



## No S&P 500 Sector Has a Rising ROIC Through First Half of 2020

This report analyzes the drivers<sup>1</sup> of [economic earnings](#) [return on invested capital (ROIC), NOPAT margin, [invested capital turns](#) and weighted average cost of capital (WACC)] for the S&P 500 and each of its sectors.

For reference, we analyze the [core earnings](#) for the entire S&P 500 in “[S&P 500 Peaks As Earnings Trough](#)” and for each S&P 500 sector in “[Only One S&P 500 Sector’s Core Earnings Improved This Year.](#)”

These reports leverage [cutting-edge technology](#) to provide clients with a [cleaner and more comprehensive](#) view of earnings<sup>2</sup>. Investors armed with our measure of core earnings and profitability enjoy a differentiated and more informed view of the fundamentals of companies and sectors.

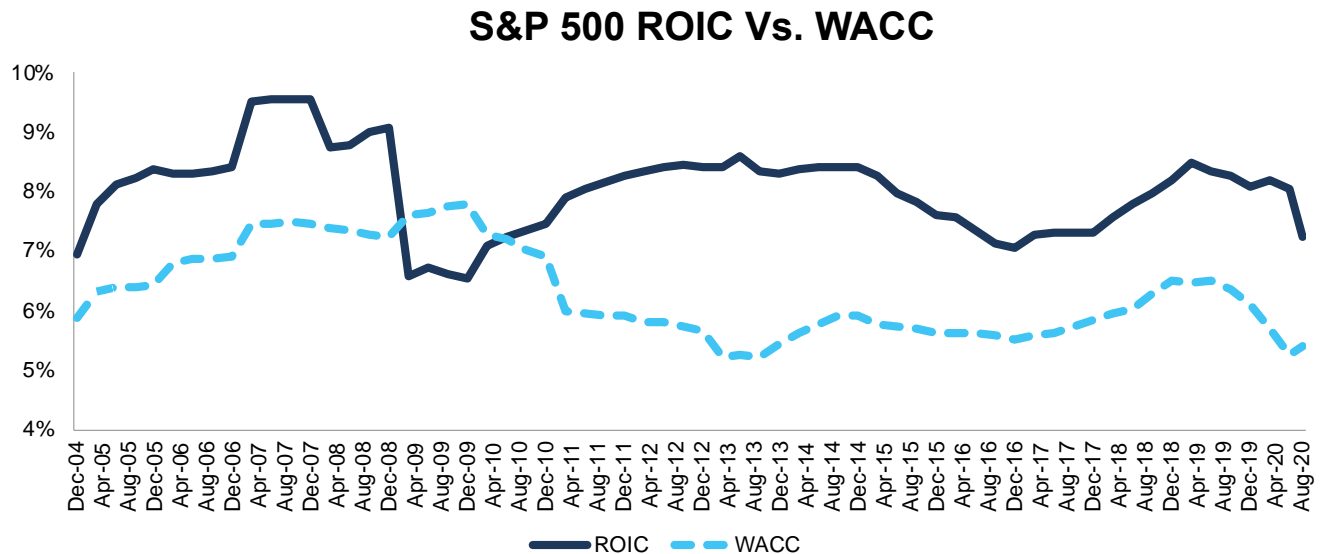
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No S&P 500 sector has seen an improvement in return on invested capital (ROIC) since the end of 2019.

### S&P 500 ROIC Falls Significantly in the First Half of 2020

ROIC for the S&P 500 began to decline in 2019 before falling significantly this year. The S&P 500’s ROIC fell from 8.2% at the end of 2019 to 7.2% through 8/11/20 (the earliest date updated 10-Qs for the S&P 500 constituents were available), per Figure 1. All S&P 500 sectors saw a drop in ROIC, though some more than others, as we’ll show below.

**Figure 1: TTM ROIC and WACC for the S&P 500 From December 2004 – 8/11/20**



Sources: New Constructs, LLC and company filings.

### Ranking the S&P 500 Sectors by ROIC Change

Figure 2 ranks all 11 S&P 500 sectors by the change in ROIC from the end of 2019 through 8/11/20.

<sup>1</sup> We calculate these metrics based on SPGI’s methodology, which sums the individual S&P 500 constituent values for NOPAT and invested capital before using them to calculate the metrics. We call this the “Aggregate” methodology. Get more details in Appendix III. See Appendix I for details on how we calculate WACC for the S&P 500 and each of its sectors.

<sup>2</sup> For 3<sup>rd</sup>-party reviews on the benefits of adjusted Core Earnings, historically and prospectively, across all stocks, click [here](#) and [here](#).



**Figure 2: TTM ROIC as of 8/11/20 vs 2019 by Sector**

| Sector                 | TTM ROIC  | Change Since 2019 (% points) |
|------------------------|-----------|------------------------------|
| Consumer Non-cyclicals | 8%        | -0.1%                        |
| Healthcare             | 9%        | -0.1%                        |
| Technology             | 21%       | -0.3%                        |
| Utilities              | 3%        | -0.3%                        |
| Telecom Services       | 5%        | -0.5%                        |
| Basic Materials        | 5%        | -0.5%                        |
| Real Estate            | 5%        | -0.6%                        |
| Financials             | 7%        | -0.8%                        |
| Consumer Cyclical      | 7%        | -2.1%                        |
| Industrials            | 6%        | -2.2%                        |
| Energy                 | 1%        | -2.4%                        |
| <b>S&amp;P 500</b>     | <b>7%</b> | <b>-1.0%</b>                 |

Sources: New Constructs, LLC and company filings.

The Consumer Non-cyclicals sector is the least impacted by the COVID-19 pandemic, as measured by change in ROIC, since the end of 2019. This trend is not surprising, given that the global shutdowns impacted travel, infrastructure, leisure, and other discretionary spending while providing a boost to many Consumer Non-cyclicals firms.

On the flip side, the Energy sector not only has the lowest ROIC, but also the largest drop since the end of 2019.

Overall, the Technology sector earns the highest ROIC of all sectors by far. These trends, in the Technology and Energy sector follow the change in core earnings we analyzed in [“Only One S&P 500 Sector’s Core Earnings Improved This Year.”](#)

**Details on each of the S&P 500 Sectors**

Figures 3-13 compare the ROIC and WACC trends for every sector since 2004. Appendix I provides the current WACC for each sector.

Investors who are curious about the drivers of ROIC can find [NOPAT margin](#) and [invested capital turns](#) for each sector in Appendix II.

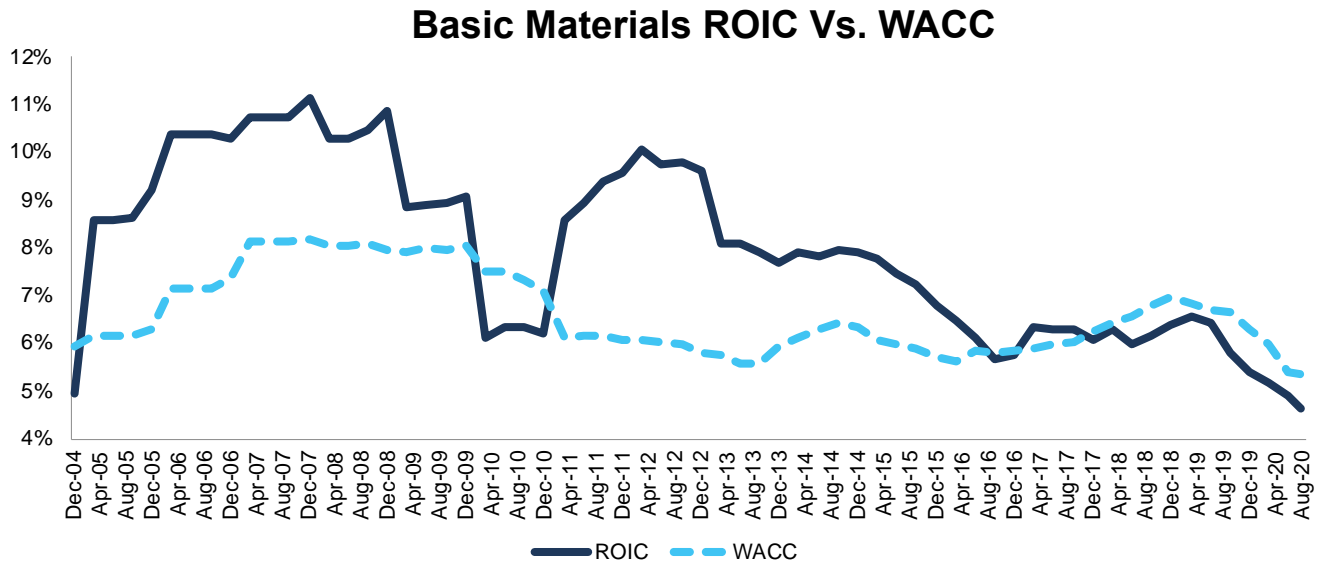
Appendix III provides additional ROIC analysis using different weighting methodologies to adjust for the impact of a firm’s size on the overall sector.

