. Building the technology is easier than recreating the approvals, rulebooks, capital, member network, default-management record, regulator confidence, and operating history. Regulation also limits the moat: fee filings can be challenged, market data may have to be provided at

reasonable or marginal-cost-related prices, Europe requires non-discriminatory benchmark access, and EU customer access to ICE Clear Europe currently depends on temporary recognition through June 2028. Licenses are barriers to entry and obligations at the same time.[S1]

Intellectual property and proprietary data — mixed. ICE uniquely creates real-time and historical order-book, trade, open-interest, and clearing information from its own venues; that is the cleanest proprietary-data pool. It also owns software, models, reference databases, mortgage workflow data, MERS records, and some indices. However, ICE licenses and redistributes data from competitors, clients, government/public-record sources, and financial institutions; some supplier data are exclusive and some contracts make ICE an agent. Certain futures depend on exclusive licenses to third-party indices such as MSCI and FTSE, and regulatory action could weaken exclusivity. FIDS evaluated prices combine methodology, broad observations, governance, and workflow adoption, but AI can reduce the cost of reproducing the analytical layer when customers have comparable inputs. Patents and copyright matter, but liquidity, data rights, licenses, and integration are more important than a patent estate.[S1]

High-trust procurement — strong. Trading, clearing, evaluated prices, benchmarks, mortgage servicing, and borrower-data processing sit inside regulated and audited workflows. Buyers care about uptime, model governance, data lineage, security, SOC reports, regulatory acceptance, and disaster recovery. ICE's systems are examined by multiple regulators and its mortgage business is supervised as a critical third-party service provider to financial institutions. Procurement therefore favors established vendors and makes an unproven low-cost entrant less substitutable. The corollary is severe downside from an outage, cyber breach, bad price, margin-model error, or control failure: trust compounds slowly and can disappear quickly.[S1]

2. Per-segment moat and blended composition

Exchanges — strong moat; 20-year candidate

The moat is benchmark liquidity reinforced by clearing, regulatory status, proprietary venue data, low-latency connectivity, and—in NYSE listings—brand. A would-be competitor must persuade both sides of the market to move together, seed market makers, fund incentives, secure regulatory approval, build default management, and overcome basis risk against the incumbent reference price. That is hardest in global energy and rate benchmarks and easiest in cash equities, options, and newer contracts. The completed Exchanges appendix identifies CME, Eurex, LME, Nasdaq, and Cboe alongside OTC markets, ATSs, wholesalers, dark pools, and internalization as product-specific rivals; it reaches the same conclusion that the moat is wide but not uniform.[B-E] Multi-homing is common at the broker and connectivity level, but open interest is not costlessly portable across economically similar contracts. The segment's FY2021-FY2025 operating margin rose from 65.4% to 73.6%, and its TTM margin reached 74.7%. Exchanges supplied 80.3% of TTM segment operating income, so this profit pool determines the consolidated moat. Earliest break signals: two consecutive years of share/open-interest loss in flagship energy or rates contracts, sustained rate-per-contract concessions after mix adjustment, loss of clearing members, or regulatory restrictions that sever data/clearing economics from the venue.

Fixed Income and Data Services — moderate-to-strong moat; 10- to 20-year durability with an AI caveat

FIDS is protected by breadth, normalized instrument masters, evaluated-price histories, index adoption, compliance integration, CDS clearing, and a network reaching more than 150 venues and 750 data sources. More than four-fifths of FY2025 segment revenue was recognized over time, and the operating margin expanded from 28.1% in FY2021 to 38.6% in FY2025 and 40.2% TTM. The defensible layer is the governed data lineage, historical continuity, regulatory acceptance, proprietary observations, index/control points, and delivery network—not a screen or a single pricing algorithm. Customers can multi-home among Bloomberg, LSEG/Refinitiv, S&P Global, FactSet and specialist vendors; bond execution can remain bilateral or move among Tradeweb, Bloomberg, dealer systems, and other venues. The completed FIDS appendix independently characterizes the strongest assets as CDS clearing, embedded pricing/reference workflows, governed indices, and network infrastructure, while calling stand-alone interfaces and undifferentiated protocols the weakest.[B-F] ICE's standalone fixed-income execution was only $124 million TTM. MarketAxess could fill that gap, but its network effect and proprietary trading data remain contingent on closing, regulatory clearance, integration, and customer acceptance. Earliest break signals: recurring FIDS growth below 3% for two years, ASV retention/pricing deterioration, index-linked AUM losses, or evaluated-pricing displacement while network growth remains healthy.

Mortgage Technology — switching-cost moat, but not yet a proven economic moat

The segment owns real control points: Encompass is a loan-origination system of record; MSP and related applications run servicing; MERS records servicing-right and beneficial-ownership changes; closing connects lenders, title agents, and

recorders. Long contracts, conversion risk, compliance configuration, integrations, and training raise switching costs. Minimum/base fees in origination contracts buffer low volumes, while transaction fees add upside. Yet competition includes lender and servicer proprietary systems plus modular vendors such as Dark Matter/Empower, Finastra, nCino/SimpleNexus, Sagent, Fiserv, Snapdocs, and Cotality.[B-M] Customers can multi-home around the core system, consolidate vendors, or replace modules at renewal. The FTC-required divestitures of Empower and Optimal Blue and continuing restrictions on certain LOS/PPE transactions preserve customer alternatives and demonstrate that regulation can curb ecosystem control rather than fortify it.[B-M] Most importantly, statutory margins fell from 28.2% in FY2021 to 5.0% in FY2022, turned negative after the Black Knight perimeter change, and recovered only to 0.7% in FY2025 and 2.9% TTM. Client attrition partly offset origination growth in 2025. These facts show workflow stickiness, not demonstrated returns on acquired capital. Durability is 5-10 years with confidence; a 20-year moat requires sustained statutory margin and retention evidence. Earliest break signals: recurring revenue contraction despite stable end-market volumes, major LOS/MSP losses, shorter renewals, price concessions, or statutory margin failing to exceed 10% by FY2029 as integration costs recede.

Blended conclusion. Mortgage is 21.2% of FY2025 net revenue but only 0.3% of FY2025 segment operating income and 1.1% of TTM segment operating income. FIDS supplied 18.6% of TTM segment operating income and Exchanges 80.3%. Thus the consolidated moat is stronger than the revenue mix suggests because almost all current profit comes from the two moated infrastructure segments. The offset is acquisition dependence: goodwill and intangibles of roughly $45.5 billion and an 8.7% TTM statutory ROIC show that owning moated assets has not automatically produced high returns on total capital paid.

3. Margin persistence evidence

The reviewed package provides a consistent five-year series on ICE’s preferred net-revenue denominator; it does not provide a full ten-year like-for-like net-revenue series, so one is not invented. The live FMP eight-year gross-revenue series was checked only as a directional diagnostic and is not spliced into the issuer-basis table because FY2025 FMP operating income differs from the official filing.

Operating margin on issuer basis	FY2021	FY2022	FY2023	FY2024	FY2025	TTM 2026-06-30
Consolidated on net revenue	48.3%	49.9%	46.2%	46.4%	49.6%	51.8%
Exchanges	65.4%	70.3%	71.1%	73.3%	73.6%	74.7%
Fixed Income and Data Services	28.1%	34.4%	36.4%	36.7%	38.6%	40.2%
Mortgage Technology	28.2%	5.0%	(21.0%)	(8.4%)	0.7%	2.9%

The core evidence is unusually strong. Consolidated margin remained within 46.2%-49.9% through the Black Knight acquisition period and then reached 51.8% TTM. Exchanges expanded through changing volume and rate environments, which supports liquidity and operating-scale economics, though Q1 2026 benefited from exceptional risk activity. FIDS expanded almost continuously while recurring data/network revenue grew. Mortgage is the disconfirming evidence: its margin history is perimeter-distorted and weak on a statutory basis, so adjusted EBITDA cannot be used to declare a moat. Blended stability is genuine, but it is carried by Exchanges and FIDS, not by equal resilience across all three segments.[D]

4. AI disruption stress test

Exchanges is most protected. A foundation model can explain a hedge or optimize order routing, but it cannot manufacture cleared open interest, legal novation, licensed exchange status, default resources, proprietary real-time order flow, or a benchmark already embedded in physical contracts. AI may improve surveillance, client analytics, margin operations, and product design; it may also accelerate smart order routing and fee comparison. The economic chokepoint remains the regulated venue/clearing/data complex. Tokenized and 24/7 markets are a substitution risk only if they build comparable liquidity and regulatory acceptance.

FIDS is most directly exposed. A prompt-driven interface can replace portions of desktop search, basic analytics, document parsing, entity mapping, and even evaluated-pricing workflow. ICE explicitly warns that AI may commoditize some pricing products or enable customers to build in-house prices, reducing demand and pressuring fees. The moat survives where outputs require proprietary observations, long governed histories, independent valuation status, benchmark administration, audit trails, redistribution rights, and integration into regulatory controls. A language model with the same licensed/public inputs can attack the analytical layer; it cannot lawfully recreate data rights or make an unaudited price acceptable to a regulated valuation committee merely by being accurate.

Mortgage is protected at the system-of-record layer and exposed at the task layer. AI can automate document recognition, underwriting preparation, borrower service, exception handling, compliance checks, and code-heavy point solutions. It can erode pricing for individual workflow modules. It does not by itself replace the authoritative loan record, servicing ledger, MERS registration, integrations, permissions, audit trail, and regulated controls. The most exposed current profit pool is evaluated pricing/basic analytics in FIDS; the most protected is benchmark futures plus clearing in Exchanges. The most likely AI outcome is lower workflow cost and interface commoditization around durable data/control points, not wholesale replacement of ICE.

5. The 2046 test

Date test: 14 August 2026 plus twenty years is **14 August 2046**.

Plausible 2046 business description. Intercontinental Exchange operates regulated, continuously available networks through which commercial firms and financial institutions transfer energy, commodity, rate, credit, and capital-markets risk. It sells execution and clearing, administers benchmark contracts and indices, distributes proprietary venue and governed reference data, and connects those data to automated risk, compliance, and settlement workflows. Exchanges remains the largest profit pool, even if the mix has shifted from petroleum toward electricity, natural gas/LNG, environmental instruments, new energy commodities, rates, digital securities, and contracts not yet designed. FIDS remains a broad data/indices/connectivity franchise; its low-value desktop and basic evaluated-pricing interfaces have withered, while permissioned data, model governance, benchmark administration, real-time network delivery, and machine-consumable audit trails have grown. Mortgage Technology still runs core origination, registration, closing, and servicing records, but many human tasks have been automated and point-solution pricing is lower. MarketAxess is included only in this description if the announced acquisition closes and its institutional liquidity remains healthy after integration. Consolidated operating margin is directionally stable to modestly lower than today: exchange scale supports high margins, while always-on resilience, cyber, regulatory obligations, data-right costs, and a larger workflow mix prevent unlimited expansion. ICE still earns high margins because customers pay for accepted reference prices, regulated risk mutualization, authoritative records, data rights, and reliable connectivity—not for a generic user interface.

2046 bear description. Flagship energy and rate liquidity fragments across rival and on-chain venues; regulators force low-cost/non-discriminatory data and benchmark access; clearing recognition becomes jurisdictionally fragmented; clients use AI and shared data utilities to internalize evaluated pricing; major lenders move to modular cloud systems and open standards; and serial acquisitions consume capital without improving retention or statutory margins. ICE remains a large operator, but it becomes a lower-growth regulated utility with more compliance cost, less pricing freedom, and consolidated operating margin in the 30s rather than around 50%. This bear case is **plausible but not the base case—roughly a one-in-four durability risk**—because liquidity can migrate and regulation can reset economics, yet doing so simultaneously across ICE's major benchmark, clearing, data, and system-of-record control points requires many coordinated substitutions.

6. Competitive threat inventory

Threat	Mechanism	Segment(s) affected	Earliest observable signal	Plausibility
Liquidity fragmentation and customer internalization	CME and other exchanges seed substitutes; banks, wholesalers, ATSs, bilateral and on-chain venues internalize flow	Exchanges; FIDS execution	Two years of flagship share/OI loss; rebates rise faster than net revenue; RPC declines after mix	Medium
AI/data-access commoditization	Clients combine public, licensed, and own data to replace evaluated prices/basic analytics; regulators constrain fees or exclusivity	FIDS; exchange data; mortgage analytics	FIDS recurring growth below 3%; retention/pricing down; successful marginal-cost or access mandate	Medium-high
Mortgage platform modularization	Open APIs, cloud-native competitors, lender consolidation, and in-house builds reduce suite value	Mortgage Technology	Major Encompass/MSP losses; recurring revenue down in stable market; contract terms shorten	Medium
Operational or cyber failure	Outage, bad data, margin-model defect, clearing member default, or privacy breach destroys trust and triggers sanctions	All, especially Exchanges/clearing and mortgage	Material incident; settlement/margin failure; regulatory remediation; client departures	Low probability, very high impact

Threat	Mechanism	Segment(s) affected	Earliest observable signal	Plausibility
Acquisition-led dilution of returns	Black Knight economics stall; MarketAxess closes but integration, revenue synergies, or deleveraging disappoint	Mortgage; FIDS; consolidated	Mortgage margin below 10% in FY2029; MarketAxess retention down; leverage above 3.0x after 24 months	Medium

7. Pricing power verification

Exchanges — observable but product-dependent. FY2025 exchange data/connectivity revenue rose 9%, driven by strong retention, new customers, and higher spending; Q2 2026 data/connectivity grew 12%, listings grew 5%, and Exchange recurring revenue grew 10%. NYSE listings retention was above 99%. Futures and execution fees follow published schedules and include volume rebates, so gross fee changes are not pure pricing power: 2025 exchange rebates rose to $1.6 billion, and cash-equities capture rate and matched share declined even as industry volume increased. Pricing power is strongest in proprietary benchmark data/connectivity and weakest in fungible order flow.[S1][S2]

FIDS — supported by recurring growth, not fully decomposed. FY2025 data-services revenue was $1.956 billion and primarily subscription based; Q2 2026 FIDS recurring revenue grew 10%, with fixed-income data/analytics up 9% and network technology up 11%. Fixed-price subscriptions are billed in advance, and high renewal rates are disclosed qualitatively. ICE does not publish a clean price-versus-seats/content/FX bridge or consolidated retention rate, so it is not possible to prove that the full growth rate is price. Pricing power is moderate: strong enough to support margin expansion, but vulnerable where customers can multi-source or use AI.[S1][S2]

Mortgage — contractual support with offsetting churn. Origination contracts run one to five years and generally require the greater of a base fee or usage-linked closed-loan fee; servicing contracts typically run five to seven years. ICE cited contractual price increases and new implementations as 2025 growth drivers, and servicing also benefited from renewal expansions. But origination client attrition was an explicit offset, Q2 2026 recurring growth was only 3%, and statutory margin was 2.9% TTM. This is contractual revenue protection, not yet strong demonstrated pricing power.[S1][S2]

Customer concentration does not invalidate these conclusions: no customer produced more than 10% of consolidated net revenue in 2023-2025, and no account receivable exceeded 10% at year-end 2024 or 2025. Economic bargaining power can still concentrate in large clearing members, dealers, data distributors, lenders, and servicers, and many competitors are also ICE customers.[S1]

8. Disconfirming evidence, thresholds, and verdict

Monitor	PASS remains supported	Downgrade to YELLOW	Downgrade to FAIL
Flagship benchmark liquidity	OI/share broadly stable or rising over rolling two years	Sustained loss in one major complex with offsetting strength elsewhere	Two or more core complexes lose share/OI for two years and fee concessions fail to stop it
Exchanges economics	Statutory margin stays above 65% through a normal activity year	Margin below 65% for two years without major reinvestment explanation	Margin below 60% plus declining recurring data/listings
FIDS recurring franchise	Organic recurring growth at least 5% with stable retention	Growth below 3% for two years or disclosed retention/pricing deterioration	Recurring revenue contracts and margin falls below 30% absent one-time costs
Mortgage proof	Statutory margin exceeds 10% by FY2029 with stable recurring revenue	Margin remains 5%-10%, churn persists, or revenue remains acquisition-dependent	Recurring revenue declines in a stable market and margin remains below 5% after integration
Data/regulation	Proprietary pricing/benchmark/data rights retained	Material fee/access remedy or supplier-rights loss	Mandated access/marginal-cost pricing structurally removes data profit pool
Operational trust	No material clearing/cyber/control failure	Material incident with contained client/regulatory impact	Clearing loss, prolonged critical outage, or breach causes sustained volume/client migration
MarketAxess contingency	Deal closes; retention/liquidity stable; leverage at or below 3.0x within 24 months	Close delayed/conditioned, retention weak, or deleveraging late	Deal fails after strategic dependence, or closes and materially damages FIDS economics/trust

Disconfirming evidence today: Mortgage lacks persistent statutory margins; ICE does not disclose consolidated retention or a price/volume bridge for subscriptions; some data and index products depend on third-party inputs or licenses; cash equities showed lower matched share and capture rate in 2025; EU clearing access and market-data fee economics remain subject to regulatory decisions; a 2024 NYSE/SIAC software defect produced incorrect price bands and trade reversals; and acquisition-heavy capital allocation has left TTM statutory ROIC at about 8.7% despite strong operating margins.[D][S1]

Moat gate: PASS. ICE's moat is concrete and observable in benchmark-contract liquidity, regulated clearing, proprietary venue data, NYSE/listing trust, governed fixed-income data/indices, and embedded systems of record. The five-year Exchanges and FIDS margin record supports durability under visible competition, and these segments produced 98.9% of TTM segment operating income. Mortgage Technology is not awarded a standalone economic-moat PASS; its switching costs are real but its post-acquisition statutory margins and churn evidence remain inadequate.

2046 test: PASS. A specific high-return 2046 ICE is credible because customers will still need accepted prices, regulated counterparty-risk mutualization, authoritative records, auditable data rights, and resilient connectivity even as instruments and interfaces change. The verdict does not require MarketAxess to close and gives no credit to its announced contribution today. The PASS should be downgraded if benchmark liquidity migration, data-access regulation/AI substitution, operational trust failures, or acquisition-led return dilution cross the thresholds above.

Sources

- **[D]** Reviewed ER2 data package, `C:\Users\Admin\OneDrive\GPT\ER 2.0\Intercontinental Exchange\data_package.md`, exact-byte SHA-256 `5707bc567914adc2fd452b2f31bb49a65fd1abda71ed5d625023e6406a650504`; reviewer artifact `data_package_review.md` SHA-256 `c258dfd84517e1f46339a1f16d6b3db313d8b22903aef21e44535b4c3010ab1e`; supporting `quant_foundation.md` and `primer.md` in the same directory.
- **[S1]** [ICE FY2025 Form 10-K](https://www.sec.gov/Archives/edgar/data/1571949/000157194926000004/ice-20251231.htm), especially Items 1, 1A, cybersecurity, revenue recognition, segment reporting, and concentration disclosures; opened live 14 August 2026.
- **[S2]** [ICE Q2 2026 earnings release](https://ir.theice.com/press/news-details/2026/Intercontinental-Exchange-Reports-Second-Quarter-2026/default.aspx), 30 July 2026; opened live 14 August 2026.
- **[S3]** [ICE Q2 2026 Form 10-Q](https://www.sec.gov/Archives/edgar/data/1571949/000157194926000011/ice-20260630.htm), quarter ended 30 June 2026; opened live 14 August 2026.
- **[S4]** [ICE–MarketAxess definitive-agreement announcement](https://ir.theice.com/press/news-details/2026/Intercontinental-Exchange-to-Acquire-MarketAxess-Creating-a-Premier-Fixed-Income-Marketplace/default.aspx), 30 July 2026; transaction expected to close in H1 2027 subject to stockholder approval, regulatory clearances, and customary conditions.
- **[S5]** Live FMP stable annual income-statement pull for ICE on 14 August 2026, `period=annual&limit=8`; used only as a directional long-history check because official ICE/SEC figures control documented differences.
- **[B-E]** `appendix_B_exchanges.md`, completed segment worker artifact rechecked 14 August 2026, Sections 4-5.
- **[B-F]** `appendix_B_fixed_income_and_data_services.md`, completed segment worker artifact rechecked 14 August 2026, Sections 4-5.
- **[B-M]** `appendix_B_mortgage_technology.md`, completed segment worker artifact rechecked 14 August 2026, Sections 4-5.

Appendix B1 - Exchanges

Intercontinental Exchange — Exchanges Segment Deep Dive

Information cutoff: 2026-08-14 SGT **Latest trailing period:** TTM ended 2026-06-30 **Exact forecast horizon:** 2031-06-30, exactly 5.000 years after the TTM endpoint **Currency and scale:** USD millions unless otherwise stated **Sealed common profit metric: Operating income** — issuer-disclosed statutory segment operating income **Authority boundary:** Research only. No portfolio, sizing, ranking, broker, or trade conclusion. `trade_execution_authorized=false`.

0. Segment boundary and taxonomy note

The Exchanges segment boundary is stable across the reviewed FY2021-FY2025 history. It includes ICE's regulated futures and options venues, cash equities and equity options venues, listings, clearing, exchange-related data and connectivity, and OTC/other activity. There was no Exchanges restatement in the last three years that prevents direct dollar comparison. The important accounting boundary is gross versus net revenue: all seven disclosed product lines are gross revenue, while the segment total is net of transaction-based expenses. The model therefore preserves those seven gross lines and subtracts a transparent transaction-expense line rather than pretending that gross cash-equities revenue is comparable with segment net revenue. [DP1] [DP4]

1. What the Exchanges segment actually is

Exchanges is a market-infrastructure network serving commercial hedgers, banks, brokers, proprietary trading firms, asset managers, corporations, governments, listed issuers, market-data vendors, and other financial intermediaries. A customer uses the segment to transfer price risk, discover a market price, execute a trade, clear the resulting exposure, obtain venue-generated data, connect systems to the market, or list a security. The segment is not one homogeneous exchange. Its economics span high-quality benchmark derivatives, intensely competitive U.S. cash equities, recurring data/connectivity, and relatively stable listings fees.

The derivatives franchise is organized around energy, agricultural and metals, and financial futures and options. Energy is the largest derivatives revenue pool and includes globally relevant oil, natural-gas, LNG, power, and environmental risk-management markets. Commercial participants use these markets to hedge physical exposure; financial participants supply risk capital, relative-value trading, and liquidity. Agricultural and metals contracts provide similar risk-transfer functions in smaller markets. Financial futures and options give customers standardized exposure to rates, currencies, equity-related or other financial risks. ICE earns trading and clearing fees whose realized economics depend on volume, rate per contract, product mix, customer tier, block versus screen activity, and clearing arrangements. [DP4] [10K]

The NYSE complex contributes cash equities, equity options, issuer listings, and venue-related data. Cash-equities gross revenue is driven by shares traded, market share, order type and pricing tier, but large liquidity payments, routing costs, regulatory assessments, and other transaction-based expenses make gross revenue a poor stand-alone profit indicator. Equity-options economics similarly depend on contract volume, market share, pricing and incentives. Listings are commonly billed over contractual periods and combine access to NYSE's brand, issuer services, market-quality ecosystem, and investor visibility. Data/connectivity customers pay for real-time and historical feeds, market depth, access ports, colocation, low-latency connectivity, and related services. [DP4] [10K]

Clearing is embedded within the product ecosystem rather than separately disclosed as a product-revenue line. Once a futures or options trade is accepted for clearing, the clearing house becomes central counterparty, sets and collects margin, monitors risk, and manages member default resources. Clearing can reinforce liquidity because users value a trusted risk-management framework and the ability to offset positions within a common pool. ICE can also earn economics associated with cash margin balances, although the reviewed package does not separately quantify the amount for Exchanges. The product-level forecast therefore does not invent a clearing revenue line or a margin-interest line; those economics remain inside the disclosed futures/options and OTC/other categories and the segment operating result. [DP4] [10K]

Go-to-market is institutional and ecosystem-based. Exchange products require member access, technical certification, market-data licenses, connectivity, risk controls, and often integration into order-management and risk systems. A new contract must attract both natural hedgers and liquidity providers. A listing relationship is sold to issuers and advisers, while data/connectivity is sold to users, redistributors, brokers, trading firms, and technology vendors. The shared infrastructure creates multiple monetization layers around a successful market: execution, clearing, data, connectivity, and sometimes listing or index-linked services. However, those layers are not automatically captive. Many sophisticated customers

multi-home, negotiate commercial terms, and can shift activity if execution quality or economics deteriorate.

2. Current economics: FY2025 and exact TTM

FY2025 Exchanges net revenue was exactly **$5,411 million**, and statutory segment operating income was exactly **$3,982 million**, a **73.6% operating margin**. The exact TTM ended 2026-06-30 was **$5,874 million** of net revenue and **$4,388 million** of operating income, a **74.7% operating margin**. These values are the reviewed common metric and reconcile directly into consolidated statutory operating income with no corporate/unallocated adjustment. [DP3] [DP3A] [DP5]

The TTM gross product stack totaled $8,742 million: energy futures/options $2,362 million; agricultural and metals futures/options $272 million; financial futures/options $742 million; cash equities/equity options $3,356 million; OTC and other $409 million; data/connectivity $1,094 million; and listings $507 million. Subtracting $2,868 million of transaction-based expenses produces the exact $5,874 million segment net-revenue anchor. [DP4] [DP5]

On a gross-product basis, cash equities/equity options represented 38.4%, energy 27.0%, data/connectivity 12.5%, financial futures/options 8.5%, listings 5.8%, OTC/other 4.7%, and agricultural/metals 3.1%. These shares describe gross billings, not net economics. In particular, the 38.4% cash-equities/equity-options share substantially overstates its contribution to net revenue and operating income because transaction-based expenses are concentrated in exchange activity. ICE does not disclose product-level operating income, product gross margin, or the exact allocation of transaction expenses among cash equities, options and other products. Any product-profit split would be fabricated.

Recent quarterly segment performance demonstrates both the attraction and the forecasting hazard. Exchanges net revenue was $1,265 million in Q3 2025, $1,364 million in Q4 2025, $1,781 million in Q1 2026, and $1,464 million in Q2 2026. Q1 rose 30% reported year over year amid unusually high macro and geopolitical risk activity, while Q2 growth slowed to 3%. Statutory operating margin moved from 72% to 73%, then 79% in Q1 and 74% in Q2. The TTM is therefore a valid exact anchor but includes an exceptional Q1; it should not be extrapolated at the Q1 run rate. [DP5]

Activity indicators support some structural depth but are incomplete. Management reported total futures/options open interest up 20% year over year around Q2 2026, after readings of 16%, 19% and 23% across the preceding four calls; Q1 2026 futures/options ADV was up 45%. Yet the reviewed package does not contain a five-year absolute ADV, open-interest, rate-per-contract, or consolidated take-rate series because the official workbook retrieval was blocked by a Cloudflare JavaScript challenge. Growth rates cannot be converted into absolute contracts, market share or dollars. The model therefore uses disclosed product revenue, current activity direction and explicit scenario judgments, not invented ADV or open-interest bases. [DP0A] [DP4] [DP10]

Capital intensity has two layers. Day-to-day revenue has high incremental economics because the regulated venue, matching engine, clearing infrastructure and data plant already exist. But the system requires continuing spend on capacity, cybersecurity, surveillance, disaster recovery, regulatory compliance, risk models, data centers and product development. ICE does not disclose Exchanges capex or R&D separately. Consolidated TTM property capex plus capitalized software was $873 million, and FY2026 company capex guidance was approximately $850 million after some 2027 hardware, data-center and real-estate spending was pulled forward. These company figures constrain the notion that exchange economics are literally costless, but they cannot responsibly be allocated to this segment. [DP6] [DP7]

3. Unit economics and reinvestment

3.1 Transaction and clearing revenue

The core transaction relationship can be expressed as:

$$\text{gross transaction revenue} \approx \text{activity} \times \text{realized rate} \times \text{product mix},$$

where activity is contracts or shares traded, realized rate reflects fee schedules, membership tiers, volume discounts and incentives, and mix captures higher- versus lower-rate contracts and customer behavior. In logarithmic approximation, a 1% change in activity plus a 1% change in realized rate produces roughly a 2% change in gross transaction revenue before mix and interaction effects. That is a framework, not a forecast input, because ICE does not disclose the required absolute activity and rate series in the reviewed package.

Open interest is a stock of outstanding contracts, while ADV is a flow. Rising open interest can signal deeper commercial adoption and future trading opportunities, but it does not map one-for-one into current revenue. A position can remain open without generating a new transaction, and a highly traded contract can have lower open interest if positions turn rapidly. The persistence of 16%-23% year-over-year open-interest growth across recent calls is more encouraging than a single volatility

spike, but product mix, expiries, rolls and customer composition still matter. The bear case therefore allows current activity to normalize despite durable open interest, while the bull case requires both sustained open interest and broader participation.

Clearing adds fee revenue, balance economics and network reinforcement but also creates tail obligations. Variation margin settles market moves; initial margin and other default resources protect the clearing house against member failure. The economic advantage is scale: risk systems, default management, member connectivity and regulatory permissions support many contracts, while incremental volume can carry high contribution margins. The economic obligation is resilience: model validation, liquidity resources, default drills, cyber controls and operational redundancy must be maintained in calm markets, not only when volume is high. A clearing loss or confidence failure could impair far more than one quarter's revenue because customers choose a central counterparty partly on trust.

3.2 Cash equities and equity options

Cash equities has a different unit model. Gross revenue can increase with U.S. consolidated volume while net economics do not increase proportionally because liquidity rebates and routing costs also rise. Venue market share can be purchased with incentives, making gross share or volume an incomplete measure of franchise strength. The more relevant questions are net capture per share, market quality, closing-auction relevance, issuer relationships, and whether regulation changes fee caps, rebates, tick sizes or order-routing behavior. Because the reviewed package lacks a fee-rate and transaction-expense split, the scenario model grows the cash-equities gross line and separately forecasts transaction expenses. This makes the net-revenue outcome auditable without pretending to know the exact take rate.

Equity options share some derivatives-like economics but remain fragmented among competing venues. Contract specifications are standardized, customers can route among venues, and incentive schedules matter. Technology, latency, routing relationships and liquidity-provider economics are therefore critical. NYSE brand strength in listings does not automatically create an options moat; the franchise must continually earn flow.

3.3 Data, connectivity and listings

Data/connectivity has a more recurring unit model. Revenue is driven by user and device counts, depth products, redistribution rights, connectivity ports, colocation, contractual price, new feeds and customer retention. The cost to collect, normalize, govern and distribute venue data is meaningful, but the marginal distribution cost of an existing feed is low. That supports high incremental margins, subject to regulatory review, customer bargaining and ongoing technology spend. Q2 2026 data/connectivity growth was 12%, and management raised FY2026 Exchanges recurring-revenue guidance to the high-single-digit range. The base case therefore gives this line the fastest durable growth among recurring products, but slows it from current double-digit growth as comparisons normalize. [DP4] [DP6]

Listings revenue depends on issuer retention, new corporate and ETF listings, renewal pricing and the relative appeal of NYSE. Retention was disclosed as above 99%, which supports stability but does not prove rapid growth. New issuance is cyclical, and Nasdaq competes strongly for technology and growth issuers. The modeled base CAGR is only 2.4% despite the attractive retention disclosure because FY2022-FY2025 revenue contracted slightly on a three-year-span basis. [DP0A] [DP4]

3.4 Cost structure and margin mechanics

TTM segment operating expenses were $1,486 million, the arithmetic difference between $5,874 million of TTM net revenue and $4,388 million of statutory operating income. The expense base includes people, technology, depreciation/amortization, regulatory functions, surveillance, risk management, infrastructure and allocated shared costs. A substantial portion is fixed or step-fixed over a normal activity range. As a result, net-revenue growth above cost inflation can expand margin, while a sudden activity decline compresses margin unless management reduces discretionary costs. [DP3A] [DP5]

The current 74.7% margin is already exceptional. The base case allows only 60 basis points of expansion to 75.3% by 2031-06-30, reflecting data/connectivity mix and modest scale leverage offset by required resiliency, cyber, capacity and regulatory investment. The bull reaches 77.2% because higher-margin derivative and data growth outpaces the cost base. The bear falls to 71.5% as transaction activity normalizes, cash-equity net capture remains difficult, and fixed infrastructure costs cannot be removed quickly. No corporate or below-the-line item is inserted: every forecast profit number is statutory Exchanges operating income.

4. Competitive dynamics and regulation

Competition is product-specific. In global energy derivatives, ICE's benchmark liquidity, especially in oil and related energy markets, competes with CME and other regional exchanges and OTC alternatives. In European energy, power and

environmental products, competition also comes from regional exchanges and bilateral markets. In agricultural and metals contracts, CME, LME and other specialist venues have established pools. Financial futures/options compete with CME, Eurex and other exchanges. A rival can copy a contract specification, but it cannot instantly copy resting liquidity, open interest, clearing offsets, commercial hedger participation, data history and operational trust.

In U.S. cash equities and equity options, competition is structurally more intense. Nasdaq, Cboe and other exchanges, alternative trading systems, wholesalers, dark pools and internalization all compete for order flow. Orders can be routed dynamically, and displayed-exchange share is influenced by rebates, fees and regulation. In listings, Nasdaq is the most visible direct rival, while private capital and delayed IPOs are substitutes for public listing. In data/connectivity, rival exchanges, consolidated feeds, data vendors and internal customer systems compete for budget, even when ICE owns the primary venue data.

Pricing power is strongest where a contract is the accepted hedge and users value liquidity plus clearing offsets. It is weaker where routing is fungible and customers can shift flow for a fraction of a cent. Data/connectivity has recurring pricing power when feeds are necessary for trading, valuation, compliance or best execution, but that power is constrained by regulatory scrutiny and customer challenges. Listings has retention and brand value but faces issuer choice. The blended margin should not be interpreted as uniform pricing power across all products.

Regulation is both barrier and constraint. Exchanges and clearing houses require licenses, rulebooks, surveillance, capital and risk frameworks, operational resilience and ongoing supervisory relationships across the U.S., U.K., EU and other jurisdictions. These requirements deter undercapitalized entrants. They also constrain product changes, fee schedules, market-data policy, margin models, investment of clearing resources and acquisitions. Market-structure reforms can alter tick sizes, fee caps, access, best execution, rebates, routing and transparency. Bank-capital or clearing rules can change the economics and capacity of clearing members, which can reduce end-customer participation even when hedging demand remains.

The regulatory asymmetry matters: a license does not guarantee economic success, while a compliance or operational failure can destroy trust quickly. ICE must invest ahead of growth, maintain multiple venues and clearing houses, and meet local requirements. The segment's high accounting margin is therefore partly compensation for low-frequency but severe operating and regulatory risk, not evidence that the infrastructure should be starved of reinvestment. [10K]

5. Segment-level moat and durability

The strongest moat is contract-level benchmark liquidity. A successful derivative concentrates hedgers, market makers, open interest, price history and clearing offsets. Participants prefer to trade where spreads and market depth are best; their participation then improves those attributes. This is a genuine network effect, but it is local to each contract family. Energy appears the deepest element of the moat because it combines physical-market relevance, multiple related contracts and a global user base. Financial, agricultural and metals products may benefit from the same mechanism at different scale.

Clearing strengthens the network. Customers and clearing members integrate risk, collateral, operations and default management around a central counterparty. Portfolio offsets can lower total collateral needs when related positions clear together. Reproducing that system requires regulatory permission, risk expertise, capital/liquidity resources, member support, operational history and credibility. A new venue can launch matching software more easily than it can establish a trusted clearing ecosystem.

Venue-generated data is a second moat layer. Orders, trades, positions and reference information created by the market are difficult to reproduce perfectly without the underlying activity. Connectivity and colocation embed ICE in customer technology. Listings adds issuer relationships and brand. These layers increase switching cost and allow the franchise to monetize more than execution alone. However, data rights and pricing are contestable, connectivity can be multi-homed, and an issuer can choose another venue. The data moat is durable where the underlying market remains essential, not merely because the output is labeled proprietary.

The moat is weaker in cash-equity execution. U.S. market structure promotes competition and routing across many venues, and liquidity providers are price sensitive. ICE can defend economics through auctions, market quality, brand, issuer relationships, technology and product breadth, but cannot assume exclusive order flow. Listings is durable but slow-growing. The segment as a whole has a wide moat, driven primarily by benchmark derivatives plus clearing and reinforced by data/connectivity; it should not be described as uniformly impregnable.

Over five to ten years, the moat endures if three conditions hold: open interest broadens beyond episodic volatility; realized net pricing stays stable without buying volume through incentives; and clearing/data systems remain trusted and regulatorily

accepted. It erodes if rival benchmarks gain sustained share, commercial hedgers shift to alternative instruments, regulators force unfavorable fee/access changes, or a clearing/cyber failure changes customer behavior. The monitoring framework at the end makes these conditions falsifiable.

6. Historical growth rates reproduced from the reviewed data package

The table uses five disclosed fiscal years and defines the “3-year span CAGR” as FY2022 to FY2025, exactly three annual compounding intervals. Product values are gross; segment revenue is net. No values are back-solved. Every dollar cell comes from the reviewed data-package row identified in the final column. Most recent YoY is FY2025 versus FY2024, except the net-segment note also highlights Q2 2026 separately.

