Research Note

S&P 500 in the AI Wave Market Value, Fundamentals and Valuation

May 2023 - October 2026

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Key Thesis

AI-related companies' market value share rose from 31.2% to 47.4%, while their share of company revenue rose from 14.4% to 20.0%.

Market value and fundamentals expanded to different degrees.

GAAP earnings include investment revaluations, and classifications are retrospective thematic labels; this research does not identify AI's causal contribution.

Main scope: 41 broad AI reference companies plus seven historical exits; only contemporaneous index members are included at each date.

Research Summary: Fundamentals, Pricing and Reinvestment

AI market value grew 191.0%, while company revenue grew 70.6%. Revenue outperformed, but market value expanded much faster. Changing constituents and share counts also affect the aggregates; the gap cannot be attributed entirely to valuation.

GAAP net income grew 244.0%, and P/E fell from 33.8 to 28.6 times; P/S rose from 5.0 to 8.5 times. Higher profit margins and non-operating gains and losses cause the two valuation signals to diverge.

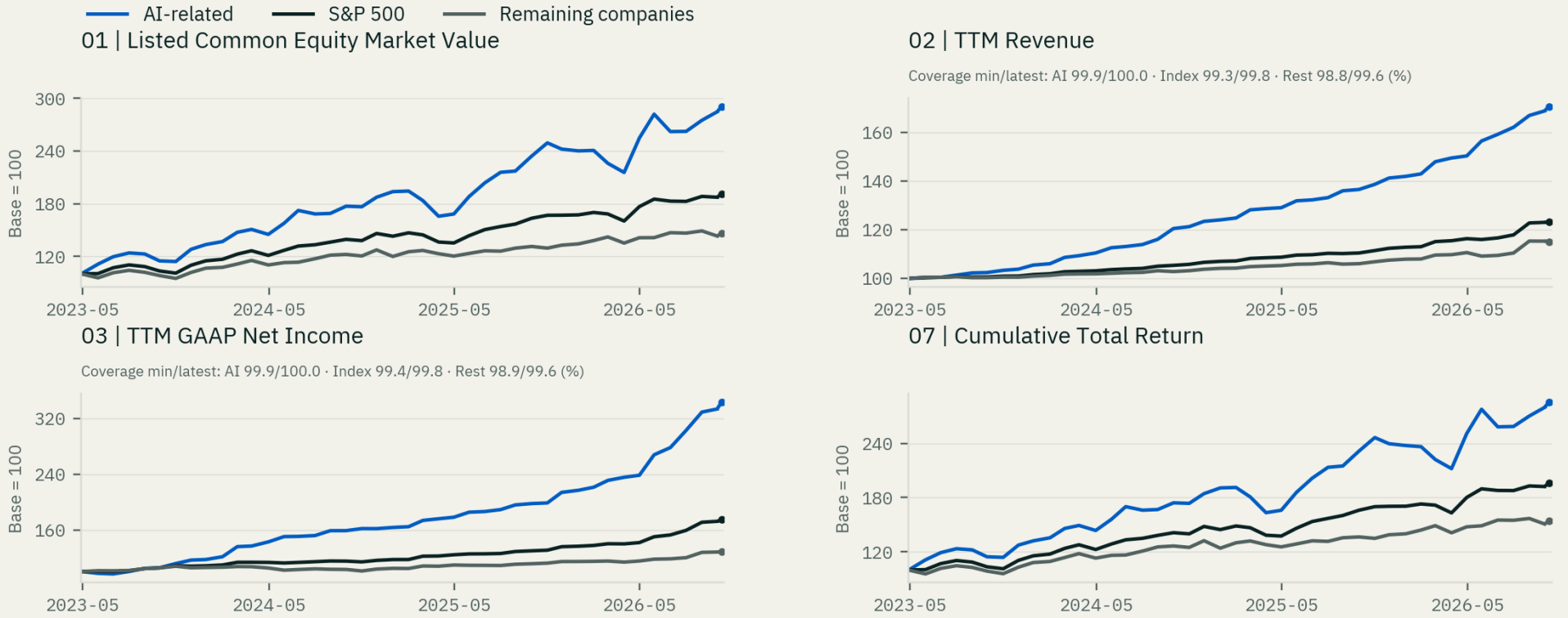
The latest 41 AI companies represent 8.2% of companies and 47.4% of market value; the top five account for 63.9% of AI market value. The share of companies advancing over the past year is 61.0% for AI and 62.9% for the remainder: aggregate outperformance does not imply broad gains within the group.