**Basic Materials**

Figure 3 shows the ROIC for the Basic Materials sector has been in a long-term decline since ~2011 and fell 54 basis points since the end of 2019. The Basic Materials sector ROIC was and remains below the sector’s WACC. NOPAT margin fell from 10.2% in 2019 to 9.6 TTM, while capital turns fell from 0.51 to 0.48.



Figure 3: Basic Materials ROIC vs. WACC: December 2004 – 8/11/20

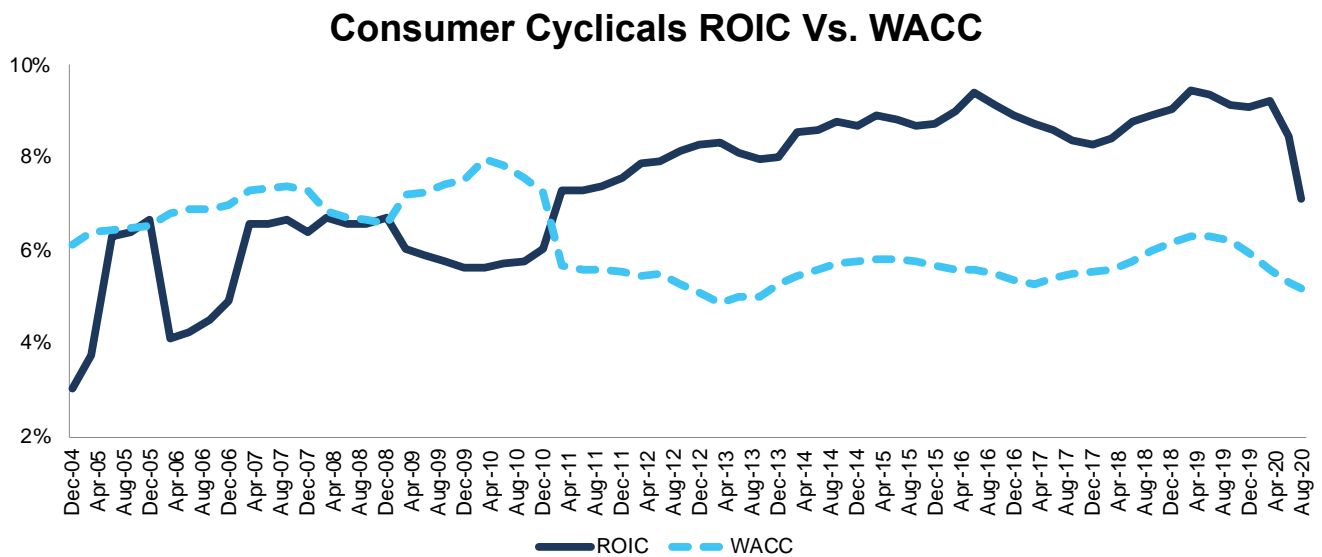


Sources: New Constructs, LLC and company filings.

### Consumer Cyclicals

Figure 4 shows the ROIC for the Consumer Cyclicals sector was hit hard by the COVID-19 pandemic and has fallen to its lowest level since mid-2011. The significant decline in 2020 follows the large drop in core earnings highlighted in [Only One S&P 500 Sector's Core Earnings Improved This Year](#). This decline is the result of deteriorating operational and capital efficiency. NOPAT margin fell from 8.0% to 6.6% since the end of 2019 and invested capital turns declined from 1.15 to 1.08 over the same time.

Figure 4: Consumer Cyclicals ROIC vs. WACC: December 2004 – 8/11/20



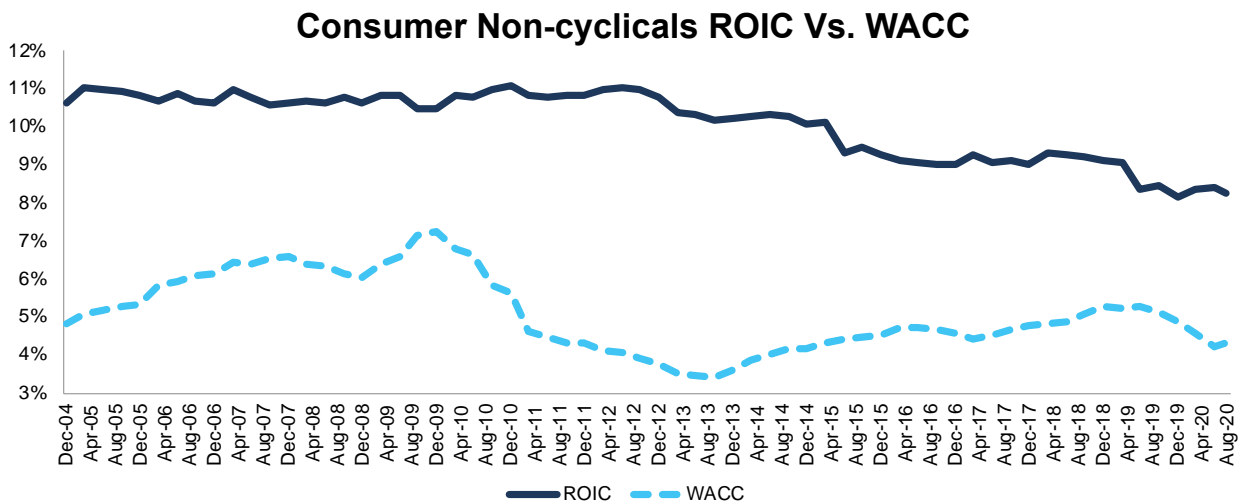
Sources: New Constructs, LLC and company filings.



### Consumer Non-cyclicals

Figure 5 shows ROIC for the Consumer Non-Cyclicals sector has steadily declined and, at 8%, is near record lows since dating back to 2004. The rise of e-commerce and consumer habits diminished the competitive advantages that previously helped industry giants earn outsized returns. Now, only the most well-run companies are improving ROIC. The declining ROIC is the result of NOPAT margin falling from 6.6% at the end of 2010 to 6.0% TTM and invested capital turns falling from 1.65 to 1.37 over the same time.

Figure 5: Consumer Non-cyclicals ROIC vs. WACC: December 2004 – 8/11/20

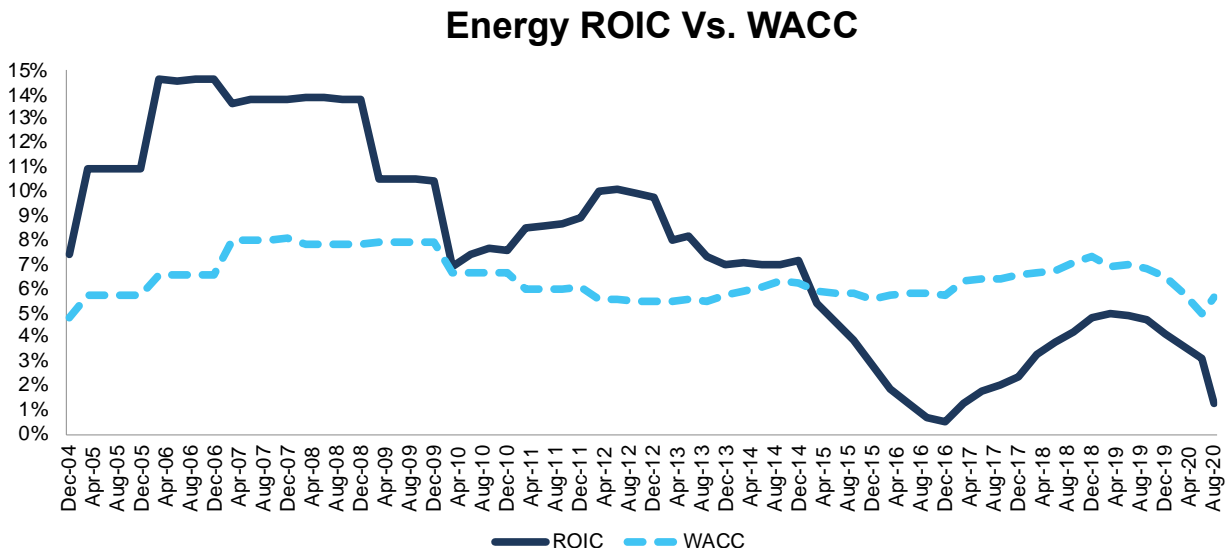


Sources: New Constructs, LLC and company filings.