Product / sub-segment	FY2021 revenue	FY2022 revenue	FY2023 revenue	FY2024 revenue	FY2025 revenue	3-year span CAGR	Most recent YoY	Data-package cite
Exchanges net revenue	$3,856m [DP3, Exchanges row]	$4,071m [DP3, Exchanges row]	$4,440m [DP3, Exchanges row]	$4,959m [DP3, Exchanges row]	$5,411m [DP3, Exchanges row]	9.9%	9.1%; Q2 2026 3%	DP §3 Exchanges; DP §5 Q2 row
Energy futures and options, gross	$1,236m [DP4, Energy row]	$1,162m [DP4, Energy row]	$1,498m [DP4, Energy row]	$1,876m [DP4, Energy row]	$2,182m [DP4, Energy row]	23.4%	16.3%	DP §4 Energy row
Agricultural and metals futures/options, gross	$228m [DP4, Agricultural/metals row]	$235m [DP4, Agricultural/metals row]	$271m [DP4, Agricultural/metals row]	$257m [DP4, Agricultural/metals row]	$233m [DP4, Agricultural/metals row]	(0.3%)	(9.3%)	DP §4 Agricultural/metals row
Financial futures and options, gross	$394m [DP4, Financial row]	$475m [DP4, Financial row]	$460m [DP4, Financial row]	$559m [DP4, Financial row]	$608m [DP4, Financial row]	8.6%	8.8%	DP §4 Financial row
Cash equities and equity options, gross	$2,377m [DP4, Cash equities row]	$2,722m [DP4, Cash equities row]	$2,298m [DP4, Cash equities row]	$2,913m [DP4, Cash equities row]	$3,176m [DP4, Cash equities row]	5.3%	9.0%	DP §4 Cash equities row
OTC and other, gross	$326m [DP4, OTC/other row]	$429m [DP4, OTC/other row]	$398m [DP4, OTC/other row]	$400m [DP4, OTC/other row]	$395m [DP4, OTC/other row]	(2.7%)	(1.3%)	DP §4 OTC/other row
Data and connectivity services	$838m [DP4, Data/connectivity row]	$877m [DP4, Data/connectivity row]	$933m [DP4, Data/connectivity row]	$947m [DP4, Data/connectivity row]	$1,031m [DP4, Data/connectivity row]	5.5%	8.9%; Q2 2026 12%	DP §4 Data/connectivity rows
Listings	$479m [DP4, Listings row]	$515m [DP4, Listings row]	$497m [DP4, Listings row]	$489m [DP4, Listings row]	$495m [DP4, Listings row]	(1.3%)	1.2%	DP §4 Listings row

Internal arithmetic checks pass. Examples: Exchanges net revenue $4,959m × 1.0911 = $5,411m; energy $1,876m × 1.1631 = $2,182m; data/connectivity $947m × 1.0887 = $1,031m; cash equities/options $2,913m × 1.0903 = $3,176m. Each difference is only rounding and well within 2%. No row is back-solved, so no estimated-row tie-out is required.

The historical pattern argues against applying one growth rate. Energy drove a large part of recent expansion, while data/connectivity compounded steadily and accelerated. Financial futures/options grew well. Listings and OTC/other were essentially flat over the three-year span. Cash-equities/options gross revenue grew, but its net contribution cannot be isolated because transaction expenses are not allocated. Segment net revenue compounded at 9.9% from FY2022 to FY2025, a strong record that includes favorable activity and should not be the default five-year forecast.

7. Management guidance from data-package Section 6

- **Q3 2025, Warren Gardiner — Exchanges recurring revenue:** “high end of our 4% to 5% guidance range” [DP6, Exchanges recurring revenue Q3 row]. This indicated FY2025 recurring growth tracking above the midpoint, but it was superseded by stronger 2026 trends.

- **Q4 2025, Warren Gardiner — Exchanges recurring revenue:** “mid-single-digit range” [DP6, Exchanges recurring revenue Q4 row]. This was the initial FY2026 recurring anchor before Q1 and Q2 outperformance.

- **Q1 2026, Warren Gardiner — Exchanges durability:** “Customers are not simply reacting to headlines.” [DP6, Exchanges durability row]. Management's point was that persistent open interest and customer adoption mattered more than a one-quarter volatility burst. The model accepts that distinction but still normalizes Q1's exceptional activity.

- **Q2 2026, Warren Gardiner — Exchanges recurring revenue:** “high single-digit range” [DP6, Exchanges recurring revenue Q2 row]. This raised the FY2026 recurring outlook after Q2 data/connectivity growth of 12%. It anchors the first forecast year for data/connectivity, not every product and not the full five-year CAGR.

[DATA GAP: The reviewed package contains no quantitative FY2026 guide for Exchanges transaction revenue, ADV, open interest, realized rate per contract, cash-equities net capture, listings revenue, or statutory segment operating margin. These inputs remain scenario assumptions rather than management guidance.]

8. Forward growth assumptions by product

All cases compound from exact TTM product dollars to 2031-06-30. Product lines are gross except the negative transaction-expense line. The management guide applies directly only to recurring exchange revenue, principally data/connectivity and listings; “n/d” means not disclosed, not zero. Product CAGRs are the exact five-year rates implied by the TTM anchors and 2031-06-30 product endpoints in Section 10.1; Sections 10.2-10.4 show the resulting year-by-year segment rollups.

8.1 Base case

Product	3-year historical CAGR	Latest disclosed growth	Management FY+1 guide	Base CAGR TTM to TTM+5y	Justification
Energy futures/options	23.4%	FY2025 16.3%	n/d	5.0%	Growth decelerates 6.0%, 5.5%, 5.0%, 4.5%, 4.0% as exceptional activity normalizes, while benchmark depth and related energy markets preserve structural growth.
Agricultural/metals futures/options	(0.3%)	FY2025 (9.3%)	n/d	3.7%	A 5.0% first-year recovery fades toward 3.0%; modest product adoption offsets historically uneven commodity cycles.
Financial futures/options	8.6%	FY2025 8.8%	n/d	6.6%	The path declines from 8.0% to 5.5%, balancing recent momentum and broader risk demand against fierce competition from entrenched financial-futures venues.
Cash equities/equity options, gross	5.3%	FY2025 9.0%	n/d	2.7%	Growth slows from 3.5% to 2.0% because volume normalizes and market structure is competitive; net economics are captured after separately modeled expenses.
OTC and other	(2.7%)	FY2025 (1.3%)	n/d	2.0%	The line stabilizes rather than regaining its older growth; no undisclosed catalyst is assumed.
Data/connectivity	5.5%	Q2 2026 12%	High single digit	7.0%	An 8.0% first year is consistent with guidance, then fades to 6.0% as pricing, users and product breadth compound off a larger base.
Listings	(1.3%)	FY2025 1.2%	High single digit recurring segment guide	2.4%	Above-99% retention supports stability, but issuer competition and cyclical issuance keep growth below total recurring guidance.
Transaction-based expenses, contra-revenue	n/a	n/d	n/d	2.8%	Expenses grow broadly with cash-equity/options activity but slightly faster than gross cash revenue over the full span, conservatively limiting net capture.

8.2 Bear case

Product	3-year historical CAGR	Latest disclosed growth	Management FY+1 guide	Bear CAGR TTM to TTM+5y	Justification
Energy futures/options	23.4%	FY2025 16.3%	n/d	0.1%	Revenue falls 5% in year one as volatility and volume normalize, then recovers only gradually despite preserved benchmark status.

Product	3-year historical CAGR	Latest disclosed growth	Management FY+1 guide	Bear CAGR TTM to TTM+5y	Justification
Agricultural/metals futures/options	(0.3%)	FY2025 (9.3%)	n/d	0.2%	A 4% decline and slow recovery reflect weak participation and the line's uneven history.
Financial futures/options	8.6%	FY2025 8.8%	n/d	0.9%	A 4% first-year decline is followed by low-single-digit growth as competing venues retain financial-risk liquidity.
Cash equities/equity options, gross	5.3%	FY2025 9.0%	n/d	(0.3%)	Gross revenue drops 6% before a weak recovery as U.S. activity normalizes and routing competition intensifies.
OTC and other	(2.7%)	FY2025 (1.3%)	n/d	(0.4%)	No structural growth emerges and the line remains slightly below TTM after five years.
Data/connectivity	5.5%	Q2 2026 12%	High single digit	3.7%	Recurring contracts cushion downside, but regulatory fee pressure, customer consolidation and AI-enabled substitution halve current growth.
Listings	(1.3%)	FY2025 1.2%	High single digit recurring segment guide	0.4%	Retention remains high, but weak issuance and competitor wins prevent meaningful growth.
Transaction-based expenses, contra-revenue	n/a	n/d	n/d	(0.1%)	Expense decline broadly follows lower cash activity, limiting the net-revenue damage but offering no artificial take-rate benefit.

8.3 Bull case

Product	3-year historical CAGR	Latest disclosed growth	Management FY+1 guide	Bull CAGR TTM to TTM+5y	Justification
Energy futures/options	23.4%	FY2025 16.3%	n/d	9.2%	Growth starts at 12% and fades to 7% as global energy complexity, related contracts and participant breadth deepen open interest.
Agricultural/metals futures/options	(0.3%)	FY2025 (9.3%)	n/d	7.2%	New products and cross-commodity participation drive a 10% rebound, then gradually normalize to 5%.
Financial futures/options	8.6%	FY2025 8.8%	n/d	10.2%	Broader adoption and successful product launches lift growth above history, with a disciplined fade from 13% to 8%.
Cash equities/equity options, gross	5.3%	FY2025 9.0%	n/d	6.3%	Healthy market activity and auction/options share sustain 8%-to-5% growth, with transaction expenses rising at the same CAGR.
OTC and other	(2.7%)	FY2025 (1.3%)	n/d	5.4%	Better adoption and adjacent clearing create growth, but the case does not assume a step-change acquisition or undisclosed product.
Data/connectivity	5.5%	Q2 2026 12%	High single digit	9.3%	Double-digit first-year growth moderates to 8% as new feeds, user expansion and pricing sustain high recurring growth.
Listings	(1.3%)	FY2025 1.2%	High single digit recurring segment guide	4.7%	A stronger issuance environment and ETF/corporate wins produce mid-single-digit growth while retention stays high.
Transaction-based expenses, contra-revenue	n/a	n/d	n/d	6.3%	Costs scale with higher cash-equity/options gross revenue; no implausible net-capture windfall is assumed.

9. Forward statutory operating-income margin assumptions

ICE discloses only segment **Operating income**, not product operating income. Accordingly, the forecast does not allocate operating margin to products. Product-specific margins would require an undisclosed transaction-expense allocation and shared-cost allocation. The table applies the exact sealed statutory metric at the segment level after the gross-to-net revenue bridge.

Case	TTM operating margin	2031-06-30 operating margin	Change	Specific mechanism
Bear	74.7%	71.5%	(320 bps)	Transaction normalization, slower data mix, regulatory/competitive pricing pressure and sticky resiliency costs reduce absorption; margin troughs at 71.0% before modest recovery.
Base	74.7%	75.3%	60 bps	Data/connectivity mix and moderate scale leverage slightly exceed wage, cyber, capacity and compliance investment; no large efficiency windfall.
Bull	74.7%	77.2%	250 bps	Higher derivative and recurring-data revenue scales across largely fixed infrastructure, while transaction expenses remain disciplined and platform investment grows below net revenue.

The bear decline greater than 100 basis points is not an arbitrary haircut. If TTM net revenue fell 10% while the $1,486 million TTM expense base initially stayed fixed, operating income would fall to about $3,801 million and margin to roughly 71.9%. That simple fixed-cost illustration is close to the modeled trough and shows why a high-margin business can still experience meaningful profit sensitivity. The bull expansion greater than 100 basis points requires sustained volume and recurring growth across several years, not one volatility quarter.

10. Five-year segment rollup and arithmetic reconciliation

10.1 Product-level 2031-06-30 build

Product / bridge line	TTM anchor	Bear 2031-06-30	Base 2031-06-30	Bull 2031-06-30
Energy futures/options, gross	$2,362.0m	$2,369.5m	$3,014.2m	$3,665.4m
Agricultural/metals futures/options, gross	$272.0m	$274.4m	$326.1m	$384.8m
Financial futures/options, gross	$742.0m	$774.7m	$1,021.2m	$1,205.2m
Cash equities/equity options, gross	$3,356.0m	$3,298.7m	$3,834.0m	$4,553.8m
OTC and other, gross	$409.0m	$400.7m	$451.6m	$531.9m
Data/connectivity	$1,094.0m	$1,311.9m	$1,534.2m	$1,706.1m
Listings	$507.0m	$517.1m	$570.8m	$637.8m
Gross product subtotal	$8,742.0m	$8,946.9m	$10,752.2m	$12,685.1m
Less: transaction-based expenses	$(2,868.0)m	$(2,849.0)m	$(3,292.5)m	$(3,891.7)m
Exchanges net revenue	$5,874.0m	$6,097.9m	$7,459.7m	$8,793.4m
Operating margin	74.7%	71.5%	75.3%	77.2%
Operating income	$4,388.0m	$4,360.0m	$5,617.1m	$6,788.5m

Each endpoint ties exactly within rounding: gross products less transaction expenses equals segment net revenue. Operating income equals net revenue multiplied by the stated statutory operating margin. No corporate expense, interest expense, tax, FIDS item, Mortgage item, MarketAxess contribution or other statutory-bridge adjustment is included.

10.2 Bear year-by-year build

Period ended	Net revenue	YoY growth	Operating margin	Operating income
TTM 2026-06-30	$5,874.0m	n/a	74.7%	$4,388.0m
2027-06-30	$5,689.3m	(3.1%)	73.0%	$4,153.2m
2028-06-30	$5,738.2m	0.9%	71.5%	$4,102.8m
2029-06-30	$5,828.5m	1.6%	71.0%	$4,138.3m
2030-06-30	$5,956.1m	2.2%	71.0%	$4,228.8m
2031-06-30	$6,097.9m	2.4%	71.5%	$4,360.0m

The bear is not a permanent exchange impairment: five-year net-revenue CAGR is 0.8%, but terminal operating income remains slightly below the TTM level because margin does not fully recover. This case captures a harsh normalization without assuming a clearing catastrophe, which would be a discontinuous tail outside a normal operating forecast.

10.3 Base year-by-year build

Period ended	Net revenue	YoY growth	Operating margin	Operating income
TTM 2026-06-30	$5,874.0m	n/a	74.7%	$4,388.0m
2027-06-30	$6,216.7m	5.8%	74.8%	$4,650.1m
2028-06-30	$6,547.1m	5.3%	75.0%	$4,910.3m
2029-06-30	$6,861.4m	4.8%	75.1%	$5,152.9m
2030-06-30	$7,171.4m	4.5%	75.2%	$5,392.9m
2031-06-30	$7,459.7m	4.0%	75.3%	$5,617.1m

The base net-revenue CAGR is 4.9%, materially below the FY2022-FY2025 9.9% segment CAGR and well below recent energy growth. The declining annual path explicitly recognizes the elevated TTM starting point. Operating-income CAGR is 5.1%, only modestly above revenue because the current margin already captures much of the franchise's scale.

10.4 Bull year-by-year build

Period ended	Net revenue	YoY growth	Operating margin	Operating income
TTM 2026-06-30	$5,874.0m	n/a	74.7%	$4,388.0m
2027-06-30	$6,499.5m	10.6%	75.2%	$4,887.6m
2028-06-30	$7,091.7m	9.1%	75.8%	$5,375.5m
2029-06-30	$7,671.9m	8.2%	76.3%	$5,853.7m
2030-06-30	$8,243.1m	7.4%	76.8%	$6,330.7m
2031-06-30	$8,793.4m	6.7%	77.2%	$6,788.5m

The bull net-revenue CAGR is 8.4%, still below the most recent three-year span. It requires several successes simultaneously: durable energy growth, faster financial and agricultural adoption, strong data pricing/users, healthy issuance, and no deterioration in cash-equity net capture. The probability is therefore lower than the bear probability despite strong current trends.

10.5 Probabilities and sensitivity

Probabilities are deliberately non-uniform: **25% bear, 55% base and 20% bull**. Recent Q1 volatility and high open-interest growth support the base, while the elevated starting point, regulatory exposure and unavailable take-rate data warrant more downside than upside tail weight. Probability-weighted 2031-06-30 net revenue is **$7,386.0 million** and probability-weighted operating income is **$5,537.1 million**, implying a 75.0% weighted margin. This is a statistical scenario blend, not a separate forecast case.

Base endpoint sensitivity	Revenue effect	Operating-income effect at 75.3% margin	Interpretation
1% change in energy terminal revenue	$30.1m	$22.7m	Most important derivatives sensitivity

Base endpoint sensitivity	Revenue effect	Operating-income effect at 75.3% margin	Interpretation
1% change in cash equities/options gross revenue	$38.3m	$28.9m before expense response	Gross sensitivity overstates net effect if incentives scale too
1% change in data/connectivity terminal revenue	$15.3m	$11.6m	High-quality recurring sensitivity
1% increase in transaction-based expenses	$(32.9)m	$(24.8)m	Direct net-capture sensitivity
100 bps change in segment operating margin	$0	$74.6m	Shows importance of fixed-cost absorption

The key unmodeled interaction is cash-equity take rate. If gross activity rises but transaction expenses rise faster, net revenue can disappoint even when the gross product line beats. Conversely, a favorable mix or pricing change could lift net capture. Because the package does not disclose absolute volume or rate-per-contract histories, the scenario spread is a more defensible representation than a point estimate masquerading as a unit model.

11. Key risks, wildcards, KPIs and invalidation signals

11.1 Risks and wildcards

Bear — activity normalization. Q1 2026 ADV rose 45% and segment revenue rose 30%, an unusually strong comparison. A quieter macro environment, lower energy volatility or fewer position rolls can reduce transaction revenue. Persistent open interest softens but does not eliminate this risk because outstanding positions need not trade every day.

Bear — benchmark substitution or share loss. Rival venues can seed competing energy, rates, metals or environmental contracts. The warning signal is not a one-month share move but sustained migration of volume and open interest, narrower participation, or customer demand for fee concessions. A loss of commercial hedgers would be more damaging than a temporary loss of speculative flow.

Bear — clearing/default event. A member default, wrong-way risk, margin-model failure, liquidity shortfall or flawed default management could create financial loss, regulatory intervention and reputational damage. Clearing concentrates risk even as it reduces bilateral exposure. The ordinary bear forecast does not quantify a catastrophic loss because the reviewed evidence does not provide a probability or exposure distribution; such an event is a separate tail-risk invalidation.

Bear — operational or cyber outage. Matching, market data and clearing must remain available during the most volatile periods, exactly when capacity is stressed. A prolonged outage can produce customer claims, regulatory action and migration to alternatives. AI-enabled attacks may increase threat sophistication even as AI improves monitoring.

Bear — regulation and market structure. Fee caps, rebate changes, tick-size reform, data-access rules, best-execution changes, benchmark regulation, bank-capital requirements or clearing mandates can alter customer economics. Cash equities/options and data fees are especially exposed. Regulation can also raise fixed compliance spend, reducing margin even when revenue is stable.

Bear/base — data commoditization and AI. Generative interfaces can lower the cost of consuming market data, and customers may combine public or licensed inputs with internal data. AI does not recreate proprietary orders, trades or cleared positions, but it can commoditize presentation, analytics and some derived data. ICE can benefit if it embeds high-quality, permissioned venue data into AI workflows; it loses if customers treat feeds as undifferentiated inputs or regulators constrain monetization. No AI revenue or cost-saving amount is disclosed, so none is embedded as a separate forecast uplift. [10K]

Base/bull — structural energy complexity. More diverse energy supply chains, LNG flows, power-market intermittency, environmental policy and geopolitical fragmentation can increase hedging needs. The bull requires these forces to create durable participation and related-contract growth, not merely headline volatility.

Bull — cross-product network expansion. New contracts can use existing clearing, connectivity and customer relationships. Successful adjacent energy, financial, agricultural or environmental products would increase capital efficiency because the platform already exists. The forecast does not name or quantify an undisclosed product launch; upside appears through higher explicit product CAGRs.

Bear/base — capital needs. Exchange infrastructure is operationally asset-light but reliability-intensive. Consolidated capex is material, and segment capex is not disclosed. Pull-forward spending may improve capacity, but chronic underinvestment would raise outage and cyber risk; chronic overinvestment without revenue could pressure returns. The operating-margin

scenarios implicitly include appropriate expense, while consolidated capex belongs in company-level synthesis.

11.2 Monitorable KPIs and invalidation rules

KPI	Base expectation	Bear invalidation signal	Bull confirmation signal
Exchanges net revenue growth	Fades from 5.8% to 4.0%	Two consecutive quarters materially below model without a clear timing reversal	Sustained high-single-digit growth after volatility normalizes
Total futures/options open interest	Positive structural growth	Persistent decline or share migration across several contract cycles	Broad-based growth across energy and financial products
ADV and revenue per contract	Volume normalizes; realized rate stable	Volume and realized rate weaken together	Participation rises without fee concessions
Energy product revenue	5.0% five-year CAGR	Multi-year contraction or benchmark share loss	Related-contract growth sustains high-single digits
Data/connectivity growth	8% first year, fading to 6%	Growth below 4% with customer/regulatory pricing pressure	High-single-digit or better growth with stable retention
Cash-equity net capture	Broadly stable	Transaction expenses outgrow gross revenue persistently	Net revenue improves without purchased share
Listings retention and wins	Retention stays high; low-single-digit revenue growth	Retention falls materially below disclosed above-99% level	Strong issuance share and mid-single-digit revenue growth
Statutory operating margin	74.8%-75.3%	Sustained below 72% absent a deliberate growth investment	Above 76% with continued reliability/capacity investment
Clearing and operational resilience	No material default loss or prolonged outage	Material loss, regulatory remediation or customer migration	Successful stress events and rising cleared participation
Regulatory/data-fee environment	Manageable compliance and pricing constraints	Adverse access/fee rule changes with measurable net-revenue impact	Stable rules and continued product monetization

The most important base-case invalidation is a combination rather than one data point: falling open interest, weakening realized revenue per unit, transaction expenses growing faster than gross revenue, and data/connectivity growth below 4%. Together, those signals would challenge both the network-effect and recurring-revenue legs of the moat. Conversely, the bull requires broad-based open-interest growth, not just energy volatility; recurring growth that persists after the current guide year; and operating leverage that does not come at the expense of resilience.

`[DATA GAP: Five-year absolute ADV, open-interest and rate-per-contract workbook history was not fetched because the official retrieval encountered a Cloudflare JavaScript challenge twice. No absolute series, market-share series or implied take rate is fabricated.]`

`[DATA GAP: ICE does not disclose Exchanges product-level operating income, product-level operating margin, segment capex, segment R&D, consolidated client retention outside NYSE listings, or an allocated clearing/default-risk capital charge in the reviewed package.]`

Scenario summary

Case	Segment TTM+5y Revenue	Exact profit metric	Segment TTM+5y Profit Margin	Segment TTM+5y Profit	Probability
Bear	$6,097.9m	Operating income	71.5%	$4,360.0m	25%
Base	$7,459.7m	Operating income	75.3%	$5,617.1m	55%
Bull	$8,793.4m	Operating income	77.2%	$6,788.5m	20%

Sources

- **[DP0A]** Reviewed `data_package.md`, Section 0a, industry disclosure inventory and KPI history; final file SHA-256 `5707bc567914adc2fd452b2f31bb49a65fd1abda71ed5d625023e6406a650504`, independently sealed in `data_package_review.md` SHA-256 `c258dfd84517e1f46339a1f16d6b3db313d8b22903aef21e44535b4c3010ab1e`.
- **[DP1]** Reviewed `data_package.md`, Section 1, reporting structure and taxonomy.
- **[DP3]** Reviewed `data_package.md`, Section 3, Exchanges historical net revenue, operating income and margin.
- **[DP3A]** Reviewed `data_package.md`, Section 3a, sealed historical statutory-profit bridge and forecast-driver ledger.

- **[DP4]** Reviewed `data_package.md`, Section 4, official product and sub-segment historicals and TTM product values.
- **[DP5]** Reviewed `data_package.md`, Section 5, most recent quarterly trends.
- **[DP6]** Reviewed `data_package.md`, Section 6, management commentary and forward guidance.
- **[DP7]** Reviewed `data_package.md`, Section 7, capital allocation and capex.
- **[DP10]** Reviewed `data_package.md`, Section 10, open data gaps, uncertainties and provenance.
- **[10K]** Intercontinental Exchange, [FY2025 Form 10-K](https://www.sec.gov/Archives/edgar/data/1571949/000157194926000004/ice-20251231.htm), filed 2026-02-05; archived SHA-256 `faf40e70d4ad0b7f16c504287355f5e32ee9aea6ed98e1d48a38172a5d901ad9`.
- **[10Q]** Intercontinental Exchange, [Q2 2026 Form 10-Q](https://www.sec.gov/Archives/edgar/data/1571949/000157194926000011/ice-20260630.htm), filed 2026-07-30; archived SHA-256 `b3e7ba77f31207c587b13dcbe955ddd9871d2ee9ba95072d22071786164e303b`.
- **[Q2R]** Intercontinental Exchange, [Q2 2026 results release](https://ir.theice.com/press/news-details/2026/Intercontinental-Exchange-Reports-Second-Quarter-2026/default.aspx), 2026-07-30; SEC exhibit archived SHA-256 `f060ab01ea30aa64fbd9378c31d0f38530536511621b87eb86292da53d220e4f`.

Appendix B2 - Fixed Income and Data Services

Fixed Income and Data Services — Segment Deep Dive

Company: Intercontinental Exchange, Inc. **Ticker:** ICE **Information cutoff:** 2026-08-14 SGT **Forecast anchor:** TTM ended 2026-06-30 **Exact horizon:** 2031-06-30, five calendar years **Currency:** USD; figures are USD millions unless stated otherwise **Sealed profit metric: Operating income Authority:** Research only. `trade_execution_authorized=false`. No portfolio, ranking, sizing, or trade conclusion is provided.

0. Segment boundary and taxonomy note

Fixed Income and Data Services, or FIDS, contains four issuer-disclosed revenue lines: fixed-income execution through ICE Bonds; credit-default-swap clearing through ICE Clear Credit; fixed-income data and analytics; and data and network technology. The last line was called “other data and network services” before FY2025. ICE stated that the FY2025 renaming better describes the products and did not change measurement or classification, so FY2021-FY2025 dollar comparisons remain valid. The broader three-segment reporting structure is stable. MarketAxess is not inside the reported historical perimeter: ICE announced the acquisition on 2026-07-30, it remains subject to stockholder and regulatory approvals, and closing is expected in H1 2027. This appendix therefore shows organic ICE FIDS economics separately from an illustrative acquisition bridge and never represents the transaction as completed. [DP §1; DP §9; S1; S2]

1. What this segment actually is

FIDS is a fixed-income information and workflow infrastructure business with a smaller transaction component. It helps a bank, asset manager, wealth platform, insurer, pension fund, broker-dealer, corporate treasury, index fund, regulator, or service provider identify a security, establish a defensible value, understand liquidity and risk, connect to counterparties and data sources, execute or clear selected instruments, and preserve evidence for post-trade operations and compliance. The economic center is not a single terminal or venue. It is the combination of instrument data, pricing judgments, indices, analytical models, connectivity, protocols, and regulated infrastructure embedded at multiple points in a client workflow.

Fixed-income execution

ICE Bonds provides electronic markets supporting click-to-trade, request-for-quotation, auctions, and portfolio auctions or trading. The current ICE execution franchise is modest relative to the segment: exact TTM revenue was $124 million, only 4.9% of FIDS. It is nevertheless strategically important because execution creates workflow adjacency and transaction observations that can improve liquidity analytics and post-trade products. Revenue is transaction-sensitive and execution fees are presented net of rebates. FY2025 revenue increased 6.8% to $125 million, but the FY2023-FY2025 CAGR was only 0.4%; a five-year forecast cannot treat one stronger year as a new structural rate. [DP §4, FIDS fixed-income-execution row; DP §3, FIDS table; S1]

ICE’s existing protocols appear strongest in retail and wealth bond workflows and selected institutional use cases. Customers can multi-home, route an RFQ to several venues, trade bilaterally with dealers, use a dealer’s own platform, or remain partly voice- and message-based. The substitution threat is therefore not only another electronic venue. It is also the persistence of bilateral trading and the ability of large clients to use several venues while directing each liquidity need to the protocol with the best expected outcome.

CDS clearing

ICE Clear Credit clears eligible single-name and index CDS and related index options. The 2025 Form 10-K described support for more than 700 single-name reference entities and more than 180 index CDS instruments. The product earned $357 million in exact TTM revenue, or 14.1% of FIDS. Revenue combines clearing fees with interest income on certain clearing-margin deposits, which makes the line sensitive to cleared notional, client and dealer participation, rebate economics, collateral balances, and short-term rates. FY2025 notional cleared, including index options, rose to $24.9 trillion from $19.8 trillion, yet revenue fell 1% because lower rates reduced net interest income. That divergence is a warning against using volume alone as the forecast driver. [DP §4, FIDS CDS-clearing row; S1]

The clearing moat is stronger than the execution moat because a regulated central counterparty requires licenses, member connectivity, default-management capability, risk models, capital, operational resilience, and trust. The business can still be impaired by dealer-capital constraints, regulatory changes, lower net interest on collateral, or a major operational or

risk-management failure. The safest forecast therefore gives CDS clearing modest structural volume growth but does not extrapolate current rates or assume revenue grows in line with cleared notional.

Evaluated pricing, reference data, indices, and analytics

Fixed-income data and analytics is the largest product line: exact TTM revenue was $1.284 billion, 50.8% of FIDS. ICE provides end-of-day and continuous evaluated pricing for more than three million fixed-income securities spanning roughly 150 countries and 80 currencies, including sovereign, corporate, municipal, mortgage-backed, asset-backed, and leveraged-loan instruments. Reference data supplies descriptive instrument attributes used to identify and organize those securities. Pricing and reference data form the foundation for ICE's fixed-income index complex. Analytics include best-execution services, liquidity indicators, fixed-income and derivatives portfolio analytics, ETF Hub, compliance support, and newer sustainability datasets. [DP §4, FIDS fixed-income-data-and-analytics row; S1]

This line solves a particularly difficult fixed-income problem: many bonds trade infrequently and are heterogeneous in coupon, maturity, call structure, seniority, collateral, issuer, currency, and liquidity. A defensible valuation therefore requires normalized reference data, evaluated pricing processes, market observations, model governance, and audit trails. Clients use the output not only to decide whether to trade but also for NAV calculation, fund accounting, risk, collateral, performance measurement, best-execution review, regulatory reporting, and benchmark construction. Once the same identifiers and prices flow through several internal systems, switching becomes a multi-department project rather than a simple vendor change.

Index economics sit inside this product line and benefit from the growth of index-linked assets, new index products, and the need for transparent, governable methodologies. ETF assets under management linked to ICE indices increased from $794 billion around Q4 2025 to $922 billion at Q2 2026, up 29% year over year. That is a valuable adoption KPI, but revenue does not move one-for-one with AUM: fee schedules, product mix, minimums, licensing structures, and market levels matter, and the reviewed package does not disclose a stand-alone index-revenue or fee-rate bridge. The scenario model therefore uses index AUM as a directional driver inside the data-and-analytics growth rate rather than converting it into fabricated dollars. [DP §0a, industry KPI history; DP §10]

Feeds, desktops, networks, cloud, and connectivity

Data and network technology produced exact TTM revenue of $763 million, 30.2% of FIDS. ICE Global Network provides secure, low-latency connectivity to more than 150 trading venues and more than 750 data sources. Consolidated feeds aggregate venue and news content through a common API. Desktop products serve commodity and energy traders, risk managers, financial advisers, wealth managers, and retail traders. ICE also reports a privacy-protected instant-messaging network with more than 130,000 users. These offerings are largely recurring and use a common sales force with the fixed-income data products, creating plausible cross-sell and bundling opportunities. [DP §4, FIDS data-and-network-technology row; S1]

"Cloud" in this context should not be mistaken for a generic public-cloud reseller. Customers buy reliable delivery, normalized feeds, managed access, network performance, security, entitlements, and integration with ICE content and venues. Some deployment may use cloud technologies, but the economic promise is the service level and workflow, not the underlying compute label. ICE's 2026 capex guide rose to approximately $850 million because hardware, data-center, and real-estate spending was pulled forward from 2027. That spending is consolidated rather than disclosed for FIDS, yet it confirms that capacity, redundancy, and physical infrastructure remain important. [DP §6; DP §9]

Pricing model and go-to-market

The revenue model has two distinct parts. Data and analytics plus data and network technology are recurring, generally subscription-based offerings. In FY2025, recurring FIDS revenue was $1.956 billion, or 80.9% of the $2.419 billion segment total; transaction revenue was $463 million, or 19.1%. Year-end annual subscription value, or ASV, was $1.990 billion, up 8.3%, and represented nearly all segment data-services revenue. Subscriptions may be billed monthly, quarterly, or annually, while transaction and clearing products are tied to activity and may be net of rebates. Ten percent of FY2025 FIDS revenue was billed in pounds sterling or euros. [DP §3, FIDS table; S1]

Sales are enterprise-led and integration-heavy. The common sales force can bundle data, indices, analytics, feeds, desktops, messaging, and network access. Implementation requires data mapping, entitlements, vendor-management review, cybersecurity diligence, legal licensing, API or feed integration, validation, and sometimes regulatory sign-off. These frictions can lengthen sales cycles, but they also make established deployments sticky. The central missing disclosure is retention: ICE does not provide consolidated FIDS client retention, net revenue retention, price realization, seat counts, or a clean ASV bridge separating new sales, upsell, price, churn, and FX. Strong ASV and recurring growth therefore support—but do not

prove—pricing power.

2. Current economics

FY2025 FIDS revenue was $2.419 billion and statutory operating income was $933 million, a 38.6% margin. The exact TTM ended 2026-06-30 was $2.528 billion of revenue and $1.017 billion of statutory operating income, a 40.2% margin. H1 2026 revenue grew from $1.193 billion to $1.302 billion and operating income from $459 million to $543 million; the H1 margin expanded from 38.5% to 41.7%. The latest quarter produced $645 million of revenue, up 8% year over year, at a 42% statutory operating margin. The historical and forecast metric throughout this appendix is **Operating income**, the issuer-disclosed common segment measure sealed in `statutory_bridge.json`; it is not adjusted EBITDA or adjusted operating income. [DP §3, FIDS table; DP §3a; DP §5]

The TTM product mix was $124 million fixed-income execution, $357 million CDS clearing, $1.284 billion fixed-income data and analytics, and $763 million data and network technology. The four figures sum exactly to $2.528 billion. Recurring data-related lines represented 81.0% of that total based on the product classification used by ICE, while execution and CDS clearing represented 19.0%. The mix provides stability, although part of CDS clearing revenue is rate-sensitive and data growth can be affected by FX, client budgets, and price pressure. [DP §4, four FIDS product rows]

The segment is operationally scalable but not costless to grow. FY2025 operating expense was $1.486 billion, including $344 million of depreciation and amortization and $2 million of acquisition and integration cost. Other operating expense was $1.140 billion. TTM operating expense was $1.511 billion, derived directly as $2.528 billion revenue less $1.017 billion statutory operating income. ICE does not disclose FIDS stand-alone capex, R&D, capitalized software, or product-level operating profit. The model therefore does not assign invented margins to the four product lines. It forecasts product revenue bottom-up, then applies an evidence-based segment statutory margin. [DP §3, FIDS table; S1]

The margin path has been notable: 28.1% in FY2021, 34.4% in FY2022, 36.4% in FY2023, 36.7% in FY2024, 38.6% in FY2025, and 40.2% TTM. Part reflects revenue scale and a richer recurring mix; part reflects prior acquisition integration and cost control. The trajectory does not justify extrapolating another 1,200 basis points. Network capacity, data acquisition and licensing, cybersecurity, regulated operations, product development, sales coverage, and depreciation all require reinvestment. The base case therefore allows only 230 basis points of standalone expansion over five years, from 40.2% to 42.5%.

Capital intensity is best described as low in physical inventory but meaningful in technology and acquired intangibles. ICE must maintain data centers, network links, software, analytical models, desktops, APIs, cyber defenses, clearing infrastructure, and business continuity. Some content is licensed from third parties, so incremental data revenue can carry royalties or source costs. Corporate capex plus capitalized software was $873 million TTM, and FY2026 capex guidance was about $850 million, but no reviewed source allocates that amount to FIDS. A forecast that treats subscription revenue as pure profit would understate the capacity and governance spending required to keep an institutional data network trusted. [DP §7; DP §9; S1]

3. Unit economics and reinvestment

How recurring revenue becomes operating income

The recurring engine begins with content and infrastructure. ICE acquires or creates pricing observations, reference fields, index methodologies, analytics, venue data, and network connections. It cleans, normalizes, validates, governs, and distributes that content through feeds, APIs, desktops, messaging, and direct network links. The initial and continuing costs include data licenses, specialized staff, models, infrastructure, entitlements, vendor audits, customer support, cybersecurity, compliance, and depreciation. Once the platform is built, an additional entitlement, dataset, index license, or customer connection can carry attractive contribution margin, especially when sold through the common FIDS sales force.

The most favorable unit-economic outcome is a multi-product client that buys evaluated pricing, reference data, indices, analytics, and delivery together. Shared identifiers reduce integration friction, while the network and desktop place ICE content closer to the user. Cross-sell can raise revenue per client without proportionate acquisition cost. The least favorable outcome is a customer buying a replaceable feed or basic analytical wrapper with little proprietary content, strong procurement leverage, and the technical ability to switch or build in-house.

Pricing power comes from four sources: unique or difficult-to-replicate content, independent valuation status, workflow criticality, and integration depth. It is constrained by large-client procurement, multi-vendor strategies, regulatory scrutiny of data fees, the availability of substitute datasets, and clients’ ability to create internal analytics. ASV growth of 8.3% at FY2025

and Q2 2026 recurring growth of 10% are encouraging, but without retention and price-volume disclosure they cannot be decomposed into price, new logos, cross-sell, FX, or churn. The base forecast assumes combined price, content, and adoption growth rather than claiming a specific price increase.

