

MACRO FUNDAMENTALS

4/1/22

S&P 500 & Sectors: Price-to-Economic Book Value Looks Cheap Based on 2021 Profits (Free, Abridged)

This report is a free, abridged version of <u>S&P 500 & Sectors: Price-to-Economic Book Value Looks Cheap</u> <u>Based on 2021 Profits</u>, one of our quarterly series on <u>fundamental market and sector trends</u>, available to <u>Pro and higher members</u>.

The full version of this report analyzes^{1,2} market cap, <u>economic book value</u>, and the trailing price-to-economic book value (PEBV) ratio for the S&P 500 and each of its sectors (last quarter's analysis is here).

These reports leverage <u>more reliable fundamental data</u>³ that overcomes <u>flaws with legacy fundamental datasets</u> to provide a more informed view of macro fundamentals and a new source of alpha.

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S&P 500 Trailing PEBV Ratio Fell to 2016 Levels in 2021

Profits rose faster than stock prices as the price-to-economic book value (<u>PEBV</u>) ratio for the S&P 500 fell to its lowest level since June 30, 2016, excluding the pandemic levels. Specifically, the trailing PEBV ratio for the S&P 500 fell from 1.6 on 3/31/21 to 1.3 on 3/11/22.

This trailing PEBV ratio compares the S&P 500's expected future profits (as reflected in its price) to its economic book value as of 3/11/22. At 1.3, the S&P 500's valuation implies the profits (NOPAT) of the S&P 500 will increase 30% from 2021 levels.

See Figure 1 in the <u>full version</u> of our report for the chart of the PEBV ratio for the S&P 500 from December 2004 through 3/11/22.

Key Details on Select S&P 500 Sectors

Four S&P 500 sectors, Telecom Services, Consumer Non-cyclicals, Healthcare, and Financials trade below their economic book value and two, Basic Materials and Energy, trade at their economic book value. The Telecom Services sector has the lowest trailing PEBV ratio among all 11 S&P 500 sectors based on prices as of 3/11/22 and financial data from 2021 10-Ks.

A trailing PEBV ratio of 0.5 means the market expects the Telecom Services sector's profits to decline by 50% from 2021 levels. On the flip side, investors expect the Real Estate and Industrials sectors (trailing PEBV ratios of 3.9 and 1.9) to improve profits more than any other S&P 500 sectors.

Below, we highlight the Consumer Non-cyclicals sector.

¹ We calculate these metrics based on <u>S&P Global</u>'s (SPGI) methodology, which sums the individual S&P 500 constituent values for market cap and economic book value before using them to calculate the metrics. We call this the "Aggregate" methodology.

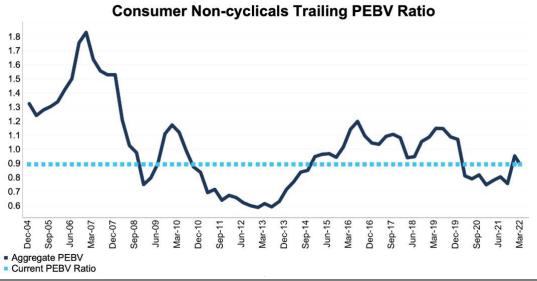
² Our research is based on the latest audited financial data, which is the 2021 10-K in most cases. Price data is as of 3/11/22.

³ Three independent studies prove the superiority of our data, models, and ratings. Learn more here.

Sample Sector Analysis⁴: Consumer Non-cyclicals: Trailing PEBV Ratio = 0.9

Figure 1 shows the trailing PEBV ratio for the Consumer Non-cyclicals sector rose from 0.8 as of 3/31/21 to 0.9 as of 3/11/22. The Consumer Non-cyclicals sector market cap remained nearly unchanged at \$2.4 trillion from 3/31/21 to 3/11/22, while its economic book value fell from \$3.1 trillion as of 3/31/21 to \$2.7 trillion as of 3/11/22.

Figure 1: Consumer Non-cyclicals Trailing PEBV Ratio: Dec 2004 - 3/11/22

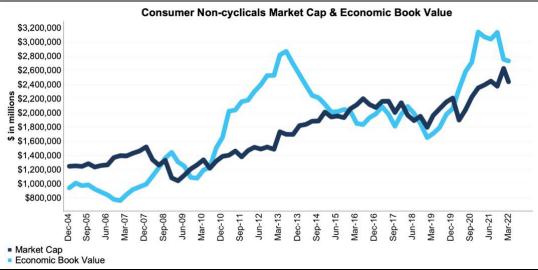


Sources: New Constructs, LLC and company filings.