### Energy

Figure 6 shows the ROIC for the Energy sector was hit hardest of all sectors during the COVID-19 pandemic that coincided with increased production from Saudi Arabia and Russia. The deteriorating ROIC wiped out nearly all the improvement achieved from 2016 to mid-2019. The decline in ROIC is largely driven by NOPAT margin falling from 8.2% at the end of 2018 to 2.6% TTM. Invested capital turns have also fallen from 0.61 to 0.48 over the same time.

Figure 6: Energy ROIC vs. WACC: December 2004 – 8/11/20



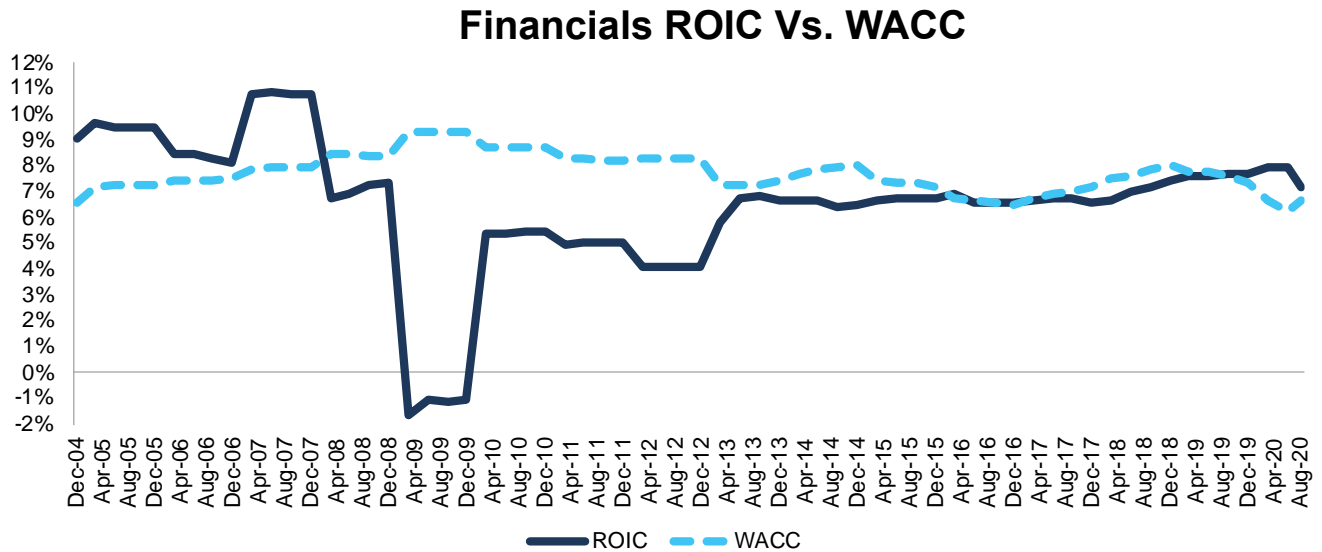
Sources: New Constructs, LLC and company filings.



Financials

Figure 7 shows ROIC for the Financials sector declined 82 basis points since the end of 2019 but remains well above the lows of the Financial Crisis. Given the stability in ROIC since 2013, one could argue regulators were successful in turning large Financial firms into “boring”, more stable businesses. NOPAT margin fell from 15.0% to 14.1% since the end of 2019 and invested capital turns fell from 0.53 to 0.51 over the same time.

Figure 7: Financials ROIC vs. WACC: December 2004 – 8/11/20

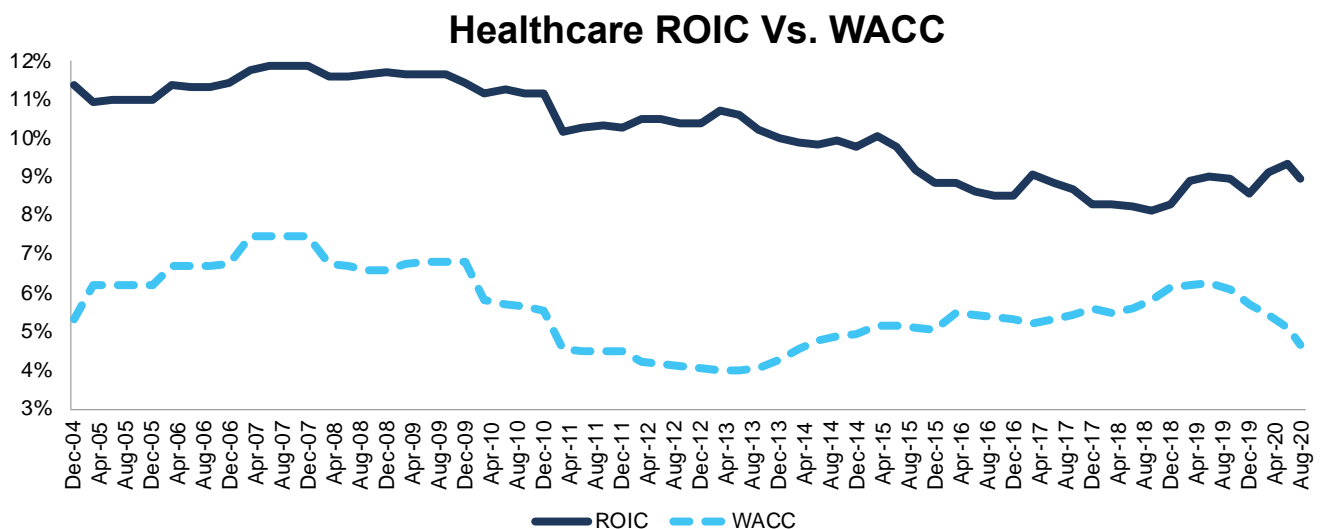


Sources: New Constructs, LLC and company filings.

Healthcare

Figure 8 shows ROIC for the Healthcare sector declined just 14 basis points since the end of 2019 and have remained relatively stable since the end of 2016. The decline in ROIC is driven by NOPAT margin falling from 10.5% to 10.1% since the end of 2019. Meanwhile, invested capital turns have improved from 0.87 to 0.89 over the same time.

Figure 8: Healthcare ROIC vs. WACC: December 2004 – 8/11/20



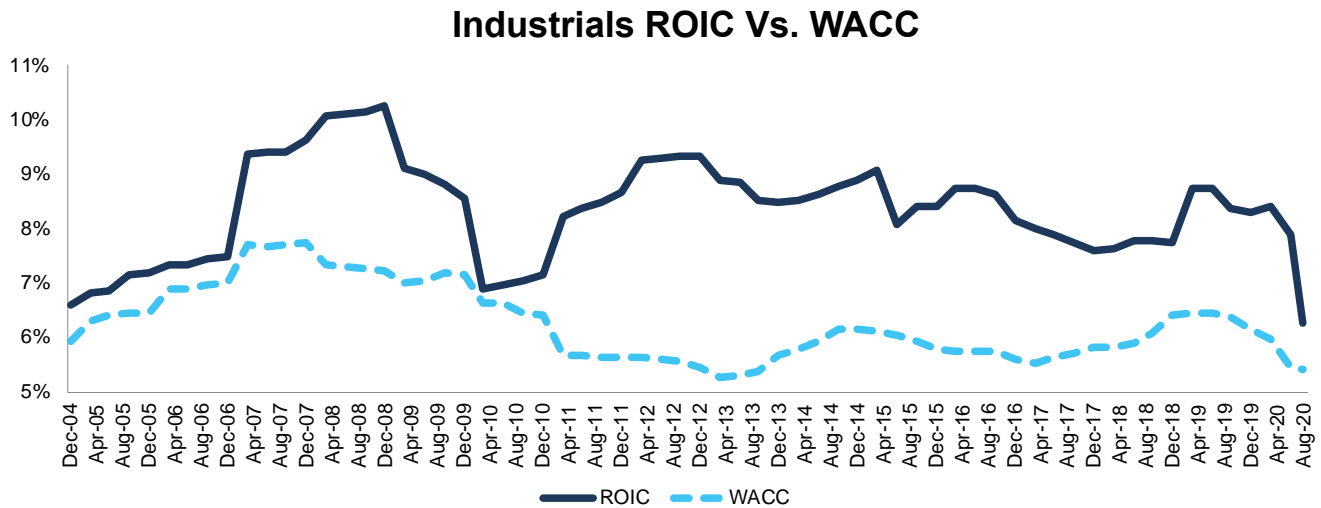
Sources: New Constructs, LLC and company filings.