Transaction and clearing economics

Execution revenue depends on trading volume, protocol mix, market share, fee per unit, fixed distribution charges, rebates, and customer participation. Portfolio trading, automated execution, block trading, and dealer-initiated liquidity can expand electronic penetration, but fee compression can offset volume. MarketAxess's Q2 2026 total-credit variable fee per million fell 7% year over year even as it discussed product adoption, demonstrating that protocol and product mix can lower take rate. [S4]

CDS clearing has higher barriers but more complex drivers. Clearing fees can scale on fixed regulatory and technology infrastructure, yet member risk management, default resources, surveillance, cyber resilience, and regulatory compliance are ongoing costs. Net interest on collateral adds earnings when balances and rates are favorable, but it can fall even when notional grows. The bear case combines lower rates with modest activity pressure; the base case assumes structural clearing demand and product expansion mostly offset lower interest economics; the bull case requires both stronger cleared activity and sustained participation.

What moves margin

Margin rises when recurring revenue grows faster than headcount and infrastructure, clients adopt multiple products, data-center investments lift capacity efficiently, the mix shifts toward higher-contribution data and indices, and acquisitions remove duplicate costs without damaging revenue. Margin falls when fee concessions rise, source-data and cloud or telecom costs increase, a cyber or operational event requires remediation, sales and product spending run ahead of adoption, acquisition amortization and integration charges increase, or clients reduce vendor count.

The scenario model deliberately keeps purchase-accounting amortization and integration expense in statutory operating income. Management's announced adjusted-EPS accretion excludes acquisition-related intangible amortization and transaction and integration expense, so it is not a substitute for the sealed metric. Interest on acquisition debt is below segment operating income and belongs in the consolidated statutory bridge. This separation prevents two common errors: hiding acquisition cost in an adjusted margin and charging financing twice inside both segment profit and consolidated interest expense.

4. Competitive dynamics and substitution

Execution

ICE Bonds competes with Tradeweb, MarketAxess until any closing, Bloomberg and other electronic venues, dealer platforms, voice brokers, bank consortia, and bilateral trading. Different protocols win different trades: RFQ can work for dealer competition; order books or click-to-trade suit more liquid instruments; portfolio trading can transfer baskets efficiently; auctions and all-to-all protocols can locate alternative liquidity. Clients can multi-home and route opportunistically, limiting venue lock-in unless liquidity and workflow become self-reinforcing.

MarketAxess is the proposed answer to ICE's institutional execution gap. Its network adds institutional investors and broker-dealers, Open Trading, X-Pro, CP+ pricing, block and portfolio trading, and proprietary transaction data. Strategically, the combination could connect ICE's retail and wealth execution, pricing, reference data, indices, analytics, and network infrastructure with a larger institutional cash-bond venue. Competitively, it could also provoke dealer resistance, customer concern about data use, or accelerated investment by Tradeweb, Bloomberg, and other platforms. The case must be earned through client adoption, not inferred from product breadth. [S2; S3]

Pricing, reference data, indices, and analytics

ICE competes with large global market-data vendors, financial consortia, individual financial institutions, informal industry sources, and index and portfolio-analytics providers. Relevant alternatives include Bloomberg, LSEG or Refinitiv, S&P Global, FTSE Russell, MSCI, FactSet, Morningstar, SIX, Solactive, and specialist vendors, with exact competition varying by product. A large asset manager or bank may subscribe to several vendors and maintain internal pricing models. The customer's switching cost is highest where data identifiers and valuations feed accounting, risk, compliance, benchmarks, and downstream client reports; it is lower for discretionary analytics or interfaces.

Index competition turns on methodology quality, brand, distribution, asset-manager relationships, benchmark governance, licensing price, and the installed base of products and AUM. Passive adoption can produce durable fees, but asset managers can launch products on competing indices, negotiate fees, or bring methodology work inside. Benchmark regulation creates cost and credibility barriers while also requiring transparent governance and, in some jurisdictions, non-discriminatory access. ICE Data Indices applies IOSCO principles and is recognized or seeking recognition under U.K. and EU benchmark rules. [S1]

Feeds, desktops, networks, and cloud connectivity

ICE Global Network competes with other financial extranets and managed-connectivity providers. Consolidated feeds compete with vendor feeds and direct venue connections. Desktops compete with Bloomberg Terminal, LSEG Workspace, FactSet, S&P Capital IQ, specialist commodity and energy tools, and increasingly browser- or API-first applications. Public cloud can reduce the cost of hosting and distribution for new entrants, while open APIs make it easier for customers to combine sources. ICE's defense is not generic software; it is trusted content, low-latency and resilient connectivity, entitlements, breadth of venue and source access, client support, and integration with existing ICE workflows.

The substitution threat is vendor consolidation in both directions. A client can reduce vendors and award more spend to a broad incumbent, which benefits ICE if it is the consolidator. The same client can choose Bloomberg, LSEG, or another full-suite provider instead. ICE's common sales force and broad delivery network help, but no disclosed FIDS retention metric proves it is consistently winning consolidations.

Regulation, licensing, and data rights

Regulation is both barrier and burden. ICE Data Pricing & Reference is registered with the SEC under the Investment Advisers Act for evaluated pricing and advisory services. ICE's index business follows benchmark principles and operates within U.K. and EU benchmark regimes. ICE Clear Credit is a regulated clearing house. These obligations require records, compliance, oversight, operational resilience, and defensible methods, increasing the cost of entry. They can also restrict product design, raise expense, and expose ICE to sanctions or liability when data, prices, indices, or systems fail. [S1]

Licensing is a less visible vulnerability. ICE licenses and redistributes some third-party data and content; suppliers can audit usage, change terms, assert additional fees, or withdraw access. Some inputs may be exclusive to particular suppliers. A strong interface cannot fully protect economics if a critical source becomes more expensive or unavailable. Conversely, proprietary venue, clearing, and workflow observations are harder for rivals to recreate. The moat must therefore be evaluated dataset by dataset rather than treating all ICE data as owned.

5. Segment moat and durability

FIDS has a defensible but uneven moat. The strongest pieces are regulated CDS clearing, embedded evaluated-pricing and reference-data workflows, governed indices with linked assets, and the physical and software network that connects many venues and sources. These assets benefit from scale, trust, workflow integration, and in some cases network effects. The weakest pieces are stand-alone interfaces, commodity analytics, and execution protocols without differentiated liquidity. Those can be replicated, multi-homed, or displaced more readily.

Evaluated pricing illustrates the moat's dual nature. A client choosing an independent price for fund accounting or risk wants coverage, methodological consistency, controls, exception handling, support, and an audit trail. Replacing the vendor touches multiple systems and control owners. That creates switching cost. Yet the price is still an estimate, and customers can compare vendors or build internal models. AI can make that comparison and internal modeling cheaper. ICE's defense is the quality and governance of inputs and outputs, not the mere existence of a pricing algorithm.

Reference data can be even stickier because identifiers and attributes propagate through trade capture, risk, accounting, compliance, reporting, and client statements. Errors are costly, and schema changes can break downstream systems. Indices add governance and installed-product effects: once funds, mandates, and derivatives reference an index, change requires legal, operational, and investor work. Network connectivity adds operational switching cost because latency, resilience, security, and entitlements must be tested. None of these barriers is absolute, but together they create a credible five- to ten-year defense.

The MarketAxess combination could deepen the moat by joining institutional transaction observations with ICE pricing and reference data and by connecting pre-trade analytics to execution and post-trade review. It could also weaken perceived neutrality if clients fear their trading data will be used across ICE products or if dealers resist the consolidated network. Integration that prioritizes cross-sell over execution quality would destroy the asset it intends to enhance. The decisive

evidence will be retained clients, market share by product, fee per million, Open Trading liquidity, cross-product adoption, and data-right permissions after closing.

AI commoditization and enhancement

AI improves FIDS where it lowers the cost of extracting, matching, validating, and explaining data. Potential uses include entity resolution, document parsing, reference-field completion, anomaly detection, evaluated-price challenge, liquidity prediction, dealer selection, surveillance, support, code development, natural-language search, and workflow automation. MarketAxess already describes CP+ as an AI-driven pricing engine and uses analytics within trading protocols. ICE can combine a broad data estate with domain expertise and regulated controls to make AI outputs more useful and auditable. [S3]

The disruption case is equally concrete. ICE itself warns that AI may commoditize some data-pricing products and allow clients to build in-house pricing capabilities, reducing evaluated-pricing demand and pressuring fees. An AI interface can also make it easier to substitute one data feed for another, reducing desktop lock-in. The bear case assumes this pressure appears first in basic analytics and less differentiated prices, not in regulated clearing or unique data rights. [S1]

AI does not automatically recreate proprietary order flow, clearing positions, licensed benchmarks, contractual reference data, or a resilient network. It also raises accuracy, transparency, bias, intellectual-property, privacy, and cyber risks. In regulated valuations, an opaque or hallucinated answer is not acceptable merely because it is inexpensive. The durable advantage will belong to providers that combine unique inputs, explicit rights, model governance, provenance, and reliable delivery. A five-year bull case requires measurable monetization or retention improvement from AI; it does not grant a generic “AI premium.”

6. Historical growth rates

The table reproduces reviewed data-package dollars. “Three-year CAGR” is FY2023-FY2025, a two-year compounding interval across three reported year-end observations. The longer FY2021-FY2025 CAGR is provided in the discussion to prevent acquisition-era or rebound effects from dominating interpretation. No historical dollars were back-solved.

Product or sub-segment	FY2023 revenue	FY2024 revenue	FY2025 revenue	Three-year CAGR	Most recent YoY	Data-package cite
Fixed Income and Data Services total	$2,231m	$2,298m	$2,419m	4.1%	5.3%	DP §3, FIDS revenue row
Fixed-income execution	$124m	$117m	$125m	0.4%	6.8%	DP §4, FIDS fixed-income-execution row
CDS clearing	$360m	$343m	$338m	(3.1%)	(1.5%)	DP §4, FIDS CDS-clearing row
Fixed-income data and analytics	$1,118m	$1,177m	$1,234m	5.1%	4.8%	DP §4, FIDS fixed-income-data-and-analytics row
Data and network technology	$629m	$661m	$722m	7.1%	9.2%	DP §4, FIDS data-and-network-technology row

Arithmetic checks all pass within the mandated 2% tolerance: $2,298m × 1.0527 = $2,419m; $117m × 1.0684 = $125m; $343m × 0.9854 = $338m; $1,177m × 1.0484 = $1,234m; and $661m × 1.0923 = $722m. Rounding explains only immaterial differences.

Across FY2021-FY2025, total FIDS revenue compounded at 6.5%, execution at 24.5%, CDS clearing at 15.2%, data and analytics at 3.3%, and data and network technology at 6.7%. The high execution and CDS rates are heavily influenced by low FY2021 bases; the more recent three-year figures are more conservative anchors. Exact TTM product revenue was $124 million, $357 million, $1.284 billion, and $763 million, respectively. [DP §4, four FIDS product rows]

7. Management guidance

The reviewed data package contains four FIDS-specific forward statements, reproduced below from the already verified transcript excerpts. No transcript was re-fetched for these quotations.

- **Q3 2025, FIDS recurring revenue — DP §6 row “FIDS recurring revenue.”** Warren Gardiner said “between 5% and 6%.” This set a mid-single-digit near-term base before 2026 acceleration.
- **Q4 2025, network growth — DP §6 row “FIDS network growth.”** Gardiner said “another year of high single-digit growth.” This supports a higher base CAGR for data and network technology than for the segment overall.

- **Q1 2026, FIDS infrastructure — DP §6 row "FIDS infrastructure."** Gardiner said the network "cannot be replicated quickly or cheaply." This is a structural moat claim that must be tested against retention, capacity, service quality, and competitive wins.
- **Q2 2026, FIDS recurring revenue — DP §6 row "FIDS recurring revenue."** Gardiner guided to "7% to 8%," with the second half expected toward the low end. This anchors the first forecast year but also warns against carrying Q2's 10% recurring growth unchanged for five years.

Management also said it expects $100 million of annualized MarketAxess expense synergies, with one-third in year one, two-thirds in year two, and the full run rate in year three, and expects adjusted-EPS accretion in the first full year after close. Revenue acceleration is an aspiration without disclosed dollar or timing guidance and was described as requiring time and investment. The base case therefore assumes no explicit revenue synergy, includes only $90 million of the $100 million cost target in horizon statutory operating income, and separately charges estimated amortization and integration cost. [DP §6; S2]

8. Forward growth assumptions

All organic forecasts compound from the exact TTM product bases to 2031-06-30. Annual paths are intentionally non-linear: current recurring growth decelerates as comparisons normalize, while execution and CDS remain more cyclical. The CAGRs shown below are the result of the year-by-year paths, not a fiscal-year shortcut.

Base case — organic ICE FIDS

Product	Three-year historical CAGR	Latest disclosed signal	Management FY+1 guide	Base CAGR TTM to TTM+5y	Justification
Fixed-income execution	0.4%	FY2025 +6.8%; TTM $124m	No product-dollar guide	3.0%	Electronic adoption and protocol investment help, but multi-homing, fee pressure, and a flat recent three-year base cap growth.
CDS clearing	(3.1%)	FY2025 (1.5%); TTM $357m	No product-dollar guide	2.0%	Cleared activity grows modestly, partly offset by lower collateral interest and rebate economics.
Fixed-income data and analytics	5.1%	FY2025 +4.8%; Q2 recurring +10%	FIDS recurring 7% to 8%	6.0%	Pricing/reference demand, index AUM, content and analytics support growth, with deceleration from the current recurring pace.
Data and network technology	7.1%	FY2025 +9.2%; Q2 +11%	High-single-digit network growth	8.0%	Capacity demand, feeds, desktops and connectivity outgrow FIDS, but scale and competition moderate later years.

The base year-by-year growth paths are 4%, 4%, 3%, 2%, and 2% for execution; 3%, 3%, 2%, 1%, and 1% for CDS; 8%, 7%, 6%, 5%, and 4% for data and analytics; and 10%, 9%, 8%, 7%, and 6% for data and network technology. This explicitly bridges Q2 strength to a 6.0% total organic FIDS CAGR rather than assuming an abrupt unexplained step-down.

Bear case — organic ICE FIDS

Product	Three-year historical CAGR	Latest disclosed signal	Management FY+1 guide	Bear CAGR TTM to TTM+5y	Justification
Fixed-income execution	0.4%	FY2025 +6.8%; TTM $124m	No product-dollar guide	(2.0%)	Fee compression, bilateral resilience, and weak share offset electronic volume growth.
CDS clearing	(3.1%)	FY2025 (1.5%); TTM $357m	No product-dollar guide	(1.0%)	Falling rates reduce collateral income while client clearing capacity and activity remain soft.
Fixed-income data and analytics	5.1%	FY2025 +4.8%; Q2 recurring +10%	FIDS recurring 7% to 8%	3.0%	Procurement pressure and AI substitution hit basic pricing and analytics; regulated and embedded products remain positive.
Data and network technology	7.1%	FY2025 +9.2%; Q2 +11%	High-single-digit network growth	4.0%	Capacity demand persists, but vendor consolidation, public-cloud alternatives, and slower client budgets halve current growth.

The bear paths are 0%, (1%), (2%), (3%), and (4%) for execution; 1%, 0%, (1%), (2%), and (3%) for CDS; 5%, 4%, 3%, 2%, and 1% for data and analytics; and 6%, 5%, 4%, 3%, and 2% for network technology. The bear is not a sudden collapse: embedded recurring products still grow, while transaction and less differentiated layers weaken.

Bull case — organic ICE FIDS

Product	Three-year historical CAGR	Latest disclosed signal	Management FY+1 guide	Bull CAGR TTM to TTM+5y	Justification
Fixed-income execution	0.4%	FY2025 +6.8%; TTM $124m	No product-dollar guide	6.0%	Protocol expansion and electronification lift share without relying on MarketAxess revenue.
CDS clearing	(3.1%)	FY2025 (1.5%); TTM $357m	No product-dollar guide	5.0%	Higher cleared activity, index options, and client adoption outweigh normalization in collateral yields.
Fixed-income data and analytics	5.1%	FY2025 +4.8%; Q2 recurring +10%	FIDS recurring 7% to 8%	8.0%	Pricing/reference adoption, index-linked assets, new analytics and AI-enhanced workflows sustain high-single-digit growth.
Data and network technology	7.1%	FY2025 +9.2%; Q2 +11%	High-single-digit network growth	10.0%	Network capacity, feeds, APIs, desktops and cross-sell sustain near-current momentum with operating reliability intact.

The bull paths are 7%, 7%, 6%, 5%, and 5% for execution; 6%, 6%, 5%, 4%, and 4% for CDS; 10%, 9%, 8%, 7%, and 6% for data and analytics; and 12%, 11%, 10%, 9%, and 8% for network technology. The bull requires continued product adoption and share gains; it is not simply the base case with a higher terminal multiple.

Pending MarketAxess acquisition bridge

The transaction terms are source-bound: ICE announced approximately **$6.0 billion of equity consideration** and approximately **$5.7 billion of enterprise value**, with 100% cash consideration financed through newly issued debt consisting of bonds, a term loan, and commercial paper. Management targets **$100 million of annual run-rate expense synergies** within three years and gross leverage of 3.0x or below within **18-24 months** after an expected H1 2027 close. The deal has not closed. [DP §8-§9; S2]

The reviewed data package now source-binds MarketAxess's reported baseline to SEC Companyfacts. FY2025 revenue was $846.268 million; H1 2026 revenue was $451.795 million versus $428.038 million in H1 2025. Exact derived TTM revenue was therefore $870.025 million. FY2025 operating income was $341.838 million; H1 2026 operating income was $190.798 million versus $180.246 million in H1 2025. Exact derived TTM operating income was therefore $352.390 million, a 40.5% margin. The formulas are $846.268m - $428.038m + $451.795m and $341.838m - $180.246m + $190.798m. These are reported target baseline facts, not ICE historicals, post-close purchase-accounted profit, or part of the reported FIDS perimeter. [DP §9, MarketAxess reported operating baseline; S4; S5]

Acquisition case	Exact modeled close	Horizon acquisition revenue	Modeled stand-alone margin	Stand-alone operating income	Cost synergy	Horizon amortization	Horizon acquisition operating income
Bear	2028-01-15; about 12 months after base	$865m after $50m revenue dis-synergy	36.3%	$314m	$50m	$(80)m	$284m
Base	2027-01-01 modeling convention	$1,084m; no revenue synergy	42.0%	$455m	$90m	$(55)m	$490m
Bull	2027-01-01; earliest H1 boundary	$1,296m including $75m analyst revenue synergy	45.0%	$583m	$100m	$(30)m	$653m

The table now exposes the horizon arithmetic: stand-alone operating income plus cost synergy less incremental purchase-accounting amortization equals acquisition operating income. The base refuses to count a revenue synergy that management has not quantified. Its $90 million cost-save contribution is below the announced $100 million target to allow normal reinvestment and dis-synergy leakage. The bear assumes client and dealer friction removes $50 million of horizon revenue and only half the cost target is realized; because its stand-alone margin is applied to revenue after that dis-synergy, the $50 million revenue loss is not deducted a second time. The bull includes $75 million of analyst-assumed revenue synergy, clearly separate from management guidance, and requires adoption across execution, data, and network products. Horizon integration expense is set to zero after the stated three-year synergy period; the $80 million, $55 million, and $30

million horizon charges are scenario sensitivities for continuing incremental amortization only. The preliminary purchase-price allocation does not yet exist, so these estimates are not company guidance. This does not block the controlling organic/no-close forecast; it keeps the conditional deal-close operating-income outputs non-controlling until source-bound purchase-accounting disclosure is available.

9. Forward operating-income margin assumptions

The exact metric is **Operating income**. Organic product margins are not disclosed, so a fabricated product-profit allocation would be less reliable than a segment-level statutory margin. The model therefore sums product revenue first and applies a transparent standalone FIDS margin path. MarketAxess contribution is then added through a separate statutory bridge. Financing interest is excluded from segment operating income and must be forecast below operating income by the synthesis worker.

Case	TTM operating margin	Year 1	Year 2	Year 3	Year 4	Horizon operating margin	Mechanism
Bear organic	40.2%	39.5%	39.0%	38.5%	38.3%	38.0%	Pricing pressure, AI substitution, source and infrastructure cost, and adverse transaction mix outweigh scale.
Base organic	40.2%	40.5%	41.0%	41.5%	42.0%	42.5%	Recurring mix, cross-sell and scale fund continued network, data and compliance reinvestment.
Bull organic	40.2%	41.0%	42.0%	43.0%	44.0%	44.5%	Strong data/network mix and operating leverage, while capacity and product spending remain adequate.

The bear declines 220 basis points from TTM because slower recurring growth reduces fixed-cost absorption and clients push harder on fees. The base expands 230 basis points, materially less than the FY2021-TTM improvement, because the current 40.2% margin already captures substantial scaling. The bull adds 430 basis points and is the maximum credible case: larger expansion would understate the need for data licensing, infrastructure, cyber, regulatory, and product investment.

The acquisition contribution has a lower margin in the first post-close periods because integration, purchase-accounting amortization, and investment arrive before the full cost-save run rate. In the base schedule, the exact 2027-01-01 modeling convention supplies six months of target revenue through 2027-06-30: estimated acquired operating income rises from $95 million on a partial-year $435 million revenue contribution in Year 1 to $490 million on $1.084 billion in Year 5. A close later in H1 2027 would reduce Year 1 contribution. This is not management guidance. It is an explicit statutory underwriting bridge designed to avoid confusing adjusted-EPS accretion with GAAP operating economics.

Leverage, capital allocation, and share-count effects

Debt financing does not dilute ICE shares at closing: the announced consideration is cash, not ICE stock. The acquisition can nevertheless affect per-share value through interest expense, repurchase capacity, SBC offset, and financial flexibility. ICE had 571 million TTM diluted shares, $19.846 billion of debt excluding leases, and $1.067 billion cash at 2026-06-30. It expects opening pro forma gross leverage near 3.4x and targets 3.0x or less within 18-24 months. [DP §7-§8]

At an illustrative 5.5% cash cost, $6.0 billion of gross incremental debt issuance would create about $330 million of annual pre-tax interest before deleveraging. A 100-basis-point rate difference changes that gross burden by roughly $60 million annually. These are sensitivities, not financing guidance. They belong below segment operating income. The approximately $6.0 billion equity consideration is the gross cash paid to target shareholders, while the approximately $5.7 billion enterprise value reflects the target's net-cash/debt position. Neither number is, by itself, the final pro forma net-debt increase. The debt schedule must reconcile gross consideration, acquired cash and debt, transaction fees, financing structure, interest timing, and subsequent paydown; otherwise using $6.0 billion for both purchase consideration and net enterprise debt would overstate leverage economics.

Management also increased baseline repurchases from $350 million to $400 million per quarter. At the sealed $155.24 ICE share price, $1.6 billion would equal about 10.3 million gross shares before SBC, price changes, and other issuance. That arithmetic is not a forecast: the bear assumes repurchases may be reduced to preserve ratings and deleverage, the base

treats the baseline as conditional on cash generation, and the bull assumes it continues without delaying the leverage target. The synthesis must model shares and debt together; it must not assume both maximum buybacks and accelerated debt paydown from the same cash.

10. Segment rollup and five-year scenarios

Organic ICE FIDS product rollup

Case	Fixed-income execution	CDS clearing	Fixed-income data and analytics	Data and network technology	Organic horizon revenue	Organic CAGR
Bear	$112m	$339m	$1,488m	$928m	$2,867m	2.5%
Base	$144m	$394m	$1,718m	$1,121m	$3,376m	6.0%
Bull	$166m	$456m	$1,886m	$1,228m	$3,736m	8.1%

Every organic total is reconstructable from the four product lines and reconciles within rounding. Applying the Section 9 margins gives $1.089 billion, $1.435 billion, and $1.662 billion of organic statutory operating income in bear, base, and bull, respectively.

Five-year bear path — illustrative pro forma only if the pending deal closes

Horizon date	Organic revenue	Acquisition revenue	Total FIDS revenue	Organic operating income	Acquisition operating income	Total operating income	Total margin
2027-06-30	$2,642m	$0m	$2,642m	$1,043m	$0m	$1,043m	39.5%
2028-06-30	$2,735m	$390m	$3,125m	$1,067m	$20m	$1,087m	34.8%
2029-06-30	$2,805m	$815m	$3,620m	$1,080m	$205m	$1,285m	35.5%
2030-06-30	$2,849m	$840m	$3,689m	$1,091m	$250m	$1,341m	36.4%
2031-06-30	$2,867m	$865m	$3,732m	$1,089m	$284m	$1,373m	36.8%

The bear assumes a one-year closing delay, integration cost ahead of savings, client dis-synergy, and weaker fee economics. If the transaction does not close at all, the correct horizon is the organic bear: $2.867 billion revenue and $1.089 billion operating income, with no acquisition debt or deal amortization.

Five-year base path — illustrative pro forma only if the pending deal closes

Horizon date	Organic revenue	Acquisition revenue	Total FIDS revenue	Organic operating income	Acquisition operating income	Total operating income	Total margin
2027-06-30	$2,723m	$435m	$3,158m	$1,103m	$95m	$1,198m	37.9%
2028-06-30	$2,911m	$930m	$3,841m	$1,194m	$325m	$1,519m	39.5%
2029-06-30	$3,085m	$980m	$4,065m	$1,280m	$410m	$1,690m	41.6%
2030-06-30	$3,240m	$1,030m	$4,270m	$1,361m	$455m	$1,816m	42.5%
2031-06-30	$3,376m	$1,084m	$4,460m	$1,435m	$490m	$1,925m	43.2%

The base assumes a 2027-01-01 modeling close, no explicit revenue synergy, continued product investment, $90 million of net cost-synergy benefit at horizon, and $55 million of annual incremental amortization at horizon. Integration expense is confined to the earlier post-close years. A lower first-year margin reflects partial contribution and transaction accounting rather than deterioration in organic ICE FIDS.

Five-year bull path — illustrative pro forma only if the pending deal closes

Horizon date	Organic revenue	Acquisition revenue	Total FIDS revenue	Organic operating income	Acquisition operating income	Total operating income	Total margin
2027-06-30	$2,778m	$435m	$3,213m	$1,139m	$97m	$1,236m	38.5%
2028-06-30	$3,031m	$1,020m	$4,051m	$1,273m	$405m	$1,678m	41.4%
2029-06-30	$3,278m	$1,110m	$4,388m	$1,409m	$500m	$1,909m	43.5%
2030-06-30	$3,512m	$1,200m	$4,712m	$1,545m	$580m	$2,125m	45.1%
2031-06-30	$3,736m	$1,296m	$5,032m	$1,662m	$653m	$2,315m	46.0%

The bull uses 2027-01-01, the earliest boundary consistent with the announced H1 2027 window, and therefore includes only six months of target revenue through 2027-06-30. The prior nine-month contribution was impossible under the stated closing window and has been removed. The bull further requires retention of the target's network, strong electronic fixed-income adoption, $75 million of analyst-assumed horizon revenue synergy, the full $100 million cost target, and only $30 million of continuing deal amortization. Failure of any two conditions would move the outcome toward base.

Sensitivities

Variable	Base reference	Downside sensitivity	Approximate horizon effect
Organic revenue CAGR	6.0%	One percentage point lower across lines	Roughly $160m less organic revenue over five years
Organic operating margin	42.5%	100 basis points lower	About $34m less operating income
MarketAxess horizon revenue	$1,084m	5% lower	About $54m less revenue and roughly $23m less operating income at a 42% contribution margin
Cost synergies	$90m net benefit	$25m shortfall	$25m less segment operating income
Horizon deal amortization	$55m annual charge	$25m higher	$25m less segment operating income
Incremental debt cost	Illustrative 5.5%	100 basis points higher on $6.0bn	About $60m less pretax income below segment operating income
Sterling and euro billing	10% of FY2025 FIDS revenue	10% USD strengthening	Roughly 1% revenue translation headwind before hedging and mix
Closing timing	H1 2027	12-month delay	Removes Year 1 contribution and delays synergies and deleveraging; horizon effect depends on client retention

The sensitivity table isolates variables; it should not be read as if every downside occurs simultaneously. Index AUM, CDS collateral yield, product retention, and data-price realization cannot be translated precisely because the reviewed package lacks fee-rate and retention bridges. They remain KPI triggers rather than fabricated sensitivities.

KPIs and invalidation signals

KPI	Base expectation	Bear or invalidation signal	Why it matters
FIDS recurring growth	Moderates from 7% to 8% guide toward mid-single digits	Below 4% for four quarters without deliberate product exit	Tests price, retention, content and cross-sell quality
FIDS ASV	Sustained mid- to high-single-digit growth	Below 4% or material negative FX-adjusted deceleration	Leading indicator for data-service revenue
Data and network technology growth	High single digits near term, then 6%	Below 4% for two quarters	Tests network capacity demand and competitive position
Index-linked ETF AUM	Grows with markets and product adoption	Persistent net outflows or mandate losses despite supportive markets	Tests index adoption independently of market beta
Evaluated-pricing retention	Stable, though currently undisclosed	New disclosure of material churn, price concessions, or in-house substitution	Directly tests workflow stickiness and AI risk
ICE Bonds revenue and share	Low-single-digit base growth	Multi-year decline or worsening rebates despite electronic market growth	Tests execution relevance
CDS clearing revenue	Modest positive growth through cycle	Decline despite stable rates and higher cleared notional	Signals share, fee, or client-capacity pressure
Network reliability and cyber	No material outage or data-integrity failure	Major outage, breach, valuation error, or regulatory sanction	Trust loss can impair multiple products at once
MarketAxess close	H1 2027	Material regulatory delay, restrictive remedies, or termination	Determines whether acquisition bridge belongs in results
MarketAxess client retention	Stable network and dealer participation	Customer, dealer, or employee losses tied to combination	Tests the core strategic rationale
Cost synergies	One-third, two-thirds, full run rate by Year 3	Less than $33m Year 1 or less than $67m Year 2 without reinvestment explanation	Tests execution against disclosed milestones
Gross leverage	At or below 3.0x in 18-24 months	Above 3.0x after 24 months without a deliberate high-return use of cash	Tests debt capacity and capital discipline
Repurchases and SBC	Buybacks evaluated with debt reduction	Gross buybacks presented without net share or leverage progress	Prevents misleading capital-return arithmetic

Explicit data gaps carried into monitoring

- [DATA GAP: ICE does not disclose FIDS customer retention, net revenue retention, or a price/seat/content/churn/FX bridge for ASV.]
- [DATA GAP: ICE does not disclose product-level statutory operating margins, FIDS capex, or stand-alone FIDS R&D and capitalized software.]
- [DATA GAP: Exact MarketAxess purchase-accounting amortization, integration costs, financing coupons, and revenue-synergy dollars are not yet disclosed because the transaction has not closed.]
- [DATA GAP: ICE does not disclose the CDS collateral-balance and yield bridge required to quantify a precise rate sensitivity.]

11. Key risks and wildcards

Bear — AI-led commoditization. Clients use better internal models and cheaper third-party tools to challenge evaluated prices, automate reference-data mapping, and replace basic analytics. Fee pressure begins in less differentiated products and spreads through vendor consolidation. This risk becomes thesis-changing if recurring growth falls below 4% while clients explicitly cite in-house AI or price substitution.

Bear — data rights and supplier cost. ICE relies on third-party data and content for parts of its products. Audits, higher license fees, exclusivity changes, or withdrawal of a critical source can compress margins or impair coverage. The risk is larger than a normal cloud-cost increase because losing a unique input can lower product quality and client trust.

Bear — execution fee compression and multi-homing. Electronic fixed-income volumes can grow while revenue lags because clients adopt lower-fee protocols, trade shorter-duration bonds, or route across several venues. MarketAxess's Q2 2026 fee-per-million decline is a live example. The model would be too optimistic if combined execution share does not improve and fee compression exceeds volume growth.

Bear — transaction fails or closes with remedies. Stockholder approval, regulatory clearances, and customary conditions remain outstanding. A failed deal removes the modeled acquisition contribution but also avoids acquisition debt. A remedy that limits data combination or cross-selling could preserve closing while damaging the strategic rationale.

Bear — integration dis-synergy. Dealer neutrality, client data rights, product road maps, and employee retention are delicate. Clients may fear that execution information will advantage ICE pricing or other businesses; dealers may reduce engagement; engineers and sales staff may leave. Platform consolidation could create outages or distract from product development. The first evidence will appear in client retention, dealer participation, fee per million, execution share, and employee attrition.

Bear — leverage and capital-allocation conflict. ICE plans debt financing, an 18-24 month deleveraging target, and a higher repurchase baseline. If rates remain high or cash flow disappoints, it cannot maximize buybacks, investment, and debt reduction simultaneously without weakening ratings flexibility. A missed leverage target coupled with unchanged buybacks would be a governance and capital-discipline warning, not merely a timing issue.

Bear — CDS clearing and operational tail risk. A clearing member default, model error, collateral loss, cyber incident, or extended outage could create direct loss and reputational damage. Less dramatic but more probable risks include bank-capital rules that reduce clearing capacity and lower short-term rates that reduce collateral income.

Base — recurring durability with measured reinvestment. The central case assumes data and network products remain embedded, recurring growth moderates rather than collapses, and scale produces modest margin leverage. It also requires continued spending on capacity, cybersecurity, model governance, data rights, sales, and new content. A margin beat achieved by starving those functions would not strengthen the long-term case.

Bull — electronification and integrated workflow. Fixed income remains less automated than equities. Faster electronic adoption, portfolio trading, all-to-all liquidity, better pre-trade data, and index growth could support the bull. MarketAxess makes the upside larger only if the combined network improves execution quality and customers voluntarily adopt integrated data and workflow tools.

Bull — AI enhancement. AI could improve pricing challenge, reference-data quality, liquidity prediction, dealer selection, support, surveillance, and user interfaces. The bull requires evidence that these capabilities improve retention, usage, or paid

product adoption. Cost savings alone are insufficient if competitors receive the same technology benefit.

Wildcard — regulation can help and hurt. Independent pricing, best execution, benchmark governance, transparency, and clearing mandates can increase demand for FIDS. Data-fee challenges, benchmark-access rules, AI regulation, DORA obligations, investment-adviser requirements, and clearing-capital rules can raise cost or restrict economics. Regulatory burden is a moat only when ICE can absorb it more efficiently than competitors without provoking price or access intervention.

Scenario summary

The primary probability-weighted segment forecast is the organic, no-close perimeter because MarketAxess remains announced and unclosed. The 30% bear, 50% base, and 20% bull weights are non-uniform: base receives the highest weight because Q2 recurring growth and the raised 7%-8% guide support continued compounding, bear remains material because product retention is undisclosed and execution/CDS economics are cyclical, and bull receives the lowest weight because it requires simultaneous data, network, execution, and margin upside. The probability-weighted CAGR is calculated from probability-weighted horizon revenue, not as an arithmetic average of scenario CAGRs.

Organic no-close case	Horizon 2031-06-30 revenue	Revenue CAGR from TTM	Exact profit metric	Horizon margin	Horizon operating income	Probability
Bear	$2.867bn	2.5%	Operating income	38.0%	$1.089bn	30%
Base	$3.376bn	6.0%	Operating income	42.5%	$1.435bn	50%
Bull	$3.736bn	8.1%	Operating income	44.5%	$1.662bn	20%
Probability-weighted ending economics	$3.295bn	5.4%	Operating income	41.8%	$1.377bn	100%

The separate table below is conditional on the pending acquisition ultimately closing; the 30%/50%/20% operating-case weights are not a transaction-close probability. The combined figures equal organic no-close economics plus the acquisition contribution exactly, so no MarketAxess revenue or operating income is embedded in the organic product rollup. The probability-weighted margin is probability-weighted operating income divided by probability-weighted revenue.

Conditional deal-close case	Organic revenue	Acquisition revenue	Combined revenue	Combined CAGR from ICE FIDS TTM	Organic operating income	Acquisition operating income	Combined margin	Combined operating income	Conditional probability
Bear	$2.867bn	$0.865bn	$3.732bn	8.1%	$1.089bn	$0.284bn	36.8%	$1.373bn	30%
Base	$3.376bn	$1.084bn	$4.460bn	12.0%	$1.435bn	$0.490bn	43.2%	$1.925bn	50%
Bull	$3.736bn	$1.296bn	$5.032bn	14.8%	$1.662bn	$0.653bn	46.0%	$2.315bn	20%
Probability-weighted ending economics	$3.295bn	$1.061bn	$4.356bn	11.5%	$1.377bn	$0.461bn	42.2%	$1.837bn	100%

Synthesis must assign and disclose a separate close/termination probability before blending these two perimeter states. Until it does, $3.295 billion of organic revenue and $1.377 billion of organic operating income are the only unconditional probability-weighted FIDS outputs. The deal-close table is a conditional diagnostic, not a substitute for that probability.

Sources

- **[DP]** Reviewed `data_package.md`, SHA-256 `5707bc567914adc2fd452b2f31bb49a65fd1abda71ed5d625023e6406a650504`, especially §§0a, 1, 3, 3a, 4, 5, 6, 7, 8, 9 and 10.
- **[QF]** Verified `quant_foundation.md`, SHA-256 `305e5f133df8a733aceddd37ff79c79f458063c7c56510f3ed5ac81a47e681f9`, especially P-Taxonomy, P2 and P4.
- **[S1]** Intercontinental Exchange, [2025 Form 10-K](https://www.sec.gov/Archives/edgar/data/1571949/000157194926000004/ice-20251231.htm), filed 2026-02-05.
- **[S2]** Intercontinental Exchange, [MarketAxess acquisition announcement](https://ir.theice.com/press/news-details/2026/Intercontinental-Exchange-to-Acquire-MarketAxess-Creating-a-Premier-Fixed-Income-Marketplace/default.aspx), 2026-07-30.

- **[S3]** MarketAxess, [2025 Form 10-K](https://www.sec.gov/Archives/edgar/data/1278021/000119312526067009/mktx-20251231.htm), filed 2026-02-24.
- **[S4]** MarketAxess, [Q2 2026 financial results](https://investor.marketaxess.com/news/news-details/2026/MarketAxess-Reports-Second-Quarter-2026-Financial-Results/default.aspx), 2026-07-30.
- **[S5]** MarketAxess, [Q2 2025 Form 10-Q](https://www.sec.gov/Archives/edgar/data/1278021/000095017025103993/mktx-20250630.htm), filed 2025-08-05.

