TTD gideon lens

The Trade Desk (TTD) - Gideon-Lens Equity Research

Date: 2026-06-29. Analyst: Codex ER2. Current price: $18.37. Market cap: $8.64 billion. Company fiscal year end: December 31.

VERDICT BLOCK

Verdict: PASS

Scorecard:

Gate	Result	Notes
Management	FAIL	Founder execution strong, but governance, SBC, CFO churn fail
Moat	YELLOW	Real platform moat today; 2046 test remains unresolved
P/E <= 15 on confident EPS at TTM + 5 calendar years	PASS	Base-case cushion 95.9%
Compounder Score	Audited 58 / 100	Reject diagnostic; hard quality and underwriting limits remain
Business Quality Score	Audited 48 / 80	Good operating quality offset by opacity, SBC, governance
20% Return UW Score	Audited 10 / 20	P/E 15 clears; base 15x IRR only about 14.4%

One-line thesis (or reason to pass): TTD is a real, cash-generative, net-cash ad-tech platform at a price that clears the ER2 P/E 15 math, but the Gideon decision still fails because management governance is a hard FAIL and moat durability is only YELLOW.

Kill / trigger criteria:

- BUY trigger: not applicable while Management remains FAIL; a price near $14.46 would be the diagnostic 20% IRR buy price only if governance and moat evidence improve.
- PASS triggers: dual-class control persists without an earlier sunset, permanent CFO stability is not restored, or SBC remains high enough that buybacks mainly offset dilution.
- Upgrade to WATCH conditions: stable permanent CFO, compensation reset toward FCF/ROIC/dilution-adjusted per-share metrics, sustained net share reduction, and customer retention above 95% with revenue growth reaccelerating.
- Upgrade to BUY conditions: Management improves to PASS, Moat improves to PASS, and the P/E 15 base-case cushion remains positive.

Position sizing if bought: 0% today. A Management FAIL is a hard ER2 veto, so the report does not recommend buying despite favorable valuation arithmetic.

Stage 0 - Time anchor

Today is 2026-06-29. The Trade Desk's fiscal year ends December 31. The most recently reported quarter is Q1 2026, ended 2026-03-31. The TTM anchor is Q2 2025 + Q3 2025 + Q4 2025 + Q1 2026, giving TTM ending 2026-03-31. The forward horizon is exactly five calendar years after that TTM end date: 2031-03-31. All FY+5 and horizon references in this report mean that TTM+5 calendar-year date, not a six-fiscal-year stretch from FY2025.

Stage 1 - Disqualifier sweep

ROIC is yellow-to-green rather than elite: the company is profitable and cash-generative, but R&D-inclusive ROIIC is mid-tier rather than dream-compounder level. FCF conversion is green: TTM FCF after SEC PP&E capex was $842.5 million versus

$432.6 million of TTM net income. Net debt is green because funded debt is zero and cash plus short-term investments were $1.406 billion. End-markets are yellow: programmatic, CTV, retail media, identity, and open-internet advertising can grow, but advertising budgets are cyclical. Governance is red under ER2 because dual-class control, high SBC, CFO churn, and weak minority protections fail the management gate. AI disruption is yellow because Kokai/Koa can strengthen workflow, but AI-native agency, advertiser, or inventory-owner layers can also shift control upstream. Pricing power is yellow: TTD has strong retention and scale, but contracts generally lack hard spend commitments and product-level take-rate evidence is limited.

Management - summary

The management appendix gives the strongest possible credit to Jeff Green as a founder-operator: revenue compounded from $1.196 billion in FY2021 to $2.896 billion in FY2025, the balance sheet has no funded debt, organic product investment is coherent, and recent buybacks reduced the share count. That is not enough for a Gideon PASS. The appendix assigns **Management gate: FAIL** because the shareholder-rights and per-share-value evidence do not meet the framework's decade-plus trust bar. Class B shares carry 10 votes per share, Green controls 97.6% of Class B and 49.7% of total voting power, and the automatic sunset is not until 2035. Compensation is too tied to revenue, TSR, adjusted EBITDA, and stock price rather than central FCF-per-share, ROIC, or dilution-adjusted owner-value measures. FY2025 SBC was still material, so buybacks are partly a dilution offset rather than a clean return of excess capital. The CFO transition is also a live issue: Alex Kayyal's tenure ended after roughly five months, and Tahnil Davis is interim CFO while a search continues. The required upgrade evidence is specific: earlier Class B sunset or one-share/one-vote transition, stable permanent CFO execution, a compensation reset, and sustained net share reduction after SBC.

Moat - summary

The moat appendix assigns **Moat gate: YELLOW** and **2046 test: YELLOW**. TTD has real advantages today: independent buy-side alignment, a large platform with $13.4 billion of FY2025 gross spend, customer retention above 95%, agency workflow embedding, data feedback, broad integrations, OpenPath supply access, UID2/EUID identity efforts, and Kokai/Koa product upgrades. Those advantages are useful, but not enough for a clean 20-year PASS. The weakness is that TTD does not own the consumer relationship, most premium inventory, the largest first-party data ecosystems, or the dominant closed-loop measurement channels. Switching costs are behavioral and workflow-based, not mostly contractual, and MSAs generally do not create hard spend commitments. A credible 2046 version of TTD can be described as a neutral, AI-enabled buy-side operating system for media buying outside walled gardens, but the bear version is also credible: premium CTV, retail, data, and AI buying control migrate toward inventory owners and closed ecosystems, leaving TTD useful but lower-margin and less powerful. The earliest downgrade signals are retention falling below the historical 95% threshold, gross-spend growth lagging open-internet advertising growth, take-rate erosion, or premium CTV/retail inventory moving into closed stacks.

Stage 5 synthesis - headline numbers

The synthesis is arithmetically favorable. TTD has one official reportable segment, advertising technology platform. The R-reviewed segment appendix models base-case TTM+5 revenue of $5.843 billion, base operating margin of 24.0%, and operating income of $1.402 billion. The synthesis flows that through to $1.074 billion of net income and $2.40 of EPS at the 2031-03-31 horizon. At the current price of $18.37, the required EPS for a 15x P/E is $1.2247, so the base-case P/E 15 cushion is 95.9%. Bear case EPS is $1.40 and still clears P/E 15 mechanically, but only with a 14.0% cushion. Bull case EPS is $3.25. The synthesis passes 11/11 tie-out checks, including segment sum, share-count path, historical arithmetic, recency anchor, sensitivity math, and probability-weighted summary math. The explicit share path starts with 476.9 million diluted shares and ends at 447.9 million after buybacks and SBC issuance. This is the critical distinction: price is not the reason to pass. Governance and durability are.

Case	Revenue ($B)	OI ($B)	NI ($B)	EPS	EPS x 15	Cushion vs $18.37
Bear	4.464	0.804	0.626	1.40	20.94	14.0%
Base	5.843	1.402	1.074	2.40	35.97	95.9%
Bull	7.085	1.913	1.457	3.25	48.80	165.7%

The audited diagnostic score is more skeptical than the P/E 15 gate. Compounder Score is 58/100, Business Quality is 48/80, and 20% Return Underwriting is 10/20. The scoring audit agrees the P/E 15 math reconciles, but it says the base-case 15x exit IRR is only about 14.4%, with a 20% buy price around $14.46. The score-implied classification is Reject.

Red team - summary

The red team does not dispute that TTD is a real business or that P/E 15 clears. It attacks the assumption that this makes the stock a Gideon BUY. The strongest bear case is that TTD remains useful while economics migrate to inventory owners, data owners, CTV platforms, retail media networks, and AI control-point owners. The most fragile assumption is the 14.5% base revenue CAGR from TTM revenue of $2.969 billion to $5.843 billion by 2031-03-31, especially with latest quarterly revenue growth down to 12% and Q2 guidance implying roughly 8% growth versus Q2 2025. The most likely optimistic Stage 5 number is the 24.0% horizon GAAP operating margin, because it requires 370 bps of expansion while AI, CTV, privacy, and SBC costs stay heavy. The red-team exit signal is precise: two consecutive quarters with revenue growth below 10% and two-quarter trailing GAAP operating margin below 20%. That combination would break the base case.

Analyst flags

- Final ER2 verdict is PASS despite P/E 15 PASS because Management is FAIL and Moat/2046 are YELLOW.
- No product revenue was back-solved. CTV, retail media, Kokai/Koa, OpenPath, UID2/EUID/OpenPass, Ventura, OpenTTD, and OpenAds are treated as qualitative growth vectors, not separate dollar-modeled product lines.
- Product-level opacity is a major score cap: no product dollars, ARR, seats, customer count, NRR, take-rate history, or product margins are disclosed.
- The S reference file in the local skill source was truncated after visible tie-out check 9, so the synthesis used the visible checks and added transparent checks for sensitivity-table arithmetic and probability-weighted summary math to complete 11/11.
- No WhatsApp BUY alert should be sent because the final verdict is PASS, not BUY.

Appendix A - Company Primer

The Trade Desk (TTD) - Appendix A: Company Primer

Date: 2026-06-29 Subagent: A - Company Primer Primary quantitative source: `quant_foundation.md` in this workdir Output path: `C:\Users\Admin\OneDrive\GPT\ER 2.0\The Trade Desk\appendix_A_primer.md`

Stage 0 Anchor

- Today: 2026-06-29.
- Company fiscal year convention: fiscal year ends December 31.
- Most recently reported quarter: Q1 2026 ended 2026-03-31, based on The Trade Desk Q1 2026 Form 10-Q / earnings release filed/released May 2026.
- TTM anchor: Q2 2025 + Q3 2025 + Q4 2025 + Q1 2026 -> TTM ending 2026-03-31.
- Forward horizon: TTM + 5 calendar years = 2031-03-31. Compounding span: exactly five calendar years from 2026-03-31 to 2031-03-31.

Source Discipline

This primer uses the cleared quantitative foundation as the controlling source for financials. The foundation states that live FMP product segmentation returned empty annual and quarterly arrays, that The Trade Desk reports one operating segment and one reportable segment, and that the official segment is the advertising technology platform. Financial figures below therefore do not allocate revenue into connected TV, retail media, Kokai, UID2, data, international, or other product categories. Those are business drivers and strategic surfaces, not audited historical segments.

The qualitative orientation uses live A-specific pulls saved under `raw\A_TTD_*`: FMP profile and quote, the FY2025 Form 10-K, the Q1 2026 Form 10-Q, and the Q1 2026 earnings release exhibit. The QF and QFR files also preserve the official SEC URLs used for the 10-K, 10-Qs, and earnings-release 8-K. The data package was still in stub form when this primer was written, so it was not used as a substantive source.

1. Business Overview

The Trade Desk is an independent demand-side advertising technology platform. Its core customer is the buyer of advertising: large advertisers, advertising agencies, holding-company agencies, and service providers acting on behalf of advertisers. The company does not primarily own media inventory. It does not look like a publisher, a social network, a search engine, or a television network. It sits on the buy side of the digital advertising ecosystem and gives marketers software to plan, buy, optimize, and measure campaigns across the open internet.

For a non-specialist reader, the easiest way to frame the business is this: advertisers have budgets, audiences, creative assets, and campaign objectives. Media owners and digital publishers have advertising impressions to sell. The Trade Desk provides the software layer that lets buyers decide, in real time and at scale, which impressions to bid on, how much to pay, which audience data to use, how campaigns should be paced, and how performance should be measured. The company emphasizes self-service, cloud-based workflows. A large agency or brand team can log into the platform, design campaigns, choose inventory sources and data inputs, set objectives, monitor performance, and adjust spend.

The company is best understood as an open-internet alternative to walled gardens. In a walled garden, the platform controls consumer data, ad inventory, buying tools, reporting, and attribution inside a closed environment. The Trade Desk instead argues that buyers need transparent access across the fragmented open internet: connected TV, streaming video, display, audio, native, mobile, digital out-of-home, and other digital channels. Its value proposition is not "we have all the inventory." It is "we help the buyer choose among many inventory sources and data sets without being conflicted by also selling owned media."

The customer workflow begins with a media plan and budget. The buyer chooses campaign objectives, audience definitions, channels, geographies, frequency rules, and measurement criteria. The Trade Desk platform connects the buyer to supply-side partners, publishers, inventory sources, data providers, and measurement tools. The platform evaluates impressions and uses data signals to support bidding and optimization. Campaign reporting then feeds back into budget

allocation. The company also offers enterprise APIs, so sophisticated buyers can build custom interfaces and workflows on top of the platform rather than relying only on the standard user interface.

Revenue is generated from client usage of the platform. QF and the FY2025 10-K describe the revenue base as platform fee, value-added services, and data revenue. The company generally charges a platform fee based on a percentage of total platform spend, plus fees for value-added services and data that support campaigns. Accounting matters here: The Trade Desk generally reports revenue as an agent on a net basis, meaning revenue is not gross media spend. The company records the economic take rate after amounts paid to suppliers for advertising inventory, supplier-provided data, and related costs. This is why revenue can be much smaller than gross billings through the platform but still carry high gross margin.

The company was founded in 2009, went public in 2016, and is headquartered in Ventura, California. Its founder-led identity still matters because CEO and co-founder Jeff Green remains the strategic voice of the company. At the same time, the reader should not treat management continuity as the same thing as operational simplicity. The platform operates in a market that changes constantly: privacy rules, browser policies, streaming distribution, publisher monetization models, identity systems, agency procurement, and macro ad budgets all affect the durability of the model.

2. Revenue Architecture

The Trade Desk has one operating segment and one reportable segment: advertising technology platform. QF is explicit that FMP product segmentation returned zero rows for annual and quarterly product splits. QFR independently verified that the official filings disclose one operating/reportable segment and that downstream work should not invent historical CTV, retail media, Kokai, data, or UID2 revenue lines.

Period	Reportable segment	Revenue	Share of total	Source
FY2023	Advertising technology platform	$1,946.120m	100.0%	QF P1/P2
FY2024	Advertising technology platform	$2,444.831m	100.0%	QF P1/P2
FY2025	Advertising technology platform	$2,896.284m	100.0%	QF P1/P2
TTM ending 2026-03-31	Advertising technology platform	$2,969.120m	100.0%	QF P4

This single-segment presentation does not mean the business is monolithic at the product level. It means the company does not give investors audited product-line revenue that can be used as a historical fact base. The operating engine includes platform fees, data fees, and value-added services across multiple channels and use cases. A client may use the platform to buy CTV, video, display, audio, mobile, native, digital out-of-home, or social-related inventory depending on integrations and availability. A buyer may also use third-party data, first-party data, identity tools, or measurement products. But all of this rolls into the single advertising technology platform revenue line.

The revenue architecture has three important implications for modeling. First, the correct top-down starting point is consolidated net revenue, not gross media spend. A change in gross billings can translate into revenue at a different rate if product mix, service mix, data usage, or take rate changes. Second, product narratives can be directionally true without being segment evidence. Connected TV may be a growth driver, Kokai may improve workflow and performance, retail media may expand data availability, and UID2 may help identity and measurement, but none of those lines should be modeled as disclosed revenue segments unless a later official source introduces segment detail. Third, a one-segment company can still have multiple economic levers: pricing, spend share, client retention, inventory access, platform usage, data attach, international expansion, and operating leverage all work through the same reported segment.

Geographic detail is also less useful than a reader might expect for this appendix. The FY2025 10-K discusses international opportunity and identifies regions where the company is investing, including Europe and Asia, and the workforce is distributed across 21 countries. However, the cleared QF did not provide a reconciled geographic revenue split, and this primer avoids inserting unaudited geography numbers into the financial architecture. The correct qualitative point is that The Trade Desk is global in ambition and operations, while the official model base remains the consolidated platform segment.

3. Unit Economics

The Trade Desk's unit economics begin with a structurally attractive revenue line. Because the company is a software and data platform that generally recognizes net revenue, a dollar of reported revenue is not burdened by the full cost of media inventory. The largest cash movement in the ecosystem is the advertiser's media spend, but The Trade Desk's reported revenue is closer to the platform's net monetization of that spend. That is a major reason the company can show high gross profit margins relative to many advertising or media businesses.

QF shows the annual unit-economic progression. FY2025 revenue was $2.896 billion, cost of revenue was $619 million, gross profit was $2.277 billion, operating income was $589 million, and net income was $443 million. That implies a 78.6% gross margin and a 20.3% operating margin for FY2025. On the TTM ending 2026-03-31, revenue was $2.969 billion, cost of revenue was $658 million, gross profit was $2.311 billion, operating income was $602 million, and net income was $433 million. TTM gross margin was roughly 77.8%, and TTM operating margin was roughly 20.3%.

The first cost layer is platform operations, which includes costs to operate the technology platform and support campaign execution. The company needs hosting infrastructure, data-processing capacity, technical operations, and client support. This is not a zero-cost software model. The 10-K notes that the platform is complex and self-service, which makes training and support important. As usage scales, platform operations expense should benefit from scale in some areas, but the company also keeps adding functionality, suppliers, data integrations, and AI-driven features. This means operating leverage is real but must be earned, not assumed mechanically.

The second cost layer is sales and marketing. The customer is often an agency or large brand team, and relationships matter. The platform sale is not a simple self-serve checkout motion for small businesses. Agencies need training, support, education, procurement comfort, and proof that campaigns deliver measurable outcomes. The company also needs to maintain relationships across agency holding companies, independent agencies, brands, publishers, and ecosystem partners. Two holding companies would each have represented more than 10% of 2025 gross billings if individual client relationships were aggregated at the holding-company level, so customer concentration is better understood at the holding-company ecosystem level than at the individual-contract level.

The third cost layer is technology and development. The business has to keep shipping. The company describes rapid innovation as core and points to a product roadmap tied to client needs. Kokai, the recent major platform upgrade, is the clearest example. The platform must keep up with AI-assisted buying, identity changes, CTV inventory, retail-media data, measurement needs, and supply-chain transparency. The expense is defensive and offensive at the same time: defensive because ad tech can become obsolete quickly, offensive because better decisioning and workflow can increase customer spend and stickiness.

The fourth layer is general and administrative, including public-company costs, legal, finance, compliance, and risk management. G&A is particularly relevant for The Trade Desk because privacy, data-use, securities, and platform-related litigation risk are not peripheral. The 10-K and Q1 2026 10-Q include privacy and platform litigation disclosure. Even if the company believes claims are meritless, the business model touches regulated data flows and therefore carries recurring compliance burden.

Cash conversion is a major strength. QF shows TTM cash from operations of $1.093 billion, SEC PP&E capex of $251 million, and FCF after PP&E of $842 million. That is 194.7% of TTM net income. Including capitalized software, TTM FCF is $829 million, or 191.7% of TTM net income. This reflects the working-capital and non-cash-expense profile of the business, including stock-based compensation. The reader should not equate high cash conversion with low dilution risk, however. QF shows TTM stock-based compensation of $471 million and share repurchases of $1.158 billion. Repurchases help offset dilution, but they are also a material use of cash.

4. Customer and Buyer Workflow

The Trade Desk's buyer is usually not a lone marketer buying a banner ad. It is often an agency team or enterprise advertiser managing budgets across many media channels and goals. The client needs to answer several questions at once: which audiences matter, which channels are available, what inventory is high quality, how much to bid, how to avoid waste, how to manage frequency, how to measure outcomes, and how to report performance back to the brand.

The workflow starts before a bid happens. A buyer brings campaign objectives, budget, creative, targeting rules, first-party data where available, and measurement goals. The platform lets that buyer design and manage a campaign across formats and devices. The buyer can choose supply paths and data inputs, use platform tools to optimize spend, and measure delivery. The value proposition is strongest when the buyer has enough budget, data, and complexity to care about optimization. A simple, direct publisher buy may not need a sophisticated demand-side platform. A large campaign across CTV, display, audio, and mobile, with multiple data sources and a performance objective, is closer to the sweet spot.

Agencies are central because they control or influence large pools of advertiser spend. The Trade Desk enters into master service agreements with agencies, advertisers, and other service providers. The platform has to win at two levels: the agency holding-company relationship and the local branch or account team that actually makes buying decisions. This structure creates both opportunity and risk. If an agency standardizes on The Trade Desk as a preferred platform, spend can scale

across many brands. If an agency shifts budgets to a rival, direct publisher tools, a walled garden, or internal technology, the impact can be broad.

The company positions itself as aligned with buyers. That matters in ad tech because some platforms serve both buyers and sellers, own inventory, or have incentives to favor their own media properties. The Trade Desk's argument is that independence allows it to help buyers make objective, data-driven media decisions. The strength of that claim depends on continued access to high-quality supply, data, and measurement in an ecosystem where publishers, streaming services, operating systems, browsers, and identity providers all have their own incentives.

5. Competitive Landscape

The competitive set is broader than "other demand-side platforms." The Trade Desk competes against independent DSPs, agency trading desks, in-house advertiser technology, publisher-direct sales, supply-side platform extensions, retail-media networks, social platforms, search platforms, streaming platform ad stacks, and other walled gardens. In some situations the choice is not "The Trade Desk versus another DSP." It is "open internet programmatic budget versus Google, Meta, Amazon, TikTok, Netflix, Disney, YouTube, retail media, or direct publisher deals."

The company's strongest competitive argument is independence on the buy side. It does not own a dominant consumer property whose inventory it must monetize. It can therefore present itself as a neutral optimizer for advertisers. That positioning is valuable when advertisers distrust closed measurement, opaque auctions, or platforms that both mark homework and sell inventory. The Trade Desk also benefits from scale. More integrations, data partnerships, buyer usage, and platform history can improve workflow depth and campaign decisioning.

The hard counterargument is that walled gardens have privileged data and inventory. Search platforms know intent. Social networks know identity and engagement. Retail media networks know purchase behavior. Streaming platforms and device operating systems may control scarce premium video inventory and viewer relationships. The Trade Desk has to stitch together the open internet and make it perform well enough to keep budget flowing outside closed platforms. Its product investments in Kokai, identity, measurement, supply-chain transparency, CTV, and APIs are all responses to that structural challenge.

Another competitive fault line is artificial intelligence. AI can help The Trade Desk's platform make better bidding, budgeting, measurement, and workflow decisions. Kokai is framed as a major platform upgrade that uses data and AI more deeply in media buying. But AI also lowers some software-building barriers and gives large platforms new optimization tools. The question is not whether The Trade Desk uses AI. It does. The question is whether AI increases the value of a neutral, scaled, open-internet DSP more than it increases the power of closed platforms and large publishers.

6. Growth Vectors

Connected TV is the most visible growth vector. The shift from linear television to streaming creates more ad inventory that can be bought with data, software, and measurement. The Trade Desk's 10-K describes a generational shift from linear TV to CTV as internet and television programming converge. CTV matters because television budgets are large, historically under-targeted, and moving toward ad-supported streaming. If The Trade Desk can help buyers reach premium CTV inventory with better decisioning and measurement, it can capture share as budgets move.

Kokai is the product-platform growth vector. It is a major upgrade rather than a separate segment. Its importance is in workflow, data integration, AI assistance, and campaign performance. If Kokai makes buyers more productive, improves optimization, and helps first-party data activation, it can increase retention and wallet share. If adoption is slower, confusing, or hard to prove, the product cycle could weigh on growth or sales efficiency. The Q1 2026 earnings release credits strategic upgrades with contributing to outperformance, but the model should still require evidence of sustained spend growth rather than assume platform upgrades automatically monetize.

Identity is another growth vector and risk reducer. Unified ID 2.0 and EUID are designed to provide pseudonymous advertising identifiers without directly identifying individuals. The strategic goal is to preserve addressability and measurement as third-party cookies and mobile identifiers become less reliable or more regulated. This is not a guaranteed replacement for every legacy signal. It requires adoption by publishers, advertisers, data providers, and other ecosystem participants, and it must operate within privacy guardrails.

Retail media and first-party data are adjacent opportunities. Retailers and brands have valuable purchase and customer data. Advertisers increasingly want to use first-party data to improve targeting and measurement without relying on legacy third-party identifiers. The Trade Desk can be a buyer-facing activation layer if it integrates enough data partnerships and

measurement workflows. The risk is that retail media networks may prefer to keep more value inside their own systems.

International expansion can add runway. The 10-K discusses investment in markets outside the United States, including parts of Europe and Asia. Programmatic penetration, CTV adoption, privacy regulation, agency structure, and publisher economics vary widely by country. International growth is therefore not a simple copy-paste of the U.S. playbook, but it can extend the market opportunity if The Trade Desk can localize supply, data, identity, and client support.

7. Cyclicality, Privacy, Platform, and Execution Risks

Advertising is cyclical. Even if programmatic takes share, advertiser budgets can slow in recessions, tariff shocks, inflationary periods, or moments of broad uncertainty. The Q1 2026 release specifically notes macro headwinds while reporting 12% year-over-year revenue growth. The Trade Desk may outgrow the market, but it does not escape the market. Brand budgets, agency spending decisions, and performance-marketing discipline can all tighten quickly.

Seasonality also matters. Advertising spend tends to be heavier in the second half, especially around holidays and major events. The QF TTM construction avoids this by using four quarters, but modelers should not annualize Q1 revenue blindly. Q1 2026 revenue of $688.857 million was lower than Q4 2025 revenue of $846.791 million, which is consistent with seasonal patterns.

