All Cap Index & Sectors: ROIC Vs. WACC Through 2021 (Free, Abridged)

Return on invested capital (ROIC) spiked to the highest level since 1998 for the NC 2000[1] in 2021.

This report is an abridged and free version of All Cap Index & Sectors: ROIC vs. WACC Through 2021, one of our quarterly series on fundamental market and sector trends, available to Pro and higher members.

The full version of this report analyzes[2,3] the drivers of economic earnings [return on invested capital (ROIC), NOPAT margin, invested capital turns, and weighted average cost of capital (WACC)] for the NC 2000 and each of its sectors (last quarter's analysis is here).

These reports leverage more reliable fundamental data[4] that overcomes flaws with legacy fundamental datasets to provide a more informed view of macro fundamentals and a new source of alpha.

NC 2000 ROIC Rises Year-Over-Year in 2021

The NC 2000's ROIC rose from 6.6% in 4Q20 to 9.3% in 2021. Ten of eleven sectors in the NC 2000 saw a year-over-year (YoY) improvement in ROIC, as well. Most of this improvement comes from higher net operating profit after-tax (NOPAT) margins though invested capital turns rose, too.

See Figure 1 in the full version of our report for the chart of ROIC vs. WACC for the NC 2000 from December 1998 through 2021.

Key Details on Select NC 2000 Sectors

The Energy sector performed best over the past year as measured by change in ROIC, with its ROIC rising over 610 basis points. Given the impact COVID-19 had on energy companies and energy prices in 2020 and the strength of the rebound, this trend is not surprising.

On the flip side, the Utilities sector is the only sector to have a YoY drop in ROIC with a slight drop of nine basis points.

Overall, the Technology sector earns the highest ROIC of all sectors, by far, and the Utilities sector earns the lowest ROIC.

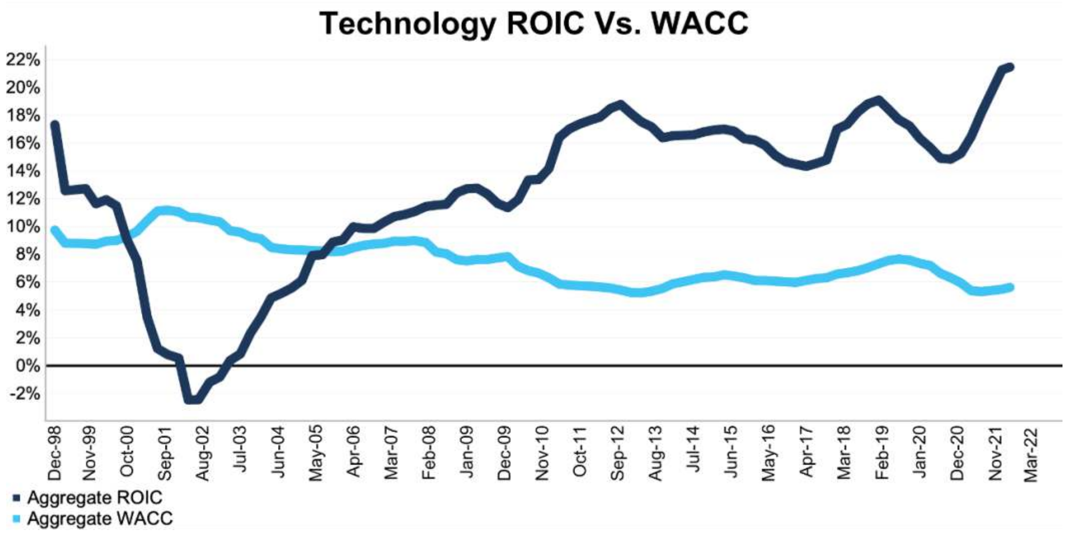
Below, we highlight the Technology sector, which has highest ROIC in the NC 2000.

[1] The NC 2000 consists of the largest 2000 U.S. companies by market cap in our coverage. Constituents are updated on a quarterly basis (March 31, June 30, September 30, and December 31). We exclude companies that report under IFRS and non-U.S. ADR companies.
[2] We calculate these metrics based on SPGI's methodology, which sums the individual NC 2000 constituent values for NOPAT and invested capital before using them to calculate the metrics. We call this the "Aggregate" methodology.
[3] Our research is based on the latest audited financial data, which is the 2021 10-K in most cases. Price data is as of 3/11/22.
[4] Three independent studies prove the superiority of our data, models, and ratings. Learn more here.

Sample Sector Analysis[5]: Technology

Figure 1 shows the Technology sector ROIC rose from 16.5% in 2020 to 21.5% in 2021. The Technology sector NOPAT margin rose from 16.4% in 2020 to 19.3% in 2021, while invested capital turns rose from 1.00 in 2020 to 1.11 in 2021.