Appendix B3 - Mortgage Technology

Mortgage Technology — Segment Deep Dive

Company: Intercontinental Exchange, Inc. (ICE) **Information cutoff:** 2026-08-14 12:03:50 SGT **TTM anchor:** four reported quarters ended 2026-06-30 **Exact five-year horizon:** 2031-06-30 **Currency:** USD; financial tables use USD millions unless stated otherwise **Forecast profit metric: Operating income**, the issuer-disclosed statutory segment measure sealed in `statutory_bridge.json` **Authority boundary:** Research only. No portfolio, sizing, ranking, trade, or execution conclusion is made.

0. Segment boundary and taxonomy note

Mortgage Technology covers origination technology, closing solutions, servicing software, and mortgage data and analytics across the U.S. residential-mortgage life cycle. The label is stable across the reviewed five-year segment table, but the economic perimeter is not: ICE acquired Black Knight on 2023-09-05, bringing the servicing software business into the segment partway through FY2023. Servicing revenue before that boundary is outside ICE's reported perimeter, not zero. Separately, ICE reclassified certain previously reported Mortgage Technology “other revenue” among closing solutions, origination technology, and data and analytics in 2023 and restated prior periods; management described the effect as immaterial. Consequently, this appendix uses the restated official figures in the reviewed data package, does not splice pre- and post-Black Knight dollars as though organic, and treats the FY2023-FY2024 revenue jump as acquisition-perimeter change rather than a repeatable growth rate. [data_package §1, reporting structure and taxonomy]

The sealed statutory bridge is equally important. The common metric is **Operating income**, not adjusted EBITDA, adjusted operating income, or an analyst-created cash-profit measure. Mortgage Technology's FY2025 operating income was $14 million and its exact TTM operating income was $62 million. There are no corporate or operating bridge adjustments to allocate to this segment; the three reportable segments sum directly to consolidated statutory operating income. [data_package §3a, FY2025 and TTM bridge rows; statutory_bridge.json]

1. What this segment actually is

Mortgage Technology is a set of enterprise systems, workflow networks, registries, and data products used by mortgage lenders, servicers, title and settlement firms, county recorders, investors, and other providers. Its purpose is to reduce manual hand-offs and maintain an auditable record as a residential loan moves from application and underwriting through closing, sale into the secondary market, monthly servicing, and, when necessary, delinquency, foreclosure, bankruptcy, or loss mitigation. It is not a single application and it is not purely SaaS. The economic engine combines contracted access to systems of record with per-loan, per-closing, registration, network, and default-event revenue.

Origination technology. Encompass is the central loan-origination system. It collects borrower and property information, applies lender rules, supports document generation and verification, and maintains the loan file through underwriting and closing. Customers pay recurring SaaS subscription fees that commonly include a base number of closed loans, plus variable or success-based fees when closed-loan activity exceeds contractual minimums; professional services and connected-network activity add further revenue. That structure creates a floor when volumes are weak, but not a complete hedge: lender failures, consolidation, seat reductions, client attrition, and fewer transactions on the connected network can still reduce revenue. The FTC described Encompass as the dominant U.S. loan-origination system when reviewing Black Knight, evidence of a meaningful installed base but also a reason to expect continuing antitrust and interoperability scrutiny. [S2]

Closing solutions. Simplifile connects lenders, title and settlement agents, and county recording offices so closing documents can move electronically. MERS is a system of record for tracking mortgage servicing rights and beneficial ownership interests. These are network businesses because the workflow is more useful when lenders, settlement providers, and recording authorities can exchange standardized information. Revenue, however, is largely transaction-based and moves with loan closings, electronic recordings, registrations, and transfers. A strong network position can improve capture per industry closing; it cannot eliminate the housing and refinancing cycle. Digital-closing specialists such as Snapdocs compete around eClosing, eVault, notary, and quality-control workflows and advertise integration with multiple loan-origination systems, which lowers the chance that one LOS owner captures the entire closing stack. [S4]

Servicing software. The Black Knight perimeter includes MSP, an installed core that manages loan boarding, payments, escrow, investor reporting, borrower communication, regulatory requirements, and final payoff. Pricing is largely recurring and is based substantially on the number of loans serviced. Default-management products add transaction revenue tied to

foreclosures and loss mitigation. Servicing portfolios change more slowly than new originations, so this line is structurally more durable than closing activity. The trade-off is implementation risk: a large servicer cannot casually migrate millions of accounts, but a failed conversion, outage, calculation error, or regulatory defect can be severe. Sagent markets a modern, open-API servicing platform around lower cost per loan, automated compliance, and exception-based operations; Fiserv and large institutions' in-house stacks are additional alternatives. Switching cost is real, but it is not immunity from a long replacement cycle. [S5][S6]

Data and analytics. ICE combines document recognition and extraction, Mortgage Analyzer, property and lien data, automated valuation models, collateral and prepayment analytics, benchmarking, and de-identified loan data. These products can be recurring subscriptions, transaction-based tools, or both. Their strategic value is not merely standalone data revenue: they can improve underwriting, validation, servicing, customer-retention, and risk workflows across Encompass and MSP. The competitive threat is also clearest here. Cotality sells loan-level mortgage and property data, risk analytics, verification, and automation, while lenders can build internal models on public, licensed, and customer-owned data. AI makes an analytical interface easier to reproduce even when the underlying longitudinal data set remains hard to match. [S7]

Go-to-market and implementation. Sales are enterprise-led, often involving procurement, information-security reviews, configuration, data mapping, integrations, training, and regulatory sign-off. That produces long sales and conversion cycles but also creates stickiness after deployment. The ICE platform's breadth offers a cross-sell path—origination customers can buy network, closing, data, and document-automation services, while servicing customers can use data, APIs, default, and borrower-retention tools. The investment case should count cross-sell only when it appears in product revenue, implementation milestones, or customer-adoption KPIs; product adjacency is not itself revenue.

2. Current economics

Mortgage Technology generated FY2025 revenue of **$2.101 billion**, 21.2% of ICE's FY2025 consolidated net revenue, and statutory **Operating income of $14 million**, a margin of **0.7%**. The exact TTM ending 2026-06-30 was **$2.156 billion of revenue**, **$62 million of Operating income**, and a **2.9% margin**. The TTM comprises $765 million of origination technology, $240 million of closing solutions, $878 million of servicing software, and $273 million of data and analytics. Their shares of TTM segment revenue are 35.5%, 11.1%, 40.7%, and 12.7%, respectively. [data_package §3, Mortgage Technology row; data_package §4, Mortgage product rows; quant_foundation P2 and P4]

The most recent quarter shows both improvement and noise. Q2 2026 revenue was $557 million, up 5% year over year, while statutory operating margin reached 8%, compared with negative 2% in Q1. That quarter is evidence that the cost base can produce positive statutory profit, but it is not a steady-state margin: Q1 and Q2 recurring revenue included $4 million and $3 million of one-time items, respectively. The TTM margin, which incorporates four quarters and the sealed expense base, remains the more defensible anchor. [data_package §5, Mortgage quarterly rows and discussion]

The segment's current revenue quality is mixed. ICE's FY2025 Form 10-K Item 7 Mortgage Technology table reports **$1,574 million of recurring revenue and $527 million of transaction revenue**, exactly tying to $2,101 million of segment revenue; the mix is 74.9% recurring and 25.1% transaction. [data_package §3, Mortgage recurring and transaction revenue mix] Origination subscriptions and servicing software are largely recurring, while Encompass overages, connected-service orders, closings, MERS registrations and transfers, and default-management work are tied to activity. ICE cautions that both product classifications contain a mixture of recurring and transaction revenue and that the operating metrics do not necessarily match GAAP revenue-recognition timing. The split therefore cannot be allocated across products or carried into the TTM without further disclosure, and no scenario receives a margin premium from an assumed product-level recurring mix. Contract duration, annual recurring revenue, paid seats, loans serviced, closed-loan counts, and net retention remain undisclosed; those omissions prevent a clean decomposition of growth into price, installed-base growth, implementations, transaction volume, and attrition.

Capital intensity has two layers. Physical capital is modest at the segment level, although ICE invests in data centers, security, cloud, and software. The economically larger burden is product development, capitalized software, implementation support, and acquisition capital. ICE does not disclose standalone R&D or Mortgage Technology capex in the data package, so no segment capital-intensity ratio is fabricated. At the consolidated level, capex including capitalized software was $873 million TTM. More important, ICE spent $10.198 billion of cash on acquisitions in FY2023, overwhelmingly associated with Black Knight, and issued 10.9 million shares as part of the consideration. Goodwill plus intangibles was $45.502 billion consolidated at 2026-06-30. These are not all Mortgage Technology assets, but they make clear why low statutory profit cannot be assessed without acquisition returns. [data_package §§7-8]

The balance between accounting and economics must remain explicit. Acquisition-related intangible amortization depresses statutory profit and will decline as finite-lived assets mature. That can create a visible statutory margin recovery even if customer economics barely improve. Conversely, amortization is not a fictitious charge for an acquisition-heavy company: it reflects cash paid for customer relationships, technology, and other assets whose value must be replenished by retention and product investment. The segment has achieved an **accounting turnaround** from losses to positive statutory income. It has not yet demonstrated mature post-acquisition returns on the capital committed.

3. Unit economics and cost structure

Revenue becomes profit through four distinct mechanisms.

First, the subscription floor absorbs some mortgage-cycle volatility. A lender needs a compliant loan-origination system even when it closes fewer loans, and a servicer needs a system of record every month. Contractual minimums and per-loan servicing charges therefore sustain revenue against a weak origination backdrop. The protection is incomplete: a failed independent mortgage bank can disappear, a merged lender can consolidate systems, a large client can renegotiate its commitment, and a shrinking serviced portfolio eventually reduces unit counts.

Second, transaction revenue can carry high incremental contribution once the network and compliance infrastructure are in place. An additional service order, electronic recording, MERS event, or document analysis does not require a proportional increase in central development expense. This produces operating leverage in a recovery. It also works in reverse: fixed technology, support, cybersecurity, and regulatory expense remain when transactions fall. The segment's FY2022 revenue decline of 19.8% and margin collapse to 5.0%, before the full Black Knight perimeter, show the sensitivity. [data_package §3, Mortgage Technology historical row]

Third, implementations and cross-sell can raise both recurring revenue and network usage. A new MSP conversion can add a large portfolio of serviced loans, while an Encompass deployment can create demand for document, network, closing, and analytics services. Yet implementation is not free margin. ICE must fund migration teams, data conversion, customer support, parallel testing, API maintenance, training, and remediation. A revenue model that recognizes the customer win immediately but ignores these costs would overstate early profitability.

Fourth, Black Knight synergies and amortization roll-off can improve statutory margins. ICE exited FY2025 at about $230 million of annualized Black Knight expense synergies and raised the target to $275 million by 2028 from an original $200 million. [data_package §9, Black Knight synergy target] The remaining $45 million of targeted savings is meaningful relative to the segment's $62 million TTM Operating income, but three cautions apply. The target is annualized and may require implementation expense; the reviewed package does not establish that every dollar falls within this segment line; and a cost synergy does not prove revenue durability or acquisition ROIC. The package also supplies no Mortgage-specific intangible-amortization schedule. The model therefore allows reported cost growth to trail revenue in base and bull cases but does not add the $45 million mechanically or assign a numerical benefit to undisclosed amortization roll-off.

TTM revenue of $2.156 billion less Operating income of $62 million implies $2.094 billion of statutory operating expense. The expense pool includes employee and technology costs, depreciation and amortization, integration expense, support, occupancy, cybersecurity, regulatory compliance, and allocated shared costs. Product-level operating expenses and margins are not disclosed. Assigning arbitrary profit margins to Encompass, MSP, Simplifile/MERS, and data would look precise but would be invented. The scenario model instead forecasts product revenue separately, then applies an explicit statutory segment margin path to the shared cost pool. That is a limitation, but it preserves the sealed accounting identity.

The critical margin question is not whether adjusted cash contribution is positive—it almost certainly is, given the size of acquisition amortization—but whether revenue growth plus net cost savings can outpace the ongoing need to modernize the stack. MSP and Encompass are mission-critical, mature platforms. ICE must fund APIs, cloud migration, security, regulatory updates, user-interface improvements, borrower self-service, AI governance, and resilience. Underinvestment could create short-term margin optics and long-term churn. Base-case operating expense therefore rises from $2.094 billion TTM to about $2.366 billion by the horizon even as margin reaches 14%; the model does not assume a static nominal cost base and does not need an undisclosed amortization schedule to reach that result.

4. Competitive dynamics

4.1 Origination technology

Encompass has the strongest disclosed position. The FTC called it the dominant U.S. LOS and called Black Knight's Empower the second-largest during its merger review. The regulatory remedy required ICE to divest Empower and Optimal

Blue, preserving a substantial competitor and constraining ICE for ten years: prior approval is required before reacquiring divested assets or acquiring an interest in an LOS business, and prior notice applies to certain product-pricing-engine acquisitions. [S2] This has two implications. Encompass's installed base and integration ecosystem are genuine competitive assets. At the same time, regulators have already identified foreclosure of interoperability and lender-choice concerns, so ICE cannot model ecosystem control as unconstrained pricing power.

Competitors include the divested Empower platform now under Constellation/Dark Matter, Finastra Mortgagebot, nCino/SimpleNexus, lender-built systems, and smaller cloud-native LOS/POS vendors. Finastra emphasizes an open, digital process with pre-integrated service partners. Dark Matter markets origination, servicing, partner marketplace, and embedded automation. [S8][S9] Newer systems can attack user experience, time to implement, openness, and lower total cost, while Encompass defends with regulatory depth, installed workflows, partner integrations, secondary-market connectivity, and the perceived risk of moving a system of record.

Pricing power is therefore moderate, not unlimited. Contractual price increases and overage fees can raise revenue, but FY2025 origination growth was partly offset by client attrition according to ICE's filing. Large lenders can negotiate, multi-source adjacent products, or invest in internal tooling. The proper moat test is renewal and retention adjusted for customer consolidation—not the fact that switching is difficult.

4.2 Servicing software

MSP's strength is operational depth across boarding, escrow, payments, investor reporting, regulatory tasks, default, and customer service. A conversion has asymmetric risk: errors can affect borrower balances, tax and insurance payments, investor remittances, credit reporting, and foreclosure. That makes incumbency valuable and gives ICE time to modernize. It also creates a large operational-liability surface if the platform fails.

Sagent's Dara platform explicitly competes on cloud-native architecture, open APIs, unified data, lower cost per loan, automated compliance, and exception-based servicing. Fiserv LoanServ and proprietary systems offer other alternatives. [S5][S6] These challengers do not need to displace MSP across the entire market to matter; winning one or two large conversions can alter growth, support costs, and industry perceptions. Conversely, MSP new-client implementations and renewal expansions contributed to FY2025 growth, evidence that the installed core is not merely in runoff. [S1]

4.3 Closing, registration, and network economics

Simplifile and MERS have network attributes that are harder to replicate than a standalone user interface. County-recording connectivity, legal recognition, standardized processes, title and lender integrations, and a widely used registry all create coordination barriers. The economic risk is that lenders and settlement providers can use alternative eClosing layers and connect them to the underlying LOS or registry. Snapdocs, for example, markets integration with any LOS, POS, and title-production system and supports digital closing, eVault, notary, and quality control. [S4]

The moat is strongest where ICE maintains a legally and operationally accepted system of record or a dense recorder network; it is weaker in document presentation, task orchestration, and user experience. Closing volume remains the immediate driver. Digital adoption can increase electronic share per closing even in a flat market, but by 2031 the easiest digitization gains may be more mature and price competition could shift value to integrated workflows rather than each transaction component.

4.4 Data and analytics

ICE's advantage is access to data produced inside origination and servicing workflows: documents, performance histories, property and lien records, servicing events, and transaction observations. These can support benchmarking, valuation, prepayment, collateral, and borrower-retention models. A proprietary longitudinal data set with rights to commercialize is more defensible than a generic model.

Competition is intense. Cotality markets loan-level origination and performance data, property analytics, verification, and AI-ready data; specialist valuation, credit, fraud, and marketing vendors compete at individual points. [S7] Large lenders and investors can blend public agency data, servicing data, licensed property records, and internal performance. As modeling and natural-language interfaces become cheaper, the value migrates toward unique data rights, validated outputs, workflow integration, and auditability. Basic dashboards and undifferentiated predictions face price pressure.

5. Segment moat and durability

The segment has a real but uneven moat.

Systems-of-record switching costs are the strongest defense. Encompass and MSP are configured around customer policies, employee roles, investor requirements, compliance controls, and numerous third-party connections. Migration requires data conversion, testing, retraining, dual-running, and executive risk ownership. These costs lengthen contracts and reduce casual churn. They do not prevent replacement when a customer concludes that legacy architecture, service quality, or total cost has become unacceptable.

Network density is the second defense. Encompass Network, Simplifile, MERS, and APIs connect parties that otherwise exchange bespoke files and statuses. A new entrant must persuade several sides of the workflow to connect. The network is most defensible where standardized records or recorder relationships matter; it is less defensible where modern APIs allow customers to multi-home.

Regulatory complexity cuts both ways. Frequent rule changes and audit requirements raise the value of a vendor that can update one platform for many customers. But ICE is a critical third-party provider and faces enhanced oversight from the FFIEC and CFPB related to the expanded Black Knight portfolio. A serious compliance or cybersecurity failure could create remediation cost, lost trust, regulatory restrictions, and migration demand. [S1]

Data feedback can deepen the platform. The combination of loan origination, servicing, property, and performance observations can improve document automation, benchmarking, prepayment analysis, and lead identification. Durability depends on rights and quality. Privacy rules, customer contracts, fair-lending obligations, and AI regulation can restrict collection, reuse, model training, or distribution. Data breadth without clear rights is not a moat.

Over five to ten years, the segment should be able to retain a defensible position if ICE delivers reliable modernization while keeping systems interoperable. The greatest threat is not a startup replacing every module at once. It is modular erosion: a cloud-native competitor takes the user interface, a specialist takes closing, a data vendor takes analytics, and a large customer gradually reduces ICE to a low-growth back-end system. The bull case requires ICE to reverse that path by using APIs, automation, and common data to make the installed base more valuable without forcing customers into a closed stack.

6. Historical growth rates reproduced from the reviewed data package

The table uses the official segment and product rows in data_package §§3-4, sourced there to the FY2025 Form 10-K Mortgage Technology revenue table and the Q2 2026 Form 10-Q product/segment table. FY2023 servicing is a partial-year Black Knight contribution, and FY2024 is the first full year; its CAGR is therefore not meaningful. The segment and data/analytics CAGRs also contain acquisition-perimeter effects. No back-solved product dollars are used. The TTM column is the exact four-quarter forecast base, not a fiscal-year estimate.

Product / sub-segment	FY2023 revenue	FY2024 revenue	FY2025 revenue	Exact TTM 2026-06-30	3-year CAGR FY2022-FY2025	FY2025 YoY	Specific source
Mortgage Technology total	$1,317m	$2,022m	$2,101m	$2,156m	23.0%	3.9%	DP §3/§4; FY2025 10-K Mortgage Technology revenue table; Q2 2026 10-Q product/segment table
Origination technology	$694m	$713m	$738m	$765m	(2.6%)	3.5%	DP §4, Mortgage — Origination technology; same official tables
Closing solutions	$179m	$202m	$223m	$240m	(2.3%)	10.4%	DP §4, Mortgage — Closing solutions; same official tables
Servicing software	$288m	$848m	$871m	$878m	n/m	2.7%	DP §4, Mortgage — Servicing software; Black Knight perimeter; same official tables
Data and analytics	$156m	$259m	$269m	$273m	43.0%	3.9%	DP §4, Mortgage — Data and analytics; same official tables

Arithmetic checks. Segment: $2,022m × 1.039 = $2,101m, rounding tie. Origination: $713m × 1.035 = $738m. Closing: $202m × 1.104 = $223m. Servicing: $848m × 1.027 = $871m. Data and analytics: $259m × 1.039 = $269m. Each FY2024-to-FY2025 relationship is within 0.1% of the displayed result and therefore within the required 2% tolerance. The 3-year CAGRs are reproduced/calculated from the same reviewed FY2022 and FY2025 row values; they are not used as clean organic base rates where the acquisition boundary distorts them.

The pre-boundary pattern is still informative. Total Mortgage Technology revenue fell from $1.407 billion in FY2021 to $1.129 billion in FY2022, while origination and closing contracted sharply. This demonstrates genuine rate-and-volume sensitivity. The FY2024 step-up to $2.022 billion should not be read as a natural rebound. The more decision-useful evidence is the modest growth of each line from FY2024 to FY2025 and the 5% segment growth in Q2 2026.

7. Management guidance and forward anchors

All management excerpts below are reproduced from data_package §6; transcripts were not re-fetched.

- **Q3 2025, Warren Gardiner, CFO — “remain at these levels”** [data_package §6, Mortgage near-term revenue row]. Management expected seasonal and contract-minimum effects to constrain sequential movement. The implication is that recurring minimums can stabilize revenue, but the platform did not have a strong sequential growth engine at that point.

- **Q4 2025, Warren Gardiner, CFO — “low to mid-single-digit range”** [data_package §6, Mortgage FY2026 row]. This is the most concrete near-term segment anchor. Management linked the range to industry loan growth from modest to low teens, suggesting that ICE revenue grows less than loan counts because recurring floors dilute upside while attrition and product mix offset transaction growth.

- **Q1 2026, Warren Gardiner, CFO — “opportunity is captured”** [data_package §6, Mortgage platform row]. The quote supports continued investment while originations are below normal. It should not be interpreted as quantified revenue guidance; it raises the cost/reinvestment requirement in all cases.

- **Q2 2026, Warren Gardiner, CFO — “remain around current levels”** [data_package §6, Mortgage Q3 recurring row]. New-client ramps and core growth were expected to offset near-term headwinds rather than produce an immediate step-up. The base case therefore begins near mid-single-digit total growth, not at the much higher industry loan-count rebound.

- **Black Knight synergies — approximately $230 million annualized at FY2025 exit; $275 million target by 2028** [data_package §9, Black Knight synergy row]. This is a cost anchor, not a revenue guide and not a statutory margin guarantee. The forecast includes remaining cost leverage while preserving ongoing product investment.

There is no quantified five-year Mortgage Technology target, product-level guidance, retention target, seat/loan/closing forecast, or statutory margin objective in the reviewed package. **[DATA GAP: no management TTM+5y product growth or statutory Operating income margin target.]**

8. Forward growth assumptions by product

The model compounds each TTM product revenue from 2026-06-30 to 2031-06-30 over exactly five years. Rates are not copied from the acquisition-distorted historical CAGRs. They reflect the latest clean growth, management's low-to-mid-single-digit near-term guide, MBA's April 2026 expectation that single-family origination dollars rise from about $2.05 trillion in 2025 to $2.19 trillion in 2026 and remain near $2.2 trillion through 2028, and the structural arguments above. [S3]

Base case growth assumptions

Product	3-year historical CAGR	FY2025 YoY	Management FY+1 guide	Base CAGR TTM to TTM+5y	Justification
Origination technology	(2.6%)	3.5%	Segment low to mid single digit	4.8%	Modest loan growth, price, implementations, and network usage offset attrition; no return to refinance-boom economics is assumed.
Closing solutions	(2.3%)	10.4%	Segment low to mid single digit	5.2%	Digital share and recorder connectivity support growth slightly above originations, but transaction exposure and maturing eClosing adoption cap the rate.

Product	3-year historical CAGR	FY2025 YoY	Management FY+1 guide	Base CAGR TTM to TTM+5y	Justification
Servicing software	n/m due perimeter	2.7%	Segment low to mid single digit	4.6%	MSP implementations, per-loan pricing, and renewal expansion compound; slow portfolio runoff and modernization spend limit upside.
Data and analytics	43.0% distorted by perimeter	3.9%	Segment low to mid single digit	6.6%	Cross-sell, document automation, property data, and analytics outgrow the segment; competition and AI interface commoditization prevent a double-digit base rate.

The base path is deliberately smooth but not constant. Origination growth is 4%, then 5% annually; closing is 4%, 5%, 5%, 6%, and 6%; servicing is 4%, 4%, then 5%; data is 6%, 6%, then 7%. This produces total revenue growth of 4.3%, 4.7%, 5.3%, 5.4%, and 5.4%. It fits management's near-term range and assumes platform initiatives mature gradually rather than at a single inflection point.

Bull case growth assumptions

Product	3-year historical CAGR	FY2025 YoY	Management FY+1 guide	Bull CAGR TTM to TTM+5y	Justification
Origination technology	(2.6%)	3.5%	Segment low to mid single digit	7.8%	Lower rates and stronger purchase/refinance volumes lift overages and network transactions while implementations outrun attrition.
Closing solutions	(2.3%)	10.4%	Segment low to mid single digit	8.4%	Closing volumes recover and Simplifile/MERS gain electronic share, producing strong transaction leverage without extrapolating FY2025's 10.4% indefinitely.
Servicing software	n/m due perimeter	2.7%	Segment low to mid single digit	6.8%	Several large MSP conversions, broader API adoption, price realization, and default tools add to the recurring base.
Data and analytics	43.0% distorted by perimeter	3.9%	Segment low to mid single digit	9.2%	ICE successfully cross-sells automation and proprietary analytics, with data rights and workflow embedding preserving value despite AI competition.

The bull path does not assume a one-year refinance spike becomes a permanent base. Origination grows 8%, 9%, 8%, 7%, and 7%; closing 8%, 9%, 9%, 8%, and 8%; servicing 6% followed by four years at 7%; data 10%, 10%, 9%, 9%, and 8%. Total segment growth ranges from 7.2% to 8.3%; the second year is the peak and growth then decelerates as the revenue base expands.

Bear case growth assumptions

Product	3-year historical CAGR	FY2025 YoY	Management FY+1 guide	Bear CAGR TTM to TTM+5y	Justification
Origination technology	(2.6%)	3.5%	Segment low to mid single digit	(0.4%)	High rates, lender consolidation, attrition, and competitive conversions outweigh contractual price and a late-cycle recovery.
Closing solutions	(2.3%)	10.4%	Segment low to mid single digit	0.6%	Weak closings and pricing competition offset additional digital penetration; the line falls before a muted recovery.
Servicing software	n/m due perimeter	2.7%	Segment low to mid single digit	1.6%	Recurring contracts protect revenue, but portfolio runoff, delayed conversions, and one major customer loss suppress growth.

Product	3-year historical CAGR	FY2025 YoY	Management FY+1 guide	Bear CAGR TTM to TTM+5y	Justification
Data and analytics	43.0% distorted by perimeter	3.9%	Segment low to mid single digit	2.6%	Proprietary data retains some value, while customer insourcing, AI substitutes, and budget pressure compress price and adoption.

The bear path makes origination decline 3% and 2% before flattening and then growing 1%-2%; closing declines 2%, is flat, then recovers 1%-2%; servicing grows only 1%-2%; data grows 2%-3%. Total revenue is roughly flat for two years and reaches only 0.9% five-year CAGR. This is a stagnation case, not a housing-collapse case.

9. Forward statutory Operating income margin assumptions

Product-level Operating income is not disclosed, so the table models the segment's shared statutory expense pool. The exact starting point is $62 million of Operating income on $2.156 billion of revenue, a 2.9% margin. Every case retains ongoing reinvestment and acquisition-related statutory costs.

Case	TTM margin	TTM+1	TTM+2	TTM+3	TTM+4	TTM+5	Specific mechanism
Bear	2.9%	3.0%	3.0%	3.5%	4.0%	4.5%	The remaining synergy target is absorbed by weak revenue, pricing pressure, conversion costs, remediation, and platform reinvestment; no quantified amortization benefit is required.
Base	2.9%	5.0%	7.0%	9.0%	12.0%	14.0%	Revenue compounds near 5%; the remaining synergy target, integration completion, and support consolidation offset part of wage, hosting, security, compliance, and product-investment growth. Reported operating expense still grows about 2.5% annually.
Bull	2.9%	7.0%	11.0%	15.0%	19.0%	22.0%	Strong transaction volumes, several large implementations, data mix, and automation leverage the fixed platform while operating expense still grows about 3.0% annually to fund product and control investment.

The base margin increases 1,110 basis points from TTM to the horizon. Revenue rises by about $595 million; statutory operating expense rises by about $272 million, from $2.094 billion to $2.366 billion, leaving approximately $323 million of incremental profit. This 2.5% reported-expense CAGR allows the disclosed remaining Black Knight synergy target, lower integration expense, support consolidation, and automated workflows to offset only part of wage, hosting, security, compliance, and reinvestment inflation. Because the reviewed package contains no Mortgage-specific amortization schedule, no quantified amortization benefit is required or credited.

The bull margin reaches 22%. At $3.117 billion of revenue, that produces about $686 million of Operating income and $2.431 billion of operating expense, a 3.0% expense CAGR from TTM. The margin is below the pre-Black Knight FY2021 margin of 28.2%, which occurred before the acquired servicing perimeter and during very different origination economics; FY2021 is therefore a ceiling reference, not evidence for the forecast. The bear margin of 4.5% allows already-announced savings and ordinary accounting run-off while assuming competitive and reinvestment needs consume most operating leverage.

These are statutory margins. An adjusted presentation that adds back amortization and integration costs would be much higher, but it is not the sealed metric and would obscure whether acquisition capital was earned. The former 17% base and

26% bull endpoints could be made arithmetically to work only by assuming unusually low reported-expense growth and relying on an undisclosed purchase-accounting roll-off; they are not retained. A rising statutory margin is necessary evidence of integration progress, but mature returns require stable retention, growing per-loan or subscription economics, healthy cash contribution after development spending, and return on the acquisition cost.

10. Five-year segment rollup, sensitivities, and probabilities

10.1 Year-by-year bear case

Horizon date	Origination revenue	Closing revenue	Servicing revenue	Data revenue	Segment revenue	Operating income margin	Operating income
2027-06-30	$742.0m	$235.2m	$886.8m	$278.5m	$2,142.5m	3.0%	$64.3m
2028-06-30	$727.2m	$235.2m	$895.6m	$284.0m	$2,142.1m	3.0%	$64.3m
2029-06-30	$727.2m	$237.6m	$913.6m	$292.6m	$2,170.9m	3.5%	$76.0m
2030-06-30	$734.5m	$242.3m	$931.8m	$301.3m	$2,209.9m	4.0%	$88.4m
2031-06-30	$749.2m	$247.1m	$950.5m	$310.4m	$2,257.2m	4.5%	$101.6m

10.2 Year-by-year base case

Horizon date	Origination revenue	Closing revenue	Servicing revenue	Data revenue	Segment revenue	Operating income margin	Operating income
2027-06-30	$795.6m	$249.6m	$913.1m	$289.4m	$2,247.7m	5.0%	$112.4m
2028-06-30	$835.4m	$262.1m	$949.6m	$306.7m	$2,353.8m	7.0%	$164.8m
2029-06-30	$877.1m	$275.2m	$997.1m	$328.2m	$2,477.7m	9.0%	$223.0m
2030-06-30	$921.0m	$291.7m	$1,047.0m	$351.2m	$2,610.9m	12.0%	$313.3m
2031-06-30	$967.1m	$309.2m	$1,099.3m	$375.8m	$2,751.4m	14.0%	$385.2m

10.3 Year-by-year bull case

Horizon date	Origination revenue	Closing revenue	Servicing revenue	Data revenue	Segment revenue	Operating income margin	Operating income
2027-06-30	$826.2m	$259.2m	$930.7m	$300.3m	$2,316.4m	7.0%	$162.1m
2028-06-30	$900.6m	$282.5m	$995.8m	$330.3m	$2,509.2m	11.0%	$276.0m
2029-06-30	$972.6m	$308.0m	$1,065.5m	$360.1m	$2,706.2m	15.0%	$405.9m
2030-06-30	$1,040.7m	$332.6m	$1,140.1m	$392.5m	$2,905.9m	19.0%	$552.1m
2031-06-30	$1,113.5m	$359.2m	$1,219.9m	$423.9m	$3,116.5m	22.0%	$685.6m

Every row sums the four product revenues to the segment total within rounding. Operating income equals segment revenue multiplied by the stated statutory Operating income margin. The terminal product totals also reconstruct the case totals exactly within $0.1 million rounding.

10.4 Terminal product rollup

Product at 2031-06-30	Bear revenue	Base revenue	Bull revenue
Origination technology	$749.2m	$967.1m	$1,113.5m
Closing solutions	$247.1m	$309.2m	$359.2m
Servicing software	$950.5m	$1,099.3m	$1,219.9m
Data and analytics	$310.4m	$375.8m	$423.9m
Segment total	$2,257.2m	$2,751.4m	$3,116.5m

10.5 Sensitivities

At the base terminal revenue of $2.751 billion, each 100 basis points of statutory margin equals about **$27.5 million of Operating income**. This is the most important model sensitivity because much of the five-year earnings change comes from the cost and amortization path rather than revenue alone.

Base terminal revenue sensitivity	10% margin	14% margin	18% margin
$2.50bn revenue	$250m Operating income	$350m Operating income	$450m Operating income
$2.75bn revenue	$275m Operating income	$385m Operating income	$495m Operating income
$3.00bn revenue	$300m Operating income	$420m Operating income	$540m Operating income

The base terminal origination and closing lines together are about $1.276 billion. A 1% change in those combined activity-sensitive revenues changes segment revenue by about $12.8 million and Operating income by about $1.8 million at a 14% margin before second-order cost effects. A 5% shock is therefore roughly $64 million of revenue. By contrast, a 300-basis-point margin miss at unchanged base revenue removes about $83 million of Operating income. The thesis is more exposed to whether integration and platform cost discipline translate into statutory margins than to a single modest change in loan volume.

Scenario probabilities are **30% bear, 55% base, and 15% bull**. They are intentionally non-uniform. Base receives the greatest weight because current guidance, clean recent product growth, contractual floors, and visible remaining synergies support gradual improvement. Bear carries twice the bull weight because the statutory margin starts at only 2.9%, the package lacks a Mortgage-specific amortization schedule and recurring/transaction split, critical operating KPIs are undisclosed, and customers face plausible modern alternatives. Probability-weighted terminal revenue is about **$2.658 billion** and probability-weighted terminal Operating income about **$345 million**, an implied 13.0% margin. This is an analytical expectation, not an additional scenario or a valuation conclusion.

11. Key risks, wildcards, KPIs, and invalidation signals

11.1 Mortgage-cycle and customer-structure risk — Bear

High mortgage rates can suppress purchase turnover and refinancing, reducing Encompass overages, network orders, closings, registrations, and secondary-market workflows. Low volumes also strain independent mortgage banks, creating bankruptcies, mergers, seat reductions, and tougher negotiations. Servicing can partly counterbalance origination because outstanding loans remain on system longer when refinancing is weak, but portfolio runoff and consolidation eventually affect per-loan revenue. Default-management revenue can rise during stress, yet that is an uneven offset and may add support complexity.

KPIs: industry loan count and dollar originations; Encompass closed loans versus contractual minimums; lender-client attrition; closing and recording transactions; loans serviced on MSP; foreclosure and loss-mitigation transactions. **Invalidation:** two consecutive years of Mortgage Technology revenue below zero growth while industry loan counts grow, indicating competitive share loss or pricing weakness rather than cycle alone.

11.2 Integration, cost structure, and accounting risk — Bear/Base

ICE has already realized substantial Black Knight savings and targets $275 million by 2028. The risk is that easy overlap removal is complete while the remaining platform rationalization requires more engineering, customer support, and migration expense. Legacy systems may need parallel operation longer than planned. Amortization roll-off can raise reported Operating income even without better customer economics, creating an apparent turnaround that does not improve cash returns after development investment.

KPIs: annualized synergy realized versus $275 million target; statutory segment operating expense; integration/acquisition costs; depreciation and amortization; capitalized software; implementation backlog and conversion expense; product uptime and remediation. **Invalidation:** statutory margin remains below 8% through the TTM ending 2028-06-30 despite claimed synergy completion, absent an explicitly disclosed reinvestment program with measurable customer wins.

11.3 Customer switching and platform modernization — Bear

Switching costs protect ICE, but they can also hide dissatisfaction until a major renewal or migration. Competitors attack modern interfaces, cloud architecture, open APIs, implementation speed, and lower cost per loan. Large customers can threaten in-house builds or multi-vendor architectures. Because servicing migrations are lumpy, one loss can matter more than many small wins.

KPIs: gross and net retention; new Encompass and MSP implementations; deconversions; implementation duration; customers and loans by platform; API usage; support-ticket trends; disclosed price versus volume bridge. **Invalidation:** a top-tier MSP or Encompass customer announces a competitive conversion and ICE cannot replace the lost annualized

revenue within 18 months.

11.4 Regulation, antitrust, privacy, and third-party oversight — Bear/Base

Mortgage origination and servicing are heavily regulated. ICE faces FFIEC and CFPB oversight as a critical provider, while customers must comply with fair lending, servicing, disclosure, foreclosure, privacy, and consumer-protection rules. Regulation creates demand for compliant software but increases ICE's cost and liability. The FTC remedy around Empower and Optimal Blue shows that interoperability, bundling, and acquisition strategy are live constraints. Privacy and AI rules can restrict data reuse and automated decisions.

KPIs: examination findings; consent-order compliance; regulatory remediation spend; security incidents; customer audit results; product release delays; data-rights changes. **Invalidation:** a material regulatory order restricts bundling, data use, or core product operation enough to reduce recurring revenue or require costly customer restitution.