Privacy and identifier risk is structural. The company and its clients use pseudonymous data to manage and execute campaigns. The 10-K warns that privacy and data-protection laws can increase costs, trigger investigations or litigation, reduce demand, or force changes to the platform or business model. It also warns that third parties control access to identifiers and that restrictions on third-party cookies or similar technologies could harm performance. UID2, EUID, clean rooms, first-party data, contextual signals, and CTV identifiers may help, but none eliminates regulatory and platform dependency.

Platform dependency is broader than cookies. Browsers, mobile operating systems, app stores, streaming platforms, TV operating systems, publishers, supply-side platforms, data providers, and large agencies can all change rules or incentives. The Trade Desk needs continued access to inventory and signals it does not own. That is the central strategic tension in an open-internet DSP.

Execution risk is also material. The company must keep training clients, adding supply and data integrations, refreshing platform features, and supporting complex workflows. The 10-K notes that self-service complexity makes client training and support important. This creates an internal scaling challenge: the company needs enough expert support to drive usage while preserving software-like margins.

There is also governance and financial-signaling risk around stock-based compensation and repurchases. QF shows strong cash generation, but SBC is large and repurchases are a major use of cash. A reader should separate economic cash flow before dilution from per-share value creation after dilution and buybacks.

8. Balance Sheet and Cash Conversion

The balance sheet is a strength. At 2026-03-31, QF shows cash and cash equivalents of $878.377 million and short-term investments of $527.538 million, for $1.406 billion of cash plus short-term investments. Funded debt outstanding was zero. Operating lease liabilities were $423.575 million, and QF notes that FMP's totalDebt field maps to lease liabilities rather than funded debt. The company also had $445 million of revolver availability at quarter end after letters of credit.

The working-capital profile is unusual because the company sits inside media payments. Accounts receivable and accounts payable can be very large relative to reported revenue because the company collects from clients and pays suppliers in the advertising ecosystem. That can make cash flow volatile by quarter. The right longer-term question is whether operating cash flow remains strong across cycles and whether credit losses, agency payment timing, or supplier payment terms change the cash-conversion profile.

Cash conversion is currently excellent. TTM FCF after SEC PP&E capex was $842.454 million, versus TTM net income of $432.623 million. Including capitalized software, FCF was $829.333 million. The company is not capital intensive in the way a media owner, network operator, or manufacturing business is capital intensive. However, it is infrastructure and talent intensive. Cloud commitments, data-processing requirements, engineering spend, client support, and compliance costs are real economic costs even if PP&E capex looks manageable.

Capital allocation has been focused on repurchases, especially to offset employee equity dilution. Q1 2026 10-Q disclosure shows repurchases under an authorization that can be expanded and used depending on market conditions and corporate

needs. The ER2 model should not treat repurchases as automatically accretive. They reduce share count when prices are attractive and can offset dilution, but they consume cash that might otherwise build strategic flexibility.

9. What To Understand Before The Segment and Model Appendices

The first thing to understand is that there is only one modeled segment unless later official disclosure changes. The segment appendix should not split historical revenue into CTV, display, retail media, international, UID2, or Kokai. Those should enter as drivers of the single advertising technology platform segment.

The second thing is that reported revenue is net economics, not gross media spend. A model that confuses gross platform spend with revenue will overstate scale and distort margins. A model that ignores gross-billings sensitivity may miss take-rate pressure or mix change. The right approach is to model reported revenue growth and margin directly, while discussing spend, take rate, data attach, and product mix as supporting drivers.

The third thing is that The Trade Desk is a high-quality business but not a low-risk utility. It has high gross margins, strong cash conversion, no funded debt, and a large open-internet opportunity. It also depends on privacy rules, identifiers, publisher and platform access, agency relationships, and continued technical execution. The bear case is not usually near-term insolvency. It is durability: whether a buy-side open-internet platform can keep compounding as walled gardens, retail media, CTV owners, browsers, regulators, and AI-driven tools reshape the ecosystem.

The fourth thing is that margin quality must be read with SBC and repurchases in mind. TTM free cash flow is strong, but stock-based compensation is large, and buybacks are partly defensive against dilution. Per-share compounding depends on revenue growth, durable margins, and capital allocation discipline.

The fifth thing is that the forward horizon is exactly five calendar years from the TTM anchor: 2026-03-31 to 2031-03-31. Any "FY+5" valuation work must use that horizon discipline. The segment and synthesis appendices should build from TTM revenue of $2.969 billion, TTM operating income of $602 million, TTM net income of $433 million, and the single official segment. Product narratives can justify assumptions, but they cannot substitute for disclosed segment history.

Key Primer Takeaways

- The Trade Desk is an independent buy-side ad-tech platform for advertisers, agencies, and related service providers, not a media owner.
- Official disclosure supports one reportable segment: advertising technology platform.
- FY2025 revenue was $2.896 billion; TTM revenue ending 2026-03-31 was $2.969 billion.
- TTM operating income was $602 million and TTM net income was $433 million.
- TTM FCF after SEC PP&E capex was $842 million, equal to 194.7% of TTM net income.
- Product themes like CTV, Kokai, UID2, retail media, data, and international are growth drivers, not audited historical revenue segments.
- The central moat question is whether neutral buy-side optimization across the open internet remains valuable versus walled gardens and direct publisher ecosystems.
- The central risk complex is privacy, identifier access, platform dependency, and macro ad-budget cyclicality.

Appendix M - Management Assessment

The Trade Desk - Management Assessment

Date: 2026-06-29 Company: The Trade Desk Ticker: TTD Stage 0 anchor: FY ends December 31; latest reported quarter is Q1 2026 ended 2026-03-31; TTM ends 2026-03-31; forward horizon is 2031-03-31.

Source log

This appendix uses the live SEC proxy statement filed April 2026, the live FY2025 Form 10-K, live FMP transcript pulls for the last eight reported calls from Q2 2024 through Q1 2026, the live company press-page source on Jeff Green's March 2026 open-market purchase, and the ER2 data package Sections 7 and 9 for capital allocation and recent corporate actions. Raw files are saved under `C:\Users\Admin\OneDrive\GPT\ER 2.0\The Trade Desk\raw\` with the `M_TTD_` prefix. The IR Q1 2026 web page was blocked by a Cloudflare challenge in direct fetch, so the analysis relies on the live SEC 8-K release already fetched by the data package and the live FMP call transcript for that quarter rather than any local data warehouse cache.

1. Who is running the company

The Trade Desk is still primarily a founder-led company. Jeff T. Green is co-founder, chairman, president, and chief executive officer. He has led the business since its 2009 formation and owns the core strategic architecture: independent buy-side DSP positioning, the long-running open-internet thesis, CTV and retail media expansion, UID2, OpenPath, Kokai, Koa, and the AI/agentic roadmap now being presented as the next growth layer. This is not a hired-manager situation where a new CEO is inheriting a mature asset. The current product and cultural identity of TTD are Jeff Green's strategy.

The CFO position is the weakest part of current leadership continuity. Laura Schenkein was CFO through a long operating period, but 2025 brought a short-lived transition to Alex Kayyal, who was announced as CFO effective 2025-08-21 after joining the board in February 2025. The FY2025 10-K states that Kayyal's CFO employment was terminated effective 2026-01-24, that the company began an external search for a permanent CFO, and that Tahnil Davis, EVP and Chief Accounting Officer, became interim CFO and principal accounting officer. That is an abrupt transition for a company asking investors to underwrite long-horizon capital allocation, margins, and buybacks. Davis may be highly capable, and the 10-K control certifications remained clean, but the management gate cannot ignore a CFO tenure measured in months.

The broader management bench has depth but also churn. Samantha Jacobson is Chief Strategy Officer and a director, Jay Grant remains Chief Legal Officer, Vivek Kundra joined as Chief Operating Officer in 2025, Anders Mortensen was announced as Chief Revenue Officer in November 2025, and Omar Tawakol and Drew Vollero joined the board in 2025-2026. Those additions bring operating, data, and finance experience, but they also mean investors are looking at a recently rearranged leadership/board architecture around a dominant founder.

Board oversight is mixed. The proxy says the board has Class I, II, and III directors, with Jeff Green and Andrea Cunningham nominated as Class I directors in 2026. Andrea Cunningham is the Class A director. Samantha Jacobson is both a senior executive and director. Omar Tawakol and Andrew Vollero are recent outside additions, with Vollero currently chairing and serving as the sole audit committee member; the proxy says the board intends to fill audit committee vacancies expeditiously. A single-member audit committee can be permitted temporarily, but for Gideon governance scoring it is not a clean setup when paired with founder control, recent CFO turnover, and several director resignations in March-April 2026.

2. Tenure and track record

Green's record as an operator is genuinely strong. Revenue increased from $1.196 billion in FY2021 to $2.896 billion in FY2025, according to the data package and SEC/FMP financial pulls. TTM revenue reached $2.969 billion for Q2 2025 through Q1 2026. The company remained profitable throughout a period when many adtech peers either failed to scale profitably or sold to larger platforms. TTD also preserved net cash on a funded-debt basis, with no funded debt at Q1 2026. This is high-quality operating evidence.

The first major strategic decision Green owns is the decision to remain an independent buy-side platform rather than own media inventory. On the Q1 2026 call, he answered a direct question about moving into supply-side services by saying TTD would not create a conflict between advertisers seeking low CPMs and publishers seeking high CPMs. That answer is strategically coherent and directly tied to TTD's differentiation. It is one of the better pieces of management evidence in the file

because it rejects an adjacent revenue opportunity to preserve trust.

The second major decision is reinvesting in platform capability while staying profitable. The data package shows R&D rising from $0.226 billion in FY2021 to $0.525 billion in FY2025, while R&D/revenue stayed in a roughly high-teens to low-20s band. Management has framed Kokai, Koa, UID2, OpenPath, retail media, CTV, and AI not as independent revenue lines but as a platform compounding system. The transcript pattern supports that: management repeatedly points to adoption, advertiser outcomes, supply-chain transparency, and decisioning quality rather than pretending each initiative is separately modelable. That is a positive sign of strategic discipline.

The third major decision is shareholder return through repurchases. The data package shows no dividends and negligible M&A, with buybacks moving from zero in FY2021-FY2022 to $0.647 billion in FY2023, $0.235 billion in FY2024, and $1.380 billion in FY2025. Q1 2026 added $0.164 billion of repurchases, and the FY2025 10-K states that the board added $350 million of authorization in February 2026, bringing future authorization to $500 million. Diluted shares declined from about 501.9 million in FY2024 to 493.6 million in FY2025 and 476.9 million in Q1 2026. That is per-share protection in the latest period, not just rhetoric.

The main decision that did not work cleanly is the executive/board transition around the finance function. Kayyal moved from board member to CFO in August 2025 and was out by January 2026. The company did not disclose a long public explanation in the reviewed sources, and the severance/relocation terms in the proxy add cost to a short tenure. That is not fatal by itself, but it reduces confidence in governance process and succession planning.

3. Capital allocation behavior

Capital allocation is mostly internally focused. Over the last five fiscal years, capex was modest relative to revenue: $0.060 billion in FY2021, $0.092 billion in FY2022, $0.055 billion in FY2023, $0.107 billion in FY2024, and $0.197 billion in FY2025. R&D was much larger and strategically central: $0.226 billion, $0.320 billion, $0.412 billion, $0.463 billion, and $0.525 billion across FY2021-FY2025. This matches the company's stated model: build a cloud/software platform, improve measurement and decisioning, and use data and integrations to make the open internet more investable for brands.

M&A is not the growth story. The data package identifies no material latest-period acquisition or divestiture and records only a $4.35 million acquisition cash outflow in FY2025/Q1 2025. That is a positive governance marker because it reduces the risk that management is covering organic deceleration with serial deals. For a business with a premium valuation and a high SBC load, avoiding large speculative M&A is preferable.

Buyback discipline is mixed but recently constructive. The large FY2025 repurchase amount and declining diluted share count show management is using cash to offset equity issuance and create some net share reduction. However, the company is still buying back shares while paying substantial stock-based compensation. SBC was $490.6 million in FY2025, nearly flat with $494.7 million in FY2024, and it represented roughly 16.9% of FY2025 revenue. That is too high to treat the buyback as pure return of excess capital. Part of the repurchase program is an offset mechanism for employee and executive equity issuance. The per-share result improved in 2025, but the quality of the buyback is not the same as a low-dilution compounder repurchasing undervalued shares.

The strongest ownership-alignment signal is Green's March 2026 open-market purchase. The company press-page source states that he purchased roughly $148 million of stock between March 2 and March 4, 2026 at approximately $23-$25 per share. That is unusually strong insider alignment and deserves real credit. But it does not neutralize the control structure. Minority shareholders benefit from Green believing in the stock, but they still do not have ordinary voting recourse if strategy, compensation, reincorporation, or governance decisions diverge from their interests.

4. Compensation alignment

The compensation program has several shareholder-friendly features: stock ownership guidelines, no option repricing without stockholder approval, no hedging or pledging, a clawback policy, and substantial equity-based pay. The company also says equity grants are scheduled and not timed around material nonpublic information. Those are positives.

The metric design is not good enough for a Gideon PASS. The 2025 annual cash incentive is tied heavily to revenue, and the pay-versus-performance disclosure identifies Adjusted EBITDA, relative peer TSR, revenue, and TSR as the important measures linking pay and company performance. There is no clear ROIC, free cash flow per share, dilution-adjusted EPS, or SBC-adjusted per-share value metric at the center of the plan. The CEO's compensation is very large: the proxy reports 2025 total compensation of $27.4 million, including about $11.6 million of stock awards, $11.6 million of option awards, and $2.8 million of non-equity incentive compensation. The board also approved a $30 million target equity amount for Green in April

2025, split between restricted shares and options.

The older 2021 CEO Performance Option remains an important alignment and governance issue. It is tied to stock-price achievements and relative peer TSR, and the 10-K shows stock-based compensation expense of $67 million, $128 million, and $198 million for that award in FY2025, FY2024, and FY2023. Stock price alignment can be powerful, but when combined with Class B voting control, revenue-heavy annual incentives, and large SBC, it tilts the plan toward market-value and scale optics rather than owner earnings per share.

For rank-and-file and executive retention, equity compensation is an understandable part of the model. But "understandable" is not the same as "disciplined." The FY2025 10-K discloses restricted stock SBC of $316 million and ESPP expense of $38 million, with total SBC of $490.6 million. That recurring expense is large relative to revenue and net income. The company explicitly warns in the proxy's adjusted EBITDA discussion that adjusted EBITDA excludes the potentially dilutive impact of SBC, which will continue and is a key part of compensation. This is exactly the adjustment Gideon should resist over-weighting.

5. Disclosure quality and candor

The last eight transcripts show a management team that is articulate and unusually willing to explain strategy. Green's answers are long, detailed, and mostly coherent. He directly names platform architecture, open-internet measurement, CTV, retail media, UID2, OpenPath, Kokai, Koa, agentic AI, agency relationships, and walled garden competition. He does not pretend the business is a simple linear ad spend index. The Q1 2026 call was especially useful because analysts pressed on Q2 deceleration, agency-related weakness, margin discipline, and whether TTD should move into supply-side services. Management answered those questions rather than refusing to engage.

The call record also has weaknesses. Green often answers with broad market narratives and many anecdotes before landing on the specific financial point. That can be useful for strategic context, but it is less useful when the load-bearing question is near-term deceleration. In Q1 2026, management acknowledged macro pressure, CPG/auto softness, tariff/geopolitical uncertainty, and a below-industry growth guide, but the answer still relied heavily on structural confidence and the long-term open-internet thesis. That is not evasive enough to fail candor by itself, but it means investors must separate strategic conviction from quarterly proof.

Guidance discipline appears adequate, not exceptional. The Q1 2026 call guided Q2 revenue to at least $750 million and full-year adjusted EBITDA margin to at least 40%. The Q4 2025 call framed Q1 guidance as prudent and highlighted lower visibility. The data package shows Q1 2026 revenue growth slowed to 12% from 19% in Q2 2025, so the company is now in a period where guidance credibility matters more. Management's language is candid enough to call out macro and category weakness, but it does not provide granular segment-level revenue or product economics. Because TTD reports one segment and many growth vectors are described qualitatively, disclosure remains less modelable than the strategic narrative implies.

Voluntary disclosure is moderate. TTD gives gross spend context, customer retention above 95%, Kokai adoption commentary, JBP count/growth commentary, and qualitative channel commentary. It does not disclose revenue by CTV, retail media, Kokai, UID2, OpenPath, or geography at a level that allows independent product-level underwriting. That is acceptable for GAAP reporting but below ideal for a high-multiple company asking investors to believe several product vectors are compounding simultaneously.

6. Strategic coherence

Strategic coherence is the best part of this management assessment. The 10-K describes a self-service, cloud-based, omnichannel technology platform for ad buyers, with AI capabilities, inventory/publisher/data partner integrations, and enterprise APIs. The transcript record is consistent with that description. The company says it is objective, independent, buy-side focused, and designed to help advertisers evaluate supply across the open internet without owning media. Management's refusal to become a full supply-side yield manager is a credible example of strategy shaping capital allocation.

The investment pattern supports the strategy. R&D spending has increased materially. Capex and platform infrastructure commitments have also risen as AI, data, and hosting needs grow. The 10-K notes $92 million of noncancelable cloud/data commitments entered in January 2026. Management's Q1 2026 comments that 2026 is a year of disciplined reinvestment are consistent with these commitments and the full-year adjusted EBITDA margin target.

The strategic risk is not incoherence. The risk is founder overconfidence under a protected voting structure. Green has a strong, internally consistent thesis about the open internet, AI, and the eventual opening of walled gardens. But if the market evolves differently, minority shareholders have limited governance leverage. A founder with a long correct record can still be

wrong about a new platform transition, and dual-class control makes that harder to discipline.

7. Governance flags

This is where the gate breaks. TTD has a dual-class structure. Class A has one vote per share; Class B has ten votes per share. The FY2025 10-K states that Class B converts into Class A on transfer subject to exceptions and automatically converts on December 22, 2035 unless converted earlier. The 2026 proxy shows Green beneficially owning 42.1 million Class B shares, or 97.6% of Class B, plus 11.5 million Class A shares, for 49.7% total voting power as of March 6, 2026. Current directors and executive officers as a group had 49.8% voting power. That is de facto founder control.

The recent history makes the control issue more serious. The 10-K discloses litigation related to the company's reincorporation from Delaware to Nevada, including allegations that the transaction was procedurally and substantively unfair and not subject to a special committee or majority-of-disinterested approval. The company also discloses books-and-records litigation relating to the Nevada conversion and dual-class capital structure. Management believes it can defend these matters, and none of this proves wrongdoing. But for a management gate, the relevant question is not whether the company will lose litigation. The question is whether minority-shareholder protections are strong enough for a 20-year compounder. Here they are not.

Related-party items are not catastrophic but are not pristine. The proxy discloses about $1.0 million reimbursed to Green for legal expenses in litigation matters where he was named as defendant in his CEO capacity. It also discloses limited personal use of aircraft under a policy overseen by the compensation committee, with Green reimbursing approximately $628,000 of incremental personal-flight costs. These are manageable but add texture: founder control, company-managed aircraft use, legal expense reimbursement, and recent governance litigation are not the profile of a clean minority-shareholder governance setup.

On controls, the FY2025 10-K is clean. Disclosure controls and internal control over financial reporting were effective at December 31, 2025, PwC audited ICFR, and there were no significant changes in internal control during Q4 2025. Section 16 reports were represented as timely filed during the last fiscal year. There is no identified SEC enforcement action, restatement, or material weakness in the reviewed sources.

Insider selling is not the main issue. The most notable latest insider action was Green's large open-market purchase. The problem is not lack of skin in the game. The problem is that his voting rights give him control economics beyond ordinary ownership.

8. Peer comparison

Against The Trade Desk's realistic peer set, Green ranks very high on operating quality and strategic clarity. Compared with adtech peers such as Magnite, PubMatic, and other scaled independent advertising technology companies, TTD's profitability, revenue scale, customer retention, and net-cash posture are superior. TTD has built a much more valuable and durable franchise than most of the independent adtech cohort.

Against larger digital advertising platforms such as Alphabet, Meta, Amazon Advertising, and Netflix's emerging ad business, TTD is smaller but more conflict-free. Green communicates the open-internet strategy more directly than most platform executives communicate adtech mechanics. On product strategy and industry architecture, he is one of the stronger public-company CEOs in advertising technology.

On governance and per-share discipline, TTD ranks worse than the best large-cap alternatives. Alphabet and Meta also have founder/control issues, so TTD is not unique, but Gideon should not normalize weak governance just because the internet sector often tolerates it. Compared with high-quality software compounders that have one-share/one-vote governance, lower SBC intensity, and mature CFO continuity, TTD is materially weaker. The combination of 49.7% founder voting power, Class B voting rights through 2035, high SBC, and CFO churn keeps this from a PASS.

9. Verdict on the management gate

Management gate: FAIL.

This is a deliberately strict call. Jeff Green is an exceptional founder-operator, and the company shows real evidence of strategic coherence, organic reinvestment, balance-sheet conservatism, customer retention, and recent per-share reduction through buybacks. If this assessment looked only at operating execution, the grade would be PASS.

But the ER2 management gate is not an operator admiration exercise. It asks whether minority shareholders can trust the team to allocate capital, communicate candidly, and protect per-share value for a decade-plus. TTD fails that standard because founder control is material and long-dated, the dual-class structure runs to 2035, recent governance litigation centers on reincorporation/control issues, the audit committee is temporarily thin, CFO continuity broke in 2025-2026, compensation leans heavily on revenue/TSR/stock-price metrics rather than ROIC or FCF per share, and SBC remains chronically high. Recent buybacks and Green's open-market purchase are meaningful positives, but they do not cure the voting-rights and dilution problems.

The specific signal that could upgrade this from FAIL to YELLOW or PASS would be a board-approved governance reset: earlier Class B sunset or one-share/one-vote transition, a stable permanent CFO with at least several clean reporting cycles, compensation redesigned around FCF per share/ROIC/dilution-adjusted EPS, and sustained net share reduction after SBC. Without those changes, the final ER2 equity verdict should treat management as a hard gate failure regardless of valuation.

Appendix W - Moat and 2046 Durability

The Trade Desk - Moat and 2046 Durability

Date: 2026-06-29 Ticker: TTD Company: The Trade Desk Subagent: W - Moat and 2046 Durability Output path: C:\Users\Admin\OneDrive\GPT\ER 2.0\The Trade Desk\appendix_moat.md

Source discipline and limitation

This appendix uses the Stage 0 anchor supplied by the orchestrator: today is 2026-06-29, The Trade Desk's fiscal year ends December 31, the latest reported quarter is Q1 2026 ended 2026-03-31, TTM ends 2026-03-31, the forward modeling horizon is 2031-03-31, and the 2046 test date is 2046-06-29. The company has one official segment: advertising technology platform. I read the data package and primer first. The segment appendix at `C:\Users\Admin\OneDrive\GPT\ER 2.0\The Trade Desk\appendix_B_advertising_technology_platform.md` became available before final return, so this final version incorporates its competitive dynamics, segment-level moat, and base/bull/bear durability framing. Segment B confirms the same control point used here: CTV, retail media, Kokai/Koa, OpenPath, UID2/EUID/OpenPass, Ventura, OpenTTD, and OpenAds are strategic capabilities and growth vectors, not dollar-disclosed product segments.

Live source checks used for this W pass include: FMP annual and quarterly income statements saved under `raw\W_TTD_fmp_income_statement_annual_live.json` and `raw\W_TTD_fmp_income_statement_quarter_live.json`; The Trade Desk FY2025 Form 10-K at https://www.sec.gov/Archives/edgar/data/1671933/000167193326000014/ttd-20251231.htm; The Trade Desk Q1 2026 Form 10-Q at https://www.sec.gov/Archives/edgar/data/1671933/000167193326000054/ttd-20260331.htm; the Q1 2026 earnings release at https://investors.thetradedesk.com/news-and-events/news/news-details/2026/The-Trade-Desk-Reports-First-Quarter-2026-Financial-Results/default.aspx; the Q4/FY2025 release at https://investors.thetradedesk.com/news-and-events/news/news-details/2026/The-Trade-Desk-Reports-Fourth-Quarter-and-Fiscal-Year-2025-Financial-Results/default.aspx; The Trade Desk OpenPath resource at https://www.thetradedesk.com/resources/what-is-openpath; and The Trade Desk UID2 resource at https://www.thetradedesk.com/unified-id-solution-2-0.

1. Moat taxonomy applied

Network effects: The Trade Desk has a real but indirect network effect. The platform becomes more valuable to buyers as it integrates more inventory, data vendors, measurement partners, publisher connections, and identity signals; it becomes more valuable to publishers and data providers as more buyer demand flows through the platform. The FY2025 Form 10-K says the company obtains inventory from over 430 directly integrated ad exchanges, publishers, and supply-side platforms and has more than 370 third-party data vendors integrated into the platform. That is not the same as a consumer social-network effect, because advertisers can multi-home and publishers can connect through multiple paths. It is a marketplace workflow network effect: scale improves data breadth, supply breadth, decisioning, and operating familiarity, but it does not make switching impossible.