Capex / revenue rose from 11.0% to 18.8%; the FCF margin fell from its period peak of 18.1% to 15.5%. This reflects tension between reinvestment intensity and cash realization; it does not yet establish whether investment returns are good or poor.

Base to latest	AI-related	S&P 500	Remaining
Market value change	+191.0%	+91.4%	+46.2%
TTM revenue change	+70.6%	+23.1%	+15.1%
TTM GAAP income change	+244.0%	+74.7%	+28.4%
Cumulative total return	+185.7%	+96.3%	+54.2%
Aggregate P/E	33.8 → 28.6	23.3 → 25.5	20.4 → 23.1
Non-financial P/S	5.0 → 8.5	2.3 → 3.6	1.7 → 2.2
Capex / revenue	11.0% → 18.8%	5.9% → 8.6%	4.8% → 5.5%
FCF / revenue	12.5% → 15.5%	8.7% → 10.3%	7.9% → 8.8%

Ratios use matched samples; company revenue is not AI business revenue; return weights differ.

Market Value and Fundamentals: Sources of Growth

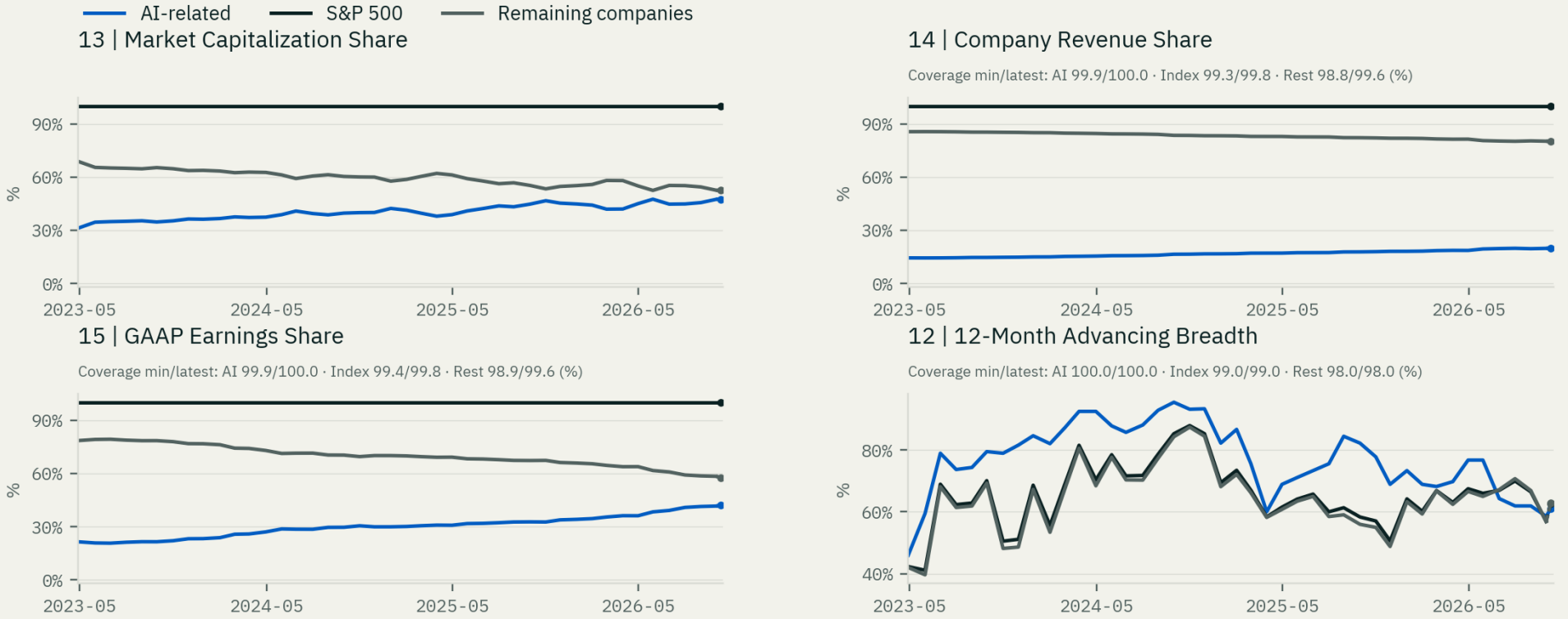


Facts: AI revenue +70.6%, remaining companies +15.1%; AI market value +191.0%, GAAP net income +244.0%.

Interpretation: The gains have accounting support from realized earnings, but GAAP earnings include investment revaluations. Changing-constituent aggregates also reflect composition effects and cannot directly identify AI's causal contribution.

Sources: User-provided CRSP / Compustat, Massive, Yahoo Finance and SEC | Base: 2023-04-28 = 100; data through 2026-10-09; dashed lines denote the October snapshot.