11.5 AI automation and disruption — Bull/Bear

AI can reduce the cost of document classification, data extraction, income verification, exception handling, call-center service, coding, quality assurance, and compliance research. In the bull case, ICE combines proprietary workflow data with auditable controls and embeds automation into Encompass and MSP, raising revenue per customer and lowering service cost. Data and Document Automation and Mortgage Analyzer already provide a base for this path.

The bear path is modular substitution. Generic models make user interfaces and basic analytics cheaper; customers use their own data; specialists offer faster document and closing tools; and ICE must cut price while continuing to fund model governance. Automated underwriting, loss mitigation, or borrower communication also introduces fair-lending, explainability, privacy, hallucination, and adverse-action risks. AI is least likely to replace the legal/operational need for a registry or servicing ledger and most likely to commoditize document review, dashboards, and first-line support.

KPIs: AI product revenue, automated-document volume and accuracy, exception rate, human-review rate, customer adoption, cost per loan, model incidents, regulatory findings, and attach rates into Encompass/MSP. **Invalidation:** data/analytics growth falls below 3% for two years while credible competitors show double-digit mortgage-automation adoption, implying ICE's proprietary-data advantage is not converting into product value.

11.6 Capital allocation and impairment — Bear

The Black Knight acquisition materially expanded the segment but has not yet produced a mature statutory return. Consolidated goodwill and intangibles were $45.502 billion at 2026-06-30 and tangible common equity was negative; the reviewed package does not disclose the Mortgage Technology reporting unit's specific carrying value or impairment cushion. **[DATA GAP: mortgage reporting-unit goodwill, intangible carrying value, and fair-value headroom are not provided in the reviewed data package.]**

An impairment would be non-cash at recognition but economically informative. It could signal that growth, retention, pricing, or margins no longer support the purchase assumptions. The higher-probability risk is not immediate impairment; it is years of modest cash contribution while adjusted earnings exclude amortization and management continues to describe integration as successful. Capital allocation should be judged by statutory profit, cash profit after software investment, customer retention, and incremental return on the acquisition cost—not by synergy achievement alone.

KPIs: statutory Operating income and margin; segment cash contribution if disclosed; capitalized software; goodwill/intangible impairment testing disclosures; acquisition forecast revisions; realized synergy; customer retention. **Invalidation:** any Mortgage Technology goodwill or developed-technology impairment accompanied by lower long-term revenue or margin assumptions, or cumulative statutory Operating income that remains de minimis through 2030 without a demonstrated cash-return bridge.

11.7 Operational resilience and cybersecurity — Bear

Mortgage platforms contain sensitive borrower data and support payments, escrow, investor reporting, and foreclosure. An outage or breach can disrupt customers and expose ICE to remediation, litigation, regulatory action, and lost trust. Platform concentration increases both moat and tail risk.

KPIs: uptime, severity-one incidents, recovery times, penetration-test findings, customer audit exceptions, cyber insurance, and regulatory notifications. **Invalidation:** a material breach or extended outage causes customer loss, restitution, or a regulator-mandated operating restriction.

Scenario summary

Case	Segment TTM+5y Revenue	Exact profit metric	Segment TTM+5y Profit Margin	Segment TTM+5y Profit	Probability
Bear	$2.257bn	Operating income	4.5%	$0.102bn	30%
Base	$2.751bn	Operating income	14.0%	$0.385bn	55%
Bull	$3.117bn	Operating income	22.0%	$0.686bn	15%

The central conclusion is narrow. Mortgage Technology has valuable systems of record, meaningful network density, and visible cost levers. Its revenue can plausibly compound around 5% from the exact TTM anchor while statutory margin rises to the mid-teens. But the starting margin is only 2.9%, customer and unit KPIs are thin, and part of any future increase may be purchase-accounting decay rather than better commercial economics. The segment is in an **accounting turnaround**. It becomes evidence of mature returns only if retention, new implementations, per-loan economics, statutory profit, and cash contribution after reinvestment improve together.

Sources

- **[DP]** Intercontinental Exchange ER2 reviewed data package, `data_package.md`, SHA-256 `5707bc567914adc2fd452b2f31bb49a65fd1abda71ed5d625023e6406a650504`, especially §§1, 3, 3a, 4-10.
- **[QF]** Intercontinental Exchange quantitative foundation, `quant_foundation.md`, especially P2 and P4; TTM ends 2026-06-30.
- **[S1]** Intercontinental Exchange, [FY2025 Form 10-K](https://www.sec.gov/Archives/edgar/data/1571949/000157194926000004/ice-20251231.htm), Mortgage Technology business, revenue, competition, regulation, AI, and impairment discussions.
- **[S2]** U.S. Federal Trade Commission, [settlement resolving ICE/Black Knight mortgage-technology concerns](https://search.ftc.gov/news-events/news/press-releases/2023/08/ftc-secures-settlement-ice-black-knight-resolving-antitrust-concerns-mortgage-technology-deal), 2023-08-31.
- **[S3]** Mortgage Bankers Association, [Mortgage Finance Forecast, April 2026](https://www.mba.org/docs/default-source/research-and-forecasts/forecasts/2026/mortgage-finance-forecast-apr-2026.pdf), origination and mortgage-debt outlook.
- **[S4]** Snapdocs, [eClosing platform](https://www.snapdocs.com/eclosing-platform), accessed for current closing-workflow competition.
- **[S5]** Sagent, [Dara mortgage servicing platform](https://sagent.com/), accessed for current servicing competition and product positioning.
- **[S6]** Fiserv, [LoanServ servicing platform](https://www.fiserv.com/content/dam/fiserv-com/resources/loanserv-brochure.pdf), servicing-platform scope.
- **[S7]** Cotality, [Loan-Level Market Analytics](https://www.cotality.com/products/loan-level-market-analytics-llma), accessed for current mortgage-data competition.
- **[S8]** Finastra, [Mortgage lending software](https://www.finastra.com/lending/mortgage-lending), accessed for origination competition and integrations.
- **[S9]** Dark Matter Technologies, [Exchange Service Network](https://dmatter.com/exchange-service-network), accessed for the post-divestiture competitor ecosystem.
- **[S10]** Consumer Financial Protection Bureau, [Mortgage servicing examination procedures](https://www.consumerfinance.gov/compliance/supervision-examinations/mortgage-servicing-examination-procedures/), regulatory-process context.

Appendix S - Synthesis and Combined Earnings Model

Intercontinental Exchange, Inc. — Synthesis and Combined Earnings Model

Ticker: ICE **Mode:** Production **Model perimeter:** Controlling organic ICE perimeter; pending MarketAxess economics are a separate non-controlling conditional sensitivity **Common segment profit metric:** Issuer-disclosed statutory **Operating income Primary valuation method: P/E Synthesis status: CLEARED — 11/11 TIE-OUTS PASSED P/E 15 gate: FAIL — base-case cushion (5.18%)**

This synthesis mechanically consolidates the three reviewed segment models. It makes no new source discovery and creates no accounting plug. The sealed statutory bridge contains no corporate/unallocated adjustment and no operating bridge adjustment; both therefore remain absent, rather than being replaced by analyst-created corporate cost. The organic/no-close Fixed Income and Data Services model controls. MarketAxess is modeled later as a probability-weighted conditional sensitivity because the deal is unclosed and ICE has not disclosed the purchase-price allocation, acquired-intangible amortization schedule, exact financing instruments and coupons, transaction fees, or exact post-close debt-paydown schedule.

1. Anchors, scope, and immutable source lock

- Today: **2026-08-14**.
- Fiscal year end: **December 31**.
- Most recent reproducible TTM: **FY2025 less H1 2025 plus H1 2026**, ending **2026-06-30**.
- Latest completed FY used only for the historical cross-check: **FY2025**, ending 2025-12-31.
- Exact terminal date: **2031-06-30**.
- Compounding span: **exactly 5.0 calendar years** from 2026-06-30; no row uses a sixth fiscal year.
- Valuation price: **USD 155.24 per XNYS:ICE common share**, raw exchange close for the completed 2026-08-13 session.
- Listing and unit: XNYS:ICE common stock; one financial-statement common share equals one listed unit.
- Reporting and quote currency: USD; FX quote currency per reporting currency is exactly **1.0**.
- Split bridge: 571.0 million financial-statement diluted shares multiplied by a 1.0 split factor equals 571.0 million quote-basis diluted financial shares.
- Listed-unit bridge: depositary ratio 1.0 multiplied by share-class factor 1.0 equals one financial share per listed unit; 571.0 million quote-basis shares divided by 1.0 equals 571.0 million listed-unit equivalents.
- Quote-packet hash: `9ab8f732eef9a19de9ac6970dced3513ca2e6dabb89a44597159c4add3bd0c9d`.
- Quote raw-source hash: `b8436dd2ca308481116cbd8826a9b74463bb6b6d97c263798dfd919be9c8661c`.
- Actionability expiry: 2026-08-15 04:00:00 SGT. The packet validator passed at 2026-08-14 14:23:24 SGT.
- Historical statutory-bridge hash: `f638ae8b4500da99eb70cc7dfc669e16eb3a77ba3f263f2c026759422c9c7157`; validator result `STATUTORY_BRIDGE_VALID` and the durable DR forecasting-clearance token are present.

The TTM operating anchor is USD 10,558 million net revenue, USD 5,467 million statutory operating income, USD 5,331 million pretax income, and USD 4,038 million net income attributable to ICE. TTM statutory diluted EPS is therefore USD 4,038 million divided by 571.0 million, or **USD 7.071803852889667** per listed unit. The corresponding current statutory P/E is **21.951966319960377x**.

2. Segment-level forward assumptions reproduced from reviewed appendices

All dollars in the segment table are USD billions. The values are the reviewed appendix endpoints, with extra decimal precision retained in the consolidation where the product schedules support it. No MarketAxess revenue, profit, debt, interest, or amortization is included here.

Segment	Exact profit metric	TTM revenue	Bear 2031 revenue	Base 2031 revenue	Bull 2031 revenue	Bear margin	Base margin	Bull margin	Frozen source
Exchanges	Operating income	5.874	6.0979	7.4597	8.7934	71.5%	75.3%	77.2%	`appendix_B_exchanges.md` §§8-10; SHA-256 `8210efbea7c0d8a3ab6eaa7f7b73acf1f2f5e6ff18e5c0d483ef4a4ea1ccf3dd`
Fixed Income and Data Services	Operating income	2.528	2.867041588	3.375937806	3.735580261	38.0%	42.5%	44.5%	`appendix_B_fixed_income_and_data_services.md` §§8-10; SHA-256 `4f875d9fdf19c57fefad885ecbe41f51105aff7b4d2490baab571864b6602399`
Mortgage Technology	Operating income	2.156	2.2572	2.7514	3.1165	4.5%	14.0%	22.0%	`appendix_B_mortgage_technology.md` §§8-10; SHA-256 `5042ed23cb5a1643f1fe90aa789691055697eccd018b5c6c5a44db2cb2301ce5`

Exchanges base revenue compounds at 4.90%, far below its FY2022-FY2025 9.9% rate, while its already-high margin rises only 60 basis points. FIDS base revenue compounds at 6.0%, supported by the reviewed 7%-8% near-term recurring guide and higher network growth, with a 230-basis-point statutory margin increase. Mortgage base revenue compounds near 5.0%, but most incremental earnings depend on statutory margin rising from 2.9% to 14.0%. That margin bridge is the largest execution risk in the consolidated base case.

3. Combined revenue build

There are no corporate eliminations in the sealed packet. Combined revenue is therefore the exact sum of the three modeled segments.

Line at 2031-06-30	Bear	Base	Bull
Exchanges revenue	6.097900000	7.459700000	8.793400000
Organic FIDS revenue	2.867041588	3.375937806	3.735580261
Mortgage Technology revenue	2.257200000	2.751400000	3.116500000
Sum of segment revenue	11.222141588	13.587037806	15.645480261
Corporate eliminations	0.000000000	0.000000000	0.000000000
Combined revenue	**11.222141588**	**13.587037806**	**15.645480261**
TTM-to-horizon CAGR	1.227571%	5.174057%	8.183605%

The probability weights used throughout company underwriting are **30% bear, 50% base, and 20% bull**. They are intentionally non-uniform. The management YELLOW gate, acquisition-return uncertainty, elevated exchange starting point, and Mortgage execution risk warrant more downside weight than upside tail weight. The moat PASS and strong current recurring trends keep the base case dominant. These weights are company-level joint states and do not pretend that all segment risks are independent.

4. Combined statutory operating-income build

The exact common metric is statutory Operating income. Because the QFR-sealed bridge has empty corporate/unallocated and operating-adjustment arrays, adding corporate cost or an adjusted-to-GAAP conversion would violate the contract.

Line at 2031-06-30	Bear	Base	Bull
Exchanges operating income	4.360000000	5.617100000	6.788500000

Line at 2031-06-30	Bear	Base	Bull
Organic FIDS operating income	1.089475803	1.434773568	1.662333216
Mortgage Technology operating income	0.101600000	0.385200000	0.685600000
Sum on sealed common metric	5.551075803	7.437073568	9.136433216
Corporate/unallocated adjustments	0.000000000	0.000000000	0.000000000
Consolidated segment-profit metric	5.551075803	7.437073568	9.136433216
Operating bridge adjustments	0.000000000	0.000000000	0.000000000
Consolidated statutory operating income	**5.551075803**	**7.437073568**	**9.136433216**
Statutory operating margin	49.465387%	54.736534%	58.396630%

Relative to the 51.780640% TTM margin, bear contracts 231.53 basis points, base expands 295.59 basis points, and bull expands 661.60 basis points. The base increase is not a corporate-cost assumption: it is the weighted result of 75.3% Exchanges, 42.5% FIDS, and 14.0% Mortgage statutory margins.

5. Annual statutory earnings paths

All income statement values are USD billions; diluted shares are millions; EPS is USD per listed unit. `Segment OI` is the sum of the three exact statutory segment Operating income lines. Corporate/unallocated and operating adjustments remain exactly zero in every year. Tax is shown as a negative expense and NCI as the negative claim needed to reach attributable net income.

Bear annual path

Period ended	Revenue	Segment OI	Corp/unalloc.	Op. adjustments	Statutory OI	Interest income	Interest expense	Other income	Pretax	Tax	NCI	Net income	Diluted shares	Statutory EPS
2027-06-30	10.473350	5.260912	0.000	0.000	5.260912	0.095	(0.825)	0.000	4.530912	(1.132728)	(0.065)	3.333184	566.354839	5.885328
2028-06-30	10.614977	5.233624	0.000	0.000	5.233624	0.090	(0.850)	0.000	4.473624	(1.118406)	(0.068)	3.287218	561.861168	5.850588
2029-06-30	10.804049	5.294090	0.000	0.000	5.294090	0.090	(0.875)	0.000	4.509090	(1.127272)	(0.070)	3.311817	556.305612	5.953234
2030-06-30	11.015280	5.408474	0.000	0.000	5.408474	0.095	(0.900)	0.000	4.603474	(1.150869)	(0.072)	3.380606	550.944166	6.136022
2031-06-30	11.222142	5.551076	0.000	0.000	5.551076	0.100	(0.900)	0.000	4.751076	(1.187769)	(0.075)	3.488307	545.179461	6.398456

Bear assumes the TTM favorable USD 562 million other-income line disappears, the tax rate is 25%, interest expense stays elevated, and annual repurchases are reduced to USD 1.0-1.3 billion. It does not assume a clearing catastrophe or permanent exchange impairment; those are discontinuous risks outside a normal operating case.

Base annual path

Period ended	Revenue	Segment OI	Corp/unalloc.	Op. adjustments	Statutory OI	Interest income	Interest expense	Other income	Pretax	Tax	NCI	Net income	Diluted shares	Statutory EPS
2027-06-30	11.187090	5.865189	0.000	0.000	5.865189	0.100	(0.800)	0.075	5.240189	(1.205244)	(0.062)	3.972946	563.000000	7.056742
2028-06-30	11.812387	6.268810	0.000	0.000	6.268810	0.100	(0.780)	0.075	5.663810	(1.302676)	(0.062)	4.299133	555.514286	7.739015
2029-06-30	12.424400	6.656299	0.000	0.000	6.656299	0.105	(0.760)	0.075	6.076299	(1.397549)	(0.062)	4.616751	548.487259	8.417243
2030-06-30	13.022028	7.066886	0.000	0.000	7.066886	0.110	(0.740)	0.075	6.511886	(1.497734)	(0.062)	4.952152	541.871874	9.138973
2031-06-30	13.587038	7.437074	0.000	0.000	7.437074	0.115	(0.720)	0.075	6.907074	(1.588627)	(0.062)	5.256447	535.627972	9.813615

Base normalizes other income to USD 75 million, below both FY2025's USD 101 million and the unusually favorable TTM USD 562 million. It uses a 23% tax rate, broadly consistent with the 22.5%-23.1% recent range, and gradually lower interest expense in the organic/no-close perimeter. This is not a MarketAxess deleveraging assumption.

Bull annual path

Period ended	Revenue	Segment OI	Corp/unalloc.	Op. adjustments	Statutory OI	Interest income	Interest expense	Other income	Pretax	Tax	NCI	Net income	Diluted shares	Statutory EPS
2027-06-30	11.593960	6.188705	0.000	0.000	6.188705	0.105	(0.780)	0.150	5.663705	(1.189378)	(0.060)	4.414327	562.314286	7.850284
2028-06-30	12.632070	6.924592	0.000	0.000	6.924592	0.110	(0.740)	0.150	6.444592	(1.353364)	(0.058)	5.033227	553.840602	9.087863
2029-06-30	13.655862	7.669038	0.000	0.000	7.669038	0.115	(0.700)	0.150	7.234038	(1.519148)	(0.056)	5.658890	545.547919	10.372856
2030-06-30	14.661429	8.428269	0.000	0.000	8.428269	0.120	(0.660)	0.150	8.038269	(1.688036)	(0.054)	6.296232	537.411555	11.715848
2031-06-30	15.645480	9.136433	0.000	0.000	9.136433	0.125	(0.620)	0.150	8.791433	(1.846201)	(0.052)	6.893232	529.411555	13.020555

Bull retains USD 150 million of other income, uses a 21% tax rate, and assumes stronger cash generation lowers organic interest expense. It requires broad-based Exchange growth, high FIDS recurring growth and margin, and Mortgage statutory margin reaching 22% while still funding resilience and product investment.

Full-precision terminal calculation ledger

Case	Revenue	Statutory OI	Pretax	Tax	NCI	Net income	Diluted shares	EPS
Bear	11.222141587564001	5.551075803274321	4.751075803274321	(1.187768950818 5802)	(0.075000000000000)	3.488306852455740	545.179460602560 4	6.398456113149024
Base	13.587037806233400	7.437073567649196	6.907073567649196	(1.588626920559315)	(0.062000000000000)	5.256446647089881	535.627971632849 7	9.813614907126157
Bull	15.645480260924001	9.136433216111182	8.791433216111182	(1.846200975383 3481)	(0.052000000000000)	6.893232240727833	529.411554940566 5	13.020554947089682

The EPS bridge is identical in all cases: reporting-currency net income divided by quote-basis diluted financial shares, multiplied by the sealed 1.0 financial-shares-per-listed-unit factor and 1.0 USD-per-USD FX factor.

5a. Return-method input bridge and capital-structure treatment

`PRIMARY_VALUATION_METHOD = PE`. Statutory diluted EPS is completely reconciled, the listing/unit/FX bridge is 1:1, and P/E is ICE's natural shareholder bridge. EV/NOPAT does not control because a source-bound terminal cash, gross debt, lease, and senior-claim path is unavailable, especially while MarketAxess remains pending.

Return input	TTM/current	Bear terminal	Base terminal	Bull terminal	Treatment
Statutory operating income, USD bn	5.467000	5.551076	7.437074	9.136433	Reconciled operating model
Normalized cash tax rate	23.1% effective anchor	25.0%	23.0%	21.0%	Scenario tax path
Normalized NOPAT, USD bn	4.204123 diagnostic	4.163307	5.726547	7.217782	Secondary diagnostic only
Cash and equivalents, USD bn	1.067	Unavailable	Unavailable	Unavailable	No residual estimate
Short-term investments, USD bn	0.886	Unavailable	Unavailable	Unavailable	Not double counted with cash
Gross debt excluding leases, USD bn	19.846	Unavailable	Unavailable	Unavailable	Interest path affects EPS
Lease liabilities, USD bn	0.681	Unavailable	Unavailable	Unavailable	No P/E adjustment
Preferred equity	None identified in sealed package	Unavailable	Unavailable	Unavailable	Inapplicable to P/E bridge
Minority interest	Reflected in NCI	Reflected in NCI	Reflected in NCI	Reflected in NCI	Counted once in EPS
Other senior claims	Unavailable	Unavailable	Unavailable	Unavailable	No analyst plug
Separately valued non-operating assets	None	None	None	None	No add-on value
Diluted listed-equivalent shares, m	571.000000	545.179461	535.627972	529.411555	Explicit share path

Current net debt excluding leases and short-term investments is **USD 18.779 billion**, equal to USD 19.846 billion gross debt less USD 1.067 billion cash. Under P/E, no current or terminal net-debt amount is added to or subtracted from EPS times the exit multiple. Financing costs and debt capacity affect statutory EPS and the independently selected multiple. This is the

terminal capital-structure treatment, and it avoids counting debt twice.

6. Share-count and distribution paths

The starting point is the sealed 571.0 million quote-basis financial shares, not ADR units. Shares retired equal buyback cash divided by assumed average repurchase price. SBC issuance is the disclosed approximation of forecast SBC dollars divided by the same average price. The paths do not assume that gross repurchases translate one-for-one into net shrinkage.

Bear share path

Period ended	Starting shares, m	Buyback, USD bn	Average price	Shares retired, m	SBC issuance, m	Ending shares, m
2027-06-30	571.000000	1.000	155	6.451613	1.806452	566.354839
2028-06-30	566.354839	1.000	158	6.329114	1.835443	561.861168
2029-06-30	561.861168	1.200	162	7.407407	1.851852	556.305612
2030-06-30	556.305612	1.200	166	7.228916	1.867470	550.944166
2031-06-30	550.944166	1.300	170	7.647059	1.882353	545.179461

Base share path

Period ended	Starting shares, m	Buyback, USD bn	Average price	Shares retired, m	SBC issuance, m	Ending shares, m
2027-06-30	571.000000	1.600	165	9.696970	1.696970	563.000000
2028-06-30	563.000000	1.600	175	9.142857	1.657143	555.514286
2029-06-30	555.514286	1.600	185	8.648649	1.621622	548.487259
2030-06-30	548.487259	1.600	195	8.205128	1.589744	541.871874
2031-06-30	541.871874	1.600	205	7.804878	1.560976	535.627972

Bull share path

Period ended	Starting shares, m	Buyback, USD bn	Average price	Shares retired, m	SBC issuance, m	Ending shares, m
2027-06-30	571.000000	1.800	175	10.285714	1.600000	562.314286
2028-06-30	562.314286	1.900	190	10.000000	1.526316	553.840602
2029-06-30	553.840602	2.000	205	9.756098	1.463415	545.547919
2030-06-30	545.547919	2.100	220	9.545455	1.409091	537.411555
2031-06-30	537.411555	2.200	235	9.361702	1.361702	529.411555

TTM common dividends were USD 1.141 billion, equivalent to approximately USD 2.00 per current diluted share, and management's policy is progressive. The governed distribution paths begin from USD 2.00 and grow 2%, 5%, and 6% annually in bear, base, and bull. Cumulative exact-horizon distributions are USD 10.6162419264, USD 11.6038256250, and USD 11.9506370752 per share. This source-bound forward estimate is preferable to a zero-distribution diagnostic.

7. P/E 15 entry-price gate

Required EPS at the frozen price is USD 155.24 divided by 15, or **USD 10.349333333333334** per listed unit.

Case	Terminal statutory EPS	EPS times 15	Frozen price	Cushion	Pass?
Bear	6.398456	95.976842	155.24	(38.18%)	FAIL
Base	9.813615	147.204224	155.24	**(5.18%)**	**FAIL**
Bull	13.020555	195.308324	155.24	25.81%	PASS
Probability-weighted EPS diagnostic	9.430455	141.456829	155.24	(8.88%)	FAIL

The confident base case controls. Bull passing does not rescue the entry-price test. The gate is independent of the terminal P/E used for shareholder returns.

8. Security return underwriting

The same P/E method controls bear, base, bull, probability weighting, and reverse-return diagnostics. Exit multiples are independently selected rather than set mechanically to 15x. Bear uses 17x because lower growth, lower margin, capital-allocation pressure, and regulatory/data risks deserve a discount to today's 21.95x. Base uses 20x because the dominant Exchange and recurring-data franchises remain high quality but mature, while Mortgage and acquisition returns remain unresolved. Bull uses 23x because EPS growth and statutory margin prove better than base without assuming a structurally higher multiple than the franchise has earned. No net-debt adjustment is added after EPS times P/E.

Case	Probability	Terminal EPS	Exit P/E	Terminal equity value per share	Cumulative distributions	Terminal wealth	Gross USD IRR
Bear	30%	6.398456113	17.0x	108.773753924	10.616241926	119.389995850	**(5.12%)**
Base	50%	9.813614907	20.0x	196.272298143	11.603825625	207.876123768	**6.01%**
Bull	20%	13.020554947	23.0x	299.472763783	11.950637075	311.423400858	**14.94%**
Probability-weighted	100%	9.430455277	Method-consistent	Not separately meaningful	Weighted in wealth	202.039740810	**5.41%**

Probability-weighted terminal wealth is `0.30 × 119.3899958499334 + 0.50 × 207.87612376752315 + 0.20 × 311.4234008582627 = 202.03974081039416`. The probability-weighted IRR is `(202.03974081039416 ÷ 155.24)^(1 ÷ 5) − 1 = 5.411169990883713%`. It is not the arithmetic average of scenario IRRs.

Bear-case operating and return bridge

Bear case	Start 2026-06-30	Horizon 2031-06-30	CAGR / change	Justification
Revenue	USD 10.558bn	USD 11.222bn	1.23%	Exchange activity normalizes; FIDS recurring layers cushion weakness; Mortgage stagnates
Operating margin	51.78%	49.47%	(2.32) pp	Exchange absorption and FIDS pricing weaken while Mortgage remains low-margin
Operating earnings	USD 5.467bn	USD 5.551bn	0.31%	Exact issuer-disclosed statutory Operating income
Diluted share count	571.00m	545.18m	(0.92%)	Reduced buybacks partly offset SBC
EPS	USD 7.0718	USD 6.3985	(1.98%)	Statutory diluted EPS used in shareholder bridge
Valuation	21.95x P/E	17.00x P/E	(4.95)x	Slower growth and capital/regulatory risks compress the multiple
Share value	USD 155.24 current price	USD 108.77	(6.87%)	USD 6.398456113 EPS times 17.0x; no net-debt adjustment
Annual dividend	USD 2.00	USD 2.21	2.00%	Progressive policy grows slowly under earnings pressure
Dividend yield	1.29%	2.03%	0.74 pp	Annual dividend divided by endpoint share value
Five-year dividends	-	USD 10.62	cumulative	Five exact modeled annual distributions
Total ending value	USD 155.24	USD 119.39	**(5.12%) gross USD IRR**	Terminal share value plus cumulative distributions

Base-case operating and return bridge

Base case	Start 2026-06-30	Horizon 2031-06-30	CAGR / change	Justification
Revenue	USD 10.558bn	USD 13.587bn	5.17%	Exchange recurring growth, 6% organic FIDS CAGR, and gradual Mortgage recovery
Operating margin	51.78%	54.74%	2.96 pp	FIDS mix and Mortgage integration lift weighted statutory margin
Operating earnings	USD 5.467bn	USD 7.437bn	6.35%	Exact issuer-disclosed statutory Operating income
Diluted share count	571.00m	535.63m	(1.27%)	USD 1.6bn annual buybacks net of modeled SBC

Base case	Start 2026-06-30	Horizon 2031-06-30	CAGR / change	Justification
EPS	USD 7.0718	USD 9.8136	6.77%	Reconciled statutory diluted EPS
Valuation	21.95x P/E	20.00x P/E	(1.95)x	Franchise quality persists but maturity and returns cap terminal multiple
Share value	USD 155.24 current price	USD 196.27	4.80%	USD 9.813614907 EPS times 20.0x; no net-debt adjustment
Annual dividend	USD 2.00	USD 2.55	5.00%	Progressive dividend grows with cash earnings
Dividend yield	1.29%	1.30%	0.01 pp	Annual dividend divided by endpoint share value
Five-year dividends	-	USD 11.60	cumulative	Five exact modeled annual distributions
Total ending value	USD 155.24	USD 207.88	**6.01% gross USD IRR**	Terminal share value plus cumulative distributions

Bull-case operating and return bridge

Bull case	Start 2026-06-30	Horizon 2031-06-30	CAGR / change	Justification
Revenue	USD 10.558bn	USD 15.645bn	8.18%	Broad benchmark adoption, high recurring FIDS growth, and Mortgage product wins
Operating margin	51.78%	58.40%	6.62 pp	High fixed-cost absorption plus Mortgage statutory margin reaching 22%
Operating earnings	USD 5.467bn	USD 9.136bn	10.82%	Exact issuer-disclosed statutory Operating income
Diluted share count	571.00m	529.41m	(1.50%)	Strong cash generation funds buybacks above SBC
EPS	USD 7.0718	USD 13.0206	12.98%	Reconciled statutory diluted EPS
Valuation	21.95x P/E	23.00x P/E	1.05x	Durable growth and demonstrated statutory returns earn a modest premium
Share value	USD 155.24 current price	USD 299.47	14.04%	USD 13.020554947 EPS times 23.0x; no net-debt adjustment
Annual dividend	USD 2.00	USD 2.68	6.00%	Strong cash earnings support faster progressive growth
Dividend yield	1.29%	0.89%	(0.40) pp	Annual dividend divided by endpoint share value
Five-year dividends	-	USD 11.95	cumulative	Five exact modeled annual distributions
Total ending value	USD 155.24	USD 311.42	**14.94% gross USD IRR**	Terminal share value plus cumulative distributions

Reverse-return and maximum-buy-price diagnostics

Diagnostic	Bear	Base	Bull	Probability-weighted wealth
Maximum price for 10% CAGR	74.13	129.07	193.37	125.45
Maximum price for 15% CAGR	59.36	103.35	154.83	100.45
Maximum price for 20% CAGR	47.98	83.54	125.15	81.20

At today's USD 155.24, the base case would need an exit P/E of 24.293978x, 30.634916x, or 38.179914x to deliver 10%, 15%, or 20% annualized respectively after the modeled base distributions. Those multiples are not credible central underwriting. The probability-weighted maximum price for a 10%-15% gross USD hurdle lies near USD 100-125, before any investor-specific tax, fee, or FX overlay. This is a security diagnostic only, not a ranking, sizing, portfolio, or trade recommendation.

9. MarketAxess conditional acquisition and capital-structure sensitivity

The controlling forecasts above contain **zero** MarketAxess revenue, operating income, acquisition amortization, incremental financing interest, or debt. This section adds each exactly once. It uses a separate **65% analyst close probability** and 35% no-close probability; this is not company guidance and does not change the controlling P/E-15 gate or return outputs.

The reviewed conditional segment bridge includes terminal acquisition revenue of USD 0.865 billion, USD 1.084 billion, and USD 1.296 billion and terminal post-amortization operating income of USD 0.284 billion, USD 0.490 billion, and USD 0.653 billion in bear/base/bull. The assumed continuing amortization is already inside those operating-income figures and is not added again. The capital sensitivity assumes remaining incremental gross deal debt of USD 5.5 billion, USD 4.0 billion, and USD 2.5 billion at terminal coupons of 6.5%, 5.5%, and 4.5%. It does not claim those are disclosed financing terms.

Conditional close case	Deal OI, USD m	Remaining incremental debt, USD bn	Coupon	Incremental interest, USD m	Pretax increment, USD m	After-tax NI increment, USD m	EPS increment	Conditional terminal EPS	Conditional gross IRR
Bear	284.0	5.5	6.5%	357.5	(73.5)	(55.125)	(0.101113)	6.297343	(5.39%)
Base	490.0	4.0	5.5%	220.0	270.0	207.900	0.388143	10.201757	6.79%
Bull	653.0	2.5	4.5%	112.5	540.5	426.995	0.806546	13.827101	16.28%

At 65% close probability, scenario-blended terminal wealth is USD 118.272692, USD 212.921977, and USD 323.481270, giving approximately (5.29%), 6.52%, and 15.82% scenario IRRs. Applying the 30%/50%/20% operating weights produces USD 206.639049899 expected wealth and a **5.886782627%** expected-wealth IRR, versus 5.411169991% for controlling no-close underwriting. A 100% conditional-close blend produces a 6.139383330% expected-wealth IRR.

This sensitivity is deliberately non-controlling. It cannot be promoted into the statutory forecast until closing, purchase accounting, acquired cash and debt, exact financing, integration charges, and a governed amortization schedule are disclosed. The USD 6.0 billion equity consideration is not also subtracted from P/E-derived equity value, and the USD 5.7 billion enterprise value is not treated as an additional debt claim. That prevents double counting.

10. Sensitivities and decision variables

The table holds all variables except the named input at base. EPS effects flow through the 23% base tax rate and terminal diluted shares unless share count itself is varied.

Variable	Downside	Base	Upside	Terminal EPS impact
Exchanges revenue CAGR	2.90%	4.90%	6.90%	USD 9.0726 / 9.8136 / 10.6134
Organic FIDS statutory margin	40.5%	42.5%	44.5%	USD 9.7166 / 9.8136 / 9.9107
Terminal diluted shares	562.41m, plus 5%	535.63m	508.85m, minus 5%	USD 9.3463 / 9.8136 / 10.3301
Tax rate	26.0%	23.0%	20.0%	USD 9.4268 / 9.8136 / 10.2005
Mortgage terminal margin	11.0%	14.0%	17.0%	About USD 9.6950 / 9.8136 / 9.9322

Exchanges growth is the largest ordinary operating sensitivity. A 200-basis-point CAGR change shifts the endpoint by roughly USD (684.5) million or USD 738.8 million of revenue and moves EPS by about USD (0.74) or USD 0.80. Mortgage margin is the most important model-risk sensitivity because the base case assumes an 1,110-basis-point statutory recovery without a disclosed amortization schedule. Share retirement also matters, but gross buyback dollars must compete with deleveraging and investment.

11. Combined earnings summary and probability arithmetic

Case	Revenue, USD bn	Statutory OI, USD bn	OI margin	NI, USD bn	EPS per listed unit	Probability	EPS times 15	Value versus USD 155.24
Bear	11.222142	5.551076	49.47%	3.488307	6.398456	30%	95.976842	(38.18%)
Base	13.587038	7.437074	54.74%	5.256447	9.813615	50%	147.204224	(5.18%)
Bull	15.645480	9.136433	58.40%	6.893232	13.020555	20%	195.308324	25.81%
Probability-weighted	13.289257	7.211146	54.26%	5.053362	9.430455	100%	141.456829	(8.88%)

Probability-weighted EPS is `0.30 × 6.398456113149024 + 0.50 × 9.813614907126157 + 0.20 × 13.020554947089682 = 9.430455276925722`. Probability-weighted revenue, operating income, and net income are statistical blends, not a fourth operating case.

12. Reflexivity, period integrity, and qualitative integration

Historical reflexivity

TTM segment revenue is USD 5,874 million Exchanges plus USD 2,528 million FIDS plus USD 2,156 million Mortgage, exactly USD 10,558 million. TTM segment operating income is USD 4,388 million plus USD 1,017 million plus USD 62 million, exactly USD 5,467 million statutory operating income. No corporate or operating adjustment is permitted or needed. FY2025 likewise sums USD 3,982 million plus USD 933 million plus USD 14 million to USD 4,929 million statutory operating income. Both residuals are zero and far inside the sealed tolerances.

The TTM construction uses the permitted cumulative bridge: FY2025 less the exactly comparable six months ended 2025-06-30 plus the six months ended 2026-06-30. Net revenue is `9,931 − 5,016 + 5,643 = 10,558`; operating income is `4,929 − 2,518 + 3,056 = 5,467`; attributable net income is `3,315 − 1,648 + 2,371 = 4,038`. Diluted shares are `(575 × 12 − 576 × 6 + 568 × 6) ÷ 12 = 571.0`. No quarterly and cumulative period overlaps.

Management and moat integration

Management is **YELLOW**, not because operating execution is weak, but because acquisition-specific cash returns, capital-allocation incentives, succession, and MarketAxess leverage discipline remain unresolved. The share and interest paths therefore do not assume simultaneous maximum buybacks, maximum deal debt paydown, and unconstrained investment. A downgrade condition is missing both the deal synergy and 24-month leverage targets while maintaining mechanical repurchases. Mortgage statutory profitability failing to improve after Black Knight completion would also undermine the base model.

The moat is **PASS**, including the 2046 test. Exchanges and FIDS produced 98.9% of TTM segment operating income. Benchmark liquidity, clearing, proprietary data, governed pricing, indices, and connectivity support long-duration earnings. Mortgage has switching costs but has not earned a standalone economic-moat PASS. The model therefore allows durable core compounding without assuming Mortgage becomes a high-return asset immediately.

Constraints and disconfirming tests

- **Exchange break:** two consecutive years of flagship energy or rates share and open-interest loss, transaction expenses persistently outgrowing gross revenue, or data/connectivity growth below 4% would invalidate the base growth and margin path.
- **FIDS break:** recurring growth below 3%-4%, disclosed retention or pricing deterioration, evaluated-pricing displacement by AI-enabled alternatives, or network growth below 4% would challenge the 6% base CAGR.
- **Mortgage break:** statutory margin below 8% by the TTM ending 2028-06-30 or below 10% by FY2029 without quantified reinvestment and customer wins would invalidate the 14% terminal base margin.
- **Capital-allocation break:** gross leverage above 3.0x more than 24 months after a MarketAxess close, combined with unchanged mechanical buybacks, would challenge the below-line and share assumptions.
- **Trust break:** a material clearing loss, prolonged critical-market outage, benchmark data failure, or mortgage privacy breach causing sustained customer migration would move the analysis outside the ordinary bear case.
- **Valuation break:** even with operating execution, base terminal EPS below USD 10.349333 means the P/E-15 gate remains failed at the frozen entry price. A higher terminal multiple cannot repair that binary gate.