### Industrials

Figure 9 shows ROIC for the Industrials sector was the second hardest hit this year and fell 217 basis points since the end of 2019 as the sector bore much of the brunt of the global shutdowns. NOPAT margin fell from 10.7% at the end of 2019 to 8.7% TTM and invested capital turns fell from 0.79 to 0.72 over the same time.

Figure 9: Industrials ROIC vs. WACC: December 2004 – 8/11/20

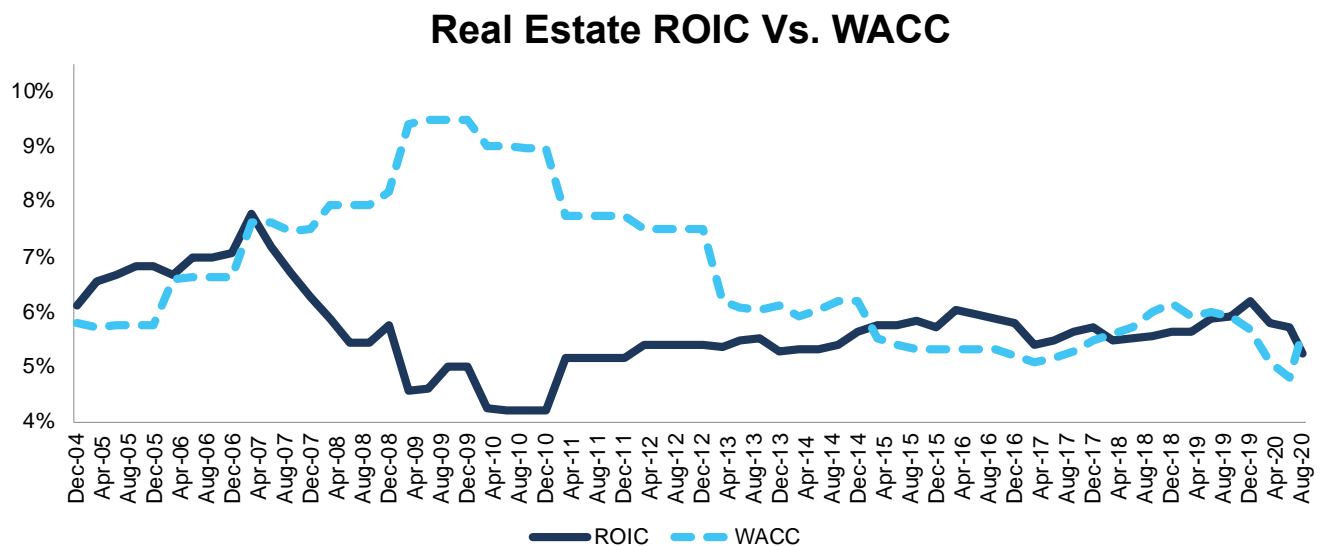


Sources: New Constructs, LLC and company filings.

### Real Estate

Figure 10 shows ROIC for the Real Estate sector has fallen significantly since the end of 2019. Longer-term, the ROIC for the Real Estate sector has yet to reach the highs achieved prior to the Financial Crisis. NOPAT margin, which fell from 24.5% at the end of 2019 to 22.7% TTM has driven the decline in ROIC, as invested capital turns have only fallen from 0.22 to 0.21 over the same time.

Figure 10: Real Estate ROIC vs. WACC: December 2004 – 8/11/20



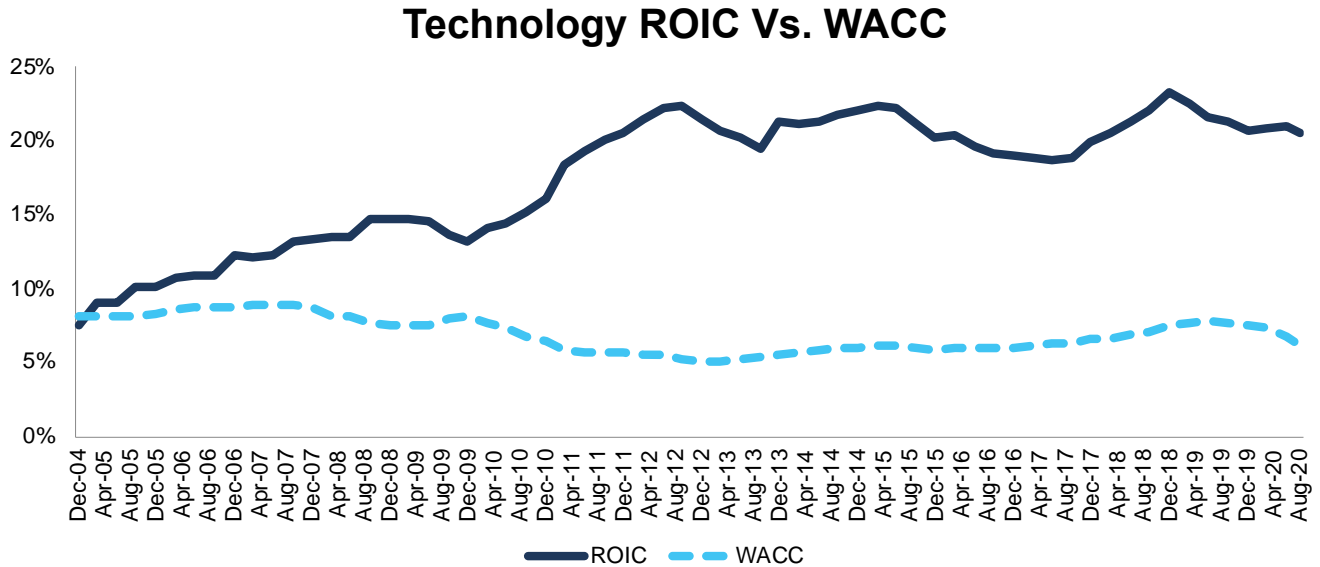
Sources: New Constructs, LLC and company filings.



### Technology

Figure 11 shows the ROIC the Technology sector has declined since the end of 2018 but remains in a long-term uptrend. The Technology sector also has the highest ROIC of any sector by a wide margin. The Technology sector's NOPAT margin actually improved from 19.9% at the end of 2019 to 20.0% TTM, but invested capital turns fell every so slightly, from 1.04 to 1.03 over the same time.

Figure 11: Technology ROIC vs. WACC: December 2004 – 8/11/20

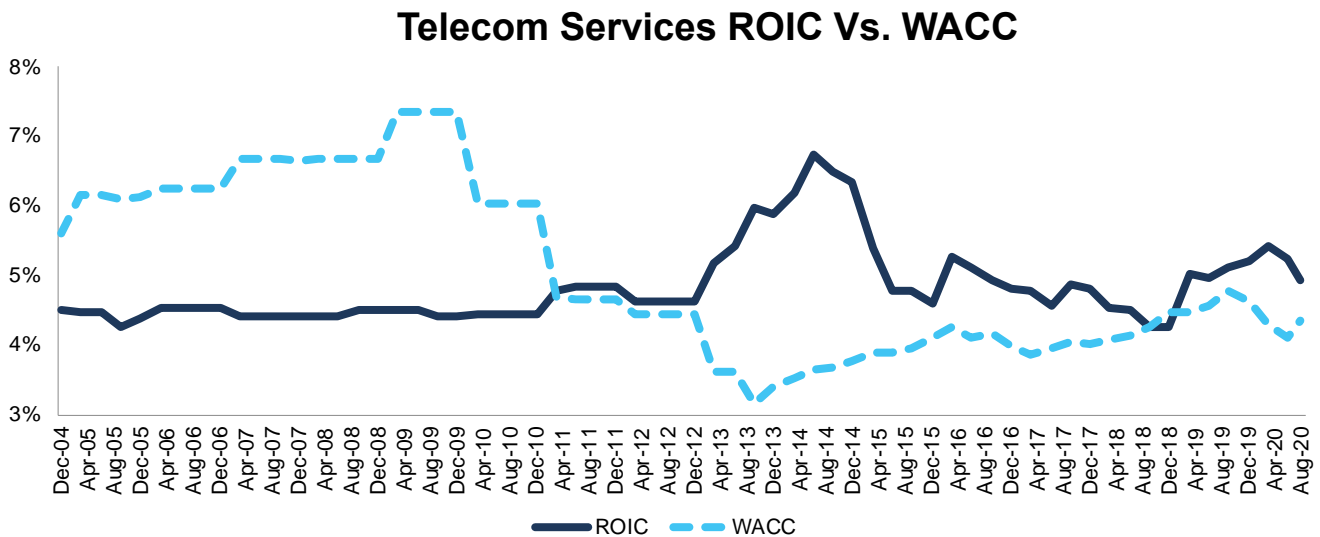


Sources: New Constructs, LLC and company filings.