Switching costs: The strongest moat evidence is customer persistence rather than contractual lock-in. The data package and 10-K show customer retention above 95% for over a decade. The company says substantially all revenue comes from ongoing master service agreements rather than episodic insertion orders, and that clients typically use MSAs with automatic annual renewals. The catch is material: those MSAs generally do not contain material spend commitments and are terminable on 60 days' notice. The lock-in is operational and organizational rather than legal. Agencies and advertisers build workflows, training, data connections, reporting, campaign history, APIs, and client-service routines around the platform. Those switching costs are meaningful for complex omnichannel campaigns, but weaker than enterprise software contracts with multi-year minimums or mission-critical system-of-record data.

Scale economies: This is a real source of advantage. The Trade Desk monetized $13.4 billion of gross spend in 2025 and reported $2.896 billion of net revenue. Platform operations, data infrastructure, AI/model training, publisher integrations, compliance, and client service all require fixed and semi-fixed investment. A small DSP can copy screens and bidding language; it cannot easily replicate the query volume, CTV relationships, data-vendor breadth, agency mindshare, and operating dataset that come from large open-internet demand. Scale also gives TTD relevance to publishers: the company can credibly promise access to a large source of buy-side demand.

Brand and trust: The Trade Desk has a brand within programmatic advertising, but this is a high-trust procurement moat rather than a consumer brand moat. Its brand promise is buyer alignment: it does not own major media inventory and can

position itself as objective, transparent, and focused on the buy side. That matters because the direct competitors include Google and Amazon, and the budget alternatives include walled gardens that own inventory, data, and measurement. The trust moat is valuable when advertisers want a neutral optimizer, but it can be damaged if customers believe fees, auction mechanics, measurement, or supply paths are opaque.

Regulatory moat: No durable regulatory moat exists. Privacy regulation and platform policy changes are more often threats than protection. UID2, EUID, clean-room workflows, and consented first-party identity tools may help TTD adapt, but these are not regulatory licenses that exclude rivals. The company must keep proving that its identity and data practices satisfy regulators, publishers, advertisers, and consumers.

IP and patents: IP is not the core moat. The 10-K states that the company relies on copyright, trade secrets, proprietary architecture, and private engineering roadmaps, and generally has not patented much of its technology. Kokai, Koa, AI models, bidding infrastructure, and decisioning tools are important, but software features can be competed against. The defensibility comes when the technology is coupled with scale, data, workflow, integrations, and buyer trust.

High-trust procurement: This is a meaningful moat. Major advertisers and agencies do not move billions of dollars of media budgets through untested infrastructure. TTD has spent years embedding itself in agency and advertiser planning, activation, optimization, and reporting processes. Edge Academy, client-service support, APIs, and self-service workflows reinforce this. However, agency concentration cuts both ways: two holding companies each represented more than 10% of 2025 gross billings if aggregated at the holding-company level. That makes the moat visible but also exposes TTD to centralized procurement pressure, agency consolidation, and shifts in preferred buying stacks.

2. Per-segment moat

The official segment is advertising technology platform, which equals 100% of consolidated revenue and operating profit. There are no official historical subsegments for CTV, retail media, Kokai, OpenPath, UID2, data, or geography. The moat at the segment level is a scaled, independent buy-side DSP with broad inventory access, data integrations, agency/advertiser relationships, workflow embedding, AI-assisted campaign optimization, and a neutrality proposition against walled gardens. Durability over five years is good: retention is high, CTV and retail media are still expanding, and Q1 2026 revenue still grew 12% year over year despite macro headwinds. Durability over ten years is plausible but not proven: TTD must keep access to premium CTV, retail, publisher, and identity signals while defending economics against Amazon, Google, Meta, streaming platforms, and AI-native buying layers. Durability over twenty years is unresolved, because TTD does not own the consumer relationship, the dominant operating system, the largest retail transaction graphs, or the major social/search inventory pools.

What would break the segment moat? The earliest signs would be: customer retention falling below the long-running 95% threshold; gross spend growth lagging open-internet digital advertising growth for several quarters; take-rate pressure masked by gross spend growth; agencies shifting budgets toward Amazon DSP, Google DV360, Meta Advantage, or direct retail/CTV buying tools; premium CTV publishers limiting open programmatic access; and UID2/OpenPath adoption failing to translate into consolidated revenue growth or margin resilience. Because this is a one-segment company, the blended company moat is exactly the segment moat. There is no hidden second segment to offset erosion in the DSP economics.

The completed Segment B appendix reinforces this moat framing. It defines the base case as a single consolidated platform growing from TTM revenue of .969 billion to .843 billion by 2031-03-31, with GAAP operating margin rising from 20.3% to 24.0%; the bull case requires high-teens growth from CTV, retail media, Kokai/Koa, OpenPath, and identity; the bear case keeps the business profitable but assumes closed ecosystems, CTV/retail supply bargaining, privacy friction, and AI interface substitution compress growth to 8.5% and margin to 18.0%. That is directly consistent with a YELLOW moat: a durable and valuable segment today, but one whose 20-year outcome depends on whether the open-internet control layer remains economically central rather than becoming a lower-value execution rail.

3. Margin persistence evidence

The live FMP annual income-statement pull shows a long history of profitability, but not perfectly stable GAAP operating margins. Annual operating margins were 28.3% in 2016, 22.5% in 2017, 22.5% in 2018, 17.0% in 2019, 17.2% in 2020, 10.4% in 2021, 7.2% in 2022, 10.3% in 2023, 17.5% in 2024, and 20.3% in 2025. The last five-year sequence in the data package is therefore 10.4%, 7.2%, 10.3%, 17.5%, and 20.3%. This is not a Costco-like or Moody's-like margin line. The business has had meaningful margin compression during heavy investment and then strong margin recovery as scale expanded.

The moat evidence is that margins remained positive through a period of heavy technology, sales, and platform investment, then expanded as the company scaled from $1.196 billion of FY2021 revenue to $2.896 billion of FY2025 revenue. The

Q4/FY2025 release also showed adjusted EBITDA margin of 41% for FY2025 and customer retention above 95% for the twelfth consecutive year. That supports the view that TTD has operating leverage and customer stickiness. The offset is that Q1 2026 GAAP operating margin was only 9.7%, down from the high Q4 seasonal margin and below FY2025 full-year margin, with Q1 2026 adjusted EBITDA margin of 30% versus 34% in Q1 2025. Some of that is seasonality and investment, but it reminds the analyst that advertising is cyclical and platform costs can rise with AI, data-center, query-volume, and data costs.

The Q1 2026 Form 10-Q adds an important pricing-power clue. Revenue increased 12% year over year, driven by more gross spend, more campaigns from new and existing clients, higher use of value-added services, increased pricing associated with those services, and higher platform fees. That is the clearest recent evidence that TTD can monetize value-added features rather than merely ride gross media spend. Still, because product-level revenue and take rates are not disclosed, the pricing-power evidence remains partly indirect.

4. AI disruption stress test

The Trade Desk's core workflow is exactly the kind of workflow AI can change: media planning, audience selection, bidding, pacing, measurement, optimization, and reporting. A foundation model with access to the same data could make campaign setup easier, generate plans, automate optimization, and compress some human trader labor. That means the moat cannot rest on the user interface or on generic AI language. It has to rest on privileged workflow data, live bidding infrastructure, buyer trust, broad integrations, identity/supply access, and operating performance.

TTD is not defenseless. The company has used AI and machine learning in its platform for years and is now pushing Kokai and Koa Agents as platform upgrades. In Q1 2026, the company highlighted Koa Agents for planning, buying, optimization, and measurement across the open internet. If AI increases the number of bid decisions, model features, and value-added services that sophisticated buyers want, a scaled DSP with deep data and supply integrations can benefit. AI can raise the minimum scale required to compete because infrastructure, hosting, training, and data costs rise.

The most exposed element is workflow abstraction. If an agency or advertiser can ask an AI buying agent to allocate budget across Google, Amazon, Meta, retail media, CTV, direct publisher deals, and open-internet programmatic without caring which DSP executes, the DSP risks becoming an execution commodity. In that world, TTD must either be the agentic layer or remain one of the indispensable execution/inventory/data rails beneath it. The most protected element is scaled, real-time open-internet execution across many inventory sources, with identity and supply-chain metadata that buyers trust. The AI bear case is not that TTD lacks AI; it is that AI could move the control point upstream to advertiser-owned planning systems, agency operating systems, cloud-based marketing stacks, or walled-garden agents.

5. The 2046 test

Today is 2026-06-29. The 2046 test date is 2046-06-29. A credible bullish 2046 description is this: The Trade Desk is an independent global buy-side advertising operating system for large brands, agencies, and commerce/media partners. It no longer looks like a 2020s browser-cookie DSP. It sells software, data, identity, decisioning, measurement, and clean supply access for advertisers that need to allocate budgets across streaming video, commerce media, open-web media, audio, digital-out-of-home, immersive formats, and whatever connected environments have replaced today's CTV categories. Buyers use TTD because they need a neutral, auditable, cross-channel system of execution outside the largest closed platforms. Publishers and retailers integrate because TTD aggregates premium demand and gives transparent bid, pricing, and demand data. The surviving profit pool is not a generic bidding screen; it is the trusted buy-side control plane for the open and semi-open internet.

Under that bullish 2046 case, operating margins are likely stable to modestly lower than FY2025 GAAP operating margin but still attractive, because AI and data infrastructure costs are higher while scale and automation offset some client-service burden. The company still makes money because advertisers continue to distrust fully closed measurement, regulators and publishers preserve enough interoperability to keep open-market buying relevant, and TTD's buyer demand, identity/supply standards, and workflow data remain difficult to replicate. CTV, retail media, and identity do not exist as the same product labels, but their economic functions remain: premium video access, commerce data activation, consented identity, and transparent supply paths.

The bearish 2046 description is also easy to write, which is why the 2046 test is not a clean PASS. In the bear case, open-internet programmatic becomes a lower-value residual channel after the strongest inventory and data are absorbed into vertically integrated media, retail, device, and AI-agent ecosystems. Amazon, Google, Meta, Apple-like device layers, major retailers, and streaming bundles sell proprietary planning and measurement tools directly. Agencies use AI-native operating systems that route spend to whichever execution endpoint is cheapest. Privacy regulation and platform policy reduce

cross-site identity, UID2 remains useful but not universal, and publishers decide that direct commerce/media partnerships monetize better than broad open access. TTD survives as a capable DSP, but growth slows, take rate compresses, and operating margins drift down as infrastructure and client-acquisition costs rise.

Probability assessment: the bear case is credible enough to keep this from PASS. I would not call it more likely than the base case over five years; the current retention, gross spend scale, customer relationships, and product momentum argue otherwise. Over twenty years, however, the uncertainty around identity, walled-garden power, retail-media control, CTV distribution, agency operating models, and AI control layers is too high for a clean Gideon durability pass.

6. Competitive threat inventory

Threat	Mechanism	Segment(s) affected	Earliest observable signal	Plausibility
Google, Amazon, Meta, and other walled gardens	Own first-party data, inventory, measurement, and AI buying tools; can keep spend inside closed ecosystems	Advertising technology platform	TTD gross spend growth below market; agency budgets shift to closed platforms; CTV/retail spend bypasses TTD	High
CTV, retail media, and publisher direct stacks	Premium inventory/data owners keep more economics in their own platforms or restrict direct programmatic access	Advertising technology platform	OpenPath/CTV announcements no longer translate into revenue growth; publisher integrations slow; retail media partners favor closed systems	Medium-high
AI-native media buying layers	Control point moves from DSP UI to advertiser/agency AI agents or cloud marketing stacks; DSPs become interchangeable execution endpoints	Advertising technology platform	Client workflow engagement falls; value-added-services pricing weakens; agencies consolidate buying through non-TTD operating systems	Medium-high
Privacy and identity reset	Regulation, browser/device policy, or consumer behavior weakens cross-channel addressability and measurement	Advertising technology platform	UID2/EUID adoption stalls; measurement precision weakens; advertisers report lower ROI; data-related revenue attach weakens	Medium
Agency concentration and procurement pressure	Large holding companies use scale to negotiate fees, shift preferred platforms, or internalize functionality	Advertising technology platform	Retention dips; two major holding companies reduce gross billings; take-rate pressure appears despite spend growth	Medium

7. Pricing power verification

Pricing power exists, but it is not yet as clean as a mission-critical vertical software vendor with disclosed seat pricing and multi-year minimums. The positive evidence is: more than a decade of customer retention above 95%; Q1 2026 revenue growth attributed partly to increased pricing associated with value-added services and higher platform fees; FY2025 gross spend of $13.4 billion; positive GAAP operating income across the full decade reviewed; and FY2025 adjusted EBITDA margin of 41%. These are not trivial signals. They imply TTD can add capabilities and monetize at least part of the incremental value.

The weaker evidence is contract structure. The 10-K says MSAs generally renew annually, can terminate on 60 days' notice, and do not contain material commitments to spend. That means reported retention is a behavior-based moat, not a contractual moat. TTD must keep earning spend every campaign cycle. Gross spend can move with macro conditions, agency decisions, client channel mix, and performance comparisons versus closed platforms. Pricing power should therefore be monitored through observed consolidated revenue earned from gross spend, value-added-service attach, customer retention, and margin stability rather than management adjectives.

The pricing-power conclusion is moderate-positive: TTD has demonstrated the ability to monetize value-added services and maintain high retention, but it has not disclosed enough product-level price, take-rate, or cohort detail to underwrite a 20-year pricing moat without caveats.

8. Moat verdict

Moat gate: YELLOW. The moat is real today: independent buy-side alignment, scale, high retention, a large integration/data ecosystem, agency workflow embedding, OpenPath supply access, UID2 identity efforts, and Kokai/Koa AI upgrades form a concrete profit defense. But the business lacks hard contractual lock-in, does not own the consumer relationship or most

premium inventory, and competes against platforms with richer first-party data and owned media. The moat is strong enough for investability consideration, but not clean enough for an unconditional Gideon PASS.

2046 test: YELLOW. A specific 2046 business can be described: a neutral, global, AI-enabled buy-side operating system for transparent cross-channel media buying outside walled gardens. The unresolved question is whether enough economically attractive inventory, identity, and measurement remain open and interoperable for TTD to keep high returns for twenty years. The bear case is not business disappearance; it is strategic downgrading from control-plane economics to lower-value execution rail economics.

Upgrade signals to PASS: customer retention remains above 95% while gross spend and revenue growth reaccelerate; OpenPath/CTV/retail integrations show durable revenue and margin contribution without product-level opacity worsening; value-added-services pricing keeps lifting revenue earned from spend; and agencies/advertisers standardize TTD as a primary AI-enabled buying layer rather than bypassing it. Downgrade signals to FAIL: retention falls below the historical threshold, take-rate or value-added pricing erodes, premium CTV/retail inventory closes off, walled gardens take sustained share of incremental budgets, or AI-native agency/advertiser systems reduce TTD to a commoditized bidder.

Appendix B1 - Advertising Technology Platform

Advertising technology platform - Segment Deep Dive

PATH_RECEIVED: C:\Users\Admin\OneDrive\GPT\ER 2.0\The Trade Desk\appendix_B_advertising_technology_platform.md

Generated: 2026-06-29 Asia/Singapore. Role: Subagent B. Company: The Trade Desk. Ticker: TTD. Segment slug: advertising_technology_platform. Source discipline: this appendix uses `data_package.md` as the source of truth for The Trade Desk historical dollar figures, KPI disclosures, and management quotes. It does not re-fetch TTD historicals or management commentary. Because The Trade Desk officially discloses one operating and reportable segment, this appendix models one segment only and treats CTV, retail media, Kokai/Koa, OpenPath, UID2/EUID/OpenPass, Ventura, OpenTTD, and OpenAds as growth drivers or strategic capabilities rather than dollar-disclosed product revenue lines.

Stage 0 anchor used in this appendix:

- Today: 2026-06-29.
- Fiscal year ends December 31.
- Latest quarter: Q1 2026 ended 2026-03-31.
- TTM: Q2 2025 + Q3 2025 + Q4 2025 + Q1 2026 -> TTM ending 2026-03-31.
- Forward horizon: TTM + 5 calendar years = 2031-03-31.

0. Segment boundary and taxonomy note

Advertising technology platform is the entire official segment base. The data package states that the FY2025 Form 10-K and Q1 2026 Form 10-Q identify one operating/reportable segment, with the CEO reviewing consolidated financial information and the company having one primary business activity [data_package lines 43-51]. The segment therefore equals 100% of consolidated revenue and operating income for the historical period. There is no official historical product revenue table for CTV, retail media, Kokai/Koa, OpenPath, UID2/EUID/OpenPass, Ventura, OpenTTD, or OpenAds [data_package lines 87-108 and 189-203]. The taxonomy is stable for the reportable-segment axis across FY2023, FY2024, FY2025, and Q1 2026; the only taxonomy caution is geography, where FY2023 onward is comparable on a revenue basis while older geography disclosures should not be mixed into the current basis [data_package lines 51-57].

This boundary matters because the most tempting model error for The Trade Desk is to turn every strategic narrative into an implied revenue line. The company discusses CTV, retail media, Kokai, Koa, OpenPath, UID2, OpenPass, Ventura, OpenTTD, and OpenAds as platform capabilities, supply-chain integrations, identity infrastructure, workflow tools, or ecosystem initiatives. The data package searched the official source set and found true non-disclosure for product dollars, margins, ARR, RPO, customer count, NRR, and product-specific take rate [data_package lines 15-41 and 189-203]. The right modeling treatment is therefore a single revenue line whose forward CAGR is justified by those vectors in aggregate, not a sum of invented product P&Ls.

[DATA GAP: No official dollar revenue, operating income, margin, ARR, RPO, seats, or product-specific take-rate disclosure exists for CTV, retail media, Kokai/Koa, OpenPath, UID2/EUID/OpenPass, Ventura, OpenTTD, or OpenAds in the data package source set.]

1. What this segment actually is

The segment is a self-service cloud advertising platform used by agencies, brands, and other ad buyers to purchase and optimize digital advertising across formats, channels, devices, data partners, measurement providers, and inventory sources. The Trade Desk is not an ad network in the old sense of owning media inventory and reselling it as a publisher. Its core role is demand-side software: it gives buyers tools to evaluate audiences, bid into programmatic auctions, manage budgets, apply data and identity signals, measure outcomes, and route spend toward inventory that meets performance and brand-safety objectives. Revenue is generated from clients using the platform to purchase advertising inventory, value-added services, and data; the company bills Gross Billings but reports revenue net of supplier components [data_package lines 43-49].

The customer is usually an advertiser or agency that wants open-internet reach outside the large walled gardens, with transparency over media supply and data choices. The buyer values reach, performance, workflow control, and interoperability. The supplier side is not the direct customer in the same way, but publisher, CTV, retail-media, and data integrations are critical to the quality of the marketplace. OpenPath is relevant here because it is described as a direct integration between The Trade Desk and a source of inventory [data_package lines 135 and 138]. That can reduce intermediary friction and improve inventory quality, which may help the platform command more advertiser budget even if it does not create a separately disclosed revenue stream.

The pricing model is best understood as platform monetization tied to media buying activity and value-added services rather than seat-based SaaS subscription revenue. The data package explicitly says The Trade Desk is not a subscription SaaS model and that RPO, ARR, NRR, and billings backlog are not disclosed or not applicable [data_package lines 189-203]. That means the key volume driver is gross spend flowing through the platform, while net revenue depends on take rate, service mix, platform fees, data usage, value-added services, and pricing associated with those services. FY2025 gross spend was $13.395B and FY2025 revenue was $2.896B, implying a rough net revenue to gross spend ratio of about 21.6%; this is a simple ratio from data-package lines 33-35 and 77-80, not a disclosed take-rate KPI.

The go-to-market is enterprise and agency-led. This is not a bottom-up self-serve motion like many SMB software tools. Large advertisers care about scaled integrations, partner access, measurement, privacy compliance, and operational trust. Customer retention has remained above 95% across the historical period and in Q1 2026 [data_package lines 33-39 and 99-106], which is a strong signal that once buyers standardize workflow, data, and measurement around the platform, displacement is not frictionless. The data package does not disclose an exact customer count or exact retention percentage beyond the threshold, so the model does not build a cohort table.

[DATA GAP: Customer count and exact customer retention percentage above the disclosed greater-than-95% threshold are not disclosed, so no cohort or logo-retention model is built.]

2. Current economics

The latest TTM anchor is the four-quarter period ending 2026-03-31. Revenue was $2.969B, operating income was $0.602B, net income was $0.433B, CFO was $1.093B, and FCF after SEC PP&E capex was $0.842B [data_package lines 110-125]. The segment operating margin for that TTM period is therefore approximately 20.3%, calculated as $0.602B divided by $2.969B. This lines up closely with FY2025 operating margin of 20.3% [data_package lines 77-83], so the forward model starts from a clean margin anchor rather than a one-quarter anomaly.

The recent revenue trend is slower than the medium-term history. Reported YoY revenue growth was +19% in Q2 2025, +18% in Q3 2025, +14% in Q4 2025, and +12% in Q1 2026 [data_package lines 99-125]. The Q1 2026 release guided Q2 2026 revenue to at least $750M, which is about 8% above Q2 2025 revenue of $694M on the data-package quarterly table. The Q2 guide therefore does not prove a quick return to 20% growth; it mainly shows that management expected sequential re-acceleration from Q1's $689M, while the latest year-over-year growth rate had clearly decelerated.

The annual historical base still shows a high-quality growth business. FY2021 revenue was $1.196B, FY2022 was $1.578B, FY2023 was $1.946B, FY2024 was $2.445B, and FY2025 was $2.896B [data_package lines 59-72 and 75-83]. The FY2022 to FY2025 revenue CAGR is about 22.4%, while FY2025 YoY growth was 18.5%. Operating income expanded from $0.114B in FY2022 to $0.589B in FY2025, which shows that the business has already demonstrated operating leverage at scale. The current question is not whether the platform can be profitable; it is whether revenue growth can remain high enough while operating margins move from about 20% GAAP operating margin toward a materially higher level without requiring an unrealistic jump in take rate or an unsupported product revenue split.

Capital intensity is moderate but not negligible. FY2025 capex was $0.197B, or 6.8% of revenue, up from 4.4% in FY2024 and 2.8% in FY2023 [data_package lines 149-159]. R&D was 18.1% of revenue in FY2025, down from 19.0% in FY2024 and 21.2% in FY2023, indicating some scale leverage while the company continues to invest in platform engineering and AI capability. Management's FY2026 adjusted EBITDA margin guide of at least 40% is an adjusted metric, not the GAAP operating margin used in this appendix [data_package lines 140-147]. It nonetheless supports the view that the company is not planning to sacrifice the entire margin structure to fund AI and platform investment.

3. Unit economics

The segment's unit economics start with media spend flowing through the platform. A client allocates budget, the platform routes bids to available inventory and data, and The Trade Desk earns revenue from platform fees, value-added services,

data-related usage, and pricing associated with those services. The data package says Q1 2026 revenue growth was driven by higher gross spend, more campaigns by new and existing clients, higher use of value-added services, increased pricing associated with those services, and higher platform fees [data_package lines 121-125]. That list is the most direct unit-economic bridge in the data package: volumes, usage breadth, service mix, price, and fees all matter.

Gross spend is the scale proxy. It rose from $6.172B in FY2021 to $13.395B in FY2025 [data_package lines 33-35], a CAGR of roughly 21.4% over four years and 20.1% from FY2022 to FY2025. Revenue rose from $1.196B to $2.896B over FY2021-FY2025, a similar but slightly higher CAGR of roughly 24.8% over four years. The gap is consistent with revenue being a function of spend volume plus take-rate, service mix, pricing, and product attach rather than pure media spend pass-through. Because gross spend is not disclosed for Q1 2026 and no product gross-spend split exists, the forecast does not model spend and take rate separately. It uses consolidated revenue CAGR as the direct output of spend growth, mix, and price.

[DATA GAP: Gross spend is disclosed annually through FY2025 but not for Q1 2026 or the TTM period, so the appendix cannot build a TTM gross-spend or take-rate bridge.]

The cost structure has several layers. Platform operations and infrastructure costs support bidding, data, measurement, and traffic. Technology and development expense funds the product roadmap, including Kokai, Koa, identity, CTV, supply-path, and analytics features. Sales and marketing carries enterprise customer acquisition, agency relationships, and global expansion. General and administrative expense supports public-company infrastructure, privacy, legal, compliance, and governance. The segment has already shown that these costs can scale: annual operating margin moved from 7.2% in FY2022 to 20.3% in FY2025 [data_package lines 75-83]. The TTM margin through Q1 2026 remains about 20.3%, despite Q1 seasonal margin compression, because Q4 2025 was highly profitable [data_package lines 110-125].

The margin upside mechanism is operating leverage, not an invented high-margin product mix. Kokai and Koa may improve buyer workflow, model quality, campaign optimization, and internal productivity, but the data package does not provide ARR, seats, product pricing, or product margin [data_package lines 91-108 and 189-203]. OpenPath may improve supply-chain transparency and reduce friction. UID2, EUID, and OpenPass may help addressability and identity resilience. CTV and retail media may shift spend toward higher-growth open-internet channels. All of these can improve the consolidated revenue growth and retention profile, but none should be modeled as a separate 80% margin software line. The conservative approach is to let the segment's GAAP operating margin rise gradually from 20.3% TTM to 24.0% in the base case by 2031, with the bull at 27.0% and bear at 18.0%.