13. Eleven mandatory tie-out checks

- **PASS — Reported-financial and statutory-bridge tie-out.** FY2025 segment operating income `3,982 + 933 + 14 = 4,929`, matching statutory OI with zero residual. TTM `4,388 + 1,017 + 62 = 5,467`, also zero residual. TTM segment revenue `5,874 + 2,528 + 2,156 = 10,558`, exactly consolidated net revenue. Both are within 0.00%, well inside 2% and packet tolerances.

- **PASS — NI, shares, listed unit, and FX equal EPS.** Bear `3,488.306852455740m ÷ 545.1794606025604m × 1.0 × 1.0 = 6.398456113149024`. Base `5,256.446647089881m ÷ 535.6279716328497m = 9.813614907126157`. Bull `6,893.232240727833m ÷ 529.4115549405665m = 13.020554947089682`. The unit and FX factors equal one but are reproduced, not omitted.

- **PASS — Segment sum at horizon.** Bear `6.097900000 + 2.867041587564 + 2.257200000 = 11.222141587564`; base `7.459700000 + 3.375937806233401 + 2.751400000 = 13.5870378062334`; bull `8.793400000 + 3.735580260924002 + 3.116500000 = 15.645480260924001`. Corporate eliminations equal zero, so each ratio is exactly 100%.

- **PASS — Product-to-segment rollup.** Exchanges gross products less transaction expenses tie to net segment revenue in every case; terminal differences are below USD 0.1 million rounding. FIDS four product endpoints sum to USD 2.867, USD 3.376, and USD 3.736 billion. Mortgage four products sum to USD 2.2572, USD 2.7514, and USD 3.1165 billion. Each reviewed appendix reports reconciliation within 1%.

- **PASS — Weighted margin check.** ICE does not disclose or model product-level statutory profit. Each segment applies one exact statutory segment margin after its product revenue sum; mathematically assigning that same segment margin to each product makes the revenue-weighted average equal the segment margin exactly. No mixed adjusted/statutory product basis exists. Company base OI `5.6171 + 1.4347735676491952 + 0.3852 = 7.437073567649196`, and divided by revenue gives 54.73653399446087%.

- **PASS — Share-count and security-unit path.** `571 × 1.0 = 571` quote-basis shares and `571 ÷ (1.0 × 1.0) = 571` listed units. Bear: `571 − 35.064108720863864 + 9.243569323424305 = 545.1794606025604`. Base: `571 − 43.49848174238418 + 8.126453375233863 = 535.6279716328497`. Bull: `571 − 48.94896851980402 + 7.360523460370509 = 529.4115549405665`.

- **PASS — Growth plausibility.** Exchanges base CAGR of 4.9% is below 1.2 times its 9.9% historical rate. Mortgage's acquisition-distorted history is not extrapolated; the base near 5% matches the low-to-mid-single-digit guide. Organic FIDS base CAGR of 6.0% exceeds 1.2 times the narrow FY2023-FY2025 4.1% total rate, but the reviewed appendix supplies the required explicit justification: 7%-8% current recurring guidance, 7.1% recent network CAGR, Q2 network growth of 11%, and a declining annual path. No unjustified breach remains.

- **PASS — Historical and forward arithmetic.** Every segment uses exactly five annual steps from 2026-06-30 to 2031-06-30. Examples: Exchanges base `5.874 × (1 + 4.895651336%)^5 = 7.4597`; organic FIDS base product paths sum to 3.375937806; Mortgage base annual product paths sum to 2.7514. The segment reviews confirm each terminal formula within 1% and no FY2025-to-2031 six-year shortcut appears.

- **PASS — Recency anchor.** First-forward-year combined revenue versus USD 10.558 billion TTM is USD 10.47335 billion, or (0.80%), in bear; USD 11.18709 billion, or 5.96%, in base; and USD 11.59396 billion, or 9.81%, in bull. All are within 10%. The bull sits close to the limit but is supported by the explicit high-growth segment paths and receives only 20% probability.

- **PASS — Period and horizon integrity.** The TTM is FY2025 minus H1 2025 plus H1 2026, using identical six-month coverage. Net revenue, OI, attributable NI, and diluted shares tie exactly as shown in §12. Every growth rate starts 2026-06-30 and ends 2031-06-30, exactly 5.0 years later. There is no overlap and no substituted fiscal-year anchor.

- **PASS — Valuation, unit bridge, hashes, and probability.** Quote packet and statutory bridge hashes recompute to the frozen values. Price, listing, raw basis, 1.0 split factor, 1.0 depositary/class factor, 1.0 FX, and 571.0 million share bridge reproduce exactly. Terminal EPS times 15 equals USD 95.97684169723536, USD 147.20422360689236, and USD 195.30832420634522. Probabilities sum to 30% + 50% + 20% = 100%; weighted EPS equals 9.430455276925722. Base cushion is `(147.20422360689236 − 155.24) ÷ 155.24 = −5.17635686234711%`, so the binary gate is FAIL.

Final tie-out result: 11/11 PASS.

14. Frozen source and artifact hash ledger

Artifact	Role	SHA-256
`quant_foundation.md`	TTM, share, price-unit and statutory anchors	`305e5f133df8a733aceddd37ff79c79f458063c7c56510f3ed5ac81a47e681f9`
`data_package.md`	Reviewed historicals, below-line drivers, capital allocation	`5707bc567914adc2fd452b2f31bb49a65fd1abda71ed5d625023e6406a650504`
`data_package_review.md`	DR clearance evidence	`c258dfd84517e1f46339a1f16d6b3db313d8b22903aef21e44535b4c3010ab1e`
`statutory_bridge.json`	Sealed exact metric and statutory reconciliation	`f638ae8b4500da99eb70cc7dfc669e16eb3a77ba3f263f2c026759422c9c7157`
`appendix_B_exchanges.md`	Reviewed Exchanges forecast	`8210efbea7c0d8a3ab6eaa7f7b73acf1f2f5e6ff18e5c0d483ef4a4ea1ccf3dd`
`appendix_B_fixed_income_and_data_services.md`	Reviewed organic FIDS and conditional deal sensitivity	`4f875d9fdf19c57fefad885ecbe41f51105aff7b4d2490baab571864b6602399`
`appendix_B_mortgage_technology.md`	Reviewed Mortgage forecast	`5042ed23cb5a1643f1fe90aa789691055697eccd018b5c6c5a44db2cb2301ce5`
`appendix_management.md`	Management YELLOW gate	`836b0b00b1686558cb1c6d26378976a8bffc1c758d9ac259b023d842600ccf28`
`appendix_moat.md`	Moat PASS and 2046 PASS	`57beba484aa156c555a740d11658db7bf0656cc49a95f203baf0a681ae87d060`
`quote_packet.json`	Frozen USD 155.24 valuation anchor	`9ab8f732eef9a19de9ac6970dced3513ca2e6dabb89a44597159c4add3bd0c9d`

No source was re-fetched or replaced during synthesis. All quantitative citations point to the frozen reviewed artifacts above. The P&C insurer lane is **NOT TRIGGERED — ICE is not a P&C insurer or reinsurer**. `trade_execution_authorized=false`; this appendix contains no portfolio conclusion, ranking, sizing, or trade action.

Appendix CS - Compounder Score

Intercontinental Exchange, Inc. — Compounder Score

Ticker: ICE **Exchange:** New York Stock Exchange (XNYS:ICE) **Analysis date:** 2026-08-14 **Reporting currency:** USD **TTM end:** 2026-06-30 **Exact horizon:** 2031-06-30, exactly 5.0 years **Frozen price:** USD 155.24 at the 2026-08-13 completed-session close **PRIMARY_VALUATION_METHOD = PE Authority:** Diagnostic research only; no ranking, sizing, portfolio, broker, messaging, or trade authority.

1. Executive Verdict

Compounder Score: 57/100. Business Quality: 56/80. 20% Return Underwriting: 1/20. Score-implied classification: Reject. Confidence: Medium.

ICE owns an exceptional operating core, but the evidence does not support the dream-compounder claim at the frozen price. Exchanges and Fixed Income and Data Services produced 98.9% of TTM segment operating income, the moat and 2046 tests passed, consolidated cash conversion is strong, and the statutory model reconciles cleanly. Those strengths are real.

The score is capped because capital returns must include the acquisition price. The FY2021-FY2025 median statutory ROIC is only 7.2%; TTM statutory ROIC is 8.7%, or about 10.4% using adjusted operating income. Goodwill and intangibles average about 95% of invested capital. A conservative reinvestment proxy produces acquisition-inclusive ROIIC of only 10.27% over the available FY2021-FY2025 observation window, versus an organic/gross-capex-only proxy of 52.43%. That gap is the central issue: high incremental economics inside the operating platforms have not translated into comparably high returns on all capital paid.

The valuation conclusion is unambiguous. The frozen P/E bridge produces gross USD IRRs of **-5.12% bear, 6.01% base, and 14.94% bull**. Expected terminal shareholder wealth of USD 202.0397408104 per share annualizes to **5.4111699909%**, using 30%/50%/20% probabilities. Even the bull case does not reach 20%. The base case would require a 38.179914x terminal P/E to deliver 20%, versus the current 21.951966x and modeled 20.0x exit. This trips the hard veto that the 20% case requires major terminal multiple expansion.

The classification is therefore **Reject under this diagnostic rubric**, not an ER2 portfolio verdict. A lower price changes the security return but does not erase the need to prove acquisition-inclusive ROIIC, Mortgage statutory profitability, and MarketAxess cash returns.

2. Data Source Map

The analysis uses the reviewer-final ER2 source chain. Frozen SHA-256 hashes were recomputed before scoring and matched the gate manifest.

Required evidence	Controlling source	Period / basis	Treatment
Price and listed unit	`quote_packet.json`; SHA-256 `9ab8f732eef9a19de9ac6970dced3513ca2e6dabb89a44597159c4add3bd0c9d`	USD 155.24 on 2026-08-13; one common share per listed unit	Frozen
Market capitalization	Quote packet price and 571.0m TTM diluted shares	USD 88.64204bn, calculated as 155.24 × 571.0m	Diagnostic
Enterprise value	`quant_foundation.md` and `data_package.md`	USD 107.21604bn, calculated using debt, leases, cash and short-term investments	Diagnostic; not primary valuation
Income statement	`statutory_bridge.json`; SHA-256 `f638ae8b4500da99eb70cc7dfc669e16eb3a77ba3f263f2c026759422c9c7157`	FY2025 and TTM ended 2026-06-30	Official statutory figures control
Balance sheet	`quant_foundation.md` / `data_package.md`	2026-06-30	Official debt/cash bridge controls
Cash flow	`quant_foundation.md` P6 and `data_package.md`	FY2021-FY2025 and TTM	Statutory FCF = CFO less property capex and capitalized software
Shares and SBC	Quote packet, QF P6, data package §7	FY2021-FY2025 and TTM	Diluted shares; SBC treated as economic cost

Required evidence	Controlling source	Period / basis	Treatment
Segment data	Three reviewer-cleared segment appendices	FY2021-FY2025, TTM, 2031 scenarios	Issuer-disclosed statutory Operating income
Management	`appendix_management.md`; SHA-256 `836b0b00b1686558cb1c6d26378976a8bffc1c758d9ac259b023d842600ccf28`	Eight calls, filings, proxy	Gate YELLOW
Capital allocation / governance	Data package and management appendix	FY2021-TTM; 2026 proxy	Acquisition cash, issuance, incentives and founder succession included
Moat / competitors	`appendix_moat.md`; SHA-256 `57beba484aa156c555a740d11658db7bf0656cc49a95f203baf0a681ae87d0600`	Current and 2046 test	Moat PASS; 2046 PASS
TAM / runway	Reviewed segment appendices and their primary sources	Five-year product scenarios	No unsupported consolidated TAM awarded
Combined model	`appendix_synthesis.md`; SHA-256 `7417cdace0b1e47ee4b335754b38e1672fbc858c3ec5a4ce99ce8b680ef31535`	TTM to 2031-06-30	11/11 tie-outs; controlling organic/no-close perimeter

Segment hashes matched `gate_manifest.json`: Exchanges `8210efbea7c0d8a3ab6eaa7f7b73acf1f2f5e6ff18e5c0d483ef4a4ea1ccf3dd`; FIDS `4f875d9fdf19c57fefad885ecbe41f51105aff7b4d2490baab571864b6602399`; Mortgage Technology `5042ed23cb5a1643f1fe90aa789691055697eccd018b5c6c5a44db2cb2301ce5`. The final data package hash matched `5707bc567914adc2fd452b2f31bb49a65fd1abda71ed5d625023e6406a650504`.

3. Key Financial and Quality Metrics

USD values are billions except per-share amounts, percentages and multiples.

Metric	1-year FY2024-FY2025	3-year FY2022-FY2025	Available longer observation	TTM / current	Interpretation
Net-revenue CAGR	7.03%	10.84%	8.58% over four intervals, FY2021-FY2025	n/a	Historical growth is strong, but not a clean ten-year series in the frozen package
NOPAT CAGR	13.61%	7.85%	11.31% over four intervals	n/a	Calculated from statutory OI and effective tax rates
FCF CAGR	0.36%	8.01%	9.72% over four intervals	n/a	FY2025 FCF was nearly flat despite earnings growth
Statutory ROIC	7.9%	7.0%-8.0% range	7.2% median across FY2021-FY2025	8.7%	Includes acquisition goodwill and intangibles
Adjusted ROIC	n/a	n/a	Insufficient evidence for a consistent five-year adjusted series	10.4%	TTM only; not used to override acquisition-inclusive ROIC
Organic ROIIC proxy	n/a	37.75%	52.43% over available FY2021-FY2025 observation	n/a	ΔNOPAT / gross capex; excludes acquisitions and working-capital data
Acquisition-inclusive ROIIC proxy	n/a	6.24%	10.27% over available FY2021-FY2025 observation	n/a	ΔNOPAT / (gross capex + cash M&A); conservative, with NWC unavailable
FCF / NOPAT	102.4%	n/a	105.3% average across FY2021-FY2025	110.4%	Cash conversion is real
CFO / attributable NI	n/a	n/a	n/a	136.6%	TTM CFO USD 5.514bn / NI USD 4.038bn
FCF / attributable NI	n/a	n/a	n/a	114.9%	TTM FCF USD 4.641bn / NI USD 4.038bn
Diluted-share CAGR	-0.17%	+0.83%	+0.44% over four intervals	571.0m	Acquisition issuance raised shares; recent buybacks reversed part of it
SBC / gross revenue	n/a	n/a	n/a	2.00%	USD 268m / USD 13.426bn
SBC / net revenue	n/a	n/a	n/a	2.54%	Useful alternate denominator
SBC / FCF	n/a	n/a	n/a	5.77%	SBC is not ignored
Net debt / adjusted EBITDA	n/a	n/a	n/a	2.65x implied	Before pending MarketAxess debt

Metric	1-year FY2024-FY2025	3-year FY2022-FY2025	Available longer observation	TTM / current	Interpretation
Current P/E	n/a	n/a	n/a	21.95x	Price / USD 7.071804 TTM EPS
EV / NOPAT	n/a	n/a	n/a	25.50x	Secondary current diagnostic only
EV / FCF	n/a	n/a	n/a	23.10x	Secondary current diagnostic only
FCF yield	n/a	n/a	n/a	5.24%	USD 4.641bn / USD 88.642bn market cap
Dividend yield	n/a	n/a	n/a	1.29%	USD 2.00 / USD 155.24
Net buyback yield, approximate	n/a	n/a	n/a	1.95%	(USD 2.0bn repurchases - USD 0.268bn SBC proxy) / market cap

An exact five-year CAGR requires six endpoints. The frozen package supplies five annual observations, FY2021-FY2025, plus a TTM anchor, and does not provide a clean ten-year acquisition/reinvestment ledger. Longer-period metric fields are therefore not fabricated. The ROIIC proxies use gross capex because depreciation and non-cash working-capital changes are not consistently supplied. That makes them diagnostic bounds, not false precision. The decisive point survives the limitation: including USD 10.314bn of cash M&A collapses the available-window ROIIC from 52.43% to 10.27%.

Current capital structure is material. At 2026-06-30 ICE had USD 19.846bn debt excluding leases, USD 0.681bn lease liabilities, USD 1.067bn cash, and USD 0.886bn short-term investments. The issuer-style disclosed net debt excluding leases and short-term investments was USD 18.779bn. A full current EV claim bridge using short-term investments as qualifying financial assets produces USD 18.574bn of debt/lease less cash/investments. Neither amount is added to terminal P/E value.

4. Rubric Scorecard

Category	Score	Maximum	Skeptical conclusion
1. Incremental Returns on Capital	13	25	Strong internal unit economics, but acquisition-inclusive ROIIC and goodwill-inclusive ROIC are modest
2. Reinvestment Runway	16	20	Long runway in benchmark markets, data, networks and workflow; Mortgage and acquisition dependence reduce confidence
3. Durability of Moat	13	15	Concrete liquidity, clearing, data and system-of-record advantages; AI/regulatory and Mortgage risks remain
4. Accounting Honesty and Financial Quality	8	10	Clean statutory reconciliation and strong cash conversion, offset by leverage and acquisition accounting
5. Capital Allocation Discipline	6	10	Excellent NYSE outcome and credible deleveraging, but missing cash-return disclosure and return-linked incentives
Business Quality	**56**	**80**	Below the 65/80 investable-now threshold
6. Price and 20% Return Underwriting	1	20	Only a small distribution contribution earns credit; all core return tests fail
Total	**57**	**100**	Reject under this diagnostic rubric

Detailed sub-scores:

Rubric item	Score	Maximum	Evidence
1A Normalized ROIC is high	1	5	Five-observation median statutory ROIC 7.2%; TTM 8.7%
1B ROIIC is high	2	8	Acquisition-inclusive proxy 10.27%; exact five-year reinvestment ledger unavailable
1C ROIIC is not deteriorating sharply	2	3	NOPAT is rising, but Black Knight and pending MarketAxess obscure the full-return trend

Rubric item	Score	Maximum	Evidence
1D Unit economics support returns	3	3	Exchanges 74.7% and FIDS 40.2% TTM statutory margins; 98.9% of segment OI
1E Cash conversion is real	3	3	TTM FCF/NI 114.9%; five-observation FCF/NOPAT average 105.3%
1F ROIC is not an accounting artifact	2	3	Including goodwill prevents artificial inflation, but adjusted/non-GAAP acquisition optics remain a risk
2A Large remaining market opportunity	4	5	Broad risk-transfer, data, electronification and mortgage-digitization opportunities; no unsupported TAM credit
2B Proven reinvestment at scale	4	5	NYSE is proven; Black Knight cost/debt execution is strong but full ROI is unresolved
2C Organic growth opportunity	3	4	Controlling no-close base revenue CAGR 5.17%
2D Repeatable expansion playbook	2	3	Cross-sell and integration playbook exists but relies materially on acquisitions
2E Market structure supports growth	2	2	Regulated clearing, benchmarks and embedded data/workflows are durable structures
2F Growth avoids ROIC collapse	1	1	Controlling forecast is organic/no-close; acquisition sensitivity is kept separate
3A Clear source of advantage	4	4	Benchmark liquidity, clearing, proprietary data, governance and systems of record
3B Pricing power	2	3	Strongest in benchmarks/data; weaker in cash equities, basic analytics and Mortgage
3C Competitive evidence	3	3	Margin persistence and product-specific competitor review support the moat
3D Customer stickiness	2	2	Clearing integration, more than 99% NYSE listings retention, long Mortgage contracts
3E Resilience through stress	2	2	Exchanges/FIDS margins persisted through volatile and acquisition periods
3F Low disruption risk	0	1	AI commoditization, on-chain venues, regulation and modular Mortgage stacks are real threats
4A Clean revenue and earnings quality	2	2	Official statutory bridge has zero residuals
4B Cash flow supports earnings	2	2	TTM FCF exceeds attributable NI
4C Conservative SBC/dilution treatment	1	2	SBC modest, but acquisition issuance and gross-buyback optics require net treatment
4D Balance-sheet strength	1	2	Strong FCF, but USD 18.779bn disclosed net debt and pending debt financing limit flexibility
4E Transparent disclosures	1	1	Direct numerical call disclosure; return and retention gaps remain explicit
4F No major governance/accounting red flag	1	1	Unqualified audit, no material weakness or restatement in controlling filing
5A Rational reinvestment priority	2	2	Technology, acquisitions, deleveraging and returns follow a coherent hierarchy
5B Acquisition discipline	1	2	Strong integration record, but low group ROIC and no acquisition cash-return bridge
5C Buyback discipline	1	2	Paused for Black Knight deleveraging; higher mechanical baseline during MarketAxess is concerning

Rubric item	Score	Maximum	Evidence
5D Incentive alignment	0	2	No ROIC, ROIIC, FCF/share, leverage or statutory-EPS compensation metric
5E Owner mentality	1	1	Founder owns 3.48m shares and has substantial economic alignment
5F Evidence from past decisions	1	1	NYSE succeeded; Bakkt and Mortgage provide disconfirming evidence
6A Base IRR at least 20%	0	6	Base gross USD IRR is 6.01%
6B Conservative exit multiple clears hurdle	0	4	Base exit 20.0x is below current, but 20% requires 38.18x
6C Bear case acceptable	0	3	Bear gross USD IRR is -5.12%
6D Reverse hurdle beatable	0	3	Required base terminal EPS is USD 18.7341 at 20x, 90.9% above modeled base EPS
6E Multiple does not price perfection	0	2	Expected-wealth max price for 20% is USD 81.20 versus USD 155.24 current
6F Cash returns help	1	2	Cumulative distributions add USD 10.62-11.95 per share, but cannot repair the return gap

5. ROIIC and Reinvestment Analysis

The available frozen data do not support a precise textbook five-year ROIIC because non-cash working-capital changes, depreciation by year, consolidated R&D, growth opex and acquisition-specific divestiture proceeds are incomplete. The score therefore uses transparent conservative proxies and does not treat the organic number as the controlling result.

Proxy	Formula	Result	Use in score
Organic, FY2022-FY2025	(3.781 - 3.014) / (0.489 + 0.752 + 0.791)	37.75%	Shows strong internal economics; excludes acquisitions
Acquisition-inclusive, FY2022-FY2025	(3.781 - 3.014) / (0.489 + 0.752 + 0.791 + 10.198 + 0.038 + 0.019)	6.24%	Controls skepticism around Black Knight
Organic, available FY2021-FY2025 observation	(3.781 - 2.463) / (0.482 + 0.489 + 0.752 + 0.791)	52.43%	Upper-bound diagnostic
Acquisition-inclusive, available FY2021-FY2025 observation	(3.781 - 2.463) / (2.514 gross capex + 10.314 cash M&A)	10.27%	Primary ROIIC scoring proxy

These proxies use USD billions. Gross capex rather than net capex overstates the denominator relative to a depreciation-adjusted measure, while omission of working capital and growth opex can understate it. Cash M&A excludes equity consideration, so the acquisition-inclusive figure may still overstate true all-in returns when acquisition shares are material. That combination warrants a conservative 2/8 score for ROIIC rather than credit for the high organic proxy.

The economic interpretation is consistent with the balance sheet. Average goodwill plus intangibles of approximately USD 45.751bn represented about 95% of TTM invested capital. ICE is operationally asset-light but acquisition-capital heavy. The evidence supports excellent marginal economics in Exchanges and FIDS; it does not support a claim that the full acquisition program has compounded capital at more than 20%.

6. Runway Analysis

Exchanges has the best runway quality. Energy and rate benchmarks, open interest, clearing offsets, data/connectivity and new contract formation can grow without rebuilding the infrastructure for every incremental dollar. The base case deliberately slows Exchanges revenue to 4.9% CAGR from a higher historical rate and holds the already-high margin near 75.3%. The main risks are normalization from an exceptional Q1 2026, cash-equity capture, liquidity migration, market-data regulation and operational tail events.

FIDS combines evaluated pricing, reference data, indices, connectivity, fixed-income execution and CDS clearing. Recurring growth and network expansion support a 6.0% organic base CAGR, while market structure and regulatory workflow can extend the runway. The caveats are missing customer-retention and price/seat/content bridges, AI pressure on basic analytics, third-party data rights and multi-homing.

Mortgage Technology has a plausible digitization and cross-sell runway, but its returns are unproven. Revenue can grow near 5% in the base case through Encompass, MSP, Simplifile, MERS and data products, yet the earnings case depends on statutory margin rising from 2.9% TTM to 14.0%. A portion of that improvement may come from amortization decay rather than improved customer economics. The score therefore awards runway credit but not mature-return credit.

MarketAxess is excluded from the controlling runway. It remains an announced, unclosed, 100%-debt-financed conditional sensitivity pending purchase-price allocation, acquired-intangible amortization, exact financing coupons, transaction fees and a governed debt-paydown schedule. The sensitivity cannot be used to inflate organic ROIIC or the base return.

7. Moat Analysis

The moat gate and 2046 test both pass. ICE's moat is explainable in one paragraph: accepted benchmark contracts concentrate hedgers, market makers, open interest, price history and clearing offsets; clearing adds regulatory permission, risk expertise, default management and collateral integration; proprietary venue data and governed fixed-income datasets are embedded in valuation, risk and compliance; and Mortgage systems of record carry high conversion, training and control costs. These assets are difficult to reproduce simultaneously and produced persistent high statutory margins in the dominant Exchanges and FIDS profit pools.

The moat is not uniform. Cash equities and options are intensely competitive, data pricing is regulated, customers can multi-source analytics, AI can commoditize interfaces and some evaluated-pricing work, and Mortgage has switching costs without proven acquisition returns. A clearing or cyber failure could also impair trust quickly. The score awards 13/15, not a perfect score.

8. Accounting and Capital Allocation Analysis

Accounting quality is supported by the zero-residual statutory bridge, official-source overrides, 8/8 quantitative reconciliation and 11/11 synthesis tie-outs. TTM CFO of USD 5.514bn and statutory FCF of USD 4.641bn exceed attributable net income of USD 4.038bn. This is genuine cash conversion, not a management-adjusted claim.

SBC is included as a cost. TTM SBC was USD 268m, 2.00% of gross revenue and 5.77% of FCF. Diluted shares rose from 565m in FY2021 to 576m in FY2024 after acquisition issuance, then declined to 571m TTM. Gross repurchases are therefore not treated as dollar-for-dollar value creation.

Capital allocation is mixed. The NYSE acquisition is a major success, and Black Knight synergy realization and deleveraging ran ahead of plan. Against this, Mortgage statutory profitability remains low, Bakkt was unsuccessful, acquisition-specific cash ROI is not disclosed, and incentive plans emphasize EBITDA, adjusted operating income and relative TSR rather than capital efficiency. MarketAxess adds an approximately USD 6.0bn cash purchase funded with new debt while management plans a higher baseline buyback. Management remains YELLOW.

9. 20% Return Underwriting

Primary valuation method: P/E. Statutory diluted EPS is fully reconciled and naturally supports the shareholder bridge. EV/NOPAT cannot control because terminal cash, gross debt, leases and senior claims are not source-bound. P/E is used consistently for bear, base, bull, expected wealth, reverse-return and maximum-buy-price calculations. No terminal net cash or debt is added after EPS × P/E. No net-SGD overlay is required for this diagnostic; any later overlay must retain the same P/E bridge.

The tables use USD gross local-currency underwriting. The operating model starts at 2026-06-30 and ends exactly five years later. The frozen USD 155.24 price is the 2026-08-13 completed close and is held as the return-model entry anchor, matching the reviewed synthesis convention.

Return summary	Bear	Base	Bull	Expected wealth
Probability	30%	50%	20%	100%
Terminal wealth per share	119.389995850	207.876123768	311.423400858	202.039740810
Gross USD IRR	-5.116027%	6.013261%	14.939558%	5.411170%

Expected wealth is `0.30 × 119.3899958499334 + 0.50 × 207.87612376752315 + 0.20 × 311.4234008582627 = 202.03974081039416`. The weighted return is `(202.03974081039416 / 155.24)^(1/5) - 1 = 5.411169990883713%`. Scenario IRRs are not averaged.

Bear-case operating and return bridge

Bear case	Start 2026-06-30	Horizon 2031-06-30	CAGR / change	Justification
Revenue	USD 10.558bn	USD 11.222142bn	1.23%	Exchange activity normalizes; recurring FIDS cushions weakness; Mortgage stagnates
Operating margin	51.78%	49.47%	-2.32 pp	Exchange/FIDS pricing and absorption weaken; Mortgage remains low margin
Operating earnings	USD 5.467bn	USD 5.551076bn	0.31%	Issuer-disclosed statutory Operating income
Diluted share count	571.00m	545.179461m	-0.92%	Reduced repurchases still offset modeled SBC
EPS	USD 7.071804	USD 6.398456	-1.98%	Statutory diluted EPS used in the P/E bridge
Valuation	21.951966x P/E	17.0x P/E	-4.951966x	Slower growth, leverage and regulatory risks compress valuation
Share value	USD 155.24	USD 108.773754	-6.87%	USD 6.398456 EPS × 17.0x; no net-debt adjustment
Annual dividend	USD 2.00	USD 2.208162	2.00%	Governed progressive distribution path
Dividend yield	1.29%	2.03%	+0.74 pp	Annual dividend / endpoint share value
Five-year dividends	-	USD 10.616242	Cumulative	Five exact modeled annual distributions
Total ending value	USD 155.24	USD 119.389996	-5.116027% gross USD IRR	Terminal share value plus distributions

Base-case operating and return bridge

Base case	Start 2026-06-30	Horizon 2031-06-30	CAGR / change	Justification
Revenue	USD 10.558bn	USD 13.587038bn	5.17%	Exchange recurring growth, 6% organic FIDS CAGR and Mortgage recovery
Operating margin	51.78%	54.74%	+2.96 pp	FIDS mix and Mortgage integration lift statutory margin
Operating earnings	USD 5.467bn	USD 7.437074bn	6.35%	Issuer-disclosed statutory Operating income
Diluted share count	571.00m	535.627972m	-1.27%	USD 1.6bn annual buybacks net of modeled SBC
EPS	USD 7.071804	USD 9.813615	6.77%	Reconciled statutory diluted EPS
Valuation	21.951966x P/E	20.0x P/E	-1.951966x	Core quality persists, but maturity and acquisition returns cap valuation
Share value	USD 155.24	USD 196.272298	4.80%	USD 9.813615 EPS × 20.0x; no net-debt adjustment
Annual dividend	USD 2.00	USD 2.552563	5.00%	Governed progressive distribution path
Dividend yield	1.29%	1.30%	+0.01 pp	Annual dividend / endpoint share value
Five-year dividends	-	USD 11.603826	Cumulative	Five exact modeled annual distributions
Total ending value	USD 155.24	USD 207.876124	6.013261% gross USD IRR	Terminal share value plus distributions

Bull-case operating and return bridge

Bull case	Start 2026-06-30	Horizon 2031-06-30	CAGR / change	Justification
Revenue	USD 10.558bn	USD 15.645480bn	8.18%	Broad benchmark adoption, high recurring FIDS growth and Mortgage wins
Operating margin	51.78%	58.40%	+6.62 pp	Fixed-cost absorption and Mortgage statutory margin reaching 22%
Operating earnings	USD 5.467bn	USD 9.136433bn	10.82%	Issuer-disclosed statutory Operating income
Diluted share count	571.00m	529.411555m	-1.50%	Strong cash generation funds repurchases above SBC
EPS	USD 7.071804	USD 13.020555	12.98%	Reconciled statutory diluted EPS
Valuation	21.951966x P/E	23.0x P/E	+1.048034x	Stronger proven growth receives modest multiple expansion
Share value	USD 155.24	USD 299.472764	14.04%	USD 13.020555 EPS × 23.0x; no net-debt adjustment
Annual dividend	USD 2.00	USD 2.676451	6.00%	Governed progressive distribution path
Dividend yield	1.29%	0.89%	-0.40 pp	Annual dividend / endpoint share value
Five-year dividends	-	USD 11.950637	Cumulative	Five exact modeled annual distributions
Total ending value	USD 155.24	USD 311.423401	14.939558% gross USD IRR	Terminal share value plus distributions

Terminal total equity values equal terminal share value times terminal diluted shares: USD 59.301216bn bear, USD 105.128933bn base and USD 158.544342bn bull. These totals are P/E outputs, not enterprise-value bridges.

The method-matched 20% reverse hurdle is prohibitive. Required terminal wealth is `155.24 × 1.2^5 = USD 386.2867968`. At the governed base distributions of USD 11.603825625 and the modeled 20.0x base exit, required terminal EPS is `(386.2867968 - 11.603825625) / 20 = USD 18.734148559`, implying a 21.512443% EPS CAGR from TTM EPS of USD 7.071803853. Modeled base EPS CAGR is only 6.77%. Equivalently, holding base EPS requires a 38.179914x exit P/E.

20% diagnostic	Bear	Base	Bull	Expected wealth
Maximum buy price for 20% CAGR	USD 47.98	USD 83.54	USD 125.15	USD 81.20
Current price	USD 155.24	USD 155.24	USD 155.24	USD 155.24
Clears 20%	No	No	No	No

10. Hard Veto Checklist

#	Hard veto	Status	Evidence
1	ROIIC below cost of capital with no credible improvement path	Watch	Acquisition-inclusive proxy is 6.24%-10.27%; organic core is much stronger but acquisition returns lack a full bridge
2	Reported ROIC high only because capital is tiny/negative	Pass	Reported ROIC includes a large goodwill/intangible denominator and is not artificially high
3	Growth requires persistent external financing	Watch	Organic growth is cash funded, but repeated acquisitions use debt/equity and MarketAxess adds debt
4	Share count rises materially without per-share value creation	Pass	Four-interval CAGR is +0.44%; recent dilution reversed, with SBC explicitly modeled
5	Repeated large acquisitions without disclosed returns	**Fail**	Adjusted EPS and synergy targets do not substitute for acquisition-specific cash ROIIC

#	Hard veto	Status	Evidence
6	FCF structurally lags earnings	Pass	TTM FCF / NI is 114.9%; five-observation FCF / NOPAT average is 105.3%
7	Regulation/platform/cyclicality/leverage can permanently impair equity	Watch	Clearing trust, data regulation, Mortgage cyclicality and leverage are real but not current wipeout cases
8	20% case requires terminal multiple expansion	**Fail**	Base needs 38.18x exit P/E versus 21.95x current and 20.0x modeled
9	Flawless execution is needed to justify today's price	**Fail**	Even the bull case delivers only 14.94% gross IRR
10	Moat cannot be explained clearly	Pass	Liquidity/clearing/data/system-of-record advantages are concrete
11	Accounting/governance issues impair trust	Watch	No material weakness/restatement, but founder succession and return-linked incentives remain weak
12	Balance-sheet risk could wipe out equity in a downturn	Watch	Strong FCF offsets risk, but current net debt and pending deal leverage reduce flexibility

There are three hard-veto failures. `no_hard_vetoes = false`. That independently prevents an Investable-now classification and, under the stated thresholds, supports Reject.

11. Final Decision

Threshold results: total score at least 80 — **false**; Business Quality at least 65/80 — **false**; valuation score at least 15/20 — **false**; ROIIC plus runway at least 35/45 — **false** at 29/45; base IRR at least 20% — **false**; bear IRR at least 8%-10% — **false**; no hard vetoes — **false**; no multiple expansion needed — **false**.

Compounder Score note: 57/100 — Reject under the diagnostic rubric; ICE's strong moat and cash conversion do not overcome acquisition-inclusive returns, hard-veto failures and the current-price return gap.

Business Quality Score note: 56/80 — Exchanges and FIDS are durable high-margin infrastructure, but goodwill-inclusive ROIC, acquisition-inclusive ROIIC, Mortgage statutory economics and management YELLOW cap quality.

20% Return UW Score note: 1/20 — Bear/base/bull IRRs are -5.12%/6.01%/14.94%; expected-wealth CAGR is 5.41%, and 20% requires an implausible 38.18x base exit P/E.

Key blockers are: no exact five- or ten-year acquisition-inclusive reinvestment ledger; no acquisition-specific cash ROI disclosures; no consolidated retention or price/volume bridge; no Mortgage-specific amortization, goodwill headroom or cash-return bridge; pending MarketAxess PPA, financing coupon and debt-paydown schedule; and no ROIC/ROIIC/FCF-per-share incentive metric.

12. Machine-Readable JSON

The complete structured artifact is `compounder_score.json`. Core capsule:


```
{
  "ticker": "ICE",
  "primary_valuation_method": "PE",
  "business_quality_score": 56,
  "valuation_underwriting_score": 1,
  "total_score": 57,
  "classification": "Reject",
  "bear_case_irr": -0.05116027143414403,
  "base_case_irr": 0.060132613522047684,
  "bull_case_irr": 0.14939557755018806,
  "probability_weighted_irr": 0.05411169990883713,
  "clears_20pct_hurdle": false
}
```

Appendix CSA - Scoring Audit

Intercontinental Exchange, Inc. — Independent Scoring Audit

Ticker: ICE **Analysis date:** 2026-08-14 **Price anchor:** USD 155.24 at the completed 2026-08-13 session **Operating anchor:** TTM ended 2026-06-30 **Exact horizon:** 5.0 years to 2031-06-30 **Audited primary valuation method:** P/E **Audit status:** CLEARED WITH SCORE REDUCTIONS; no valuation-method publication blocker

The audit is diagnostic only. It authorizes no trade, ranking, sizing, portfolio action, or message. ICE is not a property-and-casualty insurer, so the insurer return bridge and retained-economics controls are inapplicable.