The March 11, 2022 measurement period uses price data as of that date and incorporates the financial data from 2021 10-Ks, as this is the earliest date for which all the calendar 2021 10-Ks for the S&P 500 constituents were available.

Figure 2 compares the trends for market cap and economic book value for the Consumer Non-cyclicals sector since 2004. We sum the individual S&P 500/sector constituent values for market cap and economic book value. We call this approach the "Aggregate" methodology, and it matches S&P Global's (SPGI) methodology for these calculations.

Figure 2: Consumer Non-cyclicals Market Cap & Economic Book Value: Dec 2004 – 3/11/22



Sources: New Constructs, LLC and company filings.

The March 11, 2022 measurement period uses price data as of that date and incorporates the financial data from 2021 10-Ks, as this is the earliest date for which all the calendar 2021 10-Ks for the S&P 500 constituents were available.

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

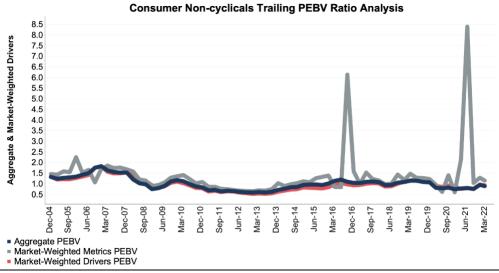


The Aggregate methodology provides a straightforward look at the entire S&P 500/sector, regardless of firm size or index weighting, and matches how S&P Global (SPGI) calculates metrics for the S&P 500.

For additional perspective, we compare the Aggregate method for trailing PEBV ratio 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 Telecom Services sector trailing PEBV ratio.

Figure 3: Consumer Non-cyclicals Trailing PEBV Ratio Methodologies Compared: Dec 2004 – 3/11/22



Sources: New Constructs, LLC and company filings.

The March 11, 2022 measurement period uses price data as of that date and incorporates the financial data from 2021 10-Ks, as this is the earliest date for which all the calendar 2021 10-Ks for the S&P 500 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 Trailing PEBV Ratio with Different Weighting Methodologies

We derive the metrics above by summing the individual S&P 500/sector constituent values for market cap and economic book value to calculate trailing PEBV ratio. We call this approach the "Aggregate" methodology.

The Aggregate methodology provides a straightforward look at the entire S&P 500/sector, regardless of firm size 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 trailing PEBV ratio with two other market-weighted methodologies. These market-weighted methodologies add more value for ratios that do not include market values, e.g. ROIC and its drivers, but we include them here, nonetheless, for comparison:

- Market-weighted metrics calculated by market-cap-weighting the trailing PEBV ratio for the individual companies relative to their sector or the overall S&P 500 in each period. Details:
 - Company weight equals the company's market cap divided by the market cap of the S&P 500 or its sector
 - b. We multiply each company's trailing PEBV ratio by its weight
 - c. S&P 500/Sector trailing PEBV equals the sum of the weighted trailing PEBV ratios for all the companies in the S&P 500/sector
- 2. **Market-weighted drivers** calculated by market-cap-weighting the market cap and economic book value for the individual companies in each sector in each period. Details:
 - Company weight equals the company's market cap divided by the market cap of the S&P 500 or its sector
 - b. We multiply each company's market cap and economic book value by its weight
 - c. We sum the weighted market cap and weighted economic book value for each company in the S&P 500/each sector to determine the S&P 500 or sector's weighted FCF and weighted enterprise value
 - d. S&P 500/Sector trailing PEBV ratio equals weighted S&P 500/sector market cap divided by weighted S&P 500/sector economic book value

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 companies entering/exiting the group of companies, which could unduly affect aggregate values. Also susceptible to outliers in any one period.

Market-weighted metrics method

Pros:

Accounts for a firm's market cap relative to the S&P 500/sector and weights its metrics accordingly.

Cons:

 Vulnerable to outlier results from a single company disproportionately impacting the overall trailing PEBV ratio, as we'll show below.

Market-weighted drivers method

Pros:

- Accounts for a firm's market cap relative to the S&P 500/sector and weights its size and economic book value accordingly.
- Mitigates the disproportionate impact of outlier results from one company on the overall results.

Cons:



 More susceptible to large swings in market cap or economic book value (which can be impacted by changes in WACC) period over period, particularly from firms with a large weighting in the S&P 500/Sector.



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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 <u>paper</u> 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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