What breaks margin down is just as important. If large walled gardens, commerce media networks, CTV platforms, or AI-native buying tools force more pricing concessions, The Trade Desk may need to reinvest more heavily in product and sales to defend growth. If privacy regulation or identity fragmentation makes measurement harder, the company may spend more on compliance and partner integrations. If CTV supply remains fragmented and expensive, supply-path advantages may not translate to margin expansion. If customer retention stays above 95% but incremental spend growth slows, fixed-cost leverage could stall. The bear case therefore assumes operating margin falls to 18.0% by the horizon year even though the company remains profitable.

4. Competitive dynamics

The segment competes in programmatic advertising technology, especially demand-side workflow and open-internet buying. The most direct competitors are other demand-side platforms and ad-tech tools, but the more important economic competitors are often the closed ecosystems that control large shares of advertiser budget. Google, Amazon, Meta, large retail media networks, CTV platform owners, agency trading desks, and specialized measurement or identity vendors all compete for parts of the same budget, workflow, or decision layer. The Trade Desk's pitch is not simply that it can buy ads; it is that it can help buyers manage independent, transparent, data-informed buying across the open internet.

The walled gardens have unmatched owned data, consumer reach, logged-in identity, and auction control. They can bundle inventory, measurement, creative tools, and attribution inside a closed system. That makes them formidable. The Trade Desk's counter-positioning is neutrality and interoperability. Advertisers that do not want all budget, data, and measurement governed by one media owner need a third-party buying platform. The more digital advertising fragments across CTV, retail media, audio, mobile, display, and emerging channels, the more valuable an independent coordination layer can become. This is why management's CTV and retail-media commentary matters even without product dollars: those are channels where buyers often want cross-publisher control rather than buying only through one closed interface.

CTV is strategically important because linear television budgets remain large and are moving into digital pipes. Management says the linear-to-CTV transition is still early [data_package lines 142-145]. That does not mean The Trade Desk can capture the entire shift. CTV platform owners, streaming services, YouTube, Amazon, Roku, Netflix, Disney, agencies, and supply-side platforms all have competing economics. However, CTV's fragmentation creates a problem that a demand-side platform can solve: buying across publishers, managing frequency, applying data, measuring outcomes, and avoiding waste. In the base case, CTV helps sustain mid-teens consolidated platform growth. In the bull case, CTV and retail media together keep growth closer to high teens. In the bear case, closed ecosystems and direct seller tools absorb more of the CTV upside.

Retail media is similar. Retailers have valuable shopper data and closed-loop attribution, but buyer workflow becomes complicated when each retailer has its own media network. The Trade Desk can add value if it helps advertisers activate retail data across the open internet and compare performance across partners. The data package notes record retail-data influenced spend in 2025 but no dollar disclosure [data_package lines 99-108 and 133-147]. The modeling consequence is qualitative: retail media supports the persistence of platform growth and pricing power, but it does not justify a separate revenue line.

OpenPath and supply-chain tools address another competitive issue: the ad-tech supply chain has historically been opaque, with multiple intermediaries between buyer and publisher. If The Trade Desk can connect more directly to inventory sources, it can improve transparency, reduce waste, and capture more buyer trust. This is not guaranteed to raise reported take rate. Publishers and supply-side platforms also have bargaining power, and direct paths may reduce total fees in the ecosystem. The benefit for The Trade Desk is more likely to show up in customer retention, budget share, and platform differentiation than in a visible product P&L.

The competitive risk from AI is two-sided. Kokai and Koa are management's evidence that The Trade Desk is integrating AI into planning, buying, and optimization [data_package lines 133-145]. If the company remains the trusted workflow layer, AI can strengthen the platform by making campaign planning easier and improving performance. But AI also lowers the cost for new entrants to build planning interfaces, creative testing tools, and automated buying agents. The hard part is not building an interface; it is connecting trusted demand, inventory, data, identity, measurement, compliance, and buyer workflow at scale. The moat depends on whether The Trade Desk's ecosystem and data advantages remain more important than user-interface substitution.

5. Moat at the segment level

The segment-level moat is real but not absolute. The strongest elements are scale, data feedback, workflow embedding, partner integrations, supply-chain transparency, and trust from large advertisers. Customer retention above 95% across the historical period is the best data-package evidence for stickiness [data_package lines 33-39 and 99-106]. The company has also grown gross spend from $6.172B in FY2021 to $13.395B in FY2025 [data_package lines 33-35], which supports the argument that the platform has scaled with customers rather than simply riding one product cycle.

Scale matters because more buyer demand can attract better integrations, better data partnerships, and more publisher interest. More campaign activity can improve optimization and workflow confidence. More integrations can make the platform more useful to large advertisers that need cross-channel coordination. The flywheel is not as closed as a search engine's query data or a social network's social graph, but it is still meaningful. A new entrant would need to reproduce not only software features, but also buyer trust, agency workflows, measurement integrations, identity solutions, inventory access, privacy controls, and support operations.

The moat is weaker where inventory owners control scarce supply. Premium CTV publishers, retail networks, and large platforms can decide how much access third-party buying tools receive and on what terms. If the highest-quality inventory is increasingly sold directly inside closed ecosystems, The Trade Desk's open-internet role becomes less central. Similarly, if regulators, browsers, or platform owners reduce addressability faster than UID2, EUID, OpenPass, clean rooms, or first-party data partnerships can offset, campaign performance may weaken. The Trade Desk has an answer, but not a monopoly on the answer.

The base-case durability assessment is that the moat supports a five-year mid-teens revenue CAGR and several hundred basis points of GAAP operating margin expansion. The bull case requires the moat to do more: CTV and retail media remain open enough, identity infrastructure proves useful, Kokai/Koa improves advertiser outcomes, and The Trade Desk keeps winning incremental budget share from less transparent buying paths. The bear case assumes the moat is still enough to keep the business growing, but not enough to prevent deceleration into high-single-digit revenue growth and margin compression from reinvestment and pricing pressure.

6. Historical growth rates - reproduced from data package, not re-derived

The table below follows the data package's control point: the only dollar-disclosed product or sub-segment is consolidated platform revenue, which equals the one official segment. Non-dollar initiatives are shown as not disclosed rather than estimated. The 3-year CAGR for the dollar row uses FY2022 to FY2025 because that is the three-year annual compounding interval ending at FY-1; the table still shows FY2023 through FY2025 as the visible three latest years.

Product / sub-segment	FY-3 rev	FY-2 rev	FY-1 rev	3-yr CAGR	Most recent YoY	Data package cite
Consolidated platform revenue	$1.946B	$2.445B	$2.896B	22.4%	18.5%	data_package lines 77-80 and 89-91
CTV	n/d	n/d	n/d	n/d	n/d	True non-disclosure, data_package lines 91-108 and 189-194
Retail media / retail data	n/d	n/d	n/d	n/d	n/d	True non-disclosure, data_package lines 91-108 and 189-195
Kokai / Koa	n/d	n/d	n/d	n/d	n/d	True non-disclosure, data_package lines 91-108 and 189-196
OpenPath / supply-chain tools	n/d	n/d	n/d	n/d	n/d	True non-disclosure, data_package lines 91-108 and 197
UID2 / EUID / OpenPass	n/d	n/d	n/d	n/d	n/d	True non-disclosure, data_package lines 91-108 and 196
Ventura / OpenAds / OpenTTD	n/d	n/d	n/d	n/d	n/d	True non-disclosure, data_package lines 91-108 and 197

Internal arithmetic check: FY2023 revenue of $1.946B multiplied by FY2024 growth of 25.6% equals about $2.444B, which ties to FY2024 revenue of $2.445B within rounding. FY2024 revenue of $2.445B multiplied by FY2025 growth of 18.5% equals about $2.897B, which ties to FY2025 revenue of $2.896B within rounding. FY2022 revenue of $1.578B compounded at 22.4% for three years equals about $2.896B. No product dollars were back-solved, so there is no estimated CTV, retail media, Kokai, OpenPath, identity, Ventura, OpenTTD, or OpenAds revenue row.

The latest-four-quarter trend is also important because the model starts from TTM rather than FY2025. Q2 2025 revenue was $0.694B, Q3 2025 was $0.739B, Q4 2025 was $0.847B, and Q1 2026 was $0.689B, for TTM revenue of $2.969B and operating income of $0.602B [data_package lines 110-125]. Year-over-year growth decelerated from +19% to +12% across those four quarters. That deceleration is the main reason the base-case forward CAGR is below the FY2022-FY2025 historical CAGR.

7. Management guidance - quoted from data package Section 6

The data package lists the following segment-relevant management comments. Because there is one segment, each maps to Advertising technology platform. The quotes are deliberately short and are reproduced from the data package rather than re-fetched.

Date / period	Speaker	Data package quote	Topic	Interpretation
2025-08-07 / Q2 2025	Jeff Green	"Kokai gives advertisers unprecedented power"	Kokai / AI	Kokai is a platform productivity and performance layer, not a separate revenue line.
2025-08-07 / Q2 2025	Jeff Green	"CTV continues to be our fastest-growing channel"	CTV	CTV is a major growth vector, but no CTV dollars or growth percentage are disclosed.
2025-08-07 / Q2 2025	Jeff Green	"we are seeing great progress with OpenPath"	Supply chain	OpenPath supports supply-chain quality and transparency assumptions.
2025-11-06 / Q3 2025	Jeff Green	"nearly 85% using Kokai as their default experience"	Kokai adoption	Adoption is broad enough to matter platform-wide but still not ARR or seats.
2025-11-06 / Q3 2025	Jeff Green	"Retail media continues to scale rapidly"	Retail media	Retail media supports growth durability, without product dollars.

Date / period	Speaker	Data package quote	Topic	Interpretation
2025-11-06 / Q3 2025	Jeff Green	"OpenPath is an integration between TTD and a direct source of inventory"	OpenPath	Describes supply-chain mechanics and inventory access.
2026-02-25 / Q4 2025	Jeff Green	"almost 100% of our clients are running through Kokai today"	Kokai adoption	Kokai has become a core platform experience, not an optional product model.
2026-02-25 / Q4 2025	Tahnil Davis	"headcount growth to remain below revenue growth"	Margins	Supports moderate operating leverage in the base and bull cases.
2026-02-25 / Q4 2025	Tahnil Davis	"Q1 guidance reflects a prudent approach"	Macro / guidance	Supports caution around near-term visibility and the bear case.
2026-05-07 / Q1 2026	Jeff Green	"Linear television moving to CTV is still at the early stages"	CTV TAM	Supports a multi-year CTV growth runway.
2026-05-07 / Q1 2026	Jeff Green	"They are investing in and leveraging AI tools like Koa"	AI / Koa	AI is a workflow and optimization capability, not a disclosed product P&L.
2026-05-07 / Q1 2026	Tahnil Davis	"For Q2, we expect revenue to be at least $750 million"	Revenue guide	Provides the latest near-term revenue anchor.
2026-05-07 / Q1 2026	Tahnil Davis	"full year 2026 adjusted EBITDA margin percentage to be at least 40%"	Margin guide	Supports adjusted profitability discipline but is not GAAP operating margin.

The key interpretation is that management's strongest growth claims are qualitative and platform-wide. CTV is early and fast-growing; retail media is scaling; Kokai and Koa are widely adopted; OpenPath improves supply-chain access; identity initiatives help addressability. But the data package repeatedly warns that none of these are dollar-disclosed product lines [data_package lines 41, 85, 108, and 147]. The forward model therefore uses the comments to calibrate one consolidated platform CAGR and one consolidated platform margin path.

8. Forward growth assumptions - explicit, per product, justified

All cases compound from TTM revenue of $2.969B for exactly five calendar years, ending 2031-03-31. The only modeled product line is consolidated platform revenue. CTV, retail media, Kokai/Koa, OpenPath, identity, Ventura, OpenTTD, and OpenAds are embedded in the consolidated platform assumptions as drivers, not modeled as separate historical or forward revenue rows.

Base case growth

Product	3-yr historical CAGR	Latest YoY	Mgmt FY+1 guide	Base CAGR TTM to TTM+5y	Justification
Consolidated platform revenue	22.4%	Q1 2026 +12%	Q2 2026 revenue at least $750M	14.5%	Growth decelerates from the FY2022-FY2025 rate as the revenue base scales, but CTV, retail media, Kokai/Koa, OpenPath, and identity keep the platform above ordinary ad-market growth.

Base case implied revenue path:

Period	Revenue ($B)	Implied YoY / CAGR step	Note
TTM ended 2026-03-31	2.969	n/a	Data-package TTM anchor
Year 1	3.400	14.5%	Below historical CAGR, above Q1 2026 YoY
Year 2	3.892	14.5%	Continued CTV and retail-media support
Year 3	4.457	14.5%	Kokai/Koa productivity sustains budget share
Year 4	5.103	14.5%	International and open-internet share gains continue
TTM+5y 2031-03-31	5.843	14.5%	Consolidated one-segment platform revenue

The base case deliberately does not extrapolate the FY2022-FY2025 22.4% CAGR. The latest quarterly growth rate was +12%, and the Q2 2026 guide of at least $750M implies only about +8% versus Q2 2025 if treated as a floor rather than a beat-and-raise setup. A 14.5% five-year CAGR assumes the latest slowdown is not permanent, but also assumes The Trade Desk is now large enough that sustaining 20% plus growth requires a strong CTV and retail-media cycle. The case is therefore moderately favorable, not heroic.

Bull case growth

Product	3-yr historical CAGR	Latest YoY	Mgmt FY+1 guide	Bull CAGR TTM to TTM+5y	Justification
Consolidated platform revenue	22.4%	Q1 2026 +12%	Q2 2026 revenue at least $750M	19.0%	CTV migration stays early, retail-data activation scales, Kokai/Koa improves buyer productivity, and OpenPath/identity tools preserve open-internet share without a walled-garden squeeze.

Bull case implied revenue path:

Period	Revenue ($B)	Implied YoY / CAGR step	Note
TTM ended 2026-03-31	2.969	n/a	Data-package TTM anchor
Year 1	3.533	19.0%	Recovers toward Q2 2025 growth rate
Year 2	4.204	19.0%	CTV and retail media remain strong
Year 3	5.003	19.0%	Platform share gains persist
Year 4	5.954	19.0%	International contribution improves
TTM+5y 2031-03-31	7.085	19.0%	Still below FY2022-FY2025 CAGR

The bull case is not a pure reversion to the 22.4% historical CAGR. It is a sustained high-teens case that assumes the Q1 2026 slowdown was a temporary digestion period and that the company regains spend share as CTV budgets move out of linear television and as retail-data use cases mature. It also assumes Kokai and Koa make the platform easier and more effective for buyers, improving budget share without requiring separate software subscription monetization.

Bear case growth

Product	3-yr historical CAGR	Latest YoY	Mgmt FY+1 guide	Bear CAGR TTM to TTM+5y	Justification
Consolidated platform revenue	22.4%	Q1 2026 +12%	Q2 2026 revenue at least $750M	8.5%	Walled gardens and retail/CTV owners keep more budget in closed systems, macro-prudent advertiser spending persists, and product innovation defends relevance but not high-teens growth.

Bear case implied revenue path:

Period	Revenue ($B)	Implied YoY / CAGR step	Note
TTM ended 2026-03-31	2.969	n/a	Data-package TTM anchor
Year 1	3.221	8.5%	Similar to the Q2 2026 guide floor
Year 2	3.495	8.5%	Slow open-internet share gains
Year 3	3.792	8.5%	Pricing and channel mix pressure
Year 4	4.115	8.5%	Mature demand-side growth
TTM+5y 2031-03-31	4.464	8.5%	Still growing, but below premium-ad-tech expectations

The bear case does not assume the platform breaks. Customer retention above 95%, net-cash balance sheet, and continued product investment make a collapse case too punitive based on the data package. The more plausible downside is a good business that becomes a lower-growth advertising infrastructure company: CTV and retail media still grow, but too much value accrues to inventory owners, closed ecosystems, and commerce media networks. In that setting, The Trade Desk remains

relevant but no longer compounds revenue at a premium software rate.

9. Forward operating margin assumptions - explicit and justified

The current operating margin anchor is 20.3% on both FY2025 and TTM ending 2026-03-31 [data_package lines 75-83 and 121-125]. Management also guided FY2026 adjusted EBITDA margin percentage to at least 40% and said headcount growth should remain below revenue growth [data_package lines 140-147]. Because adjusted EBITDA excludes items that are not excluded from GAAP operating income, this appendix does not map 40% adjusted EBITDA directly into GAAP operating margin. It uses the guide as directional evidence that management expects operating discipline while investing.

Case	Current TTM op margin	TTM+5y op margin	Change	Mechanism
Bear	20.3%	18.0%	-230 bps	Slower revenue growth, heavier AI/product investment, pricing pressure, and CTV/retail supply bargaining offset scale.
Base	20.3%	24.0%	+370 bps	Headcount grows below revenue, platform operations scale, R&D falls modestly as a percentage of revenue, and value-added services support mix.
Bull	20.3%	27.0%	+670 bps	High-teens growth drives fixed-cost leverage, Kokai/Koa improve productivity, and supply-chain/identity tools support premium value capture.

Margin bridge detail:

Margin driver	Bear treatment	Base treatment	Bull treatment
Revenue scale	Only 8.5% CAGR, limiting fixed-cost absorption	14.5% CAGR creates steady leverage	19.0% CAGR creates stronger leverage
Technology and development	Investment stays elevated to defend AI, CTV, identity	R&D intensity eases gradually but remains high	Productivity tooling offsets some engineering intensity
Sales and marketing	More spending needed to defend budget share	Enterprise go-to-market scales with revenue	Stronger brand and product pull reduce incremental burden
Platform operations	CTV and data complexity pressure costs	Infrastructure scales with mix benefits	More efficient routing and direct supply paths help
Pricing and value-added services	Competitive pressure limits price/mix upside	Value-added services and platform fees support revenue quality	Better outcomes permit stronger value capture

The base margin expansion is intentionally moderate. A move from 20.3% to 24.0% over five years is meaningful but not extreme for a software-like marketplace that has already shown FY2022 to FY2025 operating leverage. The reason not to push base margins higher is that The Trade Desk is still investing in major platform transitions: AI tools, CTV, retail media, identity, supply path, international, and privacy compliance. Those investments can protect growth, but they are not free. The bull case's 27.0% margin requires both sustained revenue growth and actual operating leverage from headcount discipline and platform productivity. The bear case's 18.0% margin allows for a profitable but less scalable version of the business, where growth is defended through spending and pricing power is more constrained.

10. Segment rollup - built bottoms-up

Because The Trade Desk has one official dollar-disclosed product/segment line, the rollup is arithmetically simple and intentionally conservative. Product-level revenue equals segment revenue. Product-level operating income equals revenue multiplied by the case operating margin. There is no residual, no corporate allocation, and no invented product-level adjustment.

Case	Product line	TTM revenue ($B)	CAGR TTM to TTM+5y	TTM+5y revenue ($B)	TTM+5y op margin	TTM+5y op income ($B)	Tie-out
Bear	Consolidated platform revenue	2.969	8.5%	4.464	18.0%	0.804	One product line equals segment total
Base	Consolidated platform revenue	2.969	14.5%	5.843	24.0%	1.402	One product line equals segment total

Case	Product line	TTM revenue ($B)	CAGR TTM to TTM+5y	TTM+5y revenue ($B)	TTM+5y op margin	TTM+5y op income ($B)	Tie-out
Bull	Consolidated platform revenue	2.969	19.0%	7.085	27.0%	1.913	One product line equals segment total

Arithmetic checks:

Check	Bear	Base	Bull
Revenue formula	2.969 x 1.085^5 = 4.464	2.969 x 1.145^5 = 5.843	2.969 x 1.190^5 = 7.085
Operating income formula	4.464 x 18.0% = 0.804	5.843 x 24.0% = 1.402	7.085 x 27.0% = 1.913
Product sum / segment total variance	0.0%	0.0%	0.0%

The base case generates $5.843B of segment revenue and $1.402B of operating income by 2031-03-31. That is a 1.97x revenue increase from the TTM base and a 2.33x operating income increase, reflecting both revenue compounding and a 370 bps margin expansion. The bull case reaches $7.085B of revenue and $1.913B of operating income, which requires the open-internet, CTV, retail media, and AI productivity narratives to remain strong throughout the five-year window. The bear case reaches $4.464B of revenue and $0.804B of operating income, which would still be a healthy business but would likely be inadequate for an expensive compounder underwriting case unless the stock price were much lower.

11. Key risks and wildcards

Bear risk - closed ecosystem capture. The largest downside risk is that CTV, retail media, commerce, and identity become more closed rather than more interoperable. If inventory owners and platform ecosystems keep more spend inside their own tools, The Trade Desk may retain customers but lose incremental budget share. This would push the business toward the bear case's 8.5% CAGR and 18.0% operating margin.

Bear risk - AI interface substitution. Kokai and Koa show that management is embedding AI into the platform, but AI also makes it easier for agencies, platforms, and new software vendors to build campaign planning or buying interfaces. The durable moat is not the interface alone; it is the integrated workflow, data, identity, inventory access, measurement, and trust. If AI weakens switching costs faster than The Trade Desk can enhance outcomes, growth and pricing power could compress.

Bear risk - privacy and identity friction. UID2, EUID, and OpenPass are addressability tools, but privacy regulation and platform-level identity changes remain outside The Trade Desk's full control. If addressability weakens, advertisers may shift more budget to logged-in media owners and retail networks. The platform could still grow, but performance measurement and open-internet value capture would be harder.

Base risk - cyclicality of advertiser budgets. The data package notes prudent Q1 guidance and slower recent growth [data_package lines 140-147]. Advertising budgets can slow quickly during macro uncertainty. A five-year model can absorb a weak quarter, but repeated spending pressure would make a mid-teens CAGR difficult.

Base risk - capex and infrastructure intensity. FY2025 capex rose to 6.8% of revenue [data_package lines 149-159]. If CTV, AI, data, and measurement require more infrastructure investment than expected, FCF can remain healthy but margin expansion may lag the base case. That would matter for valuation even if revenue growth holds.

Bull wildcard - CTV remains open and fragmented. If linear TV migration continues and buyers require cross-publisher coordination, The Trade Desk can be a major beneficiary. This is the key upside driver behind the bull case's 19.0% revenue CAGR.

Bull wildcard - Kokai/Koa raises advertiser ROI and internal productivity. Near-universal Kokai adoption gives the company a platform-wide surface to improve workflows [data_package lines 136-145]. If those tools measurably improve performance, The Trade Desk may win more wallet share and hold higher margins.

Bull wildcard - supply-chain transparency becomes a buying requirement. If OpenPath and related tools become important to advertisers seeking cleaner supply paths, The Trade Desk can strengthen its neutral platform role. This would not need to appear as OpenPath revenue; it could appear as retention, budget share, and value-added-services mix.

Summary table

Case	Segment TTM+5y Revenue	Segment TTM+5y Op Margin	Segment TTM+5y Op Income	Probability
Bear	$4.464B	18.0%	$0.804B	25%

Case	Segment TTM+5y Revenue	Segment TTM+5y Op Margin	Segment TTM+5y Op Income	Probability
Base	$5.843B	24.0%	$1.402B	50%
Bull	$7.085B	27.0%	$1.913B	25%

The one-segment structure makes the arithmetic clean, but it does not make the investment question simple. The Trade Desk has a high-quality platform, strong retention, a net-cash balance sheet, strong FCF conversion, and credible growth vectors in CTV, retail media, AI-enabled workflow, supply-chain transparency, and identity. The data package also shows a real deceleration from +19% in Q2 2025 to +12% in Q1 2026 and a Q2 2026 guide that should be treated as a floor rather than proof of high-teens reacceleration. The base case gives management credit for a durable open-internet platform while refusing to fabricate product revenue. For synthesis, the clean input is: one official segment, TTM revenue $2.969B, TTM operating income $0.602B, base TTM+5y revenue $5.843B, base TTM+5y operating margin 24.0%, and base TTM+5y operating income $1.402B.

Appendix S - Synthesis (Combined Earnings Model)

The Trade Desk - Synthesis (Combined Earnings Model)

Generated: 2026-06-29 Asia/Singapore. Role: Subagent S - Synthesis. Company: The Trade Desk. Ticker: TTD. Workdir: `C:\Users\Admin\OneDrive\GPT\ER 2.0\The Trade Desk`. Output file: `C:\Users\Admin\OneDrive\GPT\ER 2.0\The Trade Desk\appendix_synthesis.md`.

This appendix is the combined earnings model for The Trade Desk. It uses the DR-cleared data package as the historical source of truth, the R-reviewed advertising technology platform appendix as the segment forecast source, the management appendix for capital allocation and governance context, and the moat appendix for durability framing. No new live fetch was required for this synthesis because the task supplied the current price anchor from the live raw quote file and the upstream ER2 artifacts had already performed the live source work. The model is intentionally mechanical: one official reportable segment, no invented product revenue lines, explicit share count math, explicit tax and other-income assumptions, and a final P/E 15 test against the current price of $18.37.

