



S&P 500 & Sectors: ROIC Climbs Higher Again in 2Q22 (Free, Abridged)

Trailing-twelve-month (TTM) return on invested capital ([ROIC](#)) rose to a new high for the S&P 500 in 2Q22 for the sixth consecutive quarter. Eight of eleven S&P 500 sectors saw a year-over-year (YoY) improvement in ROIC as well. This improvement comes from increases in net operating profit after-tax ([NOPAT](#)) margins and [invested capital turns](#).

This report is an abridged and free version of [S&P 500 & Sectors: ROIC Climbs Higher Again in 2Q22](#), one of our quarterly series on [fundamental market and sector trends](#), available to [Pro and higher members](#).

The full version of this report presents the drivers^{1,2} of [economic earnings](#) [ROIC, NOPAT margin, invested capital turns, and weighted average cost of capital ([WACC](#))] for the S&P 500 and each of its sectors (last quarter's analysis is [here](#)).

This report leverages our cutting-edge [Robo-Analyst technology](#) to deliver [proven-superior](#)³ fundamental research and support more cost-effective fulfillment of the [fiduciary duty of care](#).

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S&P 500 ROIC Continues to Rise in 2Q22

The S&P 500's ROIC rose from 8.6% in 2Q21 to 10.2% in 2Q22. The S&P 500's NOPAT margin rose from 12.0% in 2Q21 to 13.1% in 2Q22, while invested capital turns rose from 0.72 in 2Q21 to 0.78 in 2Q22.

Two key observations:

1. Inflation continues to lift margins as profits are calculated using current prices for revenue but historic prices for inventory. This effect lasts while inflation runs hot but reverses as soon as inventory costs begin to outpace prices charged to customers.
2. WACC has increased by less than the yields for AAA corporate bonds over the past year. That lag implies firms have shortened the maturities of their outstanding bonds to benefit from the steepness of the yield curve for maturities shorter than five years. Shortening maturities might lower the cost of debt and WACC in the near term, but it leaves firms exposed to sharply rising financing costs if interest rates keep rising.

The "record" return on capital is a mirage and the bullish trend in ROIC could reverse soon, as we already saw with the ROIC from seven sectors that fell quarter-over-quarter in 2Q22.

See Figure 1 in the [full version](#) of our report for the chart of ROIC and WACC for the S&P 500 from December 2004 through 8/12/22.

Key Details on Select S&P 500 Sectors

Seven sectors saw a quarter-over-quarter (QoQ) decline in ROIC.

The Energy sector performed best in the second quarter of 2022 as measured by change in ROIC, with its ROIC rising 272 basis points. In the first half of 2022, energy companies benefited from high energy prices and strong economic activity, but those two factors can only travel together for so long before inflation ruins the party. That process is playing out in the third quarter as high energy prices fuel calls for tighter monetary policy and fears of recession.

¹ Calculated using SPGI's methodology, which sums individual S&P 500 constituent values for NOPAT and invested capital. See Appendix III for more details on this "Aggregate" method and Appendix I for details on how we calculate WACC for the S&P 500 and each of its sectors.

² This report is based on the latest audited financial data available, which is the 2Q22 10-Q in most cases. Price data is as of 8/12/22.

³ Our research utilizes our [Core Earnings](#), a more reliable measure of profits, as proven in [Core Earnings: New Data & Evidence](#), written by professors at Harvard Business School (HBS) & MIT Sloan and published in [The Journal of Financial Economics](#).