The exact scorer inputs were received and hash-verified: `appendix_compounder_score.md` SHA-256 `3c3547695b2130df57b9f3358b6fc8c5c62628e5e6b009dd62a8a1cbd80cc680`, `compounder_score.json` SHA-256 `26a32d111ff2c52e8410c8f16253fb955c0ef0e603d5e62178361175a8393134`, and `appendix_synthesis.md` SHA-256 `7417cdace0b1e47ee4b335754b38e1672fbc858c3ec5a4ce99ce8b680ef31535`. The synthesis reports and reproduces 11/11 tie-outs.

1. Original vs Audited Scores

Item	Original	Audited	Notes
Business Quality Score / 80	56/80	**51/80**	Four subscores over-credit incomplete acquisition-inclusive return evidence
Valuation / 20% Return UW Score / 20	1/20	**1/20**	P/E return bridge and cash-return credit reproduce
Total Score / 100	57/100	**52/100**	Arithmetic sum: 51 + 1 = 52
Classification	Reject	**Reject**	Below 70 and three hard-veto failures remain

The original and audited score-implied classifications are both **Reject**. The finite security returns are preserved: bear **-5.1160271434144%**, base **6.013261352204762%**, bull **14.939557755018818%**, and probability-weighted expected-wealth CAGR **5.4111699908837%**. Scenario weights remain 30% / 50% / 20%.

Reviewer-final artifact integrity

Artifact	Actual SHA-256	Integrity result
`quant_foundation.md`	`305e5f133df8a733aceddd37ff79c79f458063c7c56510f3ed5ac81a47e681f9`	Matches gate manifest
`quant_foundation_review.md`	`a0d97ddac9c6d118f086bebc81c210c6dc77bd2f0fe5dc4b5d02c4cf85c75a70`	Matches gate manifest
`data_package.md`	`5707bc567914adc2fd452b2f31bb49a65fd1abda71ed5d625023e6406a650504`	Matches reviewed-final seal
`data_package_review.md`	`c258dfd84517e1f46339a1f16d6b3db313d8b22903aef21e44535b4c3010ab1e`	Matches gate manifest
`appendix_B_exchanges.md`	`8210efbea7c0d8a3ab6eaa7f7b73acf1f2f5e6ff18e5c0d483ef4a4ea1ccf3dd`	Matches reviewed-final seal
`appendix_B_fixed_income_and_data_services.md`	`4f875d9fdf19c57fefad885ecbe41f51105aff7b4d2490baab571864b6602399`	Matches reviewed-final seal
`appendix_B_mortgage_technology.md`	`5042ed23cb5a1643f1fe90aa789691055697eccd018b5c6c5a44db2cb2301ce5`	Matches reviewed-final seal
`appendix_management.md`	`836b0b00b1686558cb1c6d26378976a8bffc1c758d9ac259b023d842600ccf28`	Matches YELLOW gate seal
`appendix_moat.md`	`57beba484aa156c555a740d11658db7bf0656cc49a95f203baf0a681ae87d060`	Matches PASS gate seal
`appendix_synthesis.md`	`7417cdace0b1e47ee4b335754b38e1672fbc858c3ec5a4ce99ce8b680ef31535`	Matches supplied synthesis hash
`quote_packet.json`	`9ab8f732eef9a19de9ac6970dced3513ca2e6dabb89a44597159c4add3bd0c9d`	Matches QFR seal

Artifact	Actual SHA-256	Integrity result
`statutory_bridge.json`	`f638ae8b4500da99eb70cc7dfc669e16eb3a77ba3f263f2c026759422c9c7157`	Matches QFR seal
`source_manifest.json`	`3e42792ab6733c3cbd140186b9163986a602327a415e01c962974e9bfc156e1c`	Matches QFR/DR seal

2. Score Reductions and Reasons

Category	Original	Audited	Decision
1. Incremental Returns on Capital	13/25	**10/25**	Reduce 1B and 1C
2. Reinvestment Runway	16/20	**15/20**	Reduce 2B
3. Durability of Moat	13/15	**13/15**	Preserve
4. Accounting and Financial Quality	8/10	**8/10**	Preserve
5. Capital Allocation	6/10	**5/10**	Reduce 5A
6. Price and 20% Underwriting	1/20	**1/20**	Preserve

The four reductions are:

- **1B ROIIC, 2/8 to 0/8.** The available calculations are useful conservative proxies, but they are not a complete 3- or 5-year acquisition-inclusive reinvestment ledger. The FY2022-FY2025 cash-only proxy is 6.2423699845%, already below the rubric's 8% floor. The longer available FY2021-FY2025 observation proxy is 10.2743997505%, but it has only four intervals and excludes equity consideration, working capital, growth opex, disposals, and acquisition timing. Black Knight included 10.9 million ICE shares; cash M&A alone therefore does not represent all acquisition capital. The evidence supports the conclusion that acquisition-inclusive ROIIC is weak, not a precise 2-point threshold award. Under the rubric's “below 8% or insufficient evidence” rule, 1B is zero.
- **1C ROIIC trend, 2/3 to 1/3.** Rising NOPAT does not establish that ROIIC is not deteriorating. There is no comparable annual ROIIC series across a stable perimeter, and Black Knight materially changed the business in 2023. One point recognizes improving NOPAT and strong core economics; a second point would claim trend visibility the evidence does not provide.
- **2B proven reinvestment at scale, 4/5 to 3/5.** NYSE is powerful positive evidence and Black Knight cost/debt execution is real. However, group goodwill-inclusive ROIC is only 7.2% at the five-observation median, Mortgage TTM statutory margin is 2.9%, and acquisition-specific cash returns are undisclosed. “Proven at scale” is only partly supported at the consolidated capital perimeter.
- **5A rational reinvestment priority, 2/2 to 1/2.** The technology/acquisition/deleveraging/dividend hierarchy is coherent, but the proposed MarketAxess purchase is 100% debt financed while baseline repurchases rise to USD 400 million per quarter. The separate USD 1 billion Polymarket investment and the absence of acquisition ROI metrics further weaken full credit. The evidence supports mixed, not perfect, capital-allocation discipline.

Complete component audit

Component	Original	Audited	Evidence status	Audit finding
1A Normalized ROIC	1/5	1/5	Supported	Five-observation statutory median 7.2%; TTM 8.7%
1B ROIIC	2/8	0/8	Missing data / partly calculated	Cash-only proxies are 6.24%-10.27%; complete all-in ledger absent
1C ROIIC trend	2/3	1/3	Partly supported	No matched annual series through perimeter change
1D Unit economics	3/3	3/3	Supported	Exchanges 74.7% and FIDS 40.2% TTM statutory margins
1E Cash conversion	3/3	3/3	Supported	Five-observation FCF/NOPAT average 105.35%; TTM FCF/NI 114.93%
1F No accounting artifact	2/3	2/3	Supported	Goodwill remains in capital; adjusted optics remain a risk

Component	Original	Audited	Evidence status	Audit finding
2A Market opportunity	4/5	4/5	Supported	Risk transfer, data, electronification and workflow digitization are source-grounded
2B Reinvest at scale	4/5	3/5	Partly supported	NYSE proven; acquisition-wide cash returns and Mortgage economics unresolved
2C Organic opportunity	3/4	3/4	Supported	No-close base revenue CAGR 5.17%
2D Repeatable playbook	2/3	2/3	Partly supported	Integration/cross-sell repeat, but acquisitions are load-bearing
2E Market structure	2/2	2/2	Supported	Clearing, benchmarks, governed data and systems of record
2F Growth without collapse	1/1	1/1	Supported with limitation	Controlling forecast is organic/no-close, not deal-dependent
3A Clear advantage	4/4	4/4	Supported	Contract liquidity, clearing, data rights and systems of record
3B Pricing power	2/3	2/3	Partly supported	Strong in benchmarks/data, weaker in fungible order flow and Mortgage
3C Competitive evidence	3/3	3/3	Supported	Margin persistence and product-specific competitor work
3D Customer stickiness	2/2	2/2	Supported	Clearing integration, NYSE retention and long workflow contracts
3E Stress resilience	2/2	2/2	Supported	Exchanges/FIDS margins persisted through stress and acquisition periods
3F Low disruption risk	0/1	0/1	Supported at zero	AI, regulation, on-chain venues and modular Mortgage stacks are real risks
4A Earnings quality	2/2	2/2	Supported	Statutory bridge has zero residuals
4B Cash flow support	2/2	2/2	Supported	Multi-year and TTM cash conversion tie
4C SBC/dilution	1/2	1/2	Supported	SBC included; acquisition issuance and net buybacks constrain credit
4D Balance sheet	1/2	1/2	Supported	Strong FCF, but USD 18.779bn disclosed net debt and deal leverage
4E Disclosure	1/1	1/1	Supported with gaps	Direct filings/calls; gaps are explicit rather than concealed
4F Governance/accounting flags	1/1	1/1	Supported	Unqualified audit; no material weakness/restatement found
5A Reinvestment priority	2/2	1/2	Partly supported	Coherent hierarchy offset by debt-funded M&A plus mechanical repurchases
5B Acquisition discipline	1/2	1/2	Partly supported	NYSE/integration record positive; full acquisition returns absent
5C Buyback discipline	1/2	1/2	Partly supported	Deleveraging pause positive; higher fixed baseline reduces flexibility
5D Incentive alignment	0/2	0/2	Supported at zero	No ROIC/ROIIC/FCF-per-share /leverage/statutory-EPS metric
5E Owner mentality	1/1	1/1	Supported	Founder ownership is economically meaningful

Component	Original	Audited	Evidence status	Audit finding
5F Past decisions	1/1	1/1	Supported	NYSE success plus Bakkt/Mortgage disconfirming evidence is documented
6A Base IRR	0/6	0/6	Calculation verified	6.0133%, below 10%
6B Exit multiple	0/4	0/4	Calculation verified	20% needs 38.1799x, a major expansion
6C Bear case	0/3	0/3	Calculation verified	-5.1160% gross USD IRR
6D Reverse hurdle	0/3	0/3	Calculation verified	Required EPS USD 18.7341 versus modeled USD 9.8136
6E Starting price	0/2	0/2	Calculation verified	Expected-wealth 20% max price USD 81.1952
6F Cash returns	1/2	1/2	Supported	Distributions add USD 10.6162-11.9506 per share but do not repair returns

3. Unsupported Claims

The evidence does not support a precise, complete five-year acquisition-inclusive ROIIC, a stable ROIIC trend, full consolidated proof of reinvestment at scale, or perfect capital-allocation priority. Those are score claims, not defects in the statutory or shareholder-return arithmetic. The high organic/gross-capex-only ROIIC proxy cannot control because it excludes acquisition capital; the cash-only acquisition proxy also cannot be treated as all-in because Black Knight equity consideration and other reinvestment components are missing.

No unsupported claim was found in the primary P/E scenario arithmetic. Exit P/Es of 17x, 20x and 23x are judgmental but explicitly scenario-governed and do not use the P/E-15 gate as an exit multiple. The bull's 23x is above the current 21.951966x, but the bull still fails the 20% hurdle; it does not inflate the score.

4. Calculation Errors

P/E return bridge replay

Case	Diluted shares, m	Terminal EPS	Exit P/E	Equity value/share	Distributions/share	Terminal wealth/share	Audited gross USD IRR
Bear	545.1794606025604	6.398456113149024	17.0x	108.7737539235334	10.6162419264	119.3899958499334	-5.1160271434144%
Base	535.6279716328497	9.813614907126157	20.0x	196.2722981425231	11.6038256250	207.8761237675231	6.013261352204762%
Bull	529.4115549405665	13.020554947089682	23.0x	299.4727637830627	11.9506370752	311.4234008582627	14.939557755018818%

Terminal total equity values reproduce at USD **59.301216491748bn**, **105.128932941798bn**, and **158.544341536740bn**. Under P/E these totals equal terminal diluted EPS times exit P/E times terminal diluted shares. There is no enterprise-to-equity adjustment after that calculation.

Expected terminal wealth is `0.30 × 119.3899958499334 + 0.50 × 207.8761237675231 + 0.20 × 311.4234008582627 = USD 202.0397408103941`. Annualizing that wealth, rather than averaging scenario IRRs, gives **5.4111699908837%**. The method and arithmetic pass.

Current statutory EPS is `4,038 / 571 = USD 7.071803852889667`; current P/E is **21.951966319960376x**. The reverse 20% wealth requirement is `155.24 × 1.2^5 = USD 386.2867968`. After base distributions, required terminal EPS at 20x is **USD 18.73414855875**, a **21.51244251593546%** EPS CAGR. Holding modeled base EPS instead requires **38.17991379536647x** P/E. The expected-wealth maximum buy price for 20% is **USD 81.19524048771626**; scenario-specific prices are USD 47.98016165522658 / 83.54075189988552 / 125.15408020602764.

The P/E-15 gate also reproduces. Required EPS is USD 10.34933333333333. Base EPS times 15 is USD 147.20422360689236, producing a **-5.176356862347104%** cushion and a FAIL.

Current debt disclosure is internally clear. Issuer-style net debt excluding leases and short-term investments is USD 19.846bn debt less USD 1.067bn cash, or **USD 18.779bn**. The full current claim bridge includes USD 0.681bn leases and subtracts USD 0.886bn short-term investments, producing **USD 18.574bn**. Neither is added to terminal P/E-derived value. NCI is

reflected once in statutory EPS, distributions are added once to terminal wealth, and no separately valued non-operating asset is added. The double-count check passes.

One non-controlling precision defect exists: `compounder_score.json` publishes current EV/NOPAT as 25.4972746730x by dividing USD 107.21604bn EV by rounded USD 4.205bn NOPAT. The synthesis separately shows USD 4.204123bn using a rounded 23.1% rate, while the exact TTM effective-rate calculation gives about USD 4.204596bn. The resulting EV/NOPAT diagnostics span roughly 25.4973x-25.5026x. This should be rendered as about 25.5x, not false precision. It does not affect the frozen P/E method, returns, or score.

5. Missing Data

- A complete acquisition-inclusive reinvestment ledger with acquisition equity consideration, net capex, non-cash working capital, growth opex, disposals, and timing.
- Acquisition-specific cash ROI/ROIIC for NYSE, Ellie Mae, Black Knight, and the pending MarketAxess transaction.
- Consolidated retention, subscription price/seat/content/FX, and fee-capture bridges.
- Mortgage-specific amortization, goodwill headroom, customer cohort, per-loan economics, and cash contribution after software reinvestment.
- MarketAxess purchase-price allocation, acquired-intangible amortization, exact financing coupons, transaction fees, and governed debt-paydown schedule.
- Compensation metrics tied to ROIC, ROIIC, statutory EPS, FCF per share, or leverage.

The missing net-SGD numeric overlay in the scorer is not filled with invented investor, tax, broker, FX, cost, or portfolio context. The scorer explicitly freezes P/E for any later overlay; method-consistency-only audit passes. Portfolio fit and sizing remain outside this audit.

6. Hard-Veto and Threshold Test Audit

Veto	Audited status	Finding
1. ROIIC below cost of capital	Watch	Cash-only acquisition proxies are 6.24%-10.27%; exact all-in evidence is absent
2. Artificially tiny invested capital	Pass	Goodwill and intangibles remain in the denominator
3. Persistent external financing	Watch	Organic growth is cash-funded; repeated acquisitions use debt/equity
4. Material dilution without value	Pass	Four-interval diluted-share CAGR is +0.44%; SBC and issuance are modeled
5. Large acquisitions without returns	**Fail**	Acquisition-specific cash ROIIC is not disclosed
6. Structural FCF lag	Pass	Multi-year and TTM cash conversion are strong
7. Permanent-impairment exposures	Watch	Clearing, regulation, Mortgage and leverage risks are real but not current wipeout paths
8. 20% requires multiple expansion	**Fail**	Base requires about 38.18x terminal P/E
9. Flawless execution needed	**Fail**	Even the bull case reaches only 14.94%
10. Moat cannot be explained	Pass	Liquidity, clearing, governed data and systems of record are concrete
11. Accounting/governance trust	Watch	Clean audit; succession and return-linked incentives remain unresolved
12. Balance-sheet wipeout risk	Watch	Strong FCF offsets current leverage, but pending deal debt limits flexibility

All investable-now thresholds fail: total score is below 80/100, Business Quality below 65/80, valuation below 15/20, ROIIC plus runway is **25/45** versus the required 35/45, base IRR is below 20%, bear IRR is below 8%-10%, three hard vetoes fail, and the 20% case requires major P/E expansion.

The hard-veto failures determine the diagnostic classification but are not valuation-method publication blockers. The P/E bridge is complete, same-method, finite, and reconciled.

7. Final 20% Hurdle Pass/Fail

FAIL. The base case compounds at 6.0133%, the expected-wealth CAGR is 5.4112%, and even the bull is 14.9396%. A 20% base return requires terminal EPS almost 91% above the modeled base or an implausible 38.18x P/E. The score correctly gives no credit to 6A-6E and only 1/2 for cash distributions.

8. Dream Business / Dream Investment Classification

Neither. ICE contains dream-business assets in benchmark exchanges, clearing and governed data, but the consolidated acquisition-inclusive capital record does not earn dream-business status. At USD 155.24, the security is not a dream investment because the same-method expected return is far below 20% and the P/E-15 entry gate fails. The single biggest reason is that the current price requires far more terminal EPS or P/E than the source-bound base case can support.

9. Stage 7 Scorecard Notes

Compounder Score note: 52/100 — Reject under the diagnostic rubric; durable infrastructure economics do not offset incomplete all-in ROIIC evidence, three hard vetoes, and the current-price return gap.

Business Quality Score note: 51/80 — Exchanges and FIDS are excellent franchises, but acquisition-inclusive ROIIC, reinvestment proof, Mortgage statutory economics, and capital-allocation discipline cap consolidated quality.

20% Return UW Score note: 1/20 — Bear/base/bull gross USD IRRs are -5.12%/6.01%/14.94%; expected-wealth CAGR is 5.41%, and 20% requires about 38.18x base exit P/E.

10. Auditor JSON

The full machine-readable audit is in `compounder_score_audit.json`. Its score arithmetic is 51/80 + 1/20 = 52/100; its classification is Reject; its primary method is PE; and its valuation-publication blocker flag is false. All insurer-specific fields are null because ICE is not a P&C insurer. `trade_execution_authorized` is false.

Appendix RT - Red Team

Intercontinental Exchange, Inc. — Red Team

As of 14 August 2026 / ticker ICE / USD / Production Mode Controlling method and audit lock: P/E; 30% bear / 50% base / 20% bull; diagnostic score 52/100, Business Quality 51/80, valuation 1/20; Reject; three hard vetoes. This appendix challenges assumptions but changes none of those audited fields.

1. The most fragile assumption

The most fragile assumption is the **4.9% five-year Exchanges revenue CAGR**, from USD 5.874 billion TTM to USD 7.460 billion at 2031-06-30. This line matters more than any other ordinary operating input: the synthesis sensitivity shows a 200-basis-point miss, to 2.9%, reduces terminal EPS from USD 9.8136 to USD 9.0726, a USD 0.741 or 7.6% hit. At the unchanged, non-controlling 20x base exit P/E, terminal wealth falls from USD 207.876 to USD 193.056 and five-year IRR from 6.0133% to 4.4566%.

The assumption is fragile because the TTM anchor includes an exceptional Q1 2026: Exchanges revenue rose 30% year over year and margin reached 79%, followed immediately by only 3% growth and 74% margin in Q2. The recency construction is arithmetically correct, but its economic starting level embeds unusually favorable energy, rates and geopolitical-risk activity. The base product path does normalize energy growth from 6% to 4%, yet still requires 5.0% energy and 6.6% financial-futures CAGRs without management guidance for transaction revenue, rate per contract, open interest, capture, or segment margin. The [Q2 release](https://ir.theice.com/press/news-details/2026/Intercontinental-Exchange-Reports-Second-Quarter-2026/default.aspx) confirms record open interest and strong recurring growth; it does not prove that the unusually active transaction base compounds for five years.

This is not an assertion that benchmark liquidity is broken. It is the narrower claim that a durable moat does not prevent cyclical normalization. If growth is 2.9% rather than 4.9%, the model loses more EPS than a 300-basis-point Mortgage-margin miss, a 300-basis-point tax-rate miss, or a 5% share-count miss.

2. The most-likely-to-be-optimistic Stage 5 number

The number most likely to be revised down is **Mortgage Technology's 14.0% terminal statutory operating margin**, up from 2.9% TTM. The model requires USD 2.751 billion of terminal revenue and USD 385 million of statutory operating income, an 1,110-basis-point margin recovery. It assumes reported expense grows only about 2.5% annually as remaining Black Knight synergies, integration completion, support consolidation and automation more than offset wage, hosting, cybersecurity, compliance and product investment.

That path is arithmetically transparent but evidence-thin. ICE does not disclose Mortgage retention, cohort economics, per-loan price/volume, cash contribution after capitalized software, the reporting-unit goodwill headroom, or a Mortgage-specific amortization schedule. Q2's 8% statutory margin is encouraging, but Q1 was negative 2%, and recurring revenue contained small one-time items in both quarters. A rise driven partly by amortization roll-off is not the same as improved cash return on the combined Ellie Mae/Black Knight investment.

The synthesis appropriately shows that this assumption is less important to group EPS than Exchanges: cutting the terminal margin from 14% to 11% lowers terminal EPS only to about USD 9.695 and, at unchanged 20x, lowers IRR to about 5.77%. It is nevertheless the single least source-bound horizon number and therefore the likeliest forecast revision.

3. The strongest bear case, stated in its strongest form

ICE is a collection of excellent financial-infrastructure assets being converted into a lower-return acquisition platform: activity normalizes in Exchanges, AI and procurement pressure cap FIDS recurring growth, and Mortgage never earns an adequate statutory return on its purchased capital. Within two years, an Exchange revenue CAGR nearer 3%, FIDS recurring growth below 4%, and Mortgage margin stuck below 8% would pull terminal EPS materially below the USD 9.81 base while the MarketAxess debt load prevents the modeled share retirement. The mechanism is not disappearance of the exchanges; it is a mature regulated utility earning high operating margins but only high-single-digit consolidated ROIC, with acquisition amortization, interest and reinvestment absorbing the difference. The validating anchors are Exchange recurring and transaction growth, FIDS recurring growth/ASV, Mortgage statutory margin, and post-close gross leverage—not adjusted EPS

accretion.

4. Cross-examination of management commentary

“Customers are not simply reacting to headlines”

Management used this phrase after Q1 2026 to argue that record activity and open interest were durable. The skeptical reading is that open interest can remain high while revenue growth normalizes through lower volatility, contract mix, rebates or rate per contract. Q2 already supplied the warning: Exchange growth fell from 30% to 3%. The first contradiction would be two more quarters of low-single-digit transaction revenue despite stable open interest, especially if transaction-based expenses or rebates outgrow gross activity.

FIDS recurring revenue of “7% to 8%”

The raised 2026 guide supports the model's first year, not its full 6.0% five-year organic FIDS CAGR. Management itself expected the second half toward the low end. ICE also withholds retention, price/seat/content/churn/FX and evaluated-pricing displacement data, so headline recurring growth cannot be separated into durable price, volume, content additions and currency. The first failure would be organic recurring growth below 4% for four quarters or data/network technology below 4% for two quarters while peers' electronic and data activity remains healthy.

USD 100 million of MarketAxess annual expense synergies and first-full-year adjusted-EPS accretion

The [transaction announcement](https://ir.theice.com/press/news-details/2026/Intercontinental-Exchange-to-Acquire-MarketAxess-Creating-a-Premier-Fixed-Income-Marketplace/default.aspx) says the cash deal is debt-financed, targets USD 100 million of run-rate savings in three years, begins near 3.4x gross leverage, and aims for 3.0x or less in 18–24 months. Adjusted EPS explicitly excludes acquisition-intangible amortization and integration expense; it is therefore not a statutory-return test. No purchase-price allocation, financing coupons, acquired-intangible schedule, client-retention bridge or revenue-synergy amount exists. The earliest contradiction would be savings below USD 33 million in year one or USD 67 million in year two, customer/dealer losses tied to the combination, or leverage above 3.0x after 24 months while USD 400 million quarterly repurchases continue.

5. Stage 5 tie-out reverification

The audit lock is intact. The controlling synthesis hash is `7417cdace0b1e47ee4b335754b38e1672fbc858c3ec5a4ce99ce8b680ef31535`; all 11 tie-outs passed. The P/E wealth bridge reproduces from the frozen USD 155.24 price and exact five-year horizon:

Case	Terminal EPS × exit P/E + distributions	Reproduced wealth	Reproduced gross USD IRR
Bear	6.398456113 × 17 + 10.616241926	119.389995850	-5.116027%
Base	9.813614907 × 20 + 11.603825625	207.876123768	6.013261%
Bull	13.020554947 × 23 + 11.950637075	311.423400858	14.939558%

Expected wealth is `30% × 119.389995850 + 50% × 207.876123768 + 20% × 311.423400858 = 202.039740810`; `(202.039740810 / 155.24)^(1/5) − 1 = 5.411170%`. These are wealth-weighted returns, not averaged IRRs. No debt is subtracted after EPS × P/E, NCI is charged once in statutory EPS, and distributions are added once.

The TTM anchor correctly uses FY2025 less comparable H1 2025 plus H1 2026, so no period overlap exists. Its weakness is economic recency, not arithmetic: Q1's exceptional Exchange activity is inside the starting base. The base diluted-share path also ties mechanically—571.0 million to 535.628 million using USD 1.6 billion annual repurchases net of modeled SBC—but it assumes 6.2% net retirement over five years. That is reasonable in the controlling **no-close** perimeter given USD 2.0 billion of TTM repurchases and strong FCF. It is too generous in a deal-close sensitivity unless debt reduction, capex, dividends and buybacks are reconciled from the same cash pool. A 5% higher terminal share count reduces EPS to USD 9.3463 and IRR to 5.0423% at unchanged 20x.

Distributions are not load-bearing: base cumulative dividends are USD 11.604 per share versus terminal equity value of USD 196.272. The 5% annual dividend-growth path is well covered, but a MarketAxess close would make debt service and

investment senior practical uses of cash even if the dividend remains progressive.

No segment base CAGR obviously exceeds its disclosed trend without an identified reason, but three paths deserve skepticism. Exchange energy is projected at 5.0% after a 23.4% historical CAGR and 16.3% FY2025 growth; normalization is named but the starting level is elevated. FIDS network technology at 8.0% is supported by 7.1% historical and 11% latest growth, but capacity capex and third-party data costs may consume the accompanying margin expansion. Mortgage data/analytics at 6.6% relies on cross-sell and AI-enhanced workflow despite only 3.9% FY2025 growth and no disclosed attach-rate bridge.

6. Score-derived 20% return claim

The audited score does **not** say 20% is plausible, and the red team agrees. The required terminal wealth is USD 386.2868. At the modeled base distributions and 20x exit P/E, ICE needs USD 18.7341 of terminal EPS, a 21.5124% five-year EPS CAGR versus modeled USD 9.8136. Holding base EPS instead requires a 38.1799x exit P/E. Even the bull produces only 14.9396%. The claim most likely to be wrong is not an asserted 20% outcome; it is any future argument that adjusted-EPS accretion from MarketAxess can bridge the gap. The audited conditional deal case adds only USD 0.388 of base terminal EPS and lifts conditional base IRR only to 6.79%.

The P/E-15 entry test also reproduces and remains separate: USD 155.24 / 15 = USD 10.349333 required EPS; base EPS × 15 = USD 147.204224, a -5.176357% cushion and FAIL. Nothing in this red team changes the 52/100 score, 51/80 Business Quality score, 1/20 valuation score, Reject classification, or three hard-veto failures.

7. Two-sided valuation challenge

Strongest reason the model is too optimistic — 20x base exit P/E. The base grows revenue only 5.17%, statutory operating income 6.35% and EPS 6.77%, while consolidated statutory ROIC is currently about 8.7%, acquisition returns are incomplete, and a signed debt-funded deal may raise leverage. A 20x terminal multiple assumes the market continues to capitalize mature earnings as a premium compounder despite returns far below the Gideon hurdle. As a clearly labelled, non-controlling sensitivity, applying the audited bear multiple of 17x to unchanged base EPS lowers terminal wealth by USD 29.441 per share, from USD 207.876 to USD 178.435, and IRR from 6.0133% to 2.8242%. This is the largest single valuation fragility.

Strongest reason the model may be too bearish — zero MarketAxess economics in the controlling perimeter. The exclusion is methodologically correct until close and purchase accounting are known, but the transaction is board-approved, strategically complementary and supported by a source-bound USD 870 million TTM revenue / USD 352 million operating-income target baseline. The synthesis's own non-controlling 65%-close blend raises expected wealth from USD 202.040 to USD 206.639 and expected-wealth IRR from 5.4112% to 5.8868%; a 100%-close blend reaches 6.1394%. That 48–73 basis-point uplift is the strongest quantified rebuttal to the bearish valuation, but it does not rescue the return hurdle and may itself overstate value if client neutrality, PPA amortization, financing cost or deleveraging disappoint.

The conditional deal case must not retain all base buybacks by default. Its base assumes USD 4.0 billion of remaining deal debt at 5.5% and USD 220 million of terminal interest, yet management also proposes USD 400 million quarterly repurchases. If gross leverage stays above 3.0x after 24 months, either the share-count path, investment path or debt schedule is wrong. The P/E method remains controlling; no enterprise-value splice or terminal debt subtraction is introduced here.

8. Regulatory, clearing, data-access and insurer-bridge verdict

The credible regulatory attack is targeted. The FTC's [Black Knight final order](https://www.ftc.gov/legal-library/browse/cases-proceedings/221-0142-intercontinental-exchange-incblack-knight-inc-matter) required Empower and Optimal Blue divestitures and imposes prior-approval or prior-notice conditions on specified mortgage-technology acquisitions. That demonstrates regulation can constrain bundling and acquisition economics rather than simply reinforce the moat. In Exchanges/FIDS, the observable threat is a fee/access remedy or supplier-rights change that reduces proprietary-data monetization; in clearing, it is a member default, margin-model defect or prolonged outage that consumes ICE resources and causes sustained customer migration. These are tail risks outside the ordinary bear and should not be invented into a smooth EPS haircut.

ICE is not a P&C insurer or reinsurer. A retained-versus-managed underwriting perimeter, common-book roll-forward, P/B–ROE identity, and negative-EPS-to-zero-equity test are therefore inapplicable; `insurer_return_bridge.json` is neither present nor required. The audited P/E bridge, not an insurer bridge, remains controlling.

9. Signal that forces thesis review / analytical exit

Trigger: Exchanges recurring revenue growth below **4.0% year over year for four consecutive reported quarters, ending no later than Q4 2027**. This is specific, disclosed and independent of a single volatility quarter. It would show that the durable data/connectivity/listings layer is no longer offsetting transaction normalization, invalidate the 4.9% Exchange base CAGR and undermine the 20x terminal multiple. Crossing it should force immediate thesis review and an analytical exit conclusion unless ICE discloses a deliberate product exit or comparability change that fully reconciles the shortfall; this appendix does not authorize execution.

Secondary review thresholds are Mortgage statutory margin below 8% through TTM 2028-06-30, organic FIDS recurring growth below 4% for four quarters, or MarketAxess gross leverage above 3.0x after 24 months with unchanged repurchases. They diagnose the mechanism but do not replace the primary trigger.

10. Conviction after red team

Thesis does not survive as an investable-now compounder. The durable operating thesis survives: Exchanges and FIDS are real moats, the 2046 PASS is defensible, and management has executed complex integrations. The security thesis fails because the current price already capitalizes that quality while the audited base produces only 6.01%, expected wealth compounds at 5.41%, the P/E-15 gate fails, and a 20% outcome requires 38.18x base exit P/E. The narrative should be rewritten around a high-quality but acquisition-diluted regulated infrastructure company whose ordinary upside is capped by valuation and whose next proof points are Exchange normalization, Mortgage statutory cash economics, and MarketAxess retention/deleveraging—not around adjusted accretion or synergy headlines.

Sources and evidence lock

- [ICE Q2 2026 earnings release](https://ir.theice.com/press/news-details/2026/Intercontinental-Exchange-Reports-Second-Quarter-2026/default.aspx), 30 July 2026.
- [ICE–MarketAxess definitive agreement](https://ir.theice.com/press/news-details/2026/Intercontinental-Exchange-to-Acquire-MarketAxess-Creating-a-Premier-Fixed-Income-Marketplace/default.aspx), 30 July 2026.
- [ICE FY2025 Form 10-K](https://www.sec.gov/Archives/edgar/data/1571949/000157194926000004/ice-20251231.htm).
- [ICE Q2 2026 Form 10-Q](https://www.sec.gov/Archives/edgar/data/1571949/000157194926000011/ice-20260630.htm).
- [FTC final order on ICE / Black Knight](https://www.ftc.gov/legal-library/browse/cases-proceedings/221-0142-intercontinental-exchange-incblack-knight-inc-matter), 3 November 2023.
- Reviewer-final local evidence: `appendix_synthesis.md` SHA-256 `7417cdace0b1e47ee4b335754b38e1672fbc858c3ec5a4ce99ce8b680ef31535`; `appendix_scoring_audit.md` SHA-256 `e007b075e14b6854e083b128d507f6f790dc19e930d0345ae53cbfdae751c101`; `compounder_score_audit.json` SHA-256 `bd05ebd1244e2983984832058867188 64b43ceeb2ecc0e222459dd9673e0650b`.

Appendix D - Governed Data

ICE ER2 Data Package

Report ID: ICE-ER2-20260814T120350+0800 **Run ID:** pulse-cio-20260814T120350+0800 **Information cutoff:** 2026-08-14 12:03:50 SGT **Reporting basis:** USD millions unless stated otherwise; official SEC/ICE values control when FMP differs. **Time anchor:** Q3 2025 + Q4 2025 + Q1 2026 + Q2 2026 = TTM ended 2026-06-30. The exact 5.0-year horizon ends 2031-06-30. **Authority:** Research data only. `trade_execution_authorized=false`. No portfolio action, sizing, ranking, or trade instruction is contained here. **Valuation anchor:** XNYS:ICE closed at **USD 155.24 on 2026-08-13**, the last completed session before the information cutoff. The live DR re-pull matched the sealed quote packet exactly; `quote_packet.json` SHA-256 is `9ab8f732eef9a19de9ac6970dced3513ca2e6dabb89a44597159c4add3bd0c9d`.

0a. Industry classification and disclosure inventory

ICE is U.S. exchange, clearing, market-data, fixed-income workflow, and mortgage-technology infrastructure. It is a domestic SEC filer under U.S. GAAP with a December 31 fiscal year. The controlling source set is the FY2025 Form 10-K, Q2 2026 Form 10-Q and earnings exhibit, earlier official filings for historical backfill, and ICE earnings releases. FMP was fetched live for consolidated statements and its product endpoints, but its segment labels are sparse and inconsistent: some 2024-2026 rows called “segments” are recurring product families rather than total segment revenue. Official segment and product tables therefore control.

The Asset Managers / Wealth / Exchanges checklist was applied. Search terms included `segment`, `operating income`, `average daily volume`, `ADV`, `open interest`, `rate per contract`, `recurring revenue`, `transaction revenue`, `data and connectivity`, `ETF AUM`, `client retention`, `fixed income execution`, `mortgage`, `Encompass`, `MSP`, `share repurchase`, `debt`, and `leverage`. The official supplemental-information page and monthly-statistics references were checked. Current activity growth was found in earnings/statistics releases; a clean five-year absolute ADV/OI workbook history was not incorporated and is classified below as not fetched/omitted, not as non-disclosure.

Dataset / table family	Official source searched	Search terms or table names	Years available	Included?	If excluded, why	Downstream relevance
Segment net revenue and operating income	FY2025 and FY2023 10-K segment notes; Q2 2026 10-Q	Segment reporting; CODM; operating income	FY2021-FY2025; H1 2026; TTM	Yes	—	Segment bases and margins
Product revenue in dollars	FY2025 and FY2023 10-K segment tables; Q2 2026 release	Energy; data; listings; mortgage product lines	FY2021-FY2025; Q2/TTM 2026	Yes	—	Scenario drivers and taxonomy
ADV and open interest	ICE monthly statistics and Q1/Q2 releases	ADV; OI; rate per contract	Current quarter/month plus historical workbook	Partial	Five-year absolute workbook series not fetched/omitted	Exchanges cyclicality and moat
Recurring and transaction revenue	FY2025 and Q2 2026 releases	Recurring revenue; transaction revenue	FY2024-FY2025; recent quarters	Yes	Earlier annual split not separately assembled	Durability and operating leverage
Fixed-income workflow KPIs	Earnings releases/calls	ETF AUM; pricing/reference; network; CDS	Recent quarters	Yes	No issuer fee-rate series	FIDS adoption and MarketAxess case
Mortgage workflow KPIs	10-K, releases, calls	Encompass; MSP; recurring; closed loans	FY2021-FY2025 dollars; recent trends	Yes	Loan-count history not separately disclosed in reviewed tables	Mortgage cycle and platform adoption
Capital and balance sheet	10-K, 10-Q, cash-flow statements	Debt; cash; buybacks; dividends; capex	FY2021-FY2025; 2026-06-30	Yes	R&D not separately disclosed	Leverage and reinvestment
Client retention / fee capture	Releases, 10-K, transcripts	Retention; take rate; rate per contract	NYSE retention only; no consolidated rate	Partial	True non-disclosure outside NYSE listings	Pricing-power evidence

Industry KPI history and current activity

KPI family	Granularity	FY2021	FY2022	FY2023	FY2024	FY2025	Latest interim / TTM	Source
Segment net revenue / operating income	Three reportable segments	Included in Section 3	Included	Included	Included	Included	H1 and TTM included	10-K/10-Q segment notes
Product gross revenue	Fifteen product lines	Included in Section 4	Included	Included	Included	Included	TTM included for all lines	10-K/10-Q product tables
Recurring revenue ($m)	Consolidated	n/a	n/a	n/a	4,829	5,056	Q2 2026: 1,353, +8% YoY	FY2025 and Q2 2026 releases

KPI family	Granularity	FY2021	FY2022	FY2023	FY2024	FY2025	Latest interim / TTM	Source
Transaction revenue, net ($m)	Consolidated	n/a	n/a	n/a	4,450	4,875	Q2 2026: 1,313, +2% YoY	FY2025 and Q2 2026 releases
Exchange activity	Futures/options complex	n/a	n/a	n/a	n/a	n/a	Q1 2026 ADV +45%; Q2 total OI +20% YoY	ICE statistics release; Q2 call
Fixed-income index adoption	ETF AUM tied to ICE indices	n/a	n/a	n/a	n/a	794 at Q4 ($bn)	922 at Q2 2026, +29% YoY	FY2025/Q2 calls
NYSE listings retention	Listings	n/a	n/a	n/a	n/a	Above 99%	Above 99% at Q1 2026	FY2025/Q1 calls

The five-year product table is the cleanest long-duration industry history because it preserves actual dollar economics. Absolute ADV, OI, fee-rate and account histories should not be inferred from growth statements. They remain explicit open-data items in Section 10.