The headline result is arithmetically favorable on the P/E 15 test. The base case reaches $5.843 billion of revenue, $1.402 billion of operating income, $1.074 billion of net income, and $2.40 of EPS at the 2031-03-31 horizon. Required EPS for a 15x P/E at $18.37 is $1.22. The base case therefore has a 95.9% cushion on the mechanical valuation gate. That does not override the ER2 management gate. The management appendix assigns a FAIL because of founder voting control, CFO churn, compensation design, and high SBC, while the moat appendix is YELLOW rather than a clean long-duration pass. This synthesis can say the price test clears; it cannot turn management FAIL into a BUY.

1. Anchors

- Today: 2026-06-29.
- FY end: December 31.
- TTM anchor end date: 2026-03-31.
- TTM quarters: Q2 2025 + Q3 2025 + Q4 2025 + Q1 2026.
- Latest completed FY label for historical tie-out only: FY2025.
- Horizon date: 2031-03-31.
- Compounding span: exactly 5.0 calendar years from 2026-03-31 to 2031-03-31.
- Current price: $18.37, from `raw\TTD_quote_live.json`, with market cap $8.636 billion in that live quote file.
- Current diluted share count: 476.883 million, from the Q1 2026 income statement row in the live quarterly pull and consistent with the data package's statement that Q1 2026 diluted shares were 476.9 million.
- TTM revenue: $2.969 billion, from the data package Section 5 TTM table.
- TTM operating income: $0.602 billion, from the data package Section 5 TTM table.
- TTM net income: $0.433 billion, from the data package Section 5 TTM table.
- TTM FCF after SEC PP&E capex: $0.842 billion, from the data package Section 5 TTM table.
- TTM stock-based compensation: $0.471 billion, from `raw\TTD_qf_calculations_live.json`.
- TTM share repurchases: $1.158 billion, from the data package recent corporate actions and QF calculation file.

The model starts at TTM, not FY2025. FY2025 is used only to verify the historical tie-out. The segment appendix compounds from TTM revenue of $2.969 billion for exactly five years. This appendix preserves that horizon and does not add a sixth year by switching to fiscal-year labels.

2. Segment-level forward assumptions

The Trade Desk has one official operating and reportable segment: advertising technology platform. The data package explicitly searched for product dollars across CTV, retail media, Kokai, Koa, OpenPath, UID2, EUID, OpenPass, Ventura,

OpenTTD, and OpenAds, and found no official dollar-disclosed product table. The R-reviewed segment appendix therefore models one consolidated platform revenue line. That keeps the rollup clean and prevents a common ad-tech modeling error: converting every strategic initiative into an unsupported product P&L.

Segment	TTM revenue ($B)	Bear TTM+5y rev ($B)	Base TTM+5y rev ($B)	Bull TTM+5y rev ($B)	Bear OI margin	Base OI margin	Bull OI margin	Source
Advertising technology platform	2.969	4.464	5.843	7.085	18.0%	24.0%	27.0%	R-reviewed segment appendix Sections 8, 9, and 10

The base case uses a 14.5% revenue CAGR from TTM to the horizon. That is below the FY2022-FY2025 historical revenue CAGR of 22.4%, but above the latest Q1 2026 year-over-year growth rate of 12%. The bear case uses 8.5%, which treats The Trade Desk as still relevant but increasingly constrained by closed ecosystems, CTV and retail-media bargaining power, privacy friction, and macro-prudent advertiser budgets. The bull case uses 19.0%, still below the three-year historical rate, but requiring open-internet CTV, retail media, identity, Kokai/Koa, and supply-chain transparency to remain strong for the full five-year window.

The operating margin assumptions are also taken from the R-reviewed segment appendix. TTM operating margin is about 20.3%. The bear case moves down to 18.0%, the base case rises to 24.0%, and the bull case rises to 27.0%. The base case assumes operating leverage from headcount discipline, platform scale, and value-added services, but it does not assume that AI tools, retail media, or CTV suddenly create a separate high-margin software line. The bull case requires actual fixed-cost leverage and stronger value capture; the bear case assumes reinvestment and pricing pressure absorb scale benefits.

3. Combined revenue build

Because there is only one official segment, combined revenue equals segment revenue. There are no corporate eliminations, no inter-segment adjustments, and no product-to-segment reallocation. The full combined model therefore inherits the segment appendix's TTM-to-horizon revenue outputs.

Line	Bear	Base	Bull
Sum of segment TTM+5y revenue ($B)	4.464	5.843	7.085
Corporate eliminations ($B)	0.000	0.000	0.000
Combined TTM+5y revenue ($B)	4.464	5.843	7.085
TTM revenue base ($B)	2.969	2.969	2.969
Implied TTM to TTM+5y CAGR	8.5%	14.5%	19.0%
Revenue multiple of TTM	1.50x	1.97x	2.39x

The base case doubles revenue over the five-year period, but it does not require a return to the prior 20% plus annual growth cadence. That distinction matters. The recent quarterly trend decelerated from 19% in Q2 2025 to 12% in Q1 2026, and Q2 2026 guidance of at least $750 million was a floor rather than proof of a clean high-teens reacceleration. A 14.5% base case is favorable, but it is not a blank extrapolation of the best historical period.

The bear case still compounds revenue. It does not assume obsolescence, because the data package and moat appendix support a real platform with more than 95% retention, a net-cash funded-debt position, broad customer workflow embedding, and strategic relevance in CTV, retail media, identity, and supply-path transparency. The bear case instead says the business remains useful but earns lower growth because more value accrues to walled gardens, retail-media owners, CTV distributors, agency operating systems, and AI-native buying layers.

The bull case is a strong open-internet case. It assumes advertisers continue to want a neutral buy-side control layer outside the largest closed platforms, that CTV and retail media remain sufficiently open and fragmented, and that Kokai/Koa and identity tools improve outcomes enough to preserve wallet share. The bull case is plausible, but it should not drive the ER2 verdict because the framework requires the confident base case to clear the price test.

4. Combined operating income build

The segment appendix already treats operating income as the relevant GAAP operating-profit base. Because the official segment equals the whole company, there is no separate unallocated corporate expense line to subtract. Historical corporate costs are already embedded in consolidated operating income. Adding a separate corporate expense here would double

count G&A, sales, technology, and platform costs.

Line	Bear	Base	Bull
Sum of segment TTM+5y OI ($B)	0.804	1.402	1.913
Unallocated corporate expense ($B)	0.000	0.000	0.000
Combined TTM+5y OI ($B)	0.804	1.402	1.913
Combined TTM+5y revenue ($B)	4.464	5.843	7.085
Implied OI margin	18.0%	24.0%	27.0%
Change vs TTM OI margin	-230 bps	+370 bps	+670 bps

Corporate expense assumption: zero incremental unallocated expense outside segment operating income, because The Trade Desk reports one segment and the segment appendix uses consolidated GAAP operating income as the segment operating-profit base. This is not an assumption that corporate costs disappear. It is the opposite: all corporate costs remain inside the OI margins above.

The base operating income number of $1.402 billion is exactly $5.843 billion of revenue multiplied by a 24.0% operating margin, within rounding. The bear number of $0.804 billion is $4.464 billion multiplied by 18.0%. The bull number of $1.913 billion is $7.085 billion multiplied by 27.0%. These are not independent forecasts; they are arithmetic outputs from the segment appendix's revenue and margin assumptions.

The 24.0% base-case GAAP operating margin is the most important qualitative assumption after revenue growth. It asks for moderate improvement from the 20.3% TTM level. The management commentary in the data package supports some operating leverage because interim CFO Tahnil Davis guided headcount growth below revenue growth and full-year 2026 adjusted EBITDA margin of at least 40%. But adjusted EBITDA excludes SBC, and The Trade Desk's SBC is material. For that reason the synthesis keeps the GAAP operating margin below the adjusted EBITDA frame and treats margin expansion as earned through scale, not as a direct conversion from management's adjusted target.

5. Net income and EPS build

The model uses a normalized 25.0% tax rate. The TTM effective tax rate was unusually high because income tax expense was about $229 million on about $662 million of pre-tax income, or roughly 34.6%. FY2025 was also high at about 32.7%. Those periods reflect the interaction of SBC, tax attributes, quarterly mix, and other items. The data package's ROIC table uses a 21% normalized U.S. rate, but the synthesis applies a more conservative 25% rate to avoid overstating net income while not extrapolating the latest high quarterly rate forever.

Net interest and other income is modeled at $0.030 billion per year in all cases. TTM pre-tax income exceeded operating income by about $0.060 billion, reflecting investment income on a net-cash balance sheet and other below-operating items. The forward model cuts that roughly in half because the share repurchase path consumes cash over time. There is no funded debt cost because the data package and QF/QFR classify funded debt as zero at 2026-03-31.

Line	Bear	Base	Bull
Combined TTM+5y OI ($B)	0.804	1.402	1.913
Net interest income / other ($B)	0.030	0.030	0.030
Other income adjustment ($B)	0.000	0.000	0.000
Pre-tax income ($B)	0.834	1.432	1.943
Tax rate assumed	25.0%	25.0%	25.0%
Tax expense ($B)	0.209	0.358	0.486
Net income ($B)	0.626	1.074	1.457
Diluted share count at TTM+5y (M)	447.9	447.9	447.9
EPS at TTM+5y	1.40	2.40	3.25

The base EPS build is therefore straightforward: $1.402 billion of operating income plus $0.030 billion of net interest and other income equals $1.432 billion of pre-tax income. Applying a 25.0% tax rate leaves $1.074 billion of net income. Dividing by 447.9 million diluted shares produces $2.40 of EPS, before rounding.

This is the key per-share result for the P/E 15 test. The model does not rely on the bull case to clear valuation. The bear case also clears narrowly on the mechanical price test, but that is not a license to ignore business risk. The bear case's margin and growth assumptions describe a worse strategic outcome, and an investor would usually demand a larger margin of safety if those conditions were becoming visible.

6. Share count path

Gideon's framework requires explicit share count math. The Trade Desk's share path matters because the company is simultaneously issuing large amounts of SBC and repurchasing a large amount of stock. Treating buybacks as a free EPS offset would be wrong. Treating SBC as harmless because adjusted EBITDA excludes it would also be wrong.

Starting share count is 476.883 million diluted shares from Q1 2026. TTM SBC is $0.471 billion. Using the current price anchor of $18.37 as the rough conversion price gives annual SBC issuance of about 25.66 million shares, calculated as $471.42 million divided by $18.37. That is a deliberately rough dilution proxy, as instructed, and it is conservative in the sense that it treats SBC at the current depressed share price rather than a higher future price.

Forward buybacks are modeled at $0.750 billion per year. This is below the TTM repurchase amount of $1.158 billion and below FY2025 repurchases of $1.380 billion, but it is close to 89% of TTM FCF after SEC PP&E capex of $0.842 billion. It also assumes the board continues to refresh authorizations beyond the $500 million authorization noted in February 2026. That assumption is reasonable for a model, but it is not a guarantee. If repurchases fall to the current authorization only and are not renewed, the share count path would be worse.

The average repurchase price is stepped up by 15% per year from the current price anchor to avoid pretending that all future buybacks occur at $18.37. This creates a conservative shape: the same dollar buyback retires fewer shares over time. SBC issuance is held at 25.66 million shares per year, which means buybacks more than offset dilution in years one through four, but barely offset it by year five as the assumed buyback price rises.

Year	Starting share count (M)	Buyback $ ($B)	Avg price assumed	Shares retired (M)	SBC issuance (M)	Ending share count (M)
Year 1	476.9	0.750	18.37	40.8	25.7	461.8
Year 2	461.8	0.750	21.13	35.5	25.7	452.0
Year 3	452.0	0.750	24.30	30.9	25.7	446.8
Year 4	446.8	0.750	27.94	26.8	25.7	445.6
Year 5	445.6	0.750	32.13	23.3	25.7	447.9

The path reduces diluted shares from 476.9 million to 447.9 million, a 6.1% net reduction over five years. It is not an aggressive financial-engineering assumption. Gross repurchases retire about 157.3 million shares, while SBC adds about 128.3 million shares. The net reduction is therefore about 29.0 million shares. That is the number used in the EPS build.

This share path is also a governance marker. The management appendix makes clear that recent buybacks helped reduce diluted shares, but the quality of the repurchase program is mixed because a large part offsets high compensation-related dilution. This synthesis gives the company credit for continued per-share reduction, but only after charging the model for ongoing SBC issuance.

7. P/E 15 test

The required EPS for a 15x P/E at the current price is $1.2247, calculated as $18.37 divided by 15. The framework's price gate is simple: the confident base case must produce FY+5 EPS such that 15 times EPS is at or above today's price, with enough cushion to absorb normal forecast error. The bull case is not the underwriting case.

Case	EPS at TTM+5y	EPS x 15	Current price	Cushion %	Pass?
Bear	1.40	20.94	18.37	14.0%	PASS, narrow
Base	2.40	35.97	18.37	95.9%	PASS
Bull	3.25	48.80	18.37	165.7%	PASS

The base case clears the P/E 15 test by a wide margin. The current price is low enough that the math does not require a heroic bull case. Even with a 25% tax rate, only $0.030 billion of net interest and other income, and a share count path that charges for continuing SBC, base EPS is almost twice the required level.

The result should be interpreted carefully. A stock can clear the mechanical price gate while still failing the broader ER2 process. The management appendix is a hard FAIL. The moat appendix is YELLOW. Those gates are not courtesy grades. They are designed to prevent a cheap-looking stock from becoming a BUY when minority-shareholder alignment, dilution discipline, governance, or long-duration durability do not meet the Gideon standard.

For valuation sensitivity, the strongest conclusion is not "buy regardless." It is that the market price has moved low enough that the quantitative gate no longer appears to be the binding constraint. The binding constraints are confidence in management alignment, confidence that SBC and buybacks produce real per-share compounding, and confidence that the platform remains a high-value open-internet control layer rather than becoming a lower-value execution rail.

8. Reflexivity check

The combined earnings build is bottoms-up, but with one segment the reflexivity check is simple. Segment TTM revenue equals consolidated TTM revenue. Segment TTM operating income equals consolidated TTM operating income. FY2025 segment revenue and operating income equal consolidated FY2025 revenue and operating income. There is no residual segment and no corporate elimination.

TTM revenue tie-out: the data package TTM table shows Q2 2025 + Q3 2025 + Q4 2025 + Q1 2026 revenue of $2.969 billion. The segment appendix uses $2.969 billion as the TTM revenue base. Variance is 0.0%.

TTM operating income tie-out: the data package TTM table shows operating income of $0.602 billion. The segment appendix uses $0.602 billion as the TTM operating income base and a 20.3% margin. Variance is 0.0% within rounding.

FY2025 historical tie-out: the data package shows FY2025 revenue of $2.896 billion and operating income of $0.589 billion in both the consolidated historicals and the segment historicals. Because the company has one segment, the FY2025 reconstruction ties exactly within rounding.

This check matters because the forward build compounds from TTM, not from a management target or a product narrative. If the TTM base were inflated, the entire horizon model would be inflated. Here the base is clean: one segment, one revenue line, one operating income line, and explicit non-disclosure of product dollars.

9. In-progress FY reconciliation and recency anchor

Stage 0 did not treat FY2026 as complete. It used the latest completed quarter, Q1 2026, to form a TTM period ending 2026-03-31. Therefore there is no in-progress full-year annualization being used as the model base. The model base is the actual TTM sum of four quarters: Q2 2025, Q3 2025, Q4 2025, and Q1 2026.

The recency check still matters because the base case should not start above the current run-rate and then compound for five years. The segment appendix compounds from the exact TTM revenue base of $2.969 billion. It does not replace the base with an already uplifted FY2026 estimate. The first forward-year endpoint in the segment appendix is $3.400 billion, or 14.5% above TTM. To test whether the model is front-loaded, this appendix compares the first forward-year average run-rate, calculated as the midpoint between the TTM base and the year-one endpoint, with the most recent four-quarter annualized run-rate.

Recency item	Value	Check
Most recent four-quarter TTM revenue run-rate ($B)	2.969	Actual Q2 2025 through Q1 2026
Base year-one endpoint ($B)	3.400	Segment appendix base case
Base first-forward-year average run-rate ($B)	3.185	Midpoint of 2.969 and 3.400
Difference vs TTM run-rate	7.3%	Within 10% recency threshold
Q2 2026 guidance floor annualized ($B)	3.000	At least $750M times four

The model passes this recency check because it starts from the actual TTM base and the first forward-year average run-rate is 7.3% above the most recent four-quarter run-rate, within the 10% threshold. The $3.400 billion year-one endpoint is above the Q2 2026 annualized guide floor, but management's guide was explicitly "at least" $750 million, and a full-year endpoint is not the same as the first-day run-rate. If Q2 through Q4 2026 revenue fails to move above the $750 million floor, the base case should be revisited.

10. Sensitivity - which variable matters most

The sensitivity table holds two variables at base and varies the third. Base revenue is $5.843 billion, base operating margin is 24.0%, base net interest and other income is $0.030 billion, base tax rate is 25.0%, and base diluted share count is 447.9 million. The table reports EPS at the 2031-03-31 horizon.

Sensitivity	Downside case	EPS downside	Base EPS	Upside case	EPS upside	EPS swing vs base
Revenue CAGR +/- 200 bps	12.5% CAGR, margin unchanged	2.20	2.40	16.5% CAGR, margin unchanged	2.61	-0.20 / +0.21
OI margin +/- 200 bps	22.0% margin, revenue unchanged	2.20	2.40	26.0% margin, revenue unchanged	2.59	-0.20 / +0.20
Share count +/- 5%	470.3M shares	2.28	2.40	425.5M shares	2.52	-0.11 / +0.12
Tax rate +/- 300 bps	28.0% tax rate	2.30	2.40	22.0% tax rate	2.49	-0.10 / +0.10

The biggest drivers are revenue CAGR and GAAP operating margin. A 200 bps miss on either variable reduces EPS by roughly $0.20. That is still above the $1.2247 required EPS for a 15x P/E at $18.37, but it cuts the cushion. Share count matters less than revenue and margin in this setup because the model already charges for SBC and uses a moderate net share reduction. Tax rate also matters, but it is not the primary underwriting variable.

The sensitivity table reinforces the qualitative debate. The investment question is not whether arithmetic can be made to clear the current price. It can. The question is whether The Trade Desk can keep compounding revenue in the low-to-mid teens while expanding GAAP operating margin despite high SBC, open-internet uncertainty, and governance concerns. If revenue growth settles into high single digits and margins fail to expand, the stock may still screen inexpensive, but it would no longer be a clean Gideon compounder.

11. Combined earnings summary table

Probability weights are 25% bear, 50% base, and 25% bull. The distribution is not uniform because the data package and segment appendix support a real platform with strong retention and a net-cash balance sheet, making the base case more likely than either tail over five years. The bear still receives a full 25% weight because recent growth decelerated, the moat is YELLOW, the management gate is FAIL, and AI or closed-ecosystem control could pressure the open-internet economics. The bull receives 25% because CTV, retail media, Kokai/Koa, OpenPath, and identity could sustain stronger-than-base growth if the open internet remains economically attractive.

Case	Revenue ($B)	OI ($B)	OI margin (%)	NI ($B)	EPS ($)	Probability	EPS x 15	vs. $18.37
Bear	4.464	0.804	18.0%	0.626	1.40	25%	20.94	+14.0%
Base	5.843	1.402	24.0%	1.074	2.40	50%	35.97	+95.9%
Bull	7.085	1.913	27.0%	1.457	3.25	25%	48.80	+165.7%
Probability-weighted EPS	n/a	n/a	n/a	n/a	2.36	100%	35.43	+92.9%

The probability-weighted EPS is $2.36, calculated as 25% times $1.40 plus 50% times $2.40 plus 25% times $3.25. Probability-weighted EPS times 15 equals $35.43, 92.9% above the current price. This is a useful diagnostic, but the ER2 price gate remains the base case, not the probability-weighted case. The base case alone clears.

Tie-out checks

- **Reported-financial tie-out (TTM + latest completed FY)** - PASSED. Combined TTM revenue of $2.969 billion matches segment TTM revenue of $2.969 billion and consolidated TTM revenue of $2.969 billion. Combined TTM operating income of $0.602 billion matches segment and consolidated TTM operating income of $0.602 billion. FY2025 revenue of $2.896 billion and operating income of $0.589 billion tie between the consolidated historicals and the one-segment historical table. Variance is 0.0% within rounding.

- **NI / shares = EPS** - PASSED. Bear net income of $0.626 billion divided by 447.9 million shares equals $1.40. Base net income of $1.074 billion divided by 447.9 million shares equals $2.40. Bull net income of $1.457 billion divided by 447.9 million shares equals $3.25. All tie within rounding.

- **Segment sum tie-out at horizon** - PASSED. The company has one official segment. Combined horizon revenue divided by the sum of segment horizon revenue equals 100.0% in bear, base, and bull. Corporate eliminations are $0.000 billion.

- **Product-to-segment rollup** - PASSED. The segment appendix states that the only dollar-disclosed product line is consolidated platform revenue and that product-level revenue equals segment revenue. Bear, base, and bull product sums tie to segment revenue with 0.0% variance.

- **Weighted margin check** - PASSED. There are no multiple dollar-disclosed products requiring revenue-weighted product margins. The single product line equals the segment. Segment operating margin is therefore the product operating margin in each case: 18.0%, 24.0%, and 27.0%.

- **Share count path** - PASSED. The TTM+5y share count is derived from an explicit five-year path: starting shares of 476.9 million plus five years of 25.7 million SBC issuance per year minus shares retired from $0.750 billion of annual buybacks at rising assumed prices. Ending shares are 447.9 million. The path uses exactly five years, not six.

- **Growth plausibility** - PASSED. Base-case revenue CAGR is 14.5%, below 1.2 times the disclosed FY2022-FY2025 historical CAGR of 22.4% and below the segment appendix's bull case of 19.0%. The base case is above latest Q1 2026 year-over-year growth of 12%, but the segment appendix justifies that with CTV, retail media, Kokai/Koa, OpenPath, identity, and platform-wide value-added services.

- **Historical arithmetic** - PASSED. Segment appendix arithmetic shows $2.969 billion times 1.085^5 equals $4.464 billion, $2.969 billion times 1.145^5 equals $5.843 billion, and $2.969 billion times 1.190^5 equals $7.085 billion, within 1% rounding. Operating income equals horizon revenue multiplied by the case margin.

- **Recency anchor** - PASSED. The model starts from the actual TTM revenue base of $2.969 billion. The base first-forward-year average run-rate is $3.185 billion, 7.3% above the most recent four-quarter annualized run-rate and within the 10% threshold. The year-one endpoint is $3.400 billion, but that is a full-year forward endpoint, not a hidden starting base.

- **Sensitivity-table arithmetic** - PASSED. The sensitivity rows use the same base formula as the model: revenue times margin, plus $0.030 billion net interest and other income, multiplied by one minus the tax rate, divided by shares. The displayed EPS impacts reconcile within rounding to the changed CAGR, margin, share count, and tax-rate assumptions.

- **Probability-weighted EPS / final summary math** - PASSED. Probability-weighted EPS equals 25% times $1.40 plus 50% times $2.40 plus 25% times $3.25, or $2.36 within rounding. EPS times 15 and the current-price cushion percentages in Section 11 reconcile to the Section 7 P/E table within rounding.

All 11 tie-out checks passed. Sections 2, 3, 4, 5, 6, 7, 10, and 11 contain valid markdown pipe tables with blank lines before and after, header rows, delimiter rows, consistent cell counts, and no multi-line cells.

Key findings

The P/E 15 gate passes. Required EPS at $18.37 is $1.2247. Base-case EPS is $2.40, giving a 95.9% cushion. Bear-case EPS is $1.40, giving a 14.0% cushion. Bull-case EPS is $3.25, giving a 165.7% cushion. On price alone, The Trade Desk no longer looks stretched under the ER2 framework.

The base case is not a heroic product split. It uses one official segment, one consolidated platform revenue line, a 14.5% five-year revenue CAGR, and a 24.0% GAAP operating margin. It does not fabricate CTV revenue, retail media revenue, Kokai ARR, OpenPath take rate, identity fees, or Ventura/OpenAds dollars. Those initiatives support the consolidated growth and margin assumptions qualitatively.

The share count path is constructive but not free. The model assumes $0.750 billion of annual buybacks and $0.471 billion of annual SBC, converted at the current price to 25.7 million shares of annual issuance. The ending share count is 447.9 million, only 6.1% below the Q1 2026 starting count. This avoids the mistake of letting buybacks erase SBC without showing the cost.

Revenue growth and GAAP operating margin are the two live underwriting variables. A 200 bps reduction in base revenue CAGR or a 200 bps reduction in horizon operating margin reduces EPS by roughly $0.20. Share count and tax rate matter, but less than the business trajectory.

The final ER2 verdict should still respect the hard gates. The management appendix is FAIL, and the moat appendix is YELLOW with a YELLOW 2046 test. This synthesis appendix can support a statement that the valuation gate clears, but it cannot support a clean Gideon BUY unless the final orchestrator explicitly decides how to handle the management gate failure.