Shares and Breadth: Concentration Is Not Broad Participation

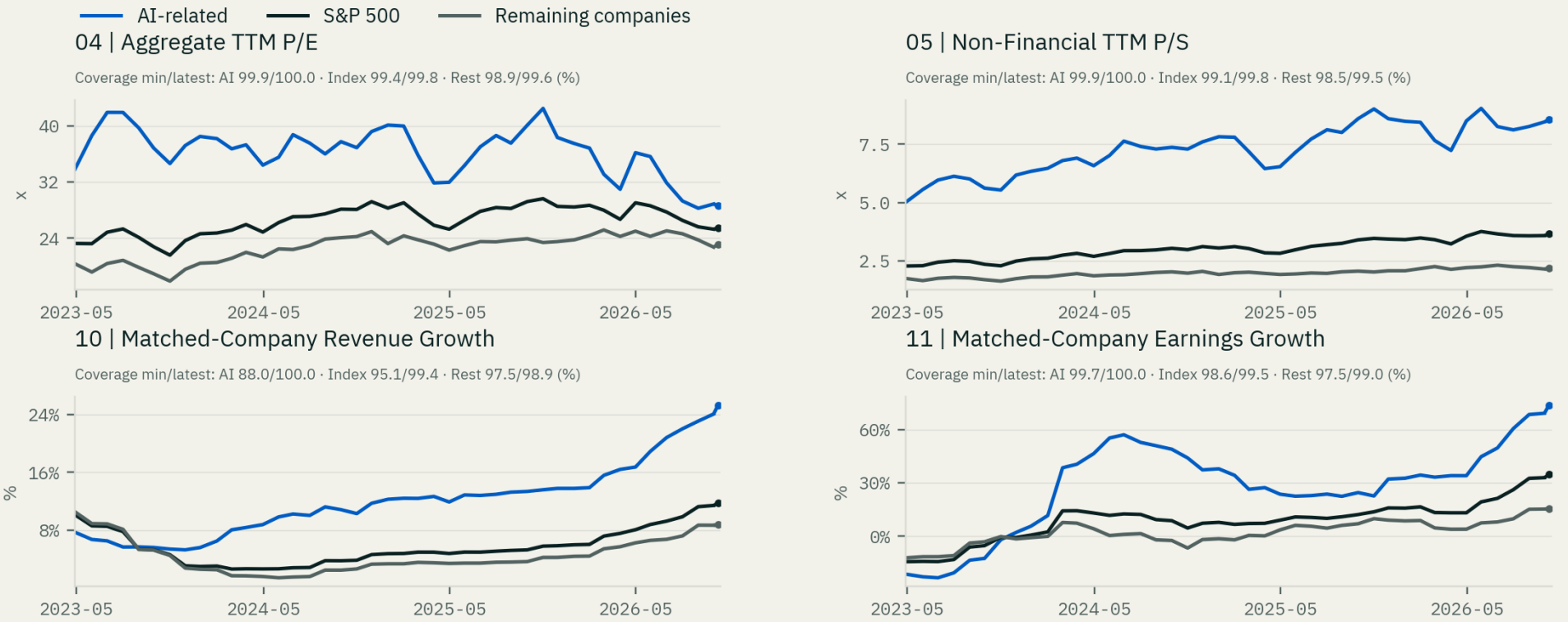


Facts: AI market value share 31.2% to 47.4%, revenue share 14.4% to 20.0%, earnings share 21.5% to 42.3%. Advancing breadth: AI 61.0%, remaining companies 62.9%.

Interpretation: Market value is more concentrated in thematic companies; the five largest AI companies account for 63.9% of group market value. Aggregate growth does not mean most companies grew; company contributions still require further decomposition.