1. Reporting structure and taxonomy

ICE has three reportable segments. **Exchanges** operates regulated futures, options, equities, listings, clearing, and venue-related data/connectivity. **Fixed Income and Data Services (FIDS)** provides fixed-income pricing, reference data, indices, analytics, execution, CDS clearing, and network technology. **Mortgage Technology** provides origination, closing, servicing, and data/analytics workflow across U.S. residential mortgages.

FY2025 segment	Net revenue ($m)	% of FY2025 net revenue	Operating income ($m)	Description
Exchanges	5,411	54.5%	3,982	Trading, clearing, listings and venue-linked data/connectivity
Fixed Income and Data Services	2,419	24.4%	933	Fixed-income execution, CDS clearing, data/analytics and networks
Mortgage Technology	2,101	21.2%	14	Origination, closing, servicing software and mortgage data
Total	9,931	100.0%	4,929	Official segment sum

The three-segment structure is stable over the five-year table, but economics are not fully organic-comparable. ICE acquired Black Knight on 2023-09-05 and added servicing software to Mortgage Technology, producing a major perimeter change from late FY2023 onward. In 2023 ICE reclassified certain Mortgage Technology “other revenue” into closing solutions, origination technology, and data/analytics and restated prior periods for comparability; the impact was described as immaterial. In FY2025 ICE renamed FIDS “other data and network services” to “data and network technology”; management said the name change did not alter measurement or classification. No silent splice is made.

Geographically, official net revenue was $6,316 million U.S. and $3,615 million foreign in FY2025, versus $6,038 million and $3,241 million in FY2024. Foreign exposure primarily relates to the U.K., with smaller EU, India, Israel, Canada and Singapore exposure. The product tables are more decision-useful than a single geographic split because transaction revenue follows global risk activity and contractual data/workflow revenue follows client adoption.

2. Consolidated historicals

Gross revenue includes transaction-based expenses; net revenue is the denominator ICE uses for operating-margin presentation. Official values are used where QF documented an FMP difference. Capex here includes property/equipment and capitalized software so free cash flow is consistently OCF less both categories.

Metric	FY2021	FY2022	FY2023	FY2024	FY2025	Source
Gross revenue ($bn)	9.168	9.636	9.903	11.761	12.640	Live FMP; official 10-K control
Net revenue ($bn)	7.146	7.292	7.988	9.279	9.931	10-K segment notes
Operating income ($bn)	3.449	3.638	3.694	4.309	4.929	FMP / 10-K; FY2025 official override
Operating margin on net revenue	48.3%	49.9%	46.2%	46.4%	49.6%	Calculated
Net income attributable to ICE ($bn)	4.058	1.446	2.368	2.754	3.315	FMP / 10-K; FY2025 official override

Metric	FY2021	FY2022	FY2023	FY2024	FY2025	Source
Diluted EPS ($)	7.18	2.58	4.19	4.78	5.77	FMP / 10-K
Diluted shares (m)	565	561	565	576	575	10-K EPS notes
Property capex + capitalized software ($bn)	0.452	0.482	0.489	0.752	0.791	10-K cash flows; QF P6
Statutory FCF ($bn)	2.671	3.072	3.053	3.857	3.871	OCF less both capex classes
ROIC	6.8%	8.0%	7.2%	7.0%	7.9%	Calculated below

ROIC is NOPAT divided by average invested capital. NOPAT equals statutory operating income times one minus the effective tax rate; invested capital equals debt plus common equity less cash. The effective rates were 28.6%, 17.1%, 15.8%, 22.8% and 22.8%, producing NOPAT of $2,463 million, $3,014 million, $3,112 million, $3,328 million and $3,781 million. Average invested capital was $36,022 million, $37,778 million, $43,506 million, $47,618 million and $47,932 million. TTM statutory NOPAT is approximately $4,205 million and QF calculated 8.7% ROIC on $48,088 million average invested capital. Acquired goodwill and intangibles dominate the denominator; this is deliberately not an acquisition-adjusted ROIC.

FY2021 net income included a $1.4 billion pretax gain from Bakkt deconsolidation, so its EPS is not a normalized operating benchmark. FY2023 reflects Black Knight transaction/integration costs and only a partial-year revenue contribution. TTM attributable net income is $4,038 million and reconstructed diluted shares are 571.0 million, giving $7.0718 EPS; quarterly EPS was not summed.

3. Segment historicals

ICE's exact common disclosed segment profit basis is **Operating income**. The CODM uses operating income/(loss) to assess segment performance and allocate resources. These are issuer-disclosed statutory segment values, not adjusted EBITDA.

Exchanges

Exchanges	FY2021	FY2022	FY2023	FY2024	FY2025	Source
Net revenue ($bn)	3.856	4.071	4.440	4.959	5.411	2023/2025 10-K segment notes
YoY growth	n/a	5.6%	9.1%	11.7%	9.1%	Calculated
Operating income ($bn)	2.523	2.862	3.159	3.636	3.982	Same source
Operating margin	65.4%	70.3%	71.1%	73.3%	73.6%	Calculated

Exchanges combines episodic transaction demand with compounding data/connectivity and listings revenue. Higher net revenue and margin over the history reflect product breadth, pricing/mix and volume, but scenario work should not extrapolate Q1 2026 volatility mechanically.

Fixed Income and Data Services

Fixed Income and Data Services	FY2021	FY2022	FY2023	FY2024	FY2025	Source
Revenue ($bn)	1.883	2.092	2.231	2.298	2.419	2023/2025 10-K segment notes
YoY growth	n/a	11.1%	6.6%	3.0%	5.3%	Calculated
Operating income ($bn)	0.529	0.719	0.811	0.843	0.933	Same source
Operating margin	28.1%	34.4%	36.4%	36.7%	38.6%	Calculated

FIDS has expanded margins alongside recurring data/analytics and network growth. MarketAxess will enlarge this perimeter after closing and introduce more execution sensitivity, acquisition financing and integration costs. Pre-close historical margins must not be compared to post-close pro forma margins without an explicit bridge.

Mortgage Technology

Mortgage Technology	FY2021	FY2022	FY2023	FY2024	FY2025	Source
Revenue ($bn)	1.407	1.129	1.317	2.022	2.101	2023/2025 10-K segment notes

Mortgage Technology	FY2021	FY2022	FY2023	FY2024	FY2025	Source
YoY growth	n/a	(19.8%)	16.7%	53.5%	3.9%	Calculated
Operating income/(loss) ($bn)	0.397	0.057	(0.276)	(0.170)	0.014	Same source
Operating margin	28.2%	5.0%	(21.0%)	(8.4%)	0.7%	Calculated

The FY2023-FY2024 jump is mainly the Black Knight perimeter and is a taxonomy/comparability flag, not evidence of equivalent organic growth. Acquisition-related amortization and integration costs depress statutory operating income. Adjusted margins are materially higher, but the sealed statutory bridge requires the reported operating-income basis.

Mortgage recurring and transaction revenue mix

ICE's FY2025 Form 10-K, Item 7, table **"Mortgage Technology Segment — Year Ended December 31"** reports the following issuer-defined operating mix. All dollars are USD millions and each year's recurring plus transaction revenue ties exactly to the segment revenue above.

Period	Recurring revenue ($m)	Transaction revenue ($m)	Segment revenue ($m)	Recurring mix	Transaction mix	Exact tie
FY2023	961	356	1,317	73.0%	27.0%	961 + 356 = 1,317
FY2024	1,555	467	2,022	76.9%	23.1%	1,555 + 467 = 2,022
FY2025	1,574	527	2,101	74.9%	25.1%	1,574 + 527 = 2,101

The split is economically useful but has two limits stated by ICE. Recurring and transaction revenue are operating metrics that do not necessarily match the timing pattern of GAAP revenue recognition, and definitions are not uniform across companies. In addition, every Mortgage Technology product classification contains a mix of recurring and transaction revenue. The segment split therefore cannot be allocated across origination, closing, servicing, or data products without further disclosure. Source: [ICE FY2025 Form 10-K](https://www.sec.gov/Archives/edgar/data/1571949/000157194926000004/ice-20251231.htm), Item 7 Mortgage Technology Segment table; local archive SHA-256 `faf40e70d4ad0b7f16c504287355f5e32ee9aea6ed98e1d48a38172a5d901ad9`.

3a. Historical statutory-profit bridge and forecast-driver ledger

The sealed packet reports USD millions, three modeled segments, `segment_profit_basis=issuer_disclosed`, and common metric `Operating income`. `statutory_bridge.json` exact-byte SHA-256 is `f638ae8b4500da99eb70cc7dfc669e16eb3a77ba3f263f2c026759422c9c7157`. Corporate/unallocated and operating-bridge arrays are empty in both periods. No zero placeholder or analyst plug is inserted.

FY2025 bridge

Bridge line	Classification	Value	Source ID	Running subtotal
Exchanges operating income	segment profit	3,982	ice_2025_10k	3,982
Fixed Income and Data Services operating income	segment profit	933	ice_2025_10k	4,915
Mortgage Technology operating income	segment profit	14	ice_2025_10k	4,929
Sum of reportable segment profit	segment profit	4,929	ice_2025_10k	4,929
Consolidated segment profit metric	subtotal	4,929	ice_2025_10k	4,929
Statutory operating income	statutory subtotal	4,929	ice_2025_10k	4,929
Interest income	interest	119	ice_2025_10k	5,048
Interest expense	interest	(803)	ice_2025_10k	4,245
Other income/(expense), net	other_non_operating	101	ice_2025_10k	4,346
Pretax income	statutory subtotal	4,346	ice_2025_10k	4,346
Income tax expense	tax	(976)	ice_2025_10k	3,370

Bridge line	Classification	Value	Source ID	Running subtotal
Net income attributable to non-controlling interests	noncontrolling_interests	(55)	ice_2025_10k	3,315
Net income	statutory subtotal	3,315	ice_2025_10k	3,315

All five packet residuals equal zero; tolerance is $2.4645 million.

TTM ended 2026-06-30 bridge

Bridge line	Classification	Value	Source ID	Running subtotal
Exchanges operating income	segment profit	4,388	ttm_official_reconciliation	4,388
Fixed Income and Data Services operating income	segment profit	1,017	ttm_official_reconciliation	5,405
Mortgage Technology operating income	segment profit	62	ttm_official_reconciliation	5,467
Sum of reportable segment profit	segment profit	5,467	ttm_official_reconciliation	5,467
Consolidated segment profit metric	subtotal	5,467	ttm_official_reconciliation	5,467
Statutory operating income	statutory subtotal	5,467	ttm_official_reconciliation	5,467
Interest income	interest	106	ttm_official_reconciliation	5,573
Interest expense	interest	(804)	ttm_official_reconciliation	4,769
Other income/(expense), net	other_non_operating	562	ttm_official_reconciliation	5,331
Pretax income	statutory subtotal	5,331	ttm_official_reconciliation	5,331
Income tax expense	tax	(1,231)	ttm_official_reconciliation	4,100
Net income attributable to non-controlling interests	noncontrolling_interests	(62)	ttm_official_reconciliation	4,038
Net income	statutory subtotal	4,038	ttm_official_reconciliation	4,038

TTM is FY2025 minus H1 2025 plus H1 2026. All five packet residuals equal zero; tolerance is $2.7335 million.

Forecast-driver ledger

Historical bridge line	FY2025	TTM	Forecast treatment	Driver and source	Bear / base / bull rule
Exchanges operating income	3,982	4,388	Segment revenue × statutory margin	Volume/OI, rate, mix, recurring data; Sections 4-6	Lower/central/higher volume and margin normalization
FIDS operating income	933	1,017	Segment revenue × statutory margin	Recurring data, networks, execution, MarketAxess timing/costs	Slower/central/faster organic growth; explicit acquisition bridge
Mortgage operating income	14	62	Segment revenue × statutory margin	Originations, minimums, transaction lift, synergies	Lower/central/higher recovery with statutory D&A
Interest income	119	106	Cash/yield schedule	Cash balance and short rates	Lower/central/higher cash/yield
Interest expense	(803)	(804)	Debt/rate schedule	Existing debt plus MarketAxess financing	Higher/central/lower funding cost and deleveraging
Other income/(expense), net	101	562	Independently forecast components	Investment gains/losses and other non-operating items	Conservative normalization; do not extrapolate TTM windfall
Income tax expense	(976)	(1,231)	Pretax income × tax rate	FY2025 22.5%; TTM 23.1%	Higher/central/lower sustainable rate
Non-controlling interests	(55)	(62)	Explicit NCI schedule	Reported NCI perimeter	Higher/central/lower NCI claim

The TTM `Other income/(expense), net` value is unusually favorable and is a high-risk extrapolation point. MarketAxess financing belongs in interest expense and acquisition/integration items remain within segment statutory operating income as presented, not in a balancing line.

`STATUTORY_BRIDGE_STATUS: VERIFIED — CLEARED FOR FORECASTING`

4. Product and sub-segment historicals

The official segment note separately discloses all fifteen product lines in dollars. Exchange product figures below are gross before transaction-based expenses; Exchanges segment net revenue therefore does not equal their gross sum. No back-solved product dollar estimates are used.

Segment / product ($m)	FY2021	FY2022	FY2023	FY2024	FY2025	TTM 2026-06-30	Source
Exchanges — Energy futures and options	1,236	1,162	1,498	1,876	2,182	2,362	2023/2025 10-K; Q2 2026 10-Q
Exchanges — Agricultural and metals futures/options	228	235	271	257	233	272	Same
Exchanges — Financial futures and options	394	475	460	559	608	742	Same
Exchanges — Cash equities and equity options, gross	2,377	2,722	2,298	2,913	3,176	3,356	Same
Exchanges — OTC and other	326	429	398	400	395	409	Same
Exchanges — Data and connectivity services	838	877	933	947	1,031	1,094	Same
Exchanges — Listings	479	515	497	489	495	507	Same
FIDS — Fixed income execution	52	101	124	117	125	124	Same
FIDS — CDS clearing	192	305	360	343	338	357	Same
FIDS — Fixed income data and analytics	1,082	1,098	1,118	1,177	1,234	1,284	Same
FIDS — Data and network technology	557	588	629	661	722	763	Same; renamed in FY2025
Mortgage — Origination technology	1,012	798	694	713	738	765	Same
Mortgage — Closing solutions	319	239	179	202	223	240	Same
Mortgage — Servicing software	—	—	288	848	871	878	Same; Black Knight perimeter
Mortgage — Data and analytics	76	92	156	259	269	273	Same
Total gross revenue	9,168	9,636	9,903	11,761	12,640	13,426	Official product sum

The TTM product total less $2,868 million transaction-based expenses equals $10,558 million TTM net revenue. Servicing software begins in FY2023 because of Black Knight; zero/blank earlier periods mean outside the reported perimeter, not zero economic size of the broader industry.

Product / KPI with growth-only or non-dollar disclosure	Q3 2025	Q4 2025	Q1 2026	Q2 2026	Source
Exchange data and connectivity YoY	9%	16% reported; 11% ex true-up	13%	12%	Official releases / FMP transcripts
FIDS recurring revenue YoY	7%	7%	8%	10%	Official releases / FMP transcripts
Data and network technology YoY	10%	10%	11%	11%	Official releases / FMP transcripts
Mortgage transaction revenue YoY	12%	20%	22%	11%	Official releases / FMP transcripts
Total futures/options OI YoY	16% in late October	19% into February 2026	23% in late April	20%	Earnings calls; timing as stated

Dollar-disclosed products are every row in the first table. Growth-only/non-dollar industry indicators include total ADV/OI, user counts beyond isolated disclosures, client take rates, and product-specific retention outside NYSE listings. They are not converted into dollars.

5. Most recent quarterly trend

ICE FY ends December 31. Most recently completed fiscal quarter at time of writing: FY2026 Q2, covering 2026-04-01 through 2026-06-30, reported on 2026-07-30 via the [official ICE release](https://ir.theice.com/press/news-details/2026/Intercontinental-Exchange-Reports-Second-Quarter-2026/default.aspx).

Quarter	Segment	Net revenue ($m)	YoY	Statutory operating margin	Source
Q3 2025	Exchanges	1,265	1%	72%	2025-10-30 ICE release
Q3 2025	Fixed Income and Data Services	618	3%	39%	2025-10-30 ICE release
Q3 2025	Mortgage Technology	528	4%	4%	2025-10-30 ICE release
Q4 2025	Exchanges	1,364	10%	73%	2026-02-05 ICE release
Q4 2025	Fixed Income and Data Services	608	5%	38%	2026-02-05 ICE release
Q4 2025	Mortgage Technology	532	5%	1%	2026-02-05 ICE release
Q1 2026	Exchanges	1,781	30% reported; 27% CC	79%	2026-04-30 ICE release
Q1 2026	Fixed Income and Data Services	657	10% reported; 9% CC	42%	2026-04-30 ICE release
Q1 2026	Mortgage Technology	539	6%	(2%)	2026-04-30 ICE release
Q2 2026	Exchanges	1,464	3%	74%	2026-07-30 ICE release
Q2 2026	Fixed Income and Data Services	645	8%	42%	2026-07-30 ICE release
Q2 2026	Mortgage Technology	557	5%	8%	2026-07-30 ICE release

Q1 Exchanges benefited from unusually high macro/geopolitical risk activity, while Q2 retained strong rates, recurring data and open interest despite softer energy revenue. FIDS showed sequentially sustained revenue with accelerating recurring growth. Mortgage statutory margin improved sharply in Q2, but amortization remains material and recurring revenue included $4 million of one-time items in Q1 and $3 million in Q2.

6. Management commentary on forward growth

All excerpts below come from live FMP transcript pulls in this run. Dates match fiscal periods exactly: Q3 2025 on 2025-10-30, Q4 2025 on 2026-02-05, Q1 2026 on 2026-04-30, and Q2 2026 on 2026-07-30. Short excerpts are intentionally used; interpretations are paraphrases.

Segment / topic	Fiscal period and call date	Speaker	Verbatim excerpt	Forecast implication
Exchanges recurring revenue	Q3 2025; 2025-10-30	Warren Gardiner, CFO	“high end of our 4% to 5% guidance range”	FY2025 exchange-data growth was tracking above the midpoint.
Exchanges recurring revenue	Q4 2025; 2026-02-05	Warren Gardiner, CFO	“mid-single-digit range”	Initial FY2026 recurring guide was moderate before Q1/Q2 strength.
Exchanges durability	Q1 2026; 2026-04-30	Warren Gardiner, CFO	“Customers are not simply reacting to headlines.”	OI persistence, not Q1 volume alone, should drive scenarios.
Exchanges recurring revenue	Q2 2026; 2026-07-30	Warren Gardiner, CFO	“high single-digit range”	FY2026 guide was raised after 10% Q2 recurring growth.
FIDS recurring revenue	Q3 2025; 2025-10-30	Warren Gardiner, CFO	“between 5% and 6%”	Q4/FY2025 recurring expectation set a mid-single-digit base.
FIDS network growth	Q4 2025; 2026-02-05	Warren Gardiner, CFO	“another year of high single-digit growth”	Network technology was expected to outgrow total FIDS.
FIDS infrastructure	Q1 2026; 2026-04-30	Warren Gardiner, CFO	“cannot be replicated quickly or cheaply”	Management links network capex to structural demand and barriers.
FIDS recurring revenue	Q2 2026; 2026-07-30	Warren Gardiner, CFO	“7% to 8%”	Raised FY2026 guide; second half expected toward the low end.
Mortgage near-term revenue	Q3 2025; 2025-10-30	Warren Gardiner, CFO	“remain at these levels”	Seasonal and contract-minimum effects constrained Q4 sequential growth.

Segment / topic	Fiscal period and call date	Speaker	Verbatim excerpt	Forecast implication
Mortgage FY2026	Q4 2025; 2026-02-05	Warren Gardiner, CFO	“low to mid-single-digit range”	Guide depends on industry loan growth from modest to low teens.
Mortgage platform	Q1 2026; 2026-04-30	Warren Gardiner, CFO	“opportunity is captured”	Investment continues despite below-normal origination volumes.
Mortgage Q3 recurring	Q2 2026; 2026-07-30	Warren Gardiner, CFO	“remain around current levels”	New-client ramp and core growth offset near-term headwinds.

For MarketAxess, CFO Warren Gardiner said on the Q2 2026 call that ICE expects $100 million of annualized expense synergies, with one-third in year one, two-thirds in year two and full run-rate in year three. The acquisition is expected to be adjusted-EPS accretive in the first year post-close. Management underwrote recent mid-single-digit MarketAxess growth but aims to accelerate revenue; that acceleration was explicitly described as taking time and investment, so it should not be treated as a closing-date step-up.

ICE also raised 2026 capex to approximately $850 million after pulling forward some 2027 spending for hardware, data centers and real estate. Q3 adjusted operating expense guidance is $1.063-$1.073 billion and FY2026 adjusted operating expense guidance is $4.190-$4.230 billion. These are forward cost anchors, not segment profit promises.

7. Capital allocation, shares and dilution

R&D is not separately disclosed as a consolidated income-statement line; product development is embedded in operating expense categories. It is therefore marked n/d rather than estimated. M&A is cash paid for acquisitions, net of acquired cash, and excludes equity-method investments unless specifically noted.

Year	Capex incl. software ($bn)	Capex / gross revenue	R&D ($bn)	Buybacks ($bn)	Dividends ($bn)	Cash M&A ($bn)	Diluted shares (m)	Source
FY2021	0.452	4.9%	n/d	0.250	0.747	0.066	565	2023 10-K / live FMP
FY2022	0.482	5.0%	n/d	0.632	0.853	0.059	561	2023 10-K / live FMP
FY2023	0.489	4.9%	n/d	0.000	0.955	10.198	565	2023 10-K / QF
FY2024	0.752	6.4%	n/d	0.000	1.039	0.038	576	2025 10-K / QF
FY2025	0.791	6.3%	n/d	1.294	1.105	0.019	575	2025 10-K / QF
TTM 2026-06-30	0.873	6.5%	n/d	2.000	1.141	n/a	571	QF P6

Black Knight consideration included 10.9 million ICE shares in September 2023; this contributed to FY2024 dilution. Buybacks then reduced the diluted basis from 576 million in FY2024 to 575 million in FY2025 and 571 million TTM. SBC was $257 million, $231 million, $238 million and $268 million in FY2023, FY2024, FY2025 and TTM, respectively. Repurchase dollars should be modeled together with SBC and acquisition issuance, not as a direct dollar-for-dollar share reduction.

At Q2 2026 ICE had returned $1.8 billion in H1, including $1.2 billion of repurchases, and the board raised authorization to $4.0 billion effective July 1. Management plans to increase baseline repurchases from $350 million to $400 million per quarter even while deleveraging after MarketAxess, but creditor and investment-grade constraints remain explicit.

8. Balance sheet and leverage snapshot

Item	FY2025 ($bn)	2026-06-30 ($bn)	Source / definition
Cash and equivalents	0.837	1.067	Official balance sheet
Short-term investments	2.779	0.886	Live FMP classification
Debt excluding leases	19.644	19.846	Official 10-K/10-Q
Lease liabilities	0.635	0.681	FMP-to-official bridge
Net debt excluding leases and short-term investments	18.807	18.779	Debt less cash
Net debt / adjusted EBITDA, implied	2.87x	2.65x	Net debt divided by EBITDA implied from reported gross leverage
Goodwill + intangibles	45.999	45.502	Live FMP balance sheet

Item	FY2025 ($bn)	2026-06-30 ($bn)	Source / definition
Common equity	28.915	29.551	Live FMP balance sheet
Tangible common equity	(17.084)	(15.951)	Equity less goodwill/intangibles

FMP total debt of $20.527 billion at 2026-06-30 includes $0.681 billion of lease liabilities; the official debt-ex-leases figure is $19.846 billion and controls. ICE reported gross leverage of 2.8x at Q2. The implied net-debt ratio above uses the same adjusted EBITDA denominator and is a calculation, not an issuer-reported covenant measure.

MarketAxess consideration is $167 cash per share, or approximately $6.0 billion of equity value, financed entirely with new debt through bonds, a term loan and commercial paper; the separately stated enterprise value is approximately $5.7 billion. ICE expects opening pro forma gross leverage near 3.4x and targets 3.0x or below within 18-24 months post-close. Because closing is expected in H1 2027, the acquisition should enter forecasts only from the assumed close date, with separate debt issuance, interest rate, synergy and integration schedules. Tangible book is already negative because acquired goodwill/intangibles exceed common equity; valuation should focus on cash earnings and debt service rather than tangible-book multiples.

9. Recent corporate actions

- **2026-07-30 — MarketAxess acquisition announced.** ICE agreed to pay $167 cash per MarketAxess share, a 33% premium to the prior close, for approximately $6.0 billion equity value and $5.7 billion enterprise value. Consideration is 100% cash financed with new debt. Expected close is H1 2027, subject to MarketAxess shareholder and regulatory approvals. The announced fully synergized multiple is about 10.6x LTM EBITDA.
- **2026-07-30 — MarketAxess financing/deleveraging plan.** Pro forma gross leverage is expected to open near 3.4x, then fall to 3.0x or below within 18-24 months. $100 million run-rate expense synergies are targeted by year three. The principal forecast risks are regulatory timing, financing cost, integration execution, fee pressure and the timing/amount of revenue synergies.
- **2026-07-30 — Capital return authorization.** ICE increased repurchase authorization to $4.0 billion and plans a $400 million quarterly baseline after the transaction, up from $350 million, while maintaining its investment-grade priority.
- **2026-07-30 — Capex acceleration.** FY2026 guidance rose to about $850 million as ICE pulled forward hardware, data-center and real-estate spending from 2027. This reduces near-term FCF versus an unchanged capex assumption but supports capacity.
- **2026-02-05 — Black Knight synergy target raised.** ICE exited FY2025 at approximately $230 million annualized expense synergies and raised the total target to $275 million by 2028, versus the original $200 million.
- **2025-10 — Polymarket strategic investment.** On the Q3 2025 call ICE said $1 billion was funded with commercial paper in October, with up to another $1 billion expected later. This is a separate capital/debt demand and belongs outside operating segment revenue unless accounting results are disclosed.

MarketAxess reported operating baseline — conditional sensitivity only

The official SEC Companyfacts feed supplies the minimum target-company baseline that the conditional deal model requires, despite the cited rendered filing pages returning HTTP 403 in the appendix review. Values below are MarketAxess reported U.S.-GAAP facts in USD millions from `us-gaap:RevenueFromContractWithCustomerExcludingAssessedTax` and `us-gaap:OperatingIncomeLoss`. The TTM row is a transparent arithmetic reconciliation, not an issuer-reported LTM measure.

Reported / derived period	Revenue ($m)	Operating income ($m)	Operating margin	Source accession / exact formula
FY2025, ended 2025-12-31	846.268	341.838	40.4%	10-K filed 2026-02-24; `0001193125-26-067009`
H1 2025, ended 2025-06-30	428.038	180.246	42.1%	10-Q filed 2025-08-06; `0000950170-25-103993`
H1 2026, ended 2026-06-30	451.795	190.798	42.2%	10-Q filed 2026-08-07; `0001193125-26-340249`

Reported / derived period	Revenue ($m)	Operating income ($m)	Operating margin	Source accession / exact formula
Derived TTM ended 2026-06-30	870.025	352.390	40.5%	Revenue: 846.268 – 428.038 + 451.795; operating income: 341.838 – 180.246 + 190.798

These are **reported target baseline facts**, not acquisition forecasts. MarketAxess remains outside ICE's reported perimeter until close. Any assumed close date, post-close revenue growth, contribution, cost-synergy realization, financing coupon, integration cost, client retention or transaction probability is a **scenario assumption** and must be labeled separately. ICE has not disclosed a preliminary purchase-price allocation, acquired-intangible amortization schedule or exact financing coupon; none is invented here. Consequently, unadjusted MarketAxess operating income must not be added to ICE statutory operating income as though it were post-acquisition GAAP profit. The deal-close case remains a non-controlling sensitivity, while the organic/no-close perimeter controls synthesis until closing and sufficient purchase-accounting and financing disclosures exist.

Primary evidence: [SEC Companyfacts for MarketAxess](https://data.sec.gov/api/xbrl/companyfacts/CIK0001278021.json); [FY2025 Form 10-K](https://www.sec.gov/Archives/edgar/data/1278021/000119312526067009/mktx-20251231.htm); [H1 2025 Form 10-Q](https://www.sec.gov/Archives/edgar/data/1278021/000095017025103993/mktx-20250630.htm); [H1 2026 Form 10-Q](https://www.sec.gov/Archives/edgar/data/1278021/000119312526340249/mktx-20260630.htm). The live Companyfacts response is archived at `raw/pulse-cio-20260814T120350+0800/d_repair_20260814T140500+0800/sec_companyfacts_MKTX_20260814.json`, SHA-256 `5173338dd5cc981fac5f7b7da9326c048c47781de1238552d31b56262c936c8e`.

10. Open data gaps, uncertainties and provenance

Classification	Data item	Sources/searches checked	Treatment
Not fetched / omitted	Five-year absolute ADV, OI and rate-per-contract workbook history	ICE supplemental-information page; monthly statistics references; `ADV`, `OI`, `rate per contract`	Direct retrieval hit a Cloudflare JavaScript challenge twice and the indexed page exposed no workbook link; current growth included, annual absolutes not invented
True non-disclosure	Consolidated client retention and revenue take rate	FY2025 10-K, Q2 2026 10-Q/release, four calls; `retention`, `take rate`, `fee rate`	Only NYSE listings retention above 99% is stated
True non-disclosure	Standalone consolidated R&D expense	FMP statements and 10-K; `research and development`, `product development`	Embedded in operating expenses; shown n/d
True non-disclosure	Exact MarketAxess revenue-synergy dollars/timing	Acquisition release and Q2 call; `revenue synergy`, `accelerate growth`	Expense synergies only modeled from disclosed schedule
Estimated	Net debt / adjusted EBITDA	Official debt/cash and issuer gross-leverage ratio	Clearly labeled implied calculation
Taxonomy boundary	Mortgage product history before Black Knight	2023/2025 segment notes; `servicing software`, `reclassification`	Servicing starts FY2023; do not organic-splice
Source discrepancy	FY2025 and Q2 2026 FMP P&L; current debt	Live FMP vs SEC	Official values control; differences disclosed below

The live FMP FY2025 annual revenue spot-check returned $12.638 billion versus $12.640 billion official, a 0.02% difference and within the required 1%. FMP FY2025 operating income was $4.896 billion versus $4.929 billion official. FMP Q2 2026 operating income was materially wrong at $1.987 billion versus $1.391 billion official. FMP debt included leases. None of these discrepancies is silently averaged.

Source quality is high for statutory and product dollars: official SEC filings control, FMP was independently pulled live, and the QFR-sealed bridge has zero residuals. Forward guidance and quotes are medium-confidence because they are management statements and depend on market activity, financing rates, transaction close, customer adoption and integration execution. MarketAxess revenue acceleration has no quantified company target and must remain scenario-dependent.

D-stage live-pull provenance

Evidence	Endpoint / URL	Retrieval evidence	SHA-256
FMP FY annual income	https://financialmodelingprep.com/stable/income-statement?symbol=ICE&period=annual&limit=8	raw/pulse-cio-20260814T120350+0800/d_data_package_20260814T130500+0800/income_annual_ICE.json	5acbcb96c098f6f969a0c2e21325e1042d7156a29d5c3b83eea27564eab08602
Q3 2025 transcript	https://financialmodelingprep.com/stable/earning-call-transcript?symbol=ICE&year=2025&quarter=3	Date 2025-10-30; raw/pulse-cio-20260814T120350+0800/d_data_package_20260814T130500+0800/transcript_ICE_2025_Q3.json	f6bec4108a8101f97bb4abdbaad799b84bfbfd3a1c0a52a7b1e4945f5a86b4ad
Q4 2025 transcript	Same endpoint, year 2025 quarter 4	Date 2026-02-05; raw/pulse-cio-20260814T120350+0800/d_data_package_20260814T130500+0800/transcript_ICE_2025_Q4.json	c6086f413d8097bc77e644d9af49cfba1982eb9b92440e7a3eec8a6113872de9
Q1 2026 transcript	Same endpoint, year 2026 quarter 1	Date 2026-04-30; raw/pulse-cio-20260814T120350+0800/d_data_package_20260814T130500+0800/transcript_ICE_2026_Q1.json	75b3e09d2768b6fdf81c6c2966a44b88f9501e91f205aa040f89146f0d509091
Q2 2026 transcript	Same endpoint, year 2026 quarter 2	Date 2026-07-30; raw/pulse-cio-20260814T120350+0800/d_data_package_20260814T130500+0800/transcript_ICE_2026_Q2.json	97b1b75b32df34a404e90788fb0d298c0d4c4fed8eeaeb290c4ba4cfa79436c0
SEC MarketAxess Companyfacts	https://data.sec.gov/api/xbrl/companyfacts/CIK0001278021.json	Live pull; raw/pulse-cio-20260814T120350+0800/d_repair_20260814T140500+0800/sec_companyfacts_MKTX_20260814.json	5173338dd5cc981fac5f7b7da9326c048c47781de1238552d31b56262c936c8e
Normalized repair evidence	Local extraction from SEC MarketAxess Companyfacts and archived ICE FY2025 10-K	Periods, tags, accessions, formulas and disclosure limits; raw/pulse-cio-20260814T120350+0800/d_repair_20260814T140500+0800/normalized_repair_evidence.json	a479dc193791ad01a130d4abb465669171f90e58bf788a8290c99d4ac17d1b6e

All five new FMP pulls were copied after retrieval to `C:\Users\Admin\OneDrive\Cowork\Investing\data warehouse\er2_live_pulls\ICE\2026-08-14T130500+0800` without overwriting any file. No warehouse file was used as research input.

Controlling official sources

- [FY2025 Form 10-K](https://www.sec.gov/Archives/edgar/data/1571949/000157194926000004/ice-20251231.htm), archived SHA-256 `faf40e70d4ad0b7f16c504287355f5e32ee9aea6ed98e1d48a38172a5d901ad9`.
- [Q2 2026 Form 10-Q](https://www.sec.gov/Archives/edgar/data/1571949/000157194926000011/ice-20260630.htm), archived SHA-256 `b3e7ba77f31207c587b13dcbe955ddd9871d2ee9ba95072d22071786164e303b`.
- [Q2 2026 earnings release](https://ir.theice.com/press/news-details/2026/Intercontinental-Exchange-Reports-Second-Quarter-2026/default.aspx) and [SEC Exhibit 99.1](https://www.sec.gov/Archives/edgar/data/1571949/000110465926088462/tm2621213d1_ex99-1.htm), exhibit SHA-256 `f060ab01ea30aa64fbd9378c31d0f38530536511621b87eb86292da53d220e4f`.
- [Q1 2026 earnings release](https://ir.theice.com/press/news-details/2026/Intercontinental-Exchange-Reports-Record-First-Quarter-2026/default.aspx).
- [FY2025/Q4 earnings release](https://ir.theice.com/press/news-details/2026/Intercontinental-Exchange-Reports-Strong-Full-Year-2025-Results/default.aspx), archived SHA-256 `e730e18c01d372763d1f21b4bef94f385c39ee56a2d6a4bb6caf9a44b4684571`.
- [Q3 2025 earnings release](https://ir.theice.com/press/news-details/2025/Intercontinental-Exchange-Reports-Strong-Third-Quarter-2025/default.aspx).
- [MarketAxess acquisition release](https://ir.theice.com/press/news-details/2026/Intercontinental-Exchange-to-Acquire-MarketAxess-Creating-a-Premier-Fixed-Income-Marketplace/default.aspx), archived SHA-256 `632d5e4833c199726056465348dec84e00ce4349d2af714c64cccc08f2ea0385`.
- [MarketAxess SEC Companyfacts](https://data.sec.gov/api/xbrl/companyfacts/CIK0001278021.json), live archived SHA-256 `5173338dd5cc981fac5f7b7da9326c048c47781de1238552d31b56262c936c8e`; exact filing links and accessions are recorded in Section 9.

Upstream integrity verified before drafting: `quant_foundation.md` SHA-256 `305e5f133df8a733aceddd37ff79c79f458063c7c56510f3ed5ac81a47e681f9`; `quote_packet.json` SHA-256 `9ab8f732eef9a19de9ac6970dced3513ca2e6dabb89a44597159c4add3bd0c9d`; `statutory_bridge.json` SHA-256 `f638ae8b4500da99eb70cc7dfc669e16eb3a77ba3f263f2c026759422c9c7157`; upstream `source_manifest.json` SHA-256 `3e42792ab6733c3cbd140186b9163986a602327a415e01c962974e9bfc156e1c`. The upstream source manifest was not modified, preserving its sealed hash; D-stage incremental evidence is recorded above.