Appendix CS - Compounder Score

The Trade Desk (TTD) - Diagnostic Compounder Score

Generated: 2026-06-29 Asia/Singapore. Role: Subagent CS - CompounderScorer. Company: The Trade Desk, Inc. Ticker: TTD. Currency: USD. Current price anchor: $18.37. TTM end: 2026-03-31. Horizon date: 2031-03-31.

This appendix is diagnostic only. It does not mechanically approve, reject, or override the ER2 gates. It reads the verified ER2 source chain first: `quant_foundation.md`, `quant_foundation_review.md`, `data_package.md`, `appendix_B_advertising_technology_platform.md`, `appendix_management.md`, `appendix_moat.md`, and `appendix_synthesis.md`. No new FMP or primary-source pull was needed because the required financial, price, governance, moat, and synthesis evidence was already present in the verified ER2 files and saved live raw artifacts. No data warehouse cache was used.

1. Executive Verdict

The diagnostic score is **67 / 100**. The Business Quality Score is **55 / 80** and the Valuation / 20% Return Underwriting Score is **12 / 20**. The score-implied classification is **Reject under this diagnostic rubric**, even though the ER2 P/E 15 gate clears mechanically.

That distinction matters. The Trade Desk is not a low-quality business. It has grown revenue from $1.196 billion in FY2021 to $2.896 billion in FY2025, produced TTM free cash flow of $842 million against TTM net income of $433 million, holds no funded debt, retains customers at more than 95%, and has a plausible five-year path to materially higher EPS. The current $18.37 price also leaves a wide cushion on the ER2 P/E 15 test: the synthesis base case reaches $2.40 of horizon EPS, versus required EPS of $1.2247.

The diagnostic rubric is stricter than "good business at a low P/E on forward EPS." It asks whether the evidence supports a 20% annualized long-term shareholder return from today's price, without terminal multiple expansion, under trustworthy management and with a moat likely to remain strong for 5-10+ years and preferably 20 years. TTD does not clear that diagnostic hurdle. The base-case five-year shareholder IRR at a 15x exit P/E is about 14.4%, not 20%. The bull case can clear 20%, but the rubric does not allow a bull case to carry the classification. More importantly, the management appendix assigns a hard **FAIL** because of dual-class founder control, high SBC, CFO churn, litigation around reincorporation and control matters, weak minority protections, and compensation design that does not center ROIC or FCF per share. The moat appendix is **YELLOW**, not PASS, because the company has real scale and retention but does not own the consumer relationship, premium inventory, operating system, or largest first-party data graphs.

The score is therefore capped on two axes. First, business quality is capped because the latest high ROIC and excellent cash conversion are offset by only mid-teens to low-20s R&D-inclusive ROIIC, high SBC, and governance evidence that fails the management gate. Second, valuation is capped because a 15x base-case exit produces attractive upside but not a 20% annualized return. The evidence supports **a real compounder candidate with serious governance and durability defects**, not an investable-now compounder under this diagnostic rubric.

2. Data Source Map

The score uses the following source hierarchy and does not introduce stale cached data.

Evidence item	Source used	Period / anchor	Confidence	CS treatment
Price and market cap	`raw/TTD_quote_live.json`; synthesis price anchor	2026-06-29 run; price $18.37	High	Used for IRR, FCF yield, market cap, and buy-price math
Company profile	`raw/TTD_profile_live.json`; data package source map	Latest live FMP profile in ER2 raw folder	High	NASDAQ, USD, U.S. issuer, ad-tech platform
Income statement	QF/QFR-cleared FMP and SEC XBRL tie-outs	FY2021-FY2025 plus TTM ending 2026-03-31	High	Used for revenue, OI, NOPAT, margins, EPS
Balance sheet	QF/QFR and data package	FY2025 and Q1 2026	High	Net cash and zero funded debt treated as strong evidence
Cash flow	QF/QFR and data package	FY2021-FY2025 plus TTM	High	Used for FCF conversion, SBC, buybacks, capex

Evidence item	Source used	Period / anchor	Confidence	CS treatment
Segment data	Data package and reviewed B appendix	One official segment	High	No product dollar splits; all growth modeled in one platform line
Management / governance	`appendix_management.md`	2026 proxy, FY2025 10-K, latest calls	High	Management FAIL is a score cap and hard-veto evidence
Moat and 2046 test	`appendix_moat.md` and segment appendix	Current platform plus 2046 stress test	Medium-high	Moat YELLOW caps durability score
Synthesis model	`appendix_synthesis.md`	TTM to 2031-03-31	High for arithmetic; medium for assumptions	Used for base, bear, bull, P/E 15, and IRR
Product KPIs	Data package disclosure inventory	FY2021-FY2025 and latest interim	Medium	Product non-disclosure treated as a modelability gap

The live source chain is internally consistent. Quant foundation cleared 8/8 reconciliation checks. QFR cleared Wave 1. The data package used FMP stable endpoints and official SEC/company sources, and the product segmentation endpoints were empty. That is not a license to invent CTV, retail media, Kokai, UID2, OpenPath, or data-product dollar histories. This score keeps the company as one consolidated advertising technology platform.

3. Key Financial and Quality Metrics

The historical financial pattern is strong. Revenue rose from $1.196 billion in FY2021 to $2.896 billion in FY2025, a roughly 24.8% CAGR across the four-year interval. Operating income rose from $125 million to $589 million, and GAAP operating margin expanded from 10.4% to 20.3%. TTM revenue through 2026-03-31 was $2.969 billion, TTM operating income was $602 million, and TTM net income was $433 million.

The cash conversion is excellent on reported cash flow. QF shows TTM CFO of $1.093 billion, PP&E capex of $251 million, FCF after PP&E capex of $842 million, and TTM SBC of $471 million. TTM FCF is therefore about 195% of TTM net income and about 187% of normalized TTM NOPAT if NOPAT is approximated as TTM operating income after a 25% tax rate. That supports the business-quality score. It also means the company has real cash to fund buybacks, platform investment, and balance-sheet flexibility.

The balance sheet is also a clear positive. The data package shows Q1 2026 cash plus short-term investments of $1.406 billion, zero funded debt, and total FMP debt that QF/QFR classify as lease liabilities rather than funded borrowings. The funded-debt basis is net cash. This eliminates the balance-sheet wipeout risk that would otherwise be a hard veto.

The quality caveat is SBC. FY2025 SBC was $490.6 million, or about 16.9% of revenue. TTM SBC was $471.4 million, or about 15.9% of TTM revenue and 56.0% of TTM FCF. Buybacks have reduced diluted shares lately, but a large portion of repurchases offsets compensation issuance rather than returning surplus capital cleanly. The synthesis explicitly charges for this by modeling 25.7 million annual SBC shares and $750 million annual buybacks at rising prices, producing only a 6.1% net share-count reduction over five years.

Metric	Evidence	CS calculation / read-through
FY2021-FY2025 revenue CAGR	$1.196B to $2.896B	About 24.8% over four annual intervals
FY2022-FY2025 revenue CAGR	$1.578B to $2.896B	About 22.4%; used by segment appendix as historical context
TTM revenue	$2.969B	Q2 2025 + Q3 2025 + Q4 2025 + Q1 2026
TTM operating margin	$0.602B / $2.969B	About 20.3%
TTM FCF / net income	$0.842B / $0.433B	About 194.7%; strong cash conversion
5-year median ROIC	16.2%	Data package ROIC series median; latest FY2025 is 28.8%
R&D-inclusive 3-year ROIIC	Approx. 21%	NOPAT increase FY2022-FY2025 over capex plus R&D through FY2023-FY2025
R&D-inclusive 4-year ROIIC	Approx. 17%	NOPAT increase FY2021-FY2025 over capex plus R&D through FY2022-FY2025
Latest SBC / revenue	15.9% TTM; 16.9% FY2025	Score cap because SBC is economically real
Latest SBC / FCF	56.0% TTM	Buybacks must be treated as dilution offset first
Funded net debt / EBITDA	Net cash	No funded debt at 2026-03-31

Metric	Evidence	CS calculation / read-through
EV / NOPAT	About 17.0x	Uses quote market cap, lease liabilities, cash and STI, and 25% tax NOPAT
FCF yield	About 9.8%	TTM FCF over quote market cap

The ROIIC calculation is intentionally conservative. A pure net-capex denominator would make incremental returns look extraordinary because TTD expenses most growth investment through R&D, sales, platform development, and data/AI operating costs. The diagnostic rubric should not reward an asset-light accounting structure without charging for the growth opex that actually builds the platform. Including R&D as reinvestment produces still-good but not elite incremental-return estimates.

4. Rubric Scorecard

Category	Score	Max	Evidence and reason
Incremental Returns on Capital	17	25	Latest ROIC is high and cash conversion is real, but 5-year median ROIC is only 16.2% and R&D-inclusive ROIIC is mid-teens to low-20s rather than elite
Reinvestment Runway	16	20	CTV, retail media, identity, OpenPath, Kokai/Koa, and international growth create a large runway, but product dollars and cohort economics are not disclosed
Durability of Moat	10	15	Retention, scale, workflow embedding, and buyer neutrality are real; moat is YELLOW because walled gardens, CTV owners, retail networks, privacy, and AI can shift control points
Accounting and Financial Quality	7	10	Cash conversion and balance sheet are strong; score is capped by high SBC and limited product-level disclosure
Capital Allocation Discipline	5	10	Organic investment and low M&A are positives; buybacks are mixed because much of the spend offsets SBC, and incentives/governance are weak
Price and 20% Return Underwriting	12	20	P/E 15 test clears, but base-case IRR at 15x exit is about 14.4%, below the 20% hurdle
Total	**67**	**100**	Score-implied classification: Reject under this diagnostic rubric

Subscore detail:

Rubric item	Score	Max	Comment
1A normalized ROIC is high	3	5	FY2025 ROIC is 28.8%, but 5-year median is 16.2%
1B ROIIC is high	4	8	R&D-inclusive ROIIC is good but not above 35%
1C ROIIC not deteriorating sharply	2	3	Recent ROIC improved, but growth decelerated and capital intensity rose
1D unit economics support returns	3	3	Retention, gross spend growth, and value-added pricing support economics
1E cash conversion is real	3	3	TTM FCF is almost twice TTM net income
1F ROIC not accounting artifact	2	3	Good but partly helped by asset-light accounting; R&D must be capitalized analytically
2A large remaining market opportunity	4	5	Large open-internet, CTV, retail-media, and international opportunity
2B proven ability to reinvest at scale	4	5	Revenue and gross spend compounded strongly; one-segment opacity prevents full credit

Rubric item	Score	Max	Comment
2C organic growth opportunity	3	4	M&A is immaterial; growth is primarily organic
2D repeatable expansion playbook	2	3	Platform roadmap is coherent, but product contribution is not disclosed
2E market structure supports long growth	2	2	Fragmentation supports a neutral buy-side layer
2F growth does not require ROIC collapse	1	1	Base case preserves attractive margin and cash conversion
3A clear source of advantage	3	4	Scale, neutrality, integrations, workflow, and data feedback are concrete
3B pricing power	2	3	Q1 2026 pricing/value-added evidence is positive but indirect
3C competitive evidence	2	3	Growth and retention are strong; rivals have more owned data/inventory
3D customer stickiness	2	2	More than 95% retention for over a decade
3E resilience through stress	1	2	Profitable through investment, but ad spend remains cyclical
3F low disruption risk	0	1	AI and closed ecosystems are live disruption risks
4A clean revenue and earnings quality	1	2	Clean reconciliations; limited product-level disclosure
4B cash flow supports earnings	2	2	Excellent cash conversion
4C conservative SBC and dilution	0	2	SBC is high and must be treated as real cost
4D balance sheet strength	2	2	Net cash with zero funded debt
4E transparent disclosures	1	1	Source chain is reconciled; product KPIs still limited
4F no governance/accounting red flags	1	1	No restatement or material weakness found; governance scored separately
5A reinvestment priority rational	2	2	R&D, platform, AI, and infrastructure investment fit strategy
5B acquisition discipline	2	2	M&A is immaterial; no serial-deal concern
5C buyback discipline	1	2	Net share reduction exists but buybacks offset heavy SBC
5D incentives align with value creation	0	2	Compensation emphasizes revenue/TSR/adjusted EBITDA more than ROIC or FCF per share
5E owner mentality	0	1	Founder purchase is positive, but dual-class control blocks full credit
5F evidence from past decisions	0	1	CFO churn and governance litigation reduce confidence
6A base-case IRR >= 20%	2	6	Base IRR is about 14.4%, not 20%
6B conservative exit multiple	4	4	15x exit P/E is below the current TTM P/E and still clears P/E 15 gate
6C bear case acceptable	0	3	Bear IRR is only about 2.6% at 15x exit
6D reverse DCF beatable	2	3	20% return requires roughly low-20s NOPAT CAGR; possible but not base-case
6E price does not price perfection	2	2	Current price is far below prior 52-week high and P/E 15 math has cushion
6F cash returns help	2	2	FCF yield and buybacks are meaningful, though diluted by SBC

5. ROIIC and Reinvestment Analysis

The evidence supports good incremental economics, not a clean 80-point compounder profile. Reported ROIC has improved materially: the data package shows ROIC of 12.9%, 10.1%, 16.2%, 28.6%, and 28.8% from FY2021 through FY2025. The latest two years are strong. The five-year median, however, is 16.2%, which belongs in the "15-20%" rubric band rather than the "above 30%" band.

The ROIIC question is more important. The Trade Desk is asset-light, so using only PP&E capex as reinvestment would overstate incremental returns. The platform is built through technology/development expense, data assets, AI/model work, customer integrations, supply partnerships, and sales capacity. A serious compounder score must capitalize at least a meaningful portion of R&D analytically. Using operating income after a normalized tax rate as NOPAT, FY2025 NOPAT is about $466 million. FY2021 NOPAT was about $99 million. The four-year NOPAT increase is therefore about $367 million. If reinvestment includes FY2022-FY2025 capex plus R&D, the denominator is about $2.17 billion, producing an approximate 17% R&D-inclusive ROIIC. Using FY2022 to FY2025 produces a roughly 21% three-year figure. These are good numbers, but not dream-compounder numbers above 35%.

That conservative treatment is appropriate because the data package shows R&D at 18.1% to 21.2% of revenue across FY2021-FY2025. Those dollars are not maintenance overhead in the ordinary sense. They are the engine for Kokai, Koa, UID2, OpenPath, identity, data, and platform performance. If the analyst ignores them when computing incremental capital, TTD appears more capital efficient than it economically is.

The reinvestment runway is still attractive. The platform grew gross spend from $6.172 billion in FY2021 to $13.395 billion in FY2025. Customer retention has remained above 95%. Q1 2026 revenue growth was attributed to higher gross spend, more campaigns from new and existing customers, higher use of value-added services, increased pricing tied to those services, and higher platform fees. Those facts support reinvestment at scale. The cap is that product-level revenue, product margin, ARR, RPO, NRR, customer count, and take-rate by initiative are not disclosed. The company may have multiple valuable growth engines, but CS cannot award full score for economics that are not separately evidenced.

6. Runway Analysis

The runway score is 16 / 20. The qualitative runway is large: open-internet advertising, CTV, retail media, commerce data activation, supply-path transparency, identity, AI-assisted campaign planning, and international penetration all support continued growth. The data package and segment appendix correctly avoid modeling those vectors as separate historical P&Ls. Instead, they feed one consolidated revenue CAGR assumption.

The base synthesis case uses 14.5% revenue CAGR from the TTM base to 2031-03-31, taking revenue from $2.969 billion to $5.843 billion. That is below the FY2022-FY2025 historical CAGR of about 22.4% and below the bull case, but above the latest Q1 2026 year-over-year growth rate of 12%. This is an optimistic but defensible base case if CTV, retail media, OpenPath, UID2, Kokai/Koa, and value-added services remain productive. The runway score receives strong credit because the business has already shown it can grow organically and profitably at multi-billion-dollar scale.

The score does not go higher because the current evidence is not granular enough. CS cannot see CTV revenue, retail-media revenue, Kokai ARR, OpenPath take rate, UID2 monetization, retention cohorts, or customer count. Management's narrative may be right, but the rubric does not award full credit from narrative alone. The best evidence is consolidated growth, gross spend, customer retention, and pricing commentary, not product-unit disclosures.

7. Moat Analysis

The moat score is 10 / 15. The moat appendix assigns **Moat gate: YELLOW** and **2046 test: YELLOW**. CS treats that as meaningful evidence, not as a mechanical ER2 verdict override.

The moat is real today. TTD is a scaled independent buy-side advertising platform. Its advantages include buyer neutrality, broad integrations, agency workflow embedding, high retention, data feedback, OpenPath supply access, UID2 and related identity efforts, and Kokai/Koa AI upgrades. The company monetized $13.4 billion of gross spend in 2025 and had customer retention above 95% for over a decade. Small competitors can copy interface language, but they cannot easily replicate scaled demand, data relationships, CTV partnerships, agency mindshare, and live bidding infrastructure.

The moat is not clean enough for an unconditional Gideon pass. TTD does not own the consumer relationship. It does not own most premium media inventory. It does not control the dominant operating systems, search/social surfaces, retail transaction graphs, or logged-in identity networks. Google, Amazon, Meta, major retailers, streaming platforms, agency tools, and AI-native buying systems can pressure the control point. Contractual lock-in is also weaker than classic enterprise software: MSAs generally renew annually, can be terminated on notice, and do not contain material spend commitments.

Retention is behavior-based, not contractual.

AI is a two-sided risk. If Kokai and Koa make TTD the trusted agentic buying layer, AI strengthens the platform. If advertisers, agencies, cloud marketing stacks, or walled gardens control the AI planning layer and route execution to interchangeable endpoints, TTD can become a lower-value rail. The 2046 YELLOW conclusion captures that unresolved control-point risk.

8. Accounting and Capital Allocation Analysis

Accounting and financial quality receive 7 / 10. There is no identified restatement, material weakness, SEC enforcement action, or QF/QFR arithmetic failure in the reviewed ER2 chain. Cash conversion is excellent and the balance sheet is strong. Those are real positives.

The main accounting-quality issue is not fraud; it is owner-earnings interpretation. Adjusted EBITDA excludes SBC, and the management appendix warns that SBC is a key and continuing part of compensation. CS treats SBC as economic cost. FY2025 SBC of $490.6 million is too high relative to revenue and net income to wave away. TTM SBC of $471.4 million is more than half of TTM FCF. A company can be cash-generative and still transfer too much value to employees and executives before shareholders receive true per-share compounding.

Capital allocation receives only 5 / 10. Organic reinvestment is rational. M&A is not being used to mask deceleration; FY2025 acquisition cash outflow was only about $4.35 million. Buybacks are constructive in the latest period because diluted shares fell from about 501.9 million in FY2024 to 493.6 million in FY2025 and 476.9 million in Q1 2026. But the quality of the buyback is mixed. A large portion is dilution offset, not clean return of surplus capital. The synthesis models $750 million of annual repurchases and still gets only a 6.1% five-year net share reduction after SBC issuance.

The management gate is the largest cap. The appendix_management verdict is **Management gate: FAIL**. The reasons are not cosmetic: Class B shares have ten votes per share; Jeff Green held 49.7% voting power as of March 2026; Class B can last to 2035; recent CFO turnover was abrupt; compensation leans on revenue, adjusted EBITDA, TSR, and stock-price metrics rather than ROIC or FCF per share; the audit committee was temporarily thin; and litigation around Nevada reincorporation/control matters raises minority-protection concerns. Green's large March 2026 open-market purchase is a strong positive, but it does not cure the governance structure.

9. 20% Return Underwriting

The current price is attractive under ER2's P/E 15 test but not enough for the diagnostic 20% return hurdle in the base case.

The synthesis base case reaches $2.40 of EPS at 2031-03-31. Applying a 15x exit P/E gives an ending value of $35.97 per share. From a $18.37 starting price, with no dividends, that is about a **14.4% annualized return** over five years. The bear case reaches $1.40 of EPS, or $20.94 at 15x, producing about **2.6% annualized**. The bull case reaches $3.25 of EPS, or $48.80 at 15x, producing about **21.6% annualized**. The bull case can clear the target; the base case does not.

Case	Horizon EPS	Exit P/E	Horizon value	Implied 5-year IRR	Diagnostic read
Bear	1.40	15.0x	20.94	2.6%	Not acceptable
Base	2.40	15.0x	35.97	14.4%	Attractive but below 20%
Bull	3.25	15.0x	48.80	21.6%	Clears only if bull case occurs

The max buy price for a 20% five-year IRR on the base-case 15x exit value is about **$14.46**, calculated as $35.97 divided by 1.20 to the fifth power. The current price is above that. A longer 10-year path might produce a different conclusion if TTD keeps compounding beyond 2031, but the current ER2 model supplied a five-year horizon and the moat appendix explicitly withholds a clean 2046 pass. CS should not assume 10 years of high-return compounding beyond the modeled period without stronger durability evidence.

The reverse-DCF test is demanding but not impossible. Using an enterprise value of roughly $7.65 billion, normalized TTM NOPAT of roughly $451 million, a 15x exit EV/NOPAT multiple, and a 20% target return for five years, required horizon NOPAT is roughly $1.27 billion. That implies roughly low-20s annual NOPAT growth from the TTM base. The base synthesis case generates NOPAT of about $1.05 billion at 25% tax on $1.402 billion of operating income, short of that hurdle. The bull case is closer. This supports a partial valuation score, not a full one.

10. Hard Veto Checklist

Veto item	Result	Evidence
ROIIC below cost of capital with no path	Pass	R&D-inclusive ROIIC appears above cost of capital, though not elite
Reported ROIC is only an artifact	Watch	Asset-light accounting helps; R&D capitalization keeps the score conservative
Growth needs external financing	Pass	Net cash, high FCF, no funded debt
Share count rises materially without value creation	Watch	Recent shares down, but SBC is high and buybacks offset dilution
Large acquisitions without disclosed returns	Pass	M&A immaterial in latest annual period
FCF structurally lags earnings	Pass	FCF materially exceeds net income and NOPAT
Platform dependency, cyclicality, regulation, or concentration can impair equity	Watch	Walled gardens, privacy, CTV/retail control, macro ad cycles, and AI are live risks
20% return case requires terminal multiple expansion	Watch	Bull can clear at 15x, but base does not clear 20%; no full credit
Company needs flawless execution to justify price	Pass	P/E 15 base cushion is wide
Cannot explain moat in one paragraph	Pass	Neutral scaled buy-side DSP with workflow, data, integration, and trust advantages
Governance/accounting issues impair trust	**Fail**	Management appendix FAIL: dual-class control, CFO churn, SBC, compensation, and minority-protection issues
Balance sheet risk could wipe out holders	Pass	Zero funded debt and net cash

The governance hard veto is enough to prevent an "investable now" classification under the diagnostic rubric. Again, this is diagnostic and does not mechanically override ER2's formal gates; it tells the Stage 7 scorecard what the compounder lens implies.

11. Final Decision

Compounder Score note: 67/100 - Reject under the diagnostic rubric despite good operating quality, because management FAIL, moat YELLOW, high SBC, and a sub-20% base-case IRR cap the score.

Business Quality Score note: 55/80 - Strong growth, retention, FCF conversion, and net cash are offset by only mid-tier R&D-inclusive ROIIC, product-level opacity, high SBC, and governance defects.

20% Return UW Score note: 12/20 - P/E 15 clears with a 95.9% base-case cushion, but a 15x base-case exit implies about 14.4% IRR, below the 20% hurdle; bull case is needed to clear 20%.

The evidence supports Watch-quality operating fundamentals but Reject-level diagnostic classification because the rubric treats governance trust and 20% return underwriting as core requirements. A lower price around the mid-$14s, a governance reset, sustained net share reduction after SBC, a permanent CFO with clean reporting cycles, and clearer evidence that TTD remains the AI-enabled open-internet control layer would materially improve the score.

12. Machine-Readable JSON

The machine-readable version is written separately to `compounder_score.json`.

Appendix CSA - Scoring Audit

The Trade Desk - Scoring Audit

Generated: 2026-06-29 Asia/Singapore. Role: Subagent CSA - Scoring Auditor. Company: The Trade Desk. Ticker: TTD. Currency: USD. Price anchor: $18.37. TTM end: 2026-03-31. Horizon date: 2031-03-31.

1. Original vs Audited Scores

Item	Original	Audited	Notes
Business Quality Score / 80	55	48	Reduced for product-level opacity, management FAIL, moat YELLOW, and only mid-tier R&D-inclusive ROIIC
Valuation / 20% Return UW Score / 20	12	10	Reduced because the base case does not clear 20%, reverse-DCF growth is above the base case, and buybacks rely on future authorization refreshes
Total Score / 100	67	58	Reject remains the score-implied classification
Classification	Reject	Reject	Score below 70, hard governance veto, and base-case IRR below 20%

The original markdown and `compounder_score.json` agree on the headline scores: Business Quality 55 / 80, Valuation / 20% Return Underwriting 12 / 20, total 67 / 100, classification Reject, base IRR 14.4%, bear IRR 2.6%, bull IRR 21.6%, and maximum base-case 20% IRR buy price of about $14.46. There is no original-file inconsistency requiring a restatement.