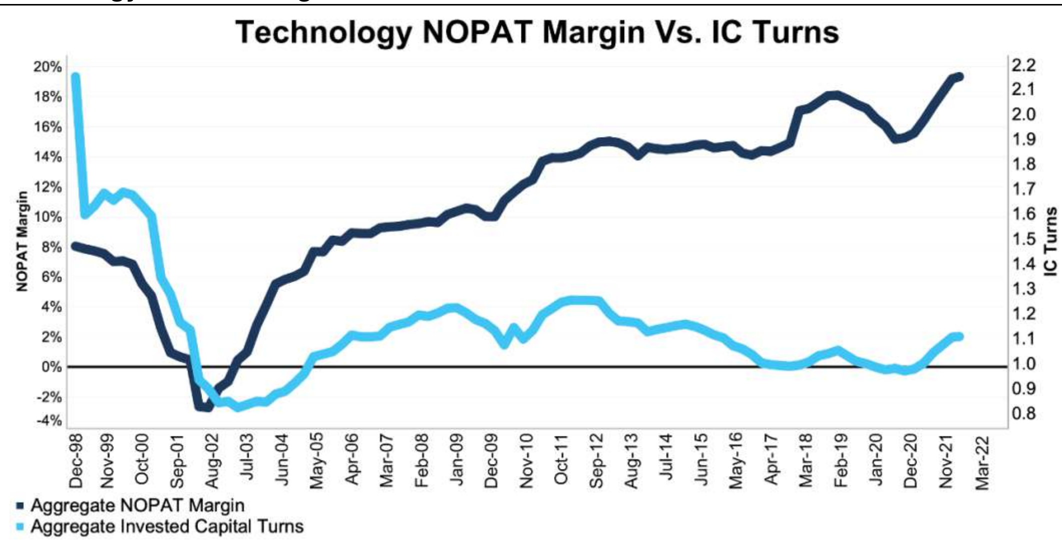
Figure 1: Technology ROIC vs. WACC: Dec 1998 – 3/11/22



Sources: New Constructs, LLC and company filings.
The March 11, 2022 measurement period uses price data as of that date for our WACC calculation and incorporates the financial data from 2021 10-Ks for ROIC, as this is the earliest date for which all the 2021 10-Ks for the NC 2000 constituents were available.

Figure 2 compares the trends in NOPAT margin and invested capital turns for the Technology sector since December 1998. We sum the individual NC 2000/sector constituent values for revenue, NOPAT, and invested capital to calculate these metrics. We call this approach the "Aggregate" methodology.

Figure 2: Technology NOPAT Margin Vs. IC Turns: Dec 1998 – 3/11/22



Sources: New Constructs, LLC and company filings.
The March 11, 2022 measurement period uses price data as of that date for our WACC calculation and incorporates the financial data from 2021 10-Ks for ROIC, as this is the earliest date for which all the 2021 10-Ks for the NC 2000 constituents were available.

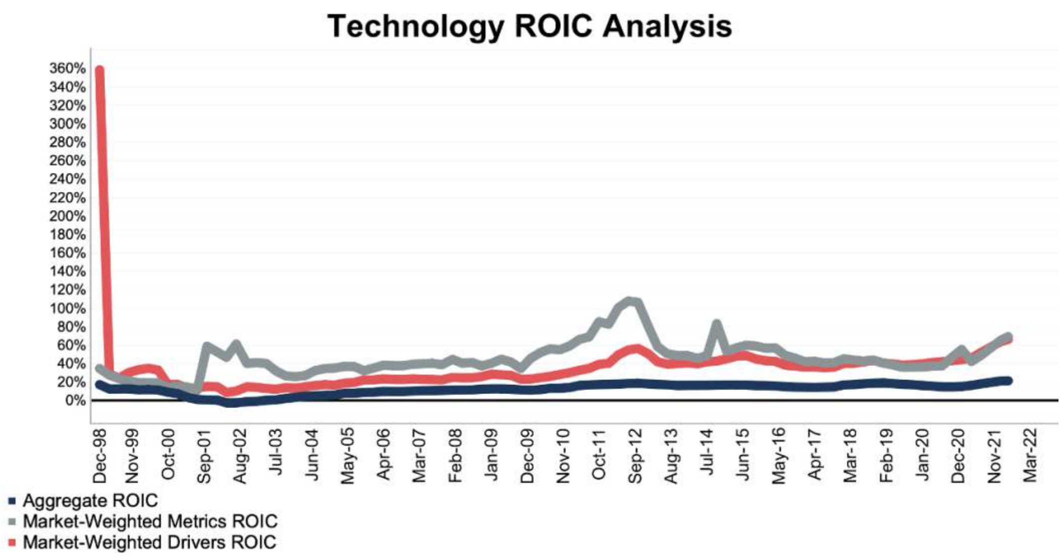
[5] The full version of this report provides the same analysis for all eleven sectors.

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: 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's ROICs.

Figure 3: Technology ROIC Methodologies Compared: Dec 1998 – 3/11/22



Sources: New Constructs, LLC and company filings.
The March 11, 2022 measurement period uses price data as of that date for our WACC calculation and incorporates the financial data from 2021 10-Ks for ROIC, as this is the earliest date for which all the 2021 10-Ks for the NC 2000 constituents were available.

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Disclosure: David Trainer, Kyle Guske II, and Matt Shuler 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 NC 2000/sector 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 NC 2000 in each period. Details:
    a. Company weight equals the company's market cap divided by the market cap of the NC 2000/its sector
    b. We multiply each company's ROIC by its weight
    c. NC 2000/Sector ROIC equals the sum of the weighted ROICs for all the companies in the NC 2000/each sector
2. **Market-weighted drivers** – calculated by market-cap-weighting the NOPAT and invested capital for the individual companies in the NC 2000/each sector in each period. Details:
    a. Company weight equals the company's market cap divided by the market cap of the NC2000/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 NC 2000/each sector to determine the NC 2000/sector's weighted NOPAT and weighted invested capital
    d. NC 2000/Sector ROIC equals weighted NC 2000/sector NOPAT divided by weighted NC 2000/sector invested capital

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

Aggregate method

Pros:

- A straightforward look at the entire NC 2000/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 NC 2000/sector and weights its metrics accordingly.

Cons:

- Vulnerable to outsized impact of one or a few companies. 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 NC 2000/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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Many firms claim their research is superior, but none of them can prove it with independent studies from highly-respected institutions as we can. Three different papers from both the public and private sectors show:

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Best Fundamental Data in the World

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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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