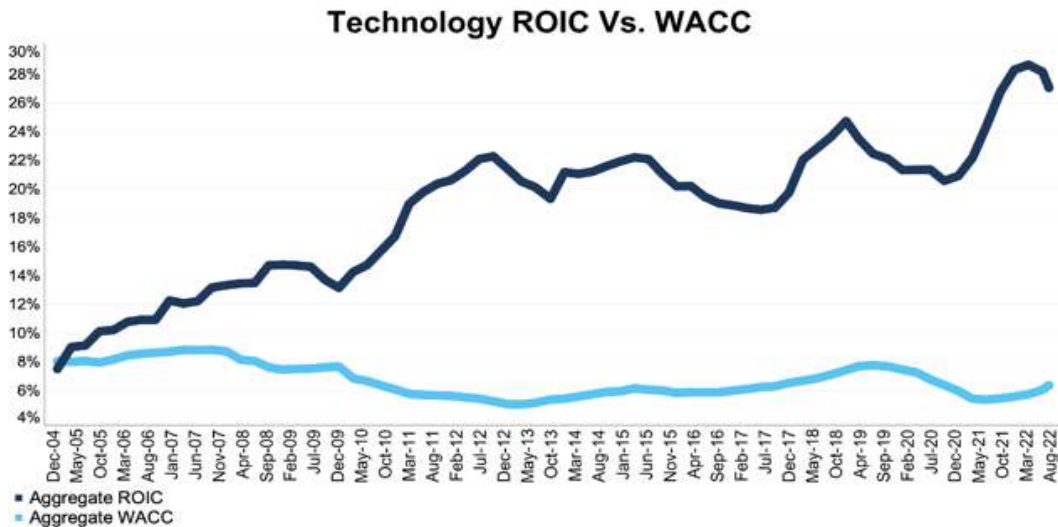
The biggest losers in the second quarter were sectors that had previously been among the biggest winners of the COVID-era market. ROICs for Telecom Services and Technology both experienced quarterly declines of 111 basis points in 2Q22.

Below, we highlight the Technology sector, which has the highest ROIC in 2Q22.

Sample Sector Analysis⁴: Technology

Figure 1 shows the Technology sector ROIC rose from 26.8% in 2Q21 to 27.1% in 2Q22. The Technology sector NOPAT margin rose from 23.5% in 2Q21 to 23.6% in 2Q22, while invested capital turns remained flat YoY at 1.14 in 2Q22.

Figure 1: Technology ROIC vs. WACC: December 2004 – 8/12/22



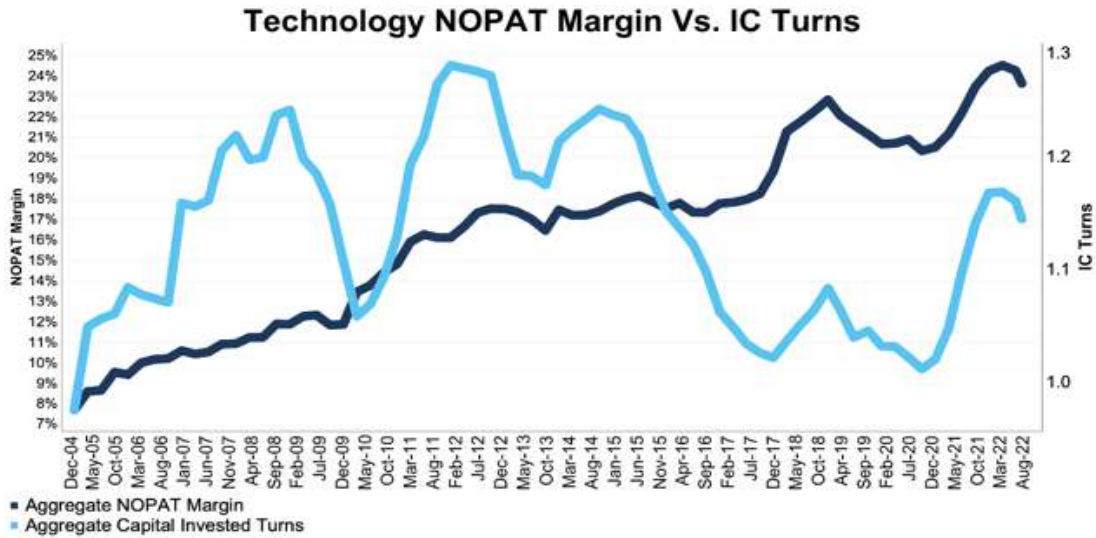
Sources: New Constructs, LLC and company filings. The August 12, 2022 measurement period uses price data as of that date for our WACC calculation and incorporates the financial data from 2Q22 10-Qs for ROIC, as this is the earliest date for which all the 2Q22 10-Qs for the S&P 500 constituents were available.