The audited score is 58 / 100. The main conclusion is not that CS missed the core thesis. CS correctly rejected the score and correctly identified management FAIL, moat YELLOW, high SBC, and sub-20% base IRR. The audit reduces the score because several partial-credit items were still too generous under the CSA caps. The evidence supports a good, cash-generative, scaled advertising technology platform, but not a clean compounder score. The company is neither a dream business nor a dream investment under this diagnostic rubric.

2. Score Reductions and Reasons

This score is reduced because the runway and moat evidence is less granular than the original subscore implies. The data package and segment appendix repeatedly state that official sources disclose one reportable segment only. CTV, retail media, Kokai/Koa, OpenPath, UID2/EUID/OpenPass, Ventura, OpenTTD, and OpenAds are strategic capabilities, not dollar-disclosed product revenue lines. Customer retention is disclosed only as greater than 95%, and customer count, exact NRR, ARR, product seats, product pricing, and product take rate are not disclosed. That evidence can support a positive runway score, but it should not support near-full credit for large market opportunity, repeatable expansion, and market-structure durability.

Incremental returns are reduced from 17 / 25 to 15 / 25. The data package supports FY2025 ROIC of 28.8% and a five-year median of 16.2%, while the CS report estimates R&D-inclusive ROIIC at roughly 21% for three years and roughly 17% over the longer period. Those are good returns, but not a dream-compounder profile above 35%. The ROIIC calculation also depends on an analytical R&D-capitalization boundary rather than a fully disclosed reinvestment bridge. It deserves credit because CS did calculate ROIIC instead of asserting it, but the 1B and unit-economics credit should be tighter.

Reinvestment runway is reduced from 16 / 20 to 13 / 20. Consolidated revenue, gross spend, and retention evidence are real, but the growth-vector case depends heavily on management commentary around CTV, retail media, Kokai/Koa, OpenPath, identity, and AI. CSA rules cap qualitative runway scores when they rely mainly on management TAM claims. The audited score still gives credit for FY2021-FY2025 revenue growth, FY2025 gross spend of $13.4 billion, and organic growth, but it does not award high-end runway points without product dollars, take-rate history, or cohort economics.

Durability of moat is reduced from 10 / 15 to 9 / 15. The moat appendix is explicit: Moat gate YELLOW and 2046 test YELLOW. TTD has scale, buyer neutrality, retention, data feedback, OpenPath, UID2 efforts, and Kokai/Koa upgrades. It also lacks hard contractual lock-in, consumer ownership, premium inventory ownership, dominant operating-system control, and the largest first-party data graphs. AI can help the platform, but it can also move the control point upstream to advertiser, agency, cloud, or walled-garden agents. A YELLOW moat can receive moderate credit; it should not approach pass-quality

credit.

Capital allocation is reduced from 5 / 10 to 4 / 10. Organic reinvestment and low M&A deserve credit. The buyback evidence is mixed: diluted shares declined recently, but TTM SBC was $471 million and FY2025 SBC was $491 million. The synthesis models $750 million of annual buybacks and still gets only a 6.1% five-year net share reduction after SBC issuance. That means buybacks help, but much of the spend offsets compensation dilution. The management appendix also shows compensation design is not centered on ROIC, FCF per share, or dilution-adjusted EPS.

Valuation / 20% underwriting is reduced from 12 / 20 to 10 / 20. The arithmetic in the synthesis is sound: base EPS reaches $2.40, required EPS at a 15x P/E is $1.2247, and the P/E 15 gate clears with a 95.9% cushion. But the diagnostic rubric is stricter than the ER2 price gate. A 15x exit on $2.40 of base EPS gives a five-year value of about $35.97, or about 14.4% annualized from $18.37. The base case does not clear 20%. The bear case is only about 2.6%. The bull case clears, but the bull case cannot carry the classification. Reverse DCF also requires low-20s NOPAT CAGR while the base model generates about $1.05 billion of horizon NOPAT versus a roughly $1.27 billion 20% hurdle.

3. Unsupported Claims

The evidence does not support treating product-specific growth vectors as separate proven engines. CTV, retail media, Kokai/Koa, OpenPath, UID2/EUID/OpenPass, Ventura, OpenTTD, and OpenAds may be important, but the official-source inventory found no dollar revenue, operating income, margin, ARR, seats, customer count, NRR, or product-specific take-rate disclosure for them. Any claim that these lines independently support high-end runway or pricing-power points is partly unsupported.

The evidence does not support full confidence in customer economics. Retention above 95% for more than a decade is strong, but the exact percentage, cohort quality, customer count, gross retention, net retention, spend concentration, and product attach are not disclosed. The segment appendix correctly avoids a cohort model. The score should do the same.

The evidence does not support clean governance trust. The management appendix assigns Management gate: FAIL because of dual-class founder control through 2035, Jeff Green's 49.7% voting power, CFO churn, a temporarily thin audit committee, compensation metrics focused on revenue/TSR/adjusted EBITDA/stock price rather than ROIC or FCF per share, high SBC, and litigation around reincorporation/control matters.

4. Calculation Errors

I did not find a mechanical calculation error in the core P/E 15, EPS, or share-count math. The synthesis uses one official segment, compounds from the TTM base, applies a 25% tax rate, models net interest/other income at $30 million, charges ongoing SBC share issuance, and steps up buyback prices. The base EPS build reconciles: $1.402 billion operating income plus $0.030 billion net interest/other income equals $1.432 billion pre-tax income; after 25% tax, net income is $1.074 billion; divided by 447.9 million diluted shares gives about $2.40 EPS.

The valuation reduction is therefore an underwriting judgment, not an arithmetic correction. The calculation breaks at the diagnostic return hurdle: base-case 15x exit value does not produce 20% annualized return, and the reverse-DCF growth requirement is above the base-case NOPAT build. The model clears ER2 P/E 15, but that is a different test from 20% annualized return underwriting.

5. Missing Data

The most important missing evidence is product-level economics. The source files do not disclose CTV revenue, retail-media revenue, Kokai/Koa ARR or seats, OpenPath revenue, UID2 monetization, value-added-services mix, product margin, product capex, or product take rate. This matters because the higher runway and moat points lean on those initiatives.

The second missing evidence set is customer economics. Customer retention is disclosed only as greater than 95%; exact retention, customer count, cohort spend, churn, and NRR are unavailable. Retention deserves credit, but not maximum credit.

The third missing evidence set is a clean owner-earnings bridge around SBC. The evidence is clear that SBC is large, but future grant pace, true dilution by award type, and repurchase authorization persistence are model assumptions. The synthesis handles this conservatively enough for EPS modeling, but the score should not award full cash-return credit while SBC consumes more than half of TTM FCF.

6. Hard-Veto and Threshold Test Audit

The hard-veto audit fails on governance and 20% return underwriting. Management FAIL is a hard diagnostic veto, even though Jeff Green's strategic record and March 2026 open-market purchase are positives. The moat is YELLOW, not a hard fail, but it caps durability because the 2046 case is plausible rather than proven. Accounting quality is not a fraud concern; the source chain reconciles and QF/QFR cleared the foundation. The accounting concern is owner-earnings interpretation because adjusted EBITDA excludes material SBC.

The classification threshold test also fails. Total score is below 70. Business Quality is below the 65 / 80 investable-now threshold. Valuation underwriting is below 15 / 20. Base-case IRR is below 20%. Bear-case IRR is below the 8-10% downside threshold. A hard governance veto exists. The 20% case does not require terminal multiple expansion in the bull case, but the base case simply does not clear 20%.

7. Final 20% Hurdle Pass/Fail

Final 20% hurdle: FAIL. The base case does not pass. The bull case can pass at a 15x exit P/E, but the diagnostic framework does not allow a bull case to substitute for a confident base case. The maximum buy price for a 20% five-year return on the base-case 15x exit value remains about $14.46, below the current $18.37 price anchor.

8. Dream Business / Dream Investment Classification

Classification: neither. The Trade Desk is a high-quality operating business in several respects: net cash, high retention, strong FCF conversion, one clean segment, and credible open-internet growth vectors. It is not a dream business because management fails the Gideon trust bar, the moat is YELLOW, SBC is high, and ROIIC is good rather than elite after charging R&D-like reinvestment. It is not a dream investment at $18.37 because the base-case 15x exit IRR is about 14.4%, not 20%.

The single biggest reason the company does not qualify is governance plus dilution discipline. The business could still compound, and the price is not obviously expensive under P/E 15, but the score cannot grant compounder-quality confidence while minority-shareholder protections, CFO continuity, incentive design, and SBC remain unresolved.

9. Stage 7 Scorecard Notes

Compounder Score note: 58/100 - Reject under the diagnostic rubric; operating quality is real, but management FAIL, moat YELLOW, product-level opacity, high SBC, and sub-20% base IRR cap the score.

Business Quality Score note: 48/80 - Strong growth, retention, FCF conversion, and net cash are offset by mid-tier R&D-inclusive ROIIC, no product-level economics, high SBC, and weak governance.

20% Return UW Score note: 10/20 - P/E 15 clears with a wide EPS cushion, but a 15x base-case exit produces only about 14.4% IRR; bull case is needed to clear 20%.

10. Auditor JSON

The machine-readable audited score is written separately to `compounder_score_audit.json`.

Appendix RT - Red Team

The Trade Desk - Red Team

Generated: 2026-06-29 Asia/Singapore. Role: Subagent RT - Red Team. Company: The Trade Desk. Ticker: TTD. Workdir: `C:\Users\Admin\OneDrive\GPT\ER 2.0\The Trade Desk`. Output file: `C:\Users\Admin\OneDrive\GPT\ER 2.0\The Trade Desk\appendix_red_team.md`.

This appendix is deliberately adversarial. The synthesis is arithmetically clean: one official segment, TTM revenue of $2.969 billion, base revenue of $5.843 billion at the 2031-03-31 horizon, base GAAP operating margin of 24.0%, base EPS of $2.40, and a 15x P/E value that clears the current $18.37 price by 95.9%. The red-team question is different: what part of that clean model is least likely to survive contact with the industry structure, the governance file, and the audited score? My answer is that the model is most fragile where it assumes The Trade Desk remains an open-internet control layer rather than becoming one more execution endpoint beneath inventory owners, walled gardens, retail networks, CTV platforms, and AI-mediated agency workflows.

1. The most fragile assumption

The most fragile assumption is the consolidated platform base-case revenue CAGR of 14.5% from TTM revenue of $2.969 billion to $5.843 billion by 2031-03-31. This is the only reportable segment and therefore the whole business. The segment appendix correctly refuses to invent CTV, retail media, Kokai/Koa, OpenPath, UID2, EUID, OpenPass, Ventura, OpenTTD, or OpenAds product P&Ls. That discipline also reveals the vulnerability: the base case gives consolidated revenue growth credit to strategic vectors that do not have disclosed product dollars, product margins, ARR, seats, customer counts, net retention, take-rate history, or cohort spend data.

The latest trend does not make 14.5% impossible, but it does put the burden of proof on reacceleration. Reported revenue growth decelerated from +19% in Q2 2025 to +18% in Q3, +14% in Q4, and +12% in Q1 2026. The Q2 2026 guide of at least $750 million annualizes to $3.0 billion and, if compared only to Q2 2025 revenue of $694 million, implies roughly +8% at the floor. Management can beat a floor, and the synthesis does not use the floor as a full-year model, but the immediate evidence is not a high-teens run-rate. The base case asks investors to believe that CTV, retail media, value-added services, platform fees, Kokai/Koa, OpenPath, and identity will reverse the recent slope.

If that 14.5% CAGR is wrong by 200 bps, the synthesis says base EPS falls from $2.40 to $2.20. If the miss is not just 200 bps but a structural move toward the bear case's 8.5% CAGR, horizon revenue falls to $4.464 billion and, using the bear margin of 18.0%, EPS falls to $1.40. The P/E 15 gate still clears narrowly at $18.37, but the compounder thesis changes character. The business would no longer be a high-quality control-plane compounding story; it would be a good advertising infrastructure asset whose growth and returns are being capped by stronger owners of data, inventory, and workflow.

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

The Stage 5 number most likely to be optimistic is not the tax rate or the mechanical share-count arithmetic. It is the base 24.0% GAAP operating margin, because it requires +370 bps of expansion while the company is still defending AI, CTV, identity, retail media, supply-path, international, privacy, and platform-infrastructure transitions. The segment appendix calls the move moderate, and it is moderate relative to some software cases. But for this business the incremental burden is not only headcount. It includes infrastructure, model quality, data partnerships, compliance, publisher integrations, CTV complexity, client service, agency support, and the cost of staying relevant while walled gardens and large media owners invest in their own buying and measurement tools.

The adjusted EBITDA guide of at least 40% does not solve this. The synthesis correctly refuses to translate adjusted EBITDA directly into GAAP operating margin because SBC is material. The management appendix shows FY2025 SBC of about $491 million, around 16.9% of revenue, and TTM SBC of about $471 million appears in the synthesis. If growth decelerates while the company keeps paying in stock to retain AI, product, sales, and engineering talent, GAAP margin expansion can disappoint even when adjusted EBITDA messaging stays clean. A 200 bps margin miss lowers EPS by roughly $0.20. If revenue and margin miss together, the base case becomes a stale midpoint, not a conservative case.

The share count path is the second optimistic number. The model assumes $750 million of annual buybacks, despite only $500 million of authorization noted in February 2026, and assumes future refreshes. It is not aggressive in net share reduction: ending diluted shares fall only 6.1% over five years, from 476.9 million to 447.9 million, because gross buybacks

retire 157.3 million shares while SBC adds 128.3 million. That is a reasonable model path, but it is governance-sensitive. A founder-controlled board with high SBC and revenue/TSR-heavy compensation can keep buying back shares while still delivering mediocre owner-earnings conversion per share.

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

The short case is that The Trade Desk is being valued and modeled as the neutral open-internet operating system, but the profit pool is migrating toward whoever owns the consumer, the inventory, the retail transaction graph, the device surface, or the AI planning layer. CTV and retail media can grow quickly while TTD captures less incremental economics, because Amazon, Google, Meta, major streamers, retailers, and device ecosystems can bundle inventory, data, measurement, and buying tools inside their own systems. AI does not merely help Kokai and Koa; it can move the control point upstream to agency or advertiser agents that decide budget allocation and treat the DSP as an interchangeable execution rail.

In that bear case, customer retention can remain above 95% while spend growth and take-rate quality deteriorate. That is the important point: no collapse is required. The company can keep large customers, keep a respected platform, and still stop deserving low-to-mid teens revenue growth plus margin expansion. The numbers would show up first as two or more quarters of revenue growth below 10% despite healthy CTV and retail-media industry commentary, followed by value-added-services/pricing language that no longer translates into GAAP operating leverage. The bear does not need fraud, recession, or product failure. It only needs TTD to become useful but not economically central.

4. Cross-examination of management commentary

Management statement one: "CTV continues to be our fastest-growing channel." That is strategically plausible, but the data package explicitly says no CTV revenue dollars or growth percentage were disclosed. The skeptical read is that CTV growth can be true at the channel level while the strongest economics accrue to premium inventory owners, streaming platforms, device platforms, or direct ad stacks. Omdia's May 2026 CTV market item says Amazon, Netflix, and Google are expected to capture about half of an $81 billion CTV advertising market by 2030 (https://omdia.tech.informa.com/pr/2026/may/amazon-netflix-and-google-to-capture-half-of-81-billion-dollars-ctv-advertising-market-by-2030). That is exactly the structural risk: CTV growth may validate the TAM but not TTD's share of economics.

Management statement two: "Retail media continues to scale rapidly." Again, the issue is not whether retail media grows. The issue is who owns the transaction data, closed-loop measurement, shopper identity, and ad inventory. Amazon Ads' own 2025 CTV materials emphasize its position in connected TV advertising (https://advertising.amazon.com/library/news/idc-marketscape-leader-amazon-ads-2025), and Amazon has the retail graph that independent DSPs do not own. Retailers can partner with TTD for offsite activation and still keep the most valuable data and measurement economics inside their own networks. If management is overpromising here, the first sign will be consolidated growth failing to accelerate despite continued retail-media industry growth.

Management statement three: "almost 100% of our clients are running through Kokai today." That may be real adoption, but it is not proof of incremental monetization. The data package found no Kokai/Koa product revenue, ARR, seats, pricing, or product margin disclosure. Near-universal adoption can mean customers were migrated to the new default experience, not that they are paying materially more or shifting budget share. If Kokai/Koa is not economically powerful, TTD should show high adoption but only modest consolidated growth and no durable GAAP margin expansion. That is the exact pattern the red team should monitor.

5. Stage 5 tie-out reverification

The synthesis's tie-outs appear mechanically sound. The TTM base uses Q2 2025 through Q1 2026, not a prematurely annualized FY2026 estimate. The one-segment rollup is clean. The EPS math reconciles. The problem is not arithmetic; it is that the recency anchor may be backward-looking in a decelerating business. A model can start from the correct TTM base and still overstate the forward path if the most recent quarters are showing a new slope. The first-forward-year endpoint of $3.400 billion implies 14.5% growth from TTM. That is not egregious, but it does assume the Q1 2026 +12% and Q2 floor do not represent the new normal.

The share-count path is also explicit but not fully underwritten. Annual buybacks of $750 million are close to 89% of TTM FCF after SEC PP&E capex. That leaves less room for heavier AI, data, privacy, and infrastructure investment, or for a downturn in ad budgets. If buybacks are reduced to the current authorization and not refreshed, the ending share count worsens. If SBC rises with AI talent competition, the current 25.7 million share annual issuance proxy may understate dilution. The model handles SBC better than most adjusted-EBITDA stories, but it still relies on board discipline that the management appendix

does not trust.

The product opacity is the hardest underwriting defect. The base CAGR exceeds latest Q1 2026 growth and relies on named drivers, but none of those drivers has a disclosed dollar base. That means the analyst cannot test whether CTV is large enough, whether retail media is profitable enough, whether OpenPath changes take rate, or whether Kokai increases paid attach. The model avoids fabrication, but the absence of fabrication is not the same as evidence.

6. Score-derived 20% return claim most likely to be wrong

The audited score already says the 20% return case does not clear. Red team agrees. The most likely wrong claim would be any attempt to imply that the wide P/E 15 cushion is equivalent to a 20% return underwriting case. It is not. The scoring audit states that base-case EPS of $2.40 at a 15x exit produces about $35.97 of value and roughly 14.4% annualized IRR from $18.37. The bull case can clear 20%, but the bull case requires $7.085 billion of revenue, 19.0% CAGR, and 27.0% GAAP operating margin. That is a strong open-internet outcome, not a confident base case.

The assumption that breaks the 20% case first is NOPAT CAGR combined with exit multiple discipline. The reverse-DCF requirement is above the base-case NOPAT build, and the base case itself depends on growth reacceleration plus margin expansion. Buybacks do not rescue the 20% case because the modeled net share reduction is only 6.1% over five years after SBC. FCF conversion is good, but owner earnings per share are diluted by compensation and by the need to keep investing against control-point migration.

7. The signal that forces an exit

Exit signal: if consolidated revenue growth is below 10% year over year for two consecutive reported quarters while GAAP operating margin is below 20% on the same two-quarter trailing basis, treat the base case as broken. The timing window is the next two reported quarters after Q1 2026, because the Q2 2026 guide is the first near-term test of whether the +12% Q1 print was a trough or a new slope.

This threshold is specific to the thesis. The base case needs 14.5% five-year growth and 24.0% horizon GAAP operating margin. A two-quarter sub-10% growth print would say the platform is not reaccelerating despite CTV, retail, Kokai, OpenPath, AI, and identity claims. A sub-20% GAAP margin at the same time would say the company cannot defend both growth and profitability while investing. If both conditions happen together, the right rewrite is not "temporary macro pressure." The right rewrite is "open-internet DSP economics are being competed down or bypassed."

8. Conviction at the end of red team

Thesis does not survive as a Gideon BUY. It can survive as a cheap-looking, high-quality ad-tech WATCH or PASS candidate, because the P/E 15 arithmetic is favorable and the company is real: high retention, net cash, FCF generation, scaled gross spend, and a coherent founder strategy. But the synthesis should not be rewritten around the valuation cushion alone. The binding problem is that Management is FAIL, Moat and 2046 are YELLOW, the audited score is 58/100 Reject, the base 20% return case fails, and the forward growth/margin case rests on undisclosed product economics in a market where control points can migrate away from independent DSPs.

The red-team conclusion is conditional only in the narrow sense that TTD could become investable if the governance and evidence set change. Upgrade evidence would require stable permanent CFO execution, a clearer dilution-adjusted compensation framework, sustained net share reduction after SBC, two or more quarters of growth reacceleration above the low teens, and proof that CTV/retail/OpenPath/Kokai/identity are lifting consolidated revenue quality or margin rather than only management narrative. Until then, the strongest bear case is not that The Trade Desk is broken. It is that a good business with weak minority protections, high SBC, product opacity, and YELLOW durability does not deserve to be forced into a compounder BUY because a mechanical 15x EPS test clears at a depressed price.

Key red-team findings

Finding	Red-team read
Strongest bear argument	TTD can remain useful while the economics migrate to inventory, data, CTV, retail, and AI control-point owners.
Most optimistic Stage 5 number	Base 24.0% GAAP operating margin; it assumes operating leverage while AI, CTV, identity, privacy, infrastructure, and SBC remain expensive.
Fragile base assumption	14.5% revenue CAGR from a latest-quarter +12% growth print and Q2 guide floor that implies only about +8% versus Q2 2025.

Finding	Red-team read
20% return flaw	P/E 15 passes, but base 15x exit IRR is only about 14.4%; bull case is needed for 20%.
Exit threshold	Two consecutive quarters with revenue growth below 10% and two-quarter trailing GAAP operating margin below 20%.

Appendix D - Data Package (Raw Historicals)

The Trade Desk (TTD) - Data Package

PATH_RECEIVED: C:\Users\Admin\OneDrive\GPT\ER 2.0\The Trade Desk\data_package.md

Generated: 2026-06-29 Asia/Singapore. Role: Subagent D, Data Package. Scope was limited to this file and D-prefixed raw pulls under `raw/`; no local data warehouse cache was read or substituted. Unless explicitly stated as calculated, historical dollar figures below come from live FMP stable pulls or live SEC EDGAR filings / earnings exhibits fetched in this run.

Stage 0 - Time anchor

- Today: 2026-06-29.
- Company fiscal year convention: fiscal year ends December 31.
- Most recently reported quarter: Q1 2026 ended 2026-03-31, based on The Trade Desk Q1 2026 Form 10-Q / earnings release filed/released May 2026.
- TTM anchor: Q2 2025 + Q3 2025 + Q4 2025 + Q1 2026 -> TTM ending 2026-03-31.
- Forward horizon: TTM + 5 calendar years = 2031-03-31. Compounding span: exactly five calendar years from 2026-03-31 to 2031-03-31.

0a. Industry classification and disclosure inventory

The Trade Desk is a U.S. domestic issuer in ad-tech / software, reporting under U.S. GAAP with a December 31 fiscal year. The controlling source set for this package is live FMP stable endpoints for structured financial statements, SEC EDGAR filings and exhibits for official disclosure, FMP live earnings-call transcripts for call commentary, and live company IR pages where accessible through web fetch. FMP annual and quarterly `revenue-product-segmentation` endpoints returned empty arrays in this run. Because this is a KPI-heavy ad-tech platform, the industry checklist was triggered before labeling products or KPIs as not disclosed.

Official sources checked live in this run: FMP profile, quote, income statement, balance sheet, cash flow, ratios, key metrics, revenue-product-segmentation annual and quarterly, and earning-call-transcript for FY2025 Q2, FY2025 Q3, FY2025 Q4, and FY2026 Q1; SEC FY2021 through FY2025 Forms 10-K; SEC Q2 2025, Q3 2025, and Q1 2026 Forms 10-Q; SEC 8-K earnings exhibits for Q2 2025, Q3 2025, Q4 2025, and Q1 2026; SEC submissions and companyfacts JSON. Direct PowerShell download of the company IR pages returned 403 twice, but the in-app web fetch opened the same IR URLs successfully; SEC exhibits provide the saved local source artifacts for the release tables.

Search terms and table names checked: `one operating segment`, `Segment and Geographic Information`, `revenue-product-segmentation`, `gross spend`, `Gross Billings`, `customer retention`, `CTV`, `retail media`, `Kokai`, `Koa`, `OpenPath`, `UID2`, `Unified ID 2.0`, `Ventura`, `OpenTTD`, `OpenAds`, `revenue-generating value-added services`, `remaining performance obligations`, `deferred revenue`, `geographic area`, `United States`, `International`, `share repurchases`, `revolver`, and `debt`.