Sources: User-provided CRSP / Compustat, Massive, Yahoo Finance and SEC | Base: 2023-04-28 = 100; data through 2026-10-09; dashed lines denote the October snapshot.

Valuation and Growth: P/E and P/S Send Different Signals

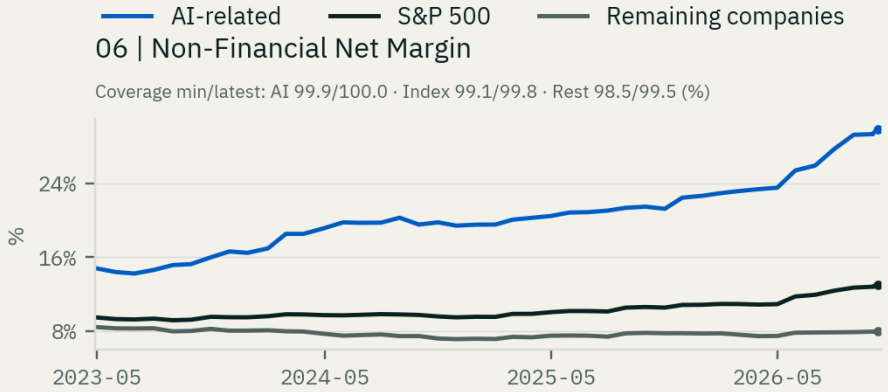


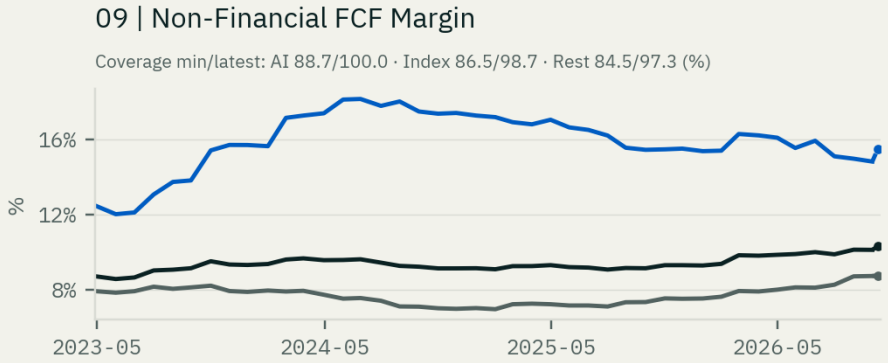
Facts: AI P/E 33.8 to 28.6 times, P/S 5.0 to 8.5 times; matched revenue growth: AI 25.3%, remaining companies 8.8%.