### Telecom Services

Figure 12 shows the ROIC for the Telecom Services sector has fallen 51 basis points since the end of 2019 and remains well below its peak in mid-2014. The NOPAT margin for the sector fell from 15.0% at the end of 2019 to 14.1% TTM and invested capital turns fell from 0.36 to 0.35 over the same time.

Figure 12: Telecom Services ROIC vs. WACC: December 2004 – 8/11/20



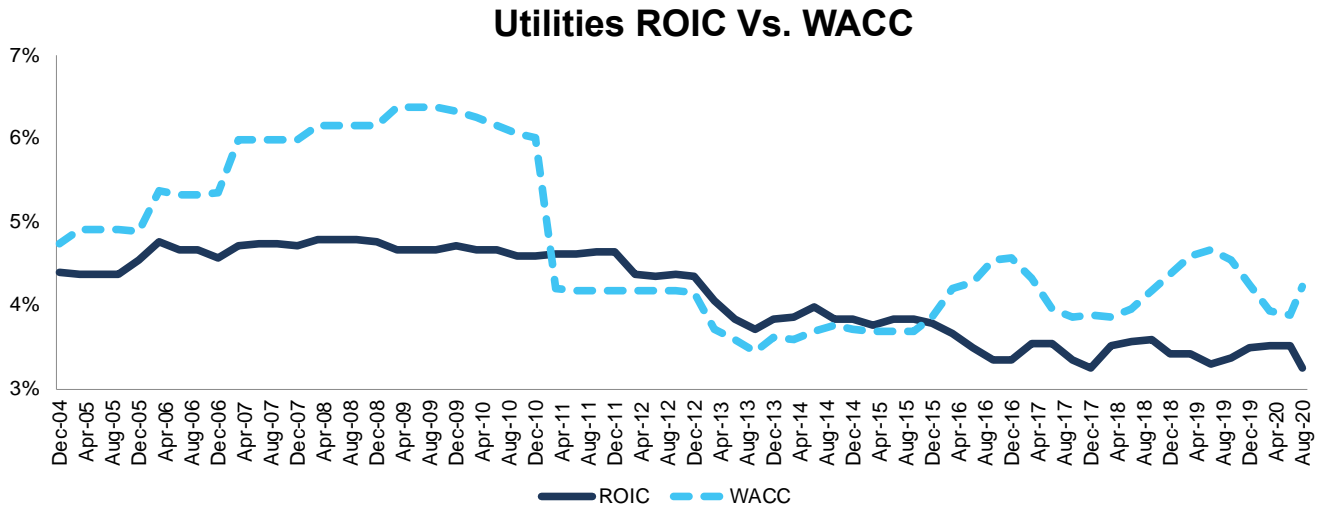
Sources: New Constructs, LLC and company filings.



Utilities

Figure 13 shows the ROIC for the Utilities sector declined 27 basis points since the end of 2019 and is once again below the sector’s WACC. The decline this year follows the long-term trend since 2004. NOPAT margin for the sector fell from 16.4% at the end of 2019 to 16.0% TTM while invested capital turns fell from 0.22 to 0.20 over the same time.

Figure 13: Utilities ROIC vs. WACC: December 2004 – 8/11/20



Sources: New Constructs, LLC and company filings.

This article originally published on [September 15, 2020](#).

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 I: WACC for Each Sector and S&P 500

This appendix shows the WACC for the S&P 500 and each sector as of 8/11/20.

We derive the sector and S&P 500 WACCs by solving for WACC in the [economic earnings](#) formula:

$$(ROIC-WACC) * \text{Average Invested Capital} = \text{Economic Earnings}$$

translates to

$$WACC = ROIC - \text{Economic Earnings} / \text{Average Invested Capital}$$

We calculate Economic Earnings, NOPAT and Invested Capital according to the Aggregate methodology described in Appendix III.

**Figure 14: WACC by Sector – TTM as of 8/11/20**

| Sector                 | WACC        |
|------------------------|-------------|
| Utilities              | 4.2%        |
| Consumer Non-cyclicals | 4.3%        |
| Telecom Services       | 4.3%        |
| Healthcare             | 4.7%        |
| Real Estate            | 5.1%        |
| Consumer Cyclicals     | 5.2%        |
| Basic Materials        | 5.3%        |
| Industrials            | 5.4%        |
| Energy                 | 5.6%        |
| Technology             | 6.1%        |
| Financials             | 6.7%        |
| <b>S&amp;P 500</b>     | <b>5.4%</b> |

Sources: New Constructs, LLC and company filings.



**Appendix II: NOPAT Margin and Invested Capital Turns Since 2004**

This appendix shows the [two key drivers](#) of ROIC ([DuPont model](#)) – NOPAT margin and invested capital turns – for each sector going back to December 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. More methodology details in Appendix III.

Figure 15 ranks all 11 sectors by TTM NOPAT margin.

**Figure 15: NOPAT Margin by Sector – TTM as of 8/11/20**

| Sector                 | NOPAT Margin |
|------------------------|--------------|
| Real Estate            | 23%          |
| Technology             | 20%          |
| Utilities              | 16%          |
| Financials             | 14%          |
| Telecom Services       | 14%          |
| Healthcare             | 10%          |
| Basic Materials        | 10%          |
| Industrials            | 9%           |
| Consumer Cyclical      | 7%           |
| Consumer Non-cyclicals | 6%           |
| Energy                 | 3%           |
| <b>S&amp;P 500</b>     | <b>11%</b>   |

Sources: New Constructs, LLC and company filings.

Figure 16 ranks all 11 sectors by TTM invested capital turns.

**Figure 16: Invested Capital Turns by Sector – TTM as of 8/11/20**

| Sector                 | Invested Capital Turns |
|------------------------|------------------------|
| Consumer Non-cyclicals | 1.4                    |
| Consumer Cyclical      | 1.1                    |
| Technology             | 1.0                    |
| Healthcare             | 0.9                    |
| Industrials            | 0.7                    |
| Financials             | 0.5                    |
| Basic Materials        | 0.5                    |
| Energy                 | 0.5                    |
| Telecom Services       | 0.4                    |
| Real Estate            | 0.2                    |
| Utilities              | 0.2                    |
| <b>S&amp;P 500</b>     | <b>0.7</b>             |

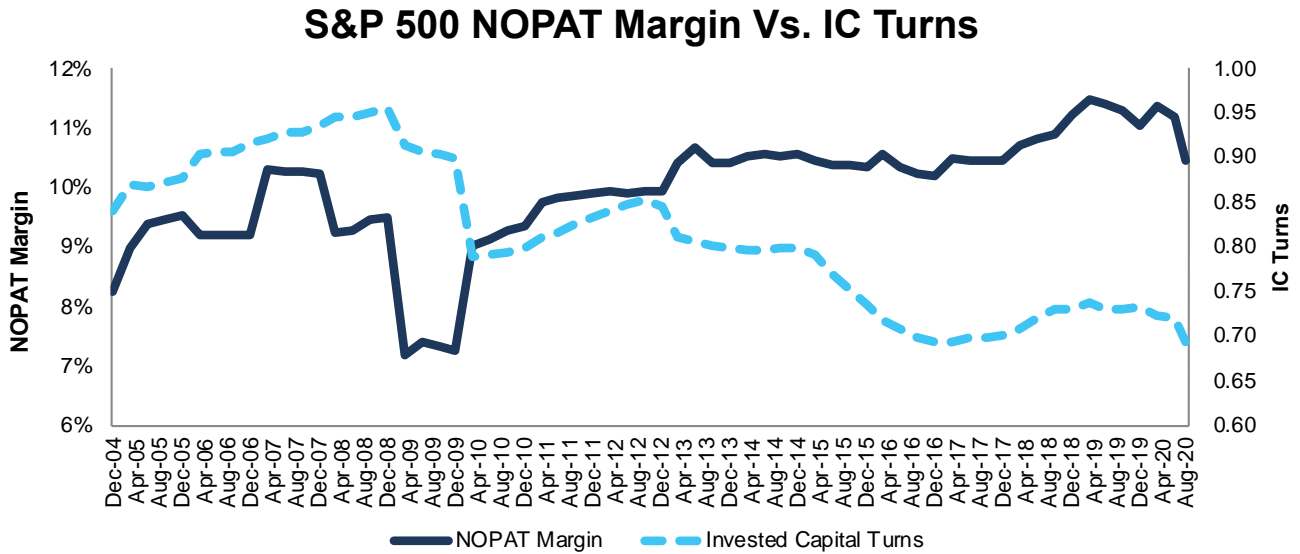
Sources: New Constructs, LLC and company filings.