Figure 2 compares the trends for NOPAT margin and invested capital turns for the Technology sector since 2004. We sum the individual S&P 500 constituent values for revenue, NOPAT, and invested capital to calculate these metrics. We call this approach the “Aggregate” methodology.

⁴ The full version of this report provides analysis for every sector like what we show for this sector.



Figure 2: Technology NOPAT Margin Vs. IC Turns: December 2004 – 8/12/22



Sources: New Constructs, LLC and company filings.

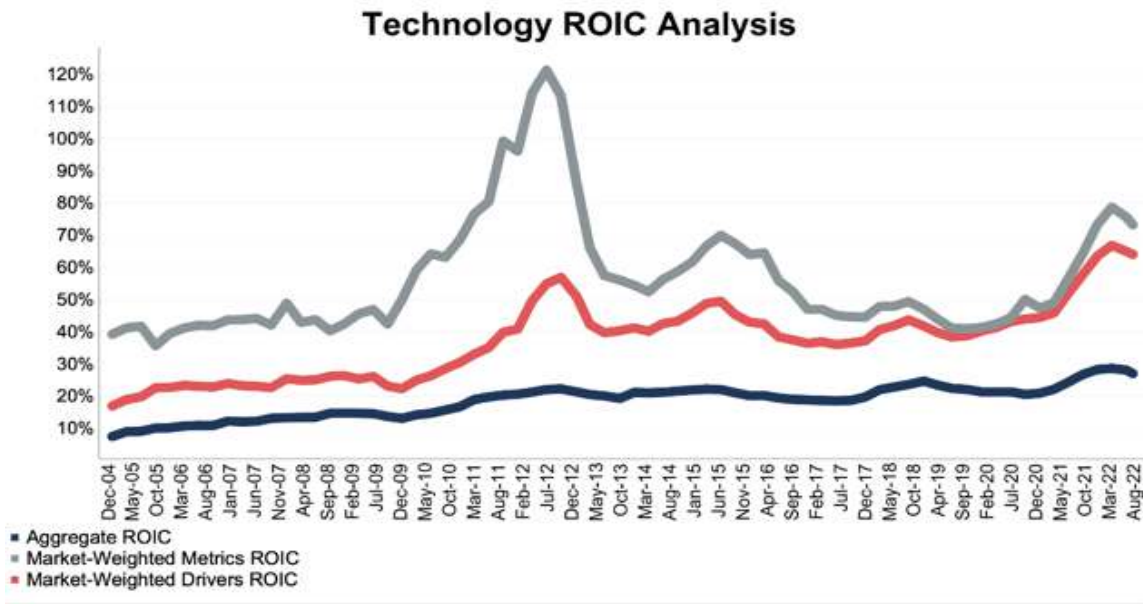
The August 12, 2022 measurement period uses price data as of that date for our WACC calculation and incorporates the financial data from 2Q22 10-Qs for ROIC, as this is the earliest date for which all the 2Q22 10-Qs for the S&P 500 constituents were available.

The Aggregate methodology provides a straightforward look at the entire sector, regardless of market cap or index weighting and matches how S&P Global (SPGI) calculates metrics for the S&P 500.

For additional perspective, we compare the Aggregate method for ROIC with two market-weighted methodologies: market-weighted metrics and market-weighted drivers. Each method has its pros and cons, which are detailed in the Appendix.

Figure 3 compares these three methods for calculating the Technology sector ROIC.

Figure 3: Technology ROIC Methodologies Compared: December 2004 – 8/12/22



Sources: New Constructs, LLC and company filings.

The August 12, 2022 measurement period uses price data as of that date for our WACC calculation and incorporates the financial data from 2Q22 10-Qs for ROIC, as this is the earliest date for which all the 2Q22 10-Qs for the S&P 500 constituents were available.



This article originally published on [August 25, 2022](#).

Disclosure: David Trainer, Kyle Guske II, Matt Shuler, and Brian Pellegrini receive no compensation to write about any specific stock, style, or theme.

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Appendix: Analyzing ROIC with Different Weighting Methodologies

We derive the metrics above by summing the individual S&P 500 constituent values for revenue, NOPAT, and invested capital to calculate the metrics presented. We call this approach the “Aggregate” methodology.