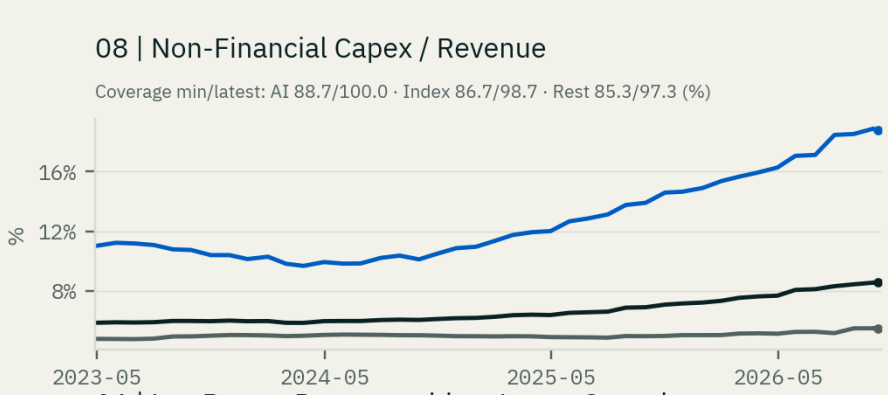
Interpretation: Pricing relative to revenue and GAAP earnings can diverge; this does not establish that the group is now cheap. Alphabet's Q2 investment gains increased net income by $77.1 billion.

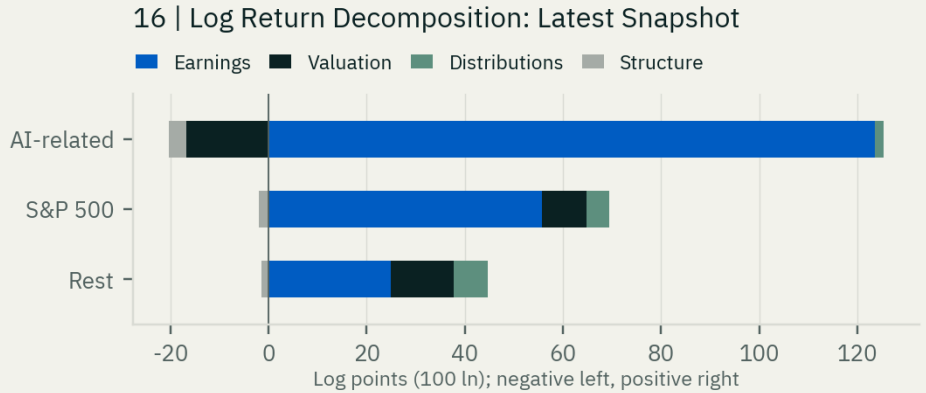
Sources: User-provided CRSP / Compustat, Massive, Yahoo Finance and SEC | Base: 2023-04-28 = 100; data through 2026-10-09; dashed lines denote the October snapshot.

Earnings and Cash: How Much Reinvestment Does Expansion Require?