These two tables show how rare it is for a sector to have both high margins and capital turns. Real Estate, the highest margin sector, has the second-worst capital turns. Consumer Non-cyclicals, the sector with the highest invested capital turns has the second lowest margin. The Technology sector has both high margins and invested capital turns, which is why that sector leads the market in ROIC by a wide margin.

Figures 17-28 compare the NOPAT margin and invested capital turns trends for the S&P 500 and every sector since 2004.

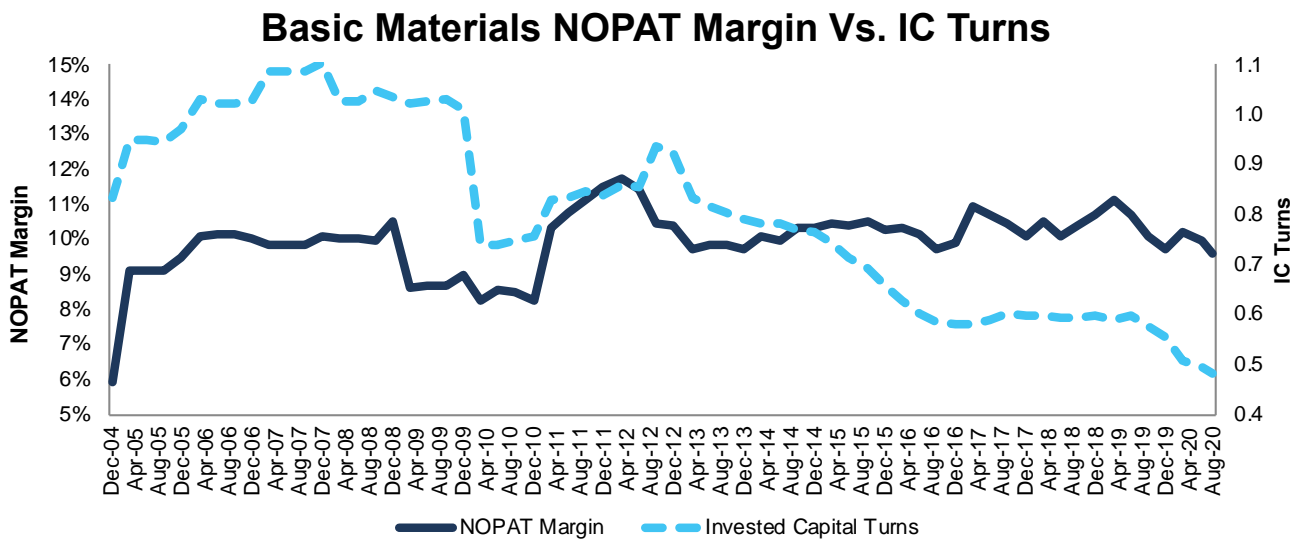


Figure 17: S&P 500 NOPAT Margin and IC Turns: December 2004 – 8/11/20



Sources: New Constructs, LLC and company filings.

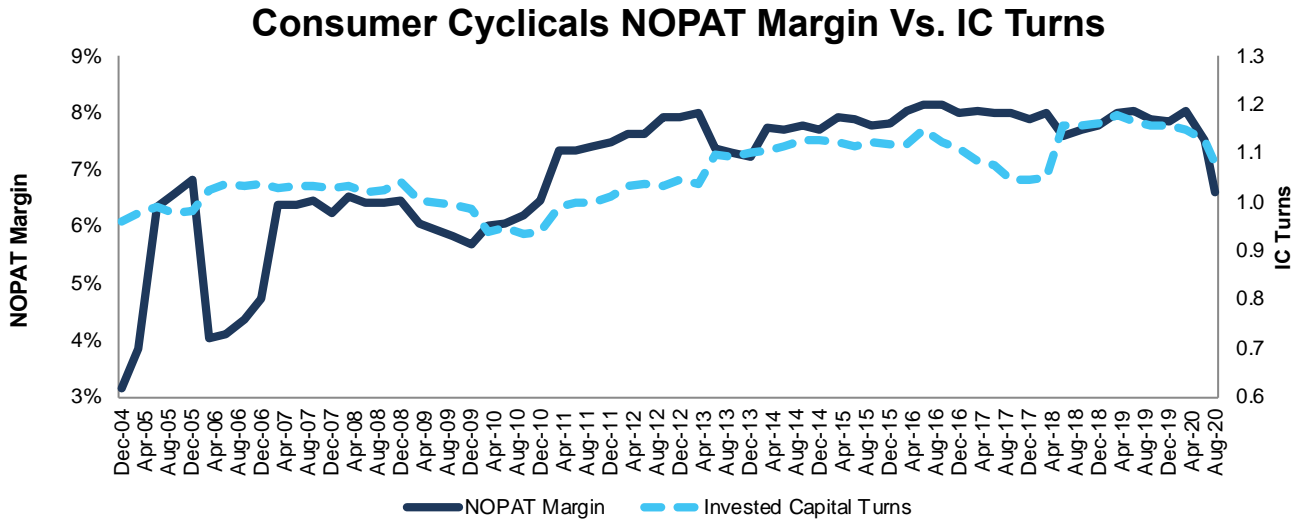
Figure 18: Basic Materials NOPAT Margin and IC Turns: December 2004 – 8/11/20



Sources: New Constructs, LLC and company filings.

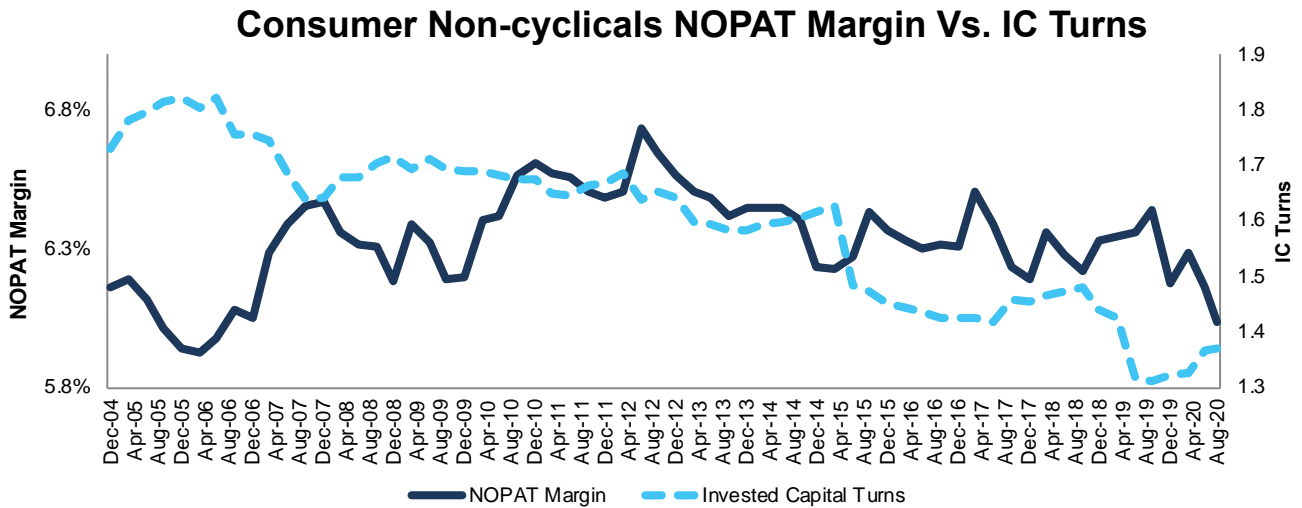


Figure 19: Consumer Cyclical NOPAT Margin and IC Turns: December 2004 – 8/11/20



Sources: New Constructs, LLC and company filings.