The Aggregate methodology provides a straightforward look at the entire sector, regardless of market cap or index weighting and matches how S&P Global (SPGI) calculates metrics for the S&P 500.

For additional perspective, we compare the Aggregate method for ROIC with two other market-weighted methodologies:

1. **Market-weighted metrics** – calculated by market-cap-weighting the ROIC for the individual companies relative to their sector or the overall S&P 500 in each period. Details:
 - a. Company weight equals the company’s market cap divided by the market cap of the S&P 500/its sector
 - b. We multiply each company’s ROIC by its weight
 - c. S&P 500/Sector ROIC equals the sum of the weighted ROICs for all the companies in the S&P 500/each sector
2. **Market-weighted drivers** – calculated by market-cap-weighting the NOPAT and invested capital for the individual companies in each sector in each period. Details:
 - a. Company weight equals the company’s market cap divided by the market cap of the S&P 500/its sector
 - b. We multiply each company’s NOPAT and invested capital by its weight
 - c. We sum the weighted NOPAT and invested capital for each company in the S&P 500/each sector to determine each sector’s weighted NOPAT and weighted invested capital
 - d. S&P 500/Sector ROIC equals weighted sector NOPAT divided by weighted sector invested capital

Each methodology has its pros and cons, as outlined below:

Aggregate method

Pros:

- A straightforward look at the entire S&P 500/sector, regardless of company size or weighting.
- Matches how S&P Global calculates metrics for the S&P 500.

Cons:

- Vulnerable to impact of by companies entering/exiting the group of companies, which could unduly affect aggregate values despite the level of change from companies that remain in the group.

Market-weighted metrics method

Pros:

- Accounts for a firm’s size relative to the overall S&P 500/sector and weights its metrics accordingly.

Cons:

- Vulnerable to outsized impact of one or a few companies, as shown in the full report. This outsized impact tends to occur only for ratios where unusually small denominator values can create extremely high or low results.

Market-weighted drivers method

Pros:

- Accounts for a firm’s size relative to the overall S&P 500/sector and weights its NOPAT and invested capital accordingly.
- Mitigates potential outsized impact of one or a few companies by aggregating values that drive the ratio before calculating the ratio.

Cons:

- Can minimize the impact of period-over-period changes in smaller companies, as their impact on the overall sector NOPAT and invested capital is smaller.



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Key quotes from the paper:

- “[New Constructs’] *Total Adjustments* differs significantly from the items identified and excluded from Compustat’s adjusted earnings measures. For example... 50% to 70% of the variation in *Total Adjustments* is not explained by *S&P Global’s (SPGI) Adjustments* individually.” – pp. 14, 1st para.
- “A final source of differences [between New Constructs’ and S&P Global’s data] is due to data collection oversights...we identified cases where Compustat did not collect information relating to firms’ income that is useful in assessing core earnings.” – pp. 16, 2nd para.

Superior Models

A top accounting firm features the superiority of our ROIC, NOPAT and Invested Capital research to Capital IQ & Bloomberg’s in [Getting ROIC Right](#). See the [Appendix](#) for direct comparison details.

Key quotes from the paper:

- “...an accurate calculation of ROIC requires more diligence than often occurs in some of the common, off-the-shelf ROIC calculations. Only by scouring the footnotes and the MD&A [as New Constructs does] can investors get an accurate calculation of ROIC.” – pp. 8, 5th para.
- “The majority of the difference...comes from New Constructs’ machine learning approach, which leverages technology to calculate ROIC by applying accounting adjustments that may be buried deeply in the footnotes across thousands of companies.” – pp. 4, 2nd para.

Superior Stock Ratings

Robo-Analysts’ stock ratings outperform those from human analysts as shown in this [paper](#) from Indiana’s Kelley School of Business. Bloomberg features the paper [here](#).

Key quotes from the paper:

- “the portfolios formed following the buy recommendations of Robo-Analysts earn abnormal returns that are statistically and economically significant.” – pp. 6, 3rd para.
- “Our results ultimately suggest that Robo-Analysts are a valuable, alternative information intermediary to traditional sell-side analysts.” – pp. 20, 3rd para.

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