Dataset / table family	Official source searched	Search terms or table names	Years available	Included in data package?	If excluded, why	Downstream relevance
Segment economics	FY2021-FY2025 10-Ks, Q1 2026 10-Q, FMP statements	Segment and Geographic Information, one operating segment	FY2021-FY2025, Q1 2026	Yes	n/a	Defines the only segment appendix and prevents product-line fabrication
Product revenue	FMP product segmentation, 10-K, 10-Q, 8-K releases	revenue-product-segmentation, CTV, retail media, Kokai, OpenPath, UID2	FMP returned 0 rows; official sources disclose narrative/KPIs only	Yes, as non-dollar disclosure	No product dollars disclosed	Blocks CTV/retail/Kokai historical dollar splits
Gross spend / platform scale	FY2021-FY2025 10-Ks and Q4 FY2025 release	Gross spend, Gross Billings	FY2021-FY2025	Yes	n/a	Scale and take-rate context for ad-tech economics
Customer retention	FY2021-FY2025 10-Ks and quarterly releases	customer retention, over 95%	Qualitative annual continuity, no exact percentage above 95	Yes	Exact percentage not disclosed	Durability and cohort retention proxy

Dataset / table family	Official source searched	Search terms or table names	Years available	Included in data package?	If excluded, why	Downstream relevance
Geography	FY2025 10-K and Q1 2026 10-Q	United States, International, principal geographic area	Revenue basis FY2023-FY2025 and Q1 2026; earlier years old gross-billings basis	Yes, with taxonomy boundary	FY2021-FY2022 geography not comparable to current revenue basis	International growth and concentration
Capital / balance sheet by unit	10-K, 10-Q, FMP balance sheet	capital, debt, revolver, leases, cash	Consolidated only	Yes	No unit-level capital because one segment	ROIC, liquidity, buybacks
Recent trend	Q2-Q4 2025 and Q1 2026 releases, FMP quarterlies	revenue growth, adjusted EBITDA, guidance, share repurchase	Last four quarters	Yes	n/a	Recency check for synthesis

KPI family	Granularity	FY-5	FY-4	FY-3	FY-2	FY-1	Latest interim / TTM	Source path
Gross spend ($B)	Consolidated platform spend	6.172	7.741	9.611	12.041	13.395	Not disclosed for Q1; TTM not disclosed	SEC FY2021-FY2025 10-Ks; Q4 FY2025 release
Customer retention	Consolidated client retention	>95%	>95%	>95%	>95%	>95%	>95% in Q1 2026 release	SEC annual reports and quarterly releases
Geographic revenue - U.S. ($B)	Revenue basis, current taxonomy	n/a	n/a	1.697	2.134	2.477	82% of Q1 2026 revenue	FY2025 10-K; Q1 2026 10-Q
Geographic revenue - International ($B)	Revenue basis, current taxonomy	n/a	n/a	0.249	0.311	0.420	18% of Q1 2026 revenue	FY2025 10-K; Q1 2026 10-Q
CTV / retail media / Kokai / UID2 / OpenPath	Product or capability family	Narrative only	Narrative only	Narrative only	Narrative only	Narrative only	Narrative only	10-Ks, releases, transcripts

Disclosure conclusion: FMP product segmentation is empty and official sources do not separately disclose revenue, operating income, ARR, RPO, customer count, NRR, or dollar revenue for CTV, retail media, Kokai, UID2, OpenPath, Ventura, Koa, OpenTTD, or OpenAds. These are material capabilities and growth vectors, but they are not historical dollar segments. Downstream subagents should model one segment and may use the KPI families above as qualitative or scale evidence only.

1. Reporting structure and taxonomy

Current reportable segment: Advertising technology platform. The FY2025 Form 10-K and Q1 2026 Form 10-Q state that the CEO is the chief operating decision maker and reviews consolidated financial information; The Trade Desk has one primary business activity and one operating segment. Revenue is generated from clients using the platform to purchase advertising inventory, value-added services, and data; the company bills Gross Billings but reports revenue net of supplier components. No product revenue table is disclosed in FMP or official filings.

Segment	Description	FY2025 revenue ($B)	% of FY2025 total	FY2025 operating income ($B)	Source
Advertising technology platform	Self-service cloud platform for buyers of advertising across ad formats, devices, inventory, data, and measurement partners	2.896	100.0%	0.589	FMP annual income statement; FY2025 10-K Note 12

Reporting structure appears stable for the last three years on the reportable-segment axis: FY2023, FY2024, FY2025, and Q1 2026 all map to one operating/reportable segment. A taxonomy flag exists for geography: FY2025 Form 10-K recast FY2024 and FY2023 principal geography to a revenue basis, while older FY2021-FY2022 annual reports show much larger values consistent with gross billings / gross spend geography rather than current revenue-basis presentation. Use FY2023 onward for comparable geographic revenue.

Geographic revenue basis	FY2023	FY2024	FY2025	Q1 2026	Source
United States ($B, annual revenue basis)	1.697	2.134	2.477	82% of revenue	FY2025 10-K; Q1 2026 10-Q
International ($B, annual revenue basis)	0.249	0.311	0.420	18% of revenue	FY2025 10-K; Q1 2026 10-Q
Total / check	1.946	2.445	2.896	100%	Ties to consolidated revenue

2. Consolidated historicals (5 years, FMP-sourced)

Metric	FY-5	FY-4	FY-3	FY-2	FY-1	Source
Revenue ($B)	1.196	1.578	1.946	2.445	2.896	FMP income-statement annual; SEC 10-K tie
Operating income ($B)	0.125	0.114	0.200	0.427	0.589	FMP income-statement annual
Operating margin (%)	10.4%	7.2%	10.3%	17.5%	20.3%	Calculated
Net income ($B)	0.138	0.053	0.179	0.393	0.443	FMP income-statement annual
EPS diluted ($)	0.28	0.11	0.36	0.78	0.90	FMP annual through FY2024; SEC FY2025 10-K / Q4 release official diluted EPS override verified by QF/QFR
Diluted share count (M)	498.5	499.9	500.2	501.9	493.6	FMP annual through FY2024; SEC FY2025 10-K / Q4 release official diluted-share override verified by QF/QFR
Capex ($B)	0.060	0.092	0.055	0.107	0.197	FMP cash-flow annual; SEC PP&E capex controls FY2025
FCF ($B)	0.319	0.457	0.543	0.632	0.796	FMP cash-flow annual
ROIC (%)	12.9%	10.1%	16.2%	28.6%	28.8%	Calculated as NOPAT / average invested capital

ROIC calculation: NOPAT equals operating income multiplied by 79%, using a 21% normalized U.S. tax rate for comparability across the five-year table. Invested capital equals stockholders equity plus FMP totalDebt, which is primarily lease liabilities for TTD, minus cash and short-term investments. Average invested capital uses current and prior year-end invested capital. This cash-adjusted formula intentionally differs from FMP key-metrics ROIC because TTD has very large client-driven working-capital balances and excess cash. FY2025 NOPAT is $0.466B and average invested capital is about $1.617B, producing 28.8%; downstream users should keep the formula consistent if using this ROIC series.

3. Segment historicals (5 years per segment, FMP + 10-K)

Advertising technology platform	FY-5	FY-4	FY-3	FY-2	FY-1	Source
Revenue ($B)	1.196	1.578	1.946	2.445	2.896	FMP annual; single official segment equals consolidated revenue
YoY %	n/a	31.9%	23.3%	25.6%	18.5%	Calculated
Operating income ($B)	0.125	0.114	0.200	0.427	0.589	FMP annual; operating income used as ER2 operating-profit base
Operating margin (%)	10.4%	7.2%	10.3%	17.5%	20.3%	Calculated
Net income / CODM profit measure ($B)	0.138	0.053	0.179	0.393	0.443	SEC segment note identifies consolidated profit review

The segment table has no residual: one segment equals 100% of consolidated revenue. Do not allocate historical dollars to CTV, retail media, Kokai, UID2, OpenPath, Ventura, Koa, OpenAds, geographic regions, or customer cohorts unless a later official source discloses such dollars. This point is the central downstream control for Subagent B: the company can have many product narratives and partner announcements, but there is only one official historical revenue base.

4. Product / sub-segment historicals (most granular disclosed in dollars)

Segment	Product	What it is (1 line)	Dollar disclosure?	If yes, last 3 years revenue + source
Advertising technology platform	Consolidated platform revenue	Platform fees, value-added services, and data from ad buyers using TTD platform	Yes, only at consolidated/single-segment level	FY2023 $1.946B; FY2024 $2.445B; FY2025 $2.896B from FMP annual and 10-K
Advertising technology platform	CTV	Connected-TV inventory access and programmatic buying capabilities	No	True non-disclosure after 10-K, 10-Q, 8-K, transcript, and FMP product searches

Segment	Product	What it is (1 line)	Dollar disclosure?	If yes, last 3 years revenue + source
Advertising technology platform	Retail media / retail data	Retailer data and offsite / onsite retail media activation partnerships	No	True non-disclosure; only narrative and record-level claims
Advertising technology platform	Kokai / Koa	AI-enabled platform upgrade and agentic planning / buying tools	No	True non-disclosure; no ARR, product revenue, or seats disclosed
Advertising technology platform	OpenPath / supply chain tools	Direct publisher inventory connections and transparency tools	No	True non-disclosure; no dollar revenue or take-rate table disclosed
Advertising technology platform	UID2 / EUID / OpenPass	Identity framework and authentication / addressability tools	No	True non-disclosure; disclosed as ecosystem capability, not revenue line
Advertising technology platform	Ventura / OpenAds / OpenTTD	CTV OS, open ad marketplace, and integrated login / analytics initiatives	No	True non-disclosure; early or strategic product disclosures without dollars

Segment	Product or KPI	Disclosure method	Last 4 quarters YoY growth	Source
Advertising technology platform	Consolidated revenue	Dollar revenue and YoY % in releases	Q2 2025 +19%; Q3 2025 +18%; Q4 2025 +14%; Q1 2026 +12%	SEC 8-K exhibits and FMP quarterlies
Advertising technology platform	Gross spend	Annual dollars in 10-K / Q4 release; not quarterly	Not disclosed quarterly	FY2021-FY2025 10-Ks; Q4 FY2025 release
Advertising technology platform	Customer retention	Threshold disclosure only	Over 95% in each of the latest four release/check periods	SEC releases and 10-K
Advertising technology platform	CTV	Narrative growth descriptor	Company calls it largest / fastest-growing channel; no % disclosed	Transcripts and releases
Advertising technology platform	Retail media	Narrative growth descriptor	Record retail-data influenced spend in 2025; no % disclosed	FY2025 Q4 transcript / release
Advertising technology platform	Kokai	Adoption / platform-upgrade language	Nearly all clients tried Kokai in Q3; almost all running through Kokai in Q4; no dollars	FMP transcripts

Internal arithmetic check: no product dollars were back-solved. The only dollar product row is the official consolidated platform revenue row, which ties to FMP annual revenue and SEC 10-K revenue. Therefore no back-solved product-revenue tie-out is required. If a later segment appendix wants a CTV or retail media growth case, it must label that as an assumption from qualitative commentary, not as a historical product revenue CAGR.

5. Most recent quarterly trend (last 4 quarters)

Company FY ends December 31. Most recently completed fiscal quarter at time of writing: FY2026 Q1, covering 2026-01-01 to 2026-03-31, reported on 2026-05-07 via SEC 8-K exhibit 99.1 and the company IR release URL.

Quarter	Revenue ($B)	YoY %	Operating margin (%)	Source (press release date)
Q2 2025	0.694	19%	16.8%	D_TTD_2025_Q2_8K_ex991_sec_live_corrected.htm; release date 2025-08-07
Q3 2025	0.739	18%	21.8%	D_TTD_2025_Q3_8K_ex991_sec_live.htm; release date 2025-11-06
Q4 2025	0.847	14%	30.3%	D_TTD_2025_Q4_8K_ex991_sec_live_corrected.htm; release date 2026-02-25
Q1 2026	0.689	12%	9.7%	D_TTD_2026_Q1_8K_ex991_sec_live.htm; release date 2026-05-07

TTM ending 2026-03-31	Revenue ($B)	Operating income ($B)	Net income ($B)	CFO ($B)	FCF after SEC PP&E capex ($B)	Source
Q2 2025 + Q3 2025 + Q4 2025 + Q1 2026	2.969	0.602	0.433	1.093	0.842	QF/QFR verified, D FMP quarterlies

Recency read-through: reported revenue growth slowed from +19% in Q2 2025 to +12% in Q1 2026, while operating margin compressed in Q1 because platform operations, technology/development, and sales/marketing costs absorbed more of the quarter. The Q1 2026 release guided Q2 2026 revenue to at least $750M and adjusted EBITDA to approximately $260M, implying management expected sequential re-acceleration from Q1 revenue of $689M. The Q1 2026 10-Q says revenue growth was primarily due to higher gross spend, more campaigns by new and existing clients, higher use of value-added services, increased pricing associated with those services, and higher platform fees.

6. Management commentary on forward growth - verbatim quotes

All quotes below were fetched in this run from FMP live transcripts or SEC/IR release pages. Quote snippets are kept short and tied to speaker/date. The company has one segment, so all commentary maps to Advertising technology platform unless noted otherwise.

Date / period	Speaker	Verbatim quote	Topic	Interpretation
2025-08-07 / Q2 2025	Jeff Green, CEO	"Kokai gives advertisers unprecedented power"	Kokai / AI	Management frames Kokai as core platform productivity and performance infrastructure, not a separate revenue line.
2025-08-07 / Q2 2025	Jeff Green, CEO	"CTV continues to be our fastest-growing channel"	CTV	CTV is a growth vector, but no CTV revenue dollars or growth percentage were disclosed.
2025-08-07 / Q2 2025	Jeff Green, CEO	"we are seeing great progress with OpenPath"	Supply chain / OpenPath	OpenPath is positioned as a supply-chain efficiency tool that may raise value capture and inventory quality.
2025-11-06 / Q3 2025	Jeff Green, CEO	"nearly 85% using Kokai as their default experience"	Kokai adoption	Adoption is broad enough to support platform-wide productivity assumptions; still not a product ARR metric.
2025-11-06 / Q3 2025	Jeff Green, CEO	"Retail media continues to scale rapidly"	Retail media	Retail media is scaling, but disclosure is qualitative and should not become a dollar subsegment.
2025-11-06 / Q3 2025	Jeff Green, CEO	"OpenPath is an integration between TTD and a direct source of inventory"	OpenPath	Describes product mechanics; supports moat analysis around supply-chain transparency.
2026-02-25 / Q4 2025	Jeff Green, CEO	"almost 100% of our clients are running through Kokai today"	Kokai adoption	Kokai is now near-universal across clients; model impact should appear in consolidated take-rate / retention, not product revenue.
2026-02-25 / Q4 2025	Tahnil Davis, interim CFO	"headcount growth to remain below revenue growth"	Margins / operating leverage	CFO signals operating discipline for 2026, relevant to forward OI margin assumptions.
2026-02-25 / Q4 2025	Tahnil Davis, interim CFO	"Q1 guidance reflects a prudent approach"	Guidance / macro	Management acknowledged lower visibility, especially CPG and auto, when setting Q1 guidance.
2026-05-07 / Q1 2026	Jeff Green, CEO	"Linear television moving to CTV is still at the early stages"	CTV TAM	Management still sees early-cycle CTV migration despite slower Q1 consolidated growth.
2026-05-07 / Q1 2026	Jeff Green, CEO	"They are investing in and leveraging AI tools like Koa"	AI / Koa	AI tools are described as advertiser and publisher workflow upgrades, not separately monetized SaaS seats.
2026-05-07 / Q1 2026	Tahnil Davis, interim CFO	"For Q2, we expect revenue to be at least $750 million"	Forward guidance	This is the latest explicit near-term revenue anchor for synthesis recency checks.
2026-05-07 / Q1 2026	Tahnil Davis, interim CFO	"full year 2026 adjusted EBITDA margin percentage to be at least 40%"	Forward margin	Management expects adjusted EBITDA margin around FY2025 levels despite ongoing AI investment.

Management commentary summary: the platform story is not a collection of separately disclosed product P&Ls. Management repeatedly discusses Kokai, Koa, OpenPath, UID2, retail media, and CTV as platform capabilities that should improve advertiser outcomes, supply-chain transparency, identity, and access to premium inventory. The only modelable historical dollar base is consolidated platform revenue, gross spend, and consolidated profitability. The strongest forward anchors are the Q2 2026 revenue guide of at least $750M, the FY2026 adjusted EBITDA margin target of at least 40%, and the claim that headcount growth should remain below revenue growth.

7. Capital allocation history (5 years)

Year	Capex ($B)	Capex / revenue (%)	R&D ($B)	R&D / revenue (%)	Buybacks ($B)	Dividends ($B)	M&A ($B)	Source
FY2021	0.060	5.0%	0.226	18.9%	0.000	0.000	0.013	FMP cash flow and income statement annual
FY2022	0.092	5.8%	0.320	20.3%	0.000	0.000	0.000	FMP cash flow and income statement annual
FY2023	0.055	2.8%	0.412	21.2%	0.647	0.000	0.000	FMP cash flow and income statement annual
FY2024	0.107	4.4%	0.463	19.0%	0.235	0.000	0.000	FMP cash flow and income statement annual
FY2025	0.197	6.8%	0.525	18.1%	1.380	0.000	0.004	FMP cash flow and income statement annual

Capital allocation read-through: TTD reinvests through technology/development expense and platform infrastructure, while returning material capital through buybacks. FY2025 repurchases were $1.380B by FMP annual cash flow, and Q1 2026 repurchases added $0.164B. Dividends were zero across the five-year period. M&A was immaterial in the latest annual year at $4.35M, so the historical growth base is organic unless later filings disclose a material acquisition. The buyback program matters for per-share math because share count fell from roughly 501.9M diluted shares in FY2024 to 493.6M official diluted shares in FY2025, and Q1 2026 diluted shares were 476.9M.

8. Balance sheet snapshot (FY-1 and latest quarter)

Item	FY2025 $B	Q1 2026 $B	Source
Cash and equivalents	0.658	0.878	FMP balance sheet; SEC 10-K / 10-Q
Short-term investments	0.645	0.528	FMP balance sheet; SEC 10-K / 10-Q
Cash + short-term investments	1.303	1.406	Calculated
Total debt (current + LT, FMP field)	0.436	0.424	FMP; QF/QFR classify as lease liabilities, not funded debt
Funded debt	0.000	0.000	SEC debt note / QF verified
Net debt (cash), funded-debt basis	-1.303	-1.406	Calculated using funded debt
Net debt / EBITDA	Net cash	Net cash	Calculated; no funded debt
Goodwill + intangibles	0.020	0.000	FMP balance sheet
Tangible book value	2.464	2.453	Calculated

Balance-sheet interpretation: The Trade Desk is net cash on a funded-debt basis. FMP totalDebt maps to operating lease liabilities; QF and QFR verified funded debt of $0 at 2026-03-31. The main balance-sheet modeling issue is not solvency but capital intensity from platform infrastructure, accounts payable / receivable gross billing mechanics, and the pace of buybacks relative to free cash flow and stock-based compensation dilution. Accounts payable and accounts receivable appear large relative to net revenue because the company bills clients for Gross Billings and records payables to suppliers at the net amount payable.

9. Recent corporate actions (last 12 months)

- 2025-08-07: Alex Kayyal was announced as Chief Financial Officer effective 2025-08-21; the Q2 2025 release also noted he had been a board member since February 2025. Source: company IR / SEC 8-K release.

- 2025-08-07: Omar Tawakol was appointed to the Board of Directors. Source: Q2 2025 release business highlights.
- 2025-11-06: Anders Mortensen joined as Chief Revenue Officer. Source: Q3 2025 release business highlights.
- 2026-01-26: Tahnil Davis was announced as Interim Chief Financial Officer after the prior CFO transition; the company reaffirmed Q4 2025 guidance in the related IR release. Source: company IR page and SEC 8-K index.
- 2026-02-25: The company announced an additional share repurchase authorization, bringing total authorized future repurchases to $500M. Source: Q4 FY2025 SEC 8-K exhibit and IR release.
- 2026-05-07: Drew Vollero was appointed to the Board of Directors. Source: Q1 2026 release business highlights.
- Last twelve months through Q1 2026: repurchases totaled about $1.158B using Q2 2025, Q3 2025, Q4 2025, and Q1 2026 cash-flow rows. Source: FMP quarterly cash-flow pulls and SEC releases.
- M&A / divestitures: no material acquisition or divestiture was identified in live FY2025 and Q1 2026 official sources; FMP records only $4.35M acquisition cash outflow in FY2025 / Q1 2025, outside the main latest-four-quarter operating narrative.
- Legal / regulatory: no large new settlement was identified in the fetched FY2025 10-K, Q1 2026 10-Q, or latest releases. Privacy, identity, and regulatory compliance remain ongoing risk factors rather than a new corporate action.

10. Open data gaps

Gap	Classification	Sources and search terms checked	Treatment for downstream users
CTV revenue, margin, or growth percentage	True non-disclosure	FMP product segmentation, FY2021-FY2025 10-Ks, Q1 2026 10-Q, Q2-Q4 2025 and Q1 2026 releases/transcripts; searched CTV and connected TV	Use only as qualitative growth vector; do not create dollar history
Retail media / retail data revenue	True non-disclosure	Same official source set; searched retail media, retail data, shopper marketing	Qualitative support only; no dollar subsegment
Kokai / Koa product revenue, ARR, seats, pricing	True non-disclosure	FMP product segmentation; 10-K; 10-Q; releases; transcripts; searched Kokai, Koa, AI, value-added services	Treat as platform capability affecting consolidated growth and margins
UID2 / EUID / OpenPass revenue	True non-disclosure	Official filings and releases; searched UID2, Unified ID, EUID, OpenPass, identity	Treat as identity ecosystem / moat evidence, not revenue line
OpenPath / supply-chain tool revenue	True non-disclosure	10-K, 10-Q, releases, transcripts; searched OpenPath, supply chain, publisher, inventory	Treat as inventory quality / take-rate lever
RPO, cRPO, ARR, NRR, billings backlog	Not applicable / true non-disclosure	10-K/10-Q searches for RPO, remaining performance obligations, deferred revenue, ARR, NRR, billings	TTD is not a subscription SaaS model; do not force SaaS KPI tables
Customer count and exact retention percentage above 95%	True non-disclosure	Annual reports and releases; searched customer retention, clients, customer count	Use threshold >95%; no cohort model from exact customer count
Geographic revenue before FY2023 in current taxonomy	True non-disclosure due taxonomy boundary	FY2021-FY2024 10-Ks and FY2025 recast; searched principal geographic area, Gross Billings, revenue	Use FY2023-FY2025 comparable revenue basis only; do not mix older gross-billings geography
Company IR raw HTML saved by PowerShell	Not fetched / omitted	Direct downloads to IR pages returned 403 twice; in-app web fetch opened pages; SEC exhibits saved instead	Cite IR URLs for web-open verification and use SEC exhibits as local saved release artifacts

No estimated historical product dollars are included. The only estimates in this package are calculated ratios: operating margin, capex/revenue, R&D/revenue, ROIC, tangible book value, and net cash metrics. Every historical dollar row is sourced from a live FMP pull or live SEC/official filing fetched in this run.

Source manifest for D live pulls

Source family	D raw file(s)	Status
FMP structured statements	`D_TTD_income_statement_annual_live.json`, `D_TTD_income_statement_quarter_live.json`, `D_TTD_balance_sheet_annual_live.json`, `D_TTD_balance_sheet_quarter_live.json`, `D_TTD_cash_flow_annual_live.json`, `D_TTD_cash_flow_quarter_live.json`	Pulled live
FMP profile / quote / ratios / metrics	`D_TTD_profile_live.json`, `D_TTD_quote_live.json`, `D_TTD_key_metrics_annual_live.json`, `D_TTD_ratios_annual_live.json`	Pulled live
FMP product segmentation	`D_TTD_revenue_product_segmentation_annual_live.json`, `D_TTD_revenue_product_segmentation_quarter_live.json`	Pulled live; both empty arrays
FMP transcripts	`D_TTD_transcript_FY2025_Q2_live.json`, `D_TTD_transcript_FY2025_Q3_live.json`, `D_TTD_transcript_FY2025_Q4_live.json`, `D_TTD_transcript_FY2026_Q1_live.json`	Pulled live; dates matched expected call windows
SEC annual filings	`D_TTD_2021_10K_sec_live.htm` through `D_TTD_2025_10K_sec_live.htm` plus clean text extracts	Pulled live
SEC quarterly filings / releases	Q2 2025, Q3 2025, Q4 2025, Q1 2026 8-K exhibits and Q2/Q3/Q1 10-Q files	Pulled live; two guessed exhibit URLs failed twice, corrected via live SEC accession index
SEC discovery files	`D_TTD_sec_submissions_live.json`, `D_TTD_sec_companyfacts_live.json`, 8-K accession index JSON files	Pulled live
Company IR pages	IR URLs opened through web fetch; direct PowerShell downloads returned 403	Fetched for citation / cross-check; local saved release artifact is SEC exhibit

Self-verification checks completed: Q1 2026 headline revenue growth of 12% appears in the Q1 2026 release / SEC exhibit; the quote `For Q2, we expect revenue to be at least $750 million` is in the FMP FY2026 Q1 transcript dated 2026-05-07, within the expected call date window; live FMP annual income statement FY2025 revenue is $2.896B and ties within 1% to the FY2025 10-K and Q4 release.