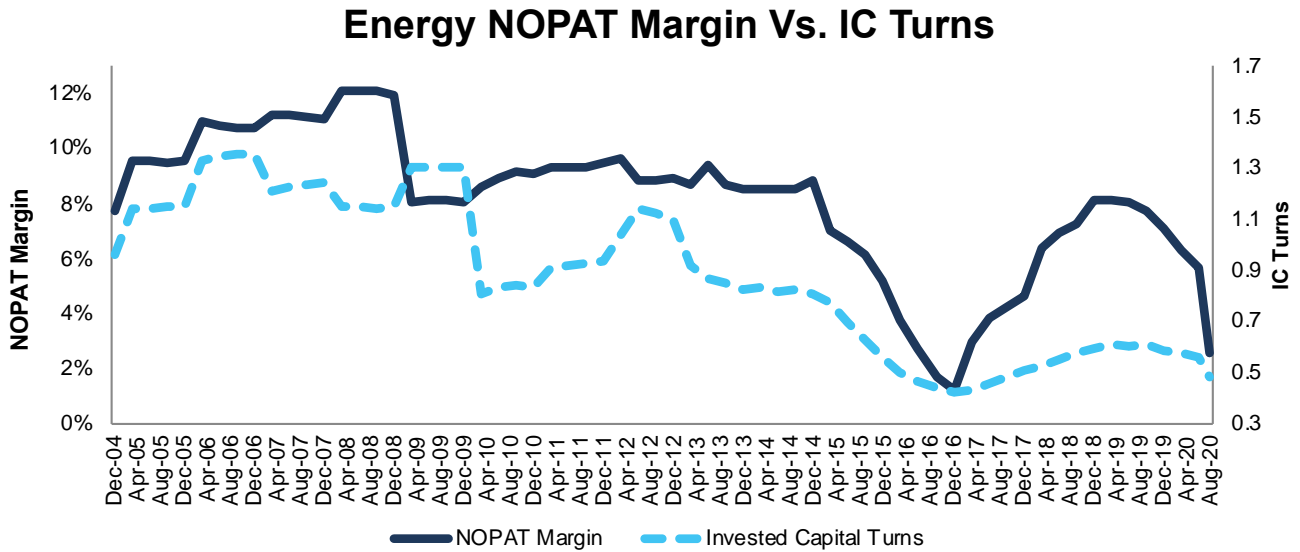
Figure 20: Consumer Non-Cyclicals NOPAT Margin and IC Turns: December 2004 – 8/11/20



Sources: New Constructs, LLC and company filings.

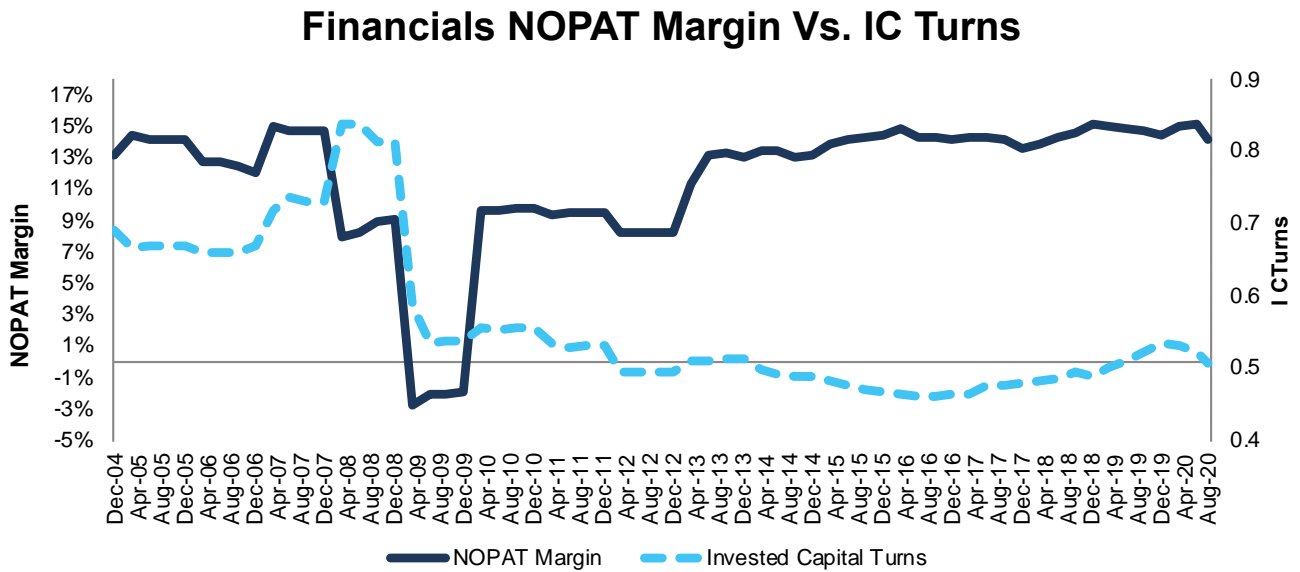


Figure 21: Energy NOPAT Margin and IC Turns: December 2004 – 8/11/20



Sources: New Constructs, LLC and company filings.

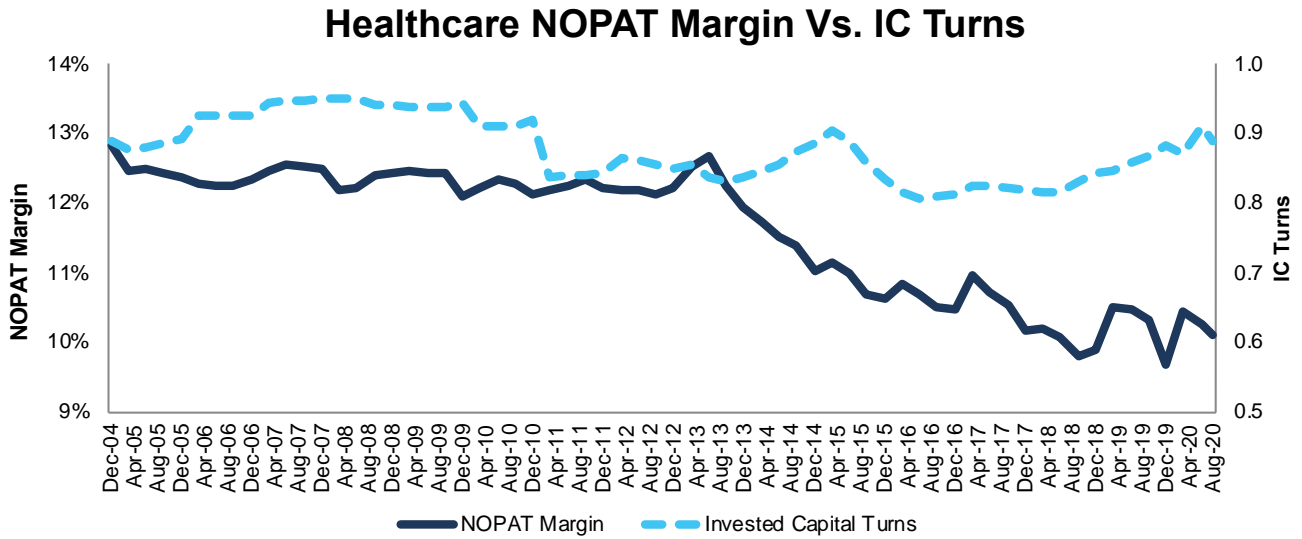
Figure 22: Financials NOPAT Margin and IC Turns: December 2004 – 8/11/20



Sources: New Constructs, LLC and company filings.

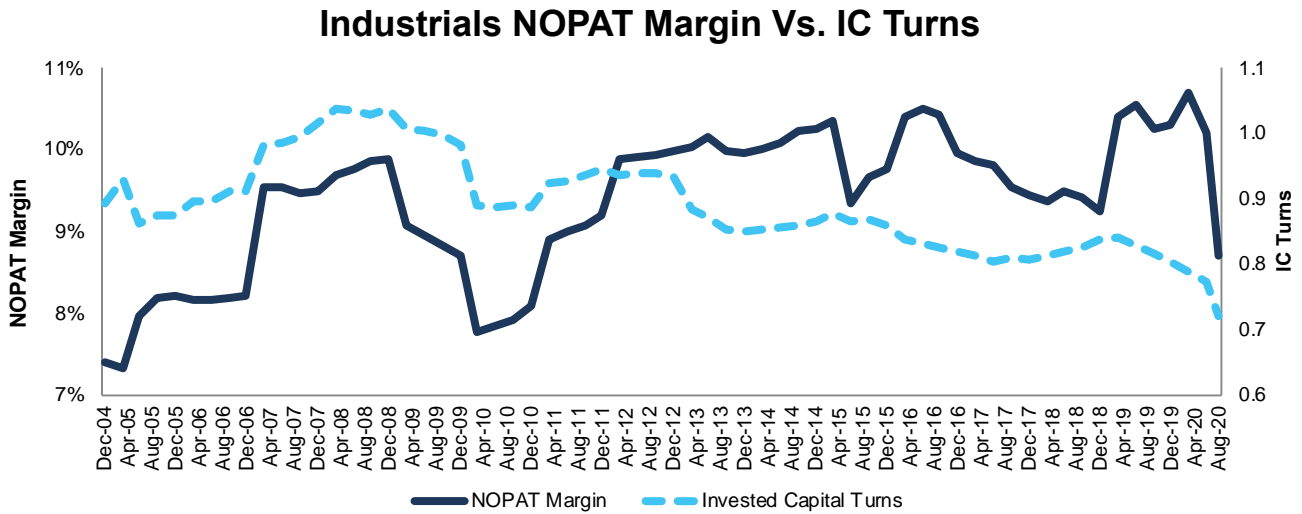


Figure 23: Healthcare NOPAT Margin and IC Turns: December 2004 – 8/11/20



Sources: New Constructs, LLC and company filings.