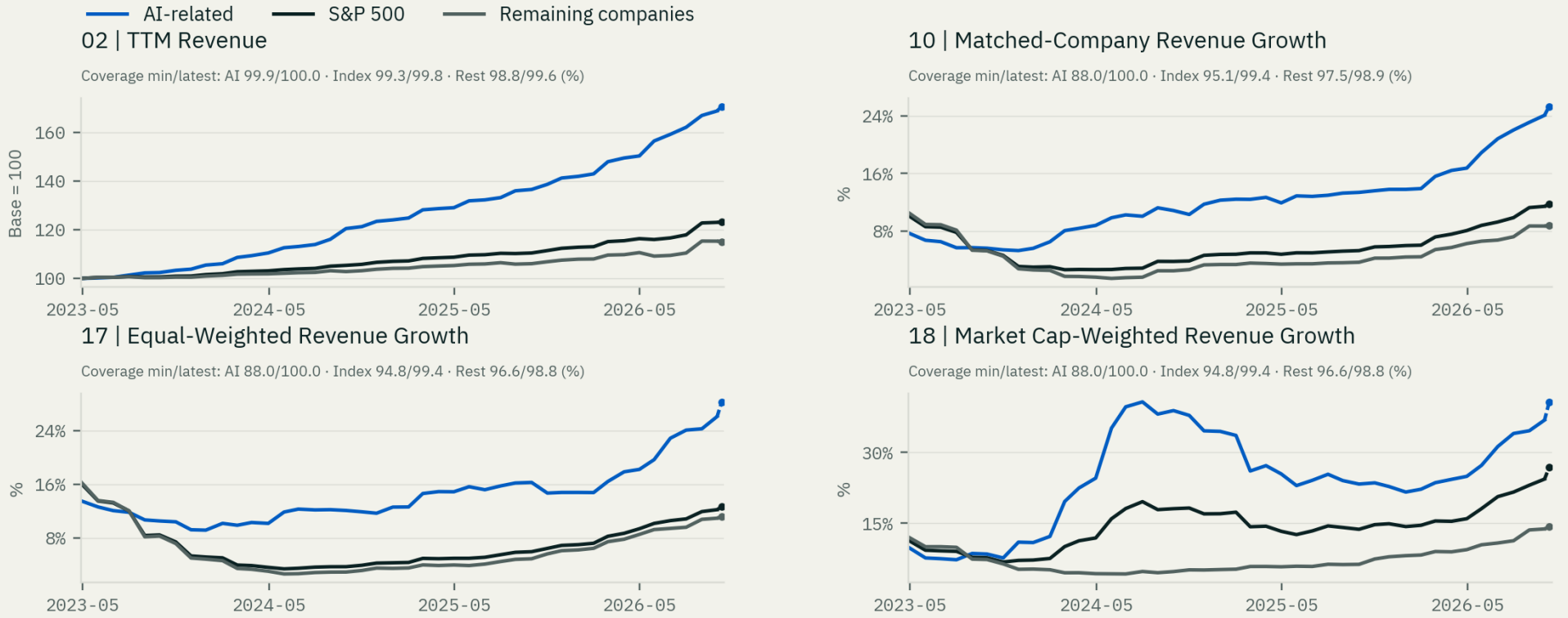


Facts: AI net margin 14.8% to 29.9%, capex / revenue 11.0% to 18.8%; FCF margin: period peak 18.1%, latest 15.5%, initial 12.5%.

Interpretation: Accounting earnings and cash generation can diverge. Until fixed-sample and company-level tests are performed, changes in FCF margins cannot be attributed entirely to AI capital expenditure.

Sources: User-provided CRSP / Compustat, Massive, Yahoo Finance and SEC | Base: 2023-04-28 = 100; data through 2026-10-09; dashed lines denote the October snapshot.

Revenue Growth: Aggregate, Equal-Weighted and Market Cap-Weighted



Facts: Latest equal-weighted / market cap-weighted revenue growth: AI 28.3% / 40.6%, overall 12.7% / 26.8%, remaining companies 11.2% / 14.2%; eligible companies: 41 / 489 / 448.

Method: Figure 10 measures year-on-year growth in matched revenue totals; Figures 17 and 18 average company growth rates over the same sample. Market cap weights use the prior month-end, renormalized after missing observations are excluded; no winsorization. Acquisitions and low bases also affect the results.

Sources: User-provided CRSP / Compustat, Massive, Yahoo Finance and SEC | Base: 2023-04-28 = 100; data through 2026-10-09; dashed lines denote the October snapshot.

Conclusion and Audit Revision

Since the April 2023 base date, AI companies in the main classification have grown market value by 191.0%, total company revenue by 70.6% and GAAP net income by 244.0%. Market value share rose from 31.2% to 47.4%, and earnings share from 21.5% to 42.3%. Aggregate revenue rose from $2.277 trillion to $3.885 trillion; revenue growth is calculated from summed company revenue, not a simple average of individual growth rates.

In the logarithmic identity, the earnings term is 123.6 log points and the valuation term is -16.7 log points. These cannot be called percentage-point contributions to cumulative simple returns. Share-count, constituent and weighting changes enter the remaining term; this accounting decomposition does not establish AI's causal contribution. The decline in P/E from 33.8 to 28.6 times reflects pricing relative to GAAP earnings and cannot alone rule out a bubble or establish reasonable valuation.

Earnings quality and cash realization still require caution. Removing only Alphabet's $77.1 billion quarterly equity investment gain mechanically yields an AI P/E of about 30.7 times; this is not a full operating-earnings adjustment. P/S rose from 5.0 to 8.5 times, net margin from 14.8% to 29.9%, while FCF margin changed from 12.5% to 15.5%; latest capex / revenue is 18.8%. These figures should be interpreted alongside operating earnings and cash flows for the same companies.

The five largest companies represent 63.9% of group market value; advancing breadth is 61.0% for AI and 62.9% for the remainder. We retain the view that the theme has fundamental support, while remaining cautious about valuation. The current list is a selected reference universe and cannot claim to cover all AI exposure. Tests excluding the largest companies, operating-earnings adjustments and investment-return analysis remain future validation.

This page preserves the author's original stance while updating figures, logarithmic units and evidence boundaries based on the full review. The original author edition is archived separately in source_documents. The weighting review also corrected historical revenue for CPT, CHD, AXON and FIX, and the affected charts were recalculated; sources and gaps are detailed in the accompanying extension note.

Methodology, Classification Comparisons and Boundaries

Broad AI plus historical exits: 41 companies, market value share 47.4%, revenue share 20.0%, cumulative research portfolio return 185.7%.

Fixed 41 broad AI companies: 41 companies, market value share 47.4%, revenue share 20.0%, cumulative research portfolio return 186.8%.

Fixed 29 direct AI companies: 29 companies, market value share 46.0%, revenue share 18.5%, cumulative research portfolio return 190.8%.

The study runs from May 2023 through 2026-10-09, with a 2023-04-28 base date and full month-ends through September 2026. Historical membership changes with effective index events; share classes are consolidated at company level. Share-count and constituent changes affect market value and fundamental aggregates.

The main classification uses 41 selected reference companies plus seven historical exits: ANSS, JNPR, EPAM, TTD, DXC, DAY/CDAY and PAYC. Exit supplements apply only after commercial evidence becomes effective and while the company is an index member. Labels are retrospective. Companies outside the list, including VRT and MRVL, also have AI exposure and are classified in the remaining group; this is not a comprehensive industry census of all AI companies.

Market value is total listed common equity, not official free-float capitalization. P/E includes losses and GAAP non-operating gains and losses; P/S, net margin, capex / revenue and FCF margin use matched non-financial samples. The compact edition shows the latest cumulative log decomposition in Figure 16; the standalone chart retains complete monthly curves in four panels.

Market history uses CRSP through 2026-04-30 and Massive thereafter. Filings become available the next day when their intraday release time is unknown; earlier announcements bridge the gap only after original-source verification. Older values are left blank when a newly disclosed period cannot be reconstructed into comparable TTM figures. DLR capex is cash real-estate development and improvements, excluding asset acquisitions. Historical carve-out statements include former-parent allocations; aggregate curves are not same-company organic growth.

Latest available market-cap coverage for AI revenue / net income is 100.0% / 100.0%, versus 99.8% / 99.8% overall. AI capex / revenue and FCF margin coverage is 100.0% / 100.0%. Coverage indicates non-missing data, not freshness; company financial period-ends, latest disclosed periods and unreconstructed items are separately documented in the accompanying workbook and audit files.

AI and remaining-company portfolios use listed-common-equity market-cap weights with monthly rebalancing; the overall benchmark is the official S&P total return index. Weights differ and transaction costs are excluded. Matched-company growth pairs earlier and later TTM figures for current constituents. Historical earnings expectations are excluded as requested.

Earnings Quality, Sources and Further Validation

Alphabet's original Q2 2026 release states that net gains on equity securities increased net income by $77.1 billion. Mechanically removing only this item raises the latest AI P/E from about 28.6 to 30.7 times. This is a single-item sensitivity illustration, not a full operating-earnings adjustment. The GAAP net-income curve cannot be treated directly as core AI operating earnings.

The charts support simultaneous growth in thematic companies' revenue, earnings and market value, accompanied by greater reinvestment intensity. They do not yet establish how much growth came from AI business, whether the findings hold after excluding the largest companies, or whether eventual cash returns on investment meet market expectations.

Three tests take priority: decompose company contributions to revenue, earnings and returns to assess concentration; add operating-earnings and non-operating-item adjustments; and separate direct AI, power and equipment, pairing capex, operating cash flow and returns. These are future research directions, not analyses completed in this edition.

Original classification reference

Historical membership seed and official checks

SEC Company Facts

Alphabet Q2 original earnings-quality release

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