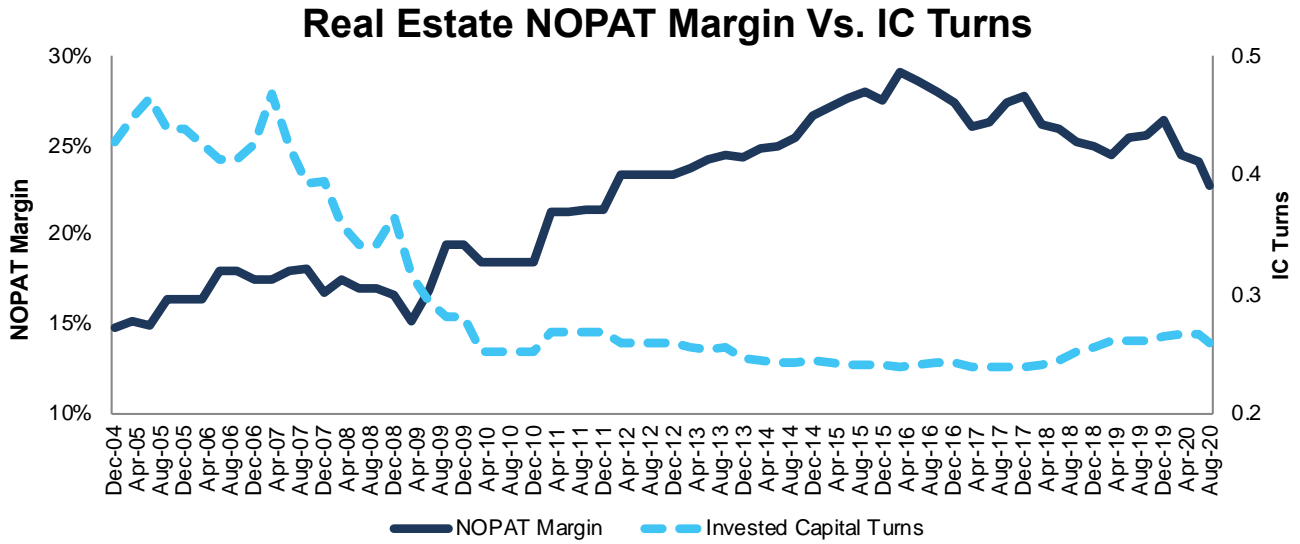
Figure 24: Industrials NOPAT Margin vs. IC Turns: December 2004 – 8/11/20



Sources: New Constructs, LLC and company filings.

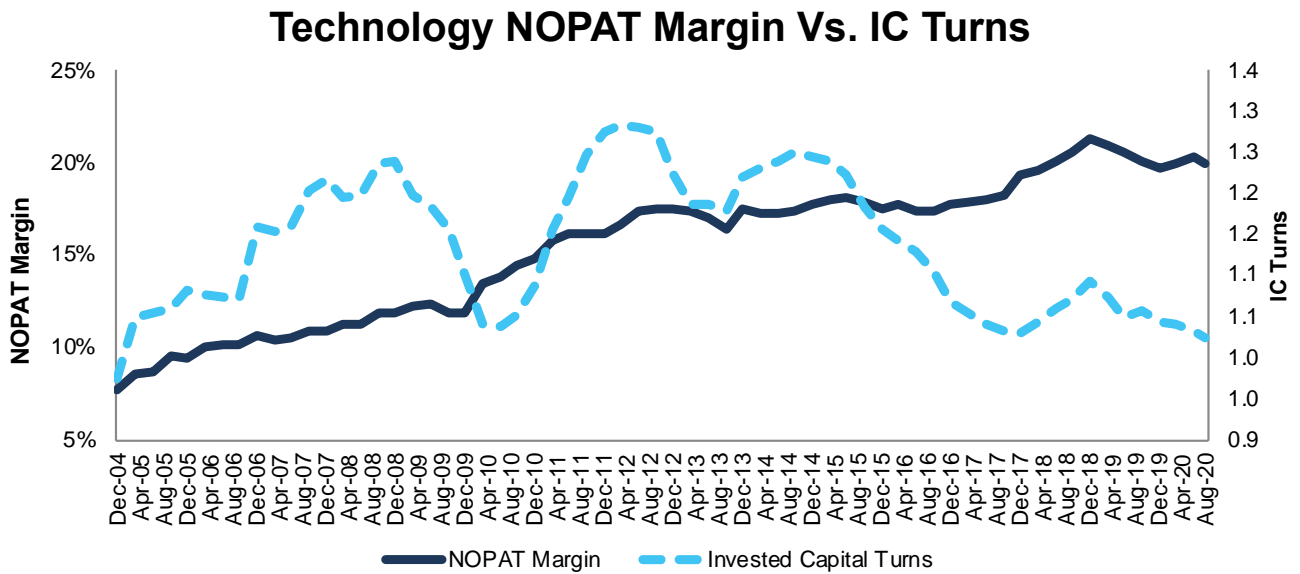


Figure 25: Real Estate NOPAT Margin Vs. IC Turns: December 2004 – 8/11/20



Sources: New Constructs, LLC and company filings.

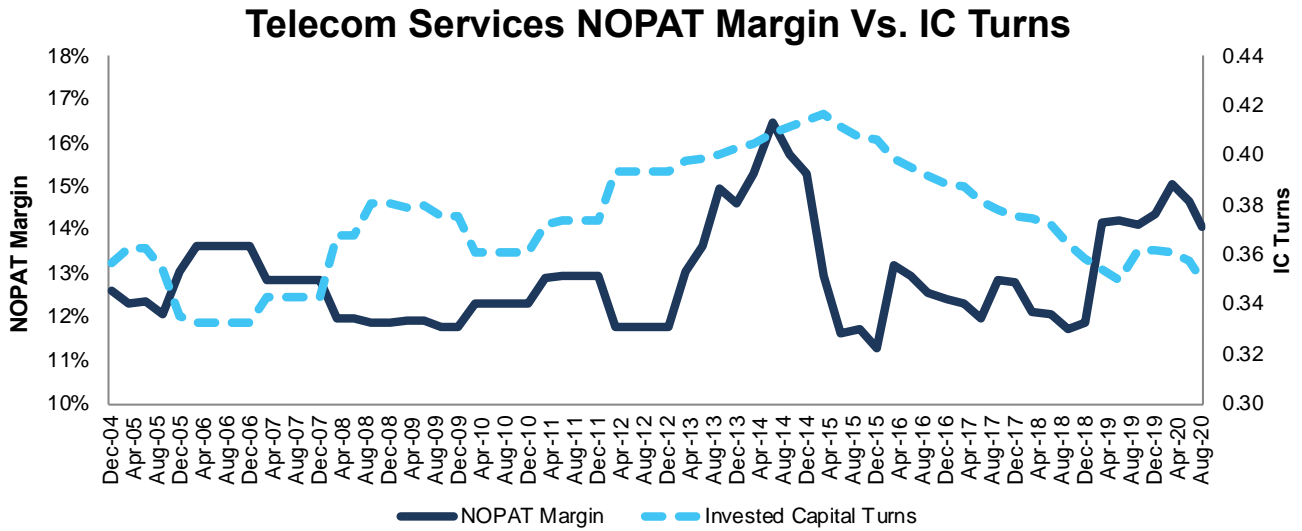
Figure 26: Technology NOPAT Margin Vs. IC Turns: December 2004 – 8/11/20



Sources: New Constructs, LLC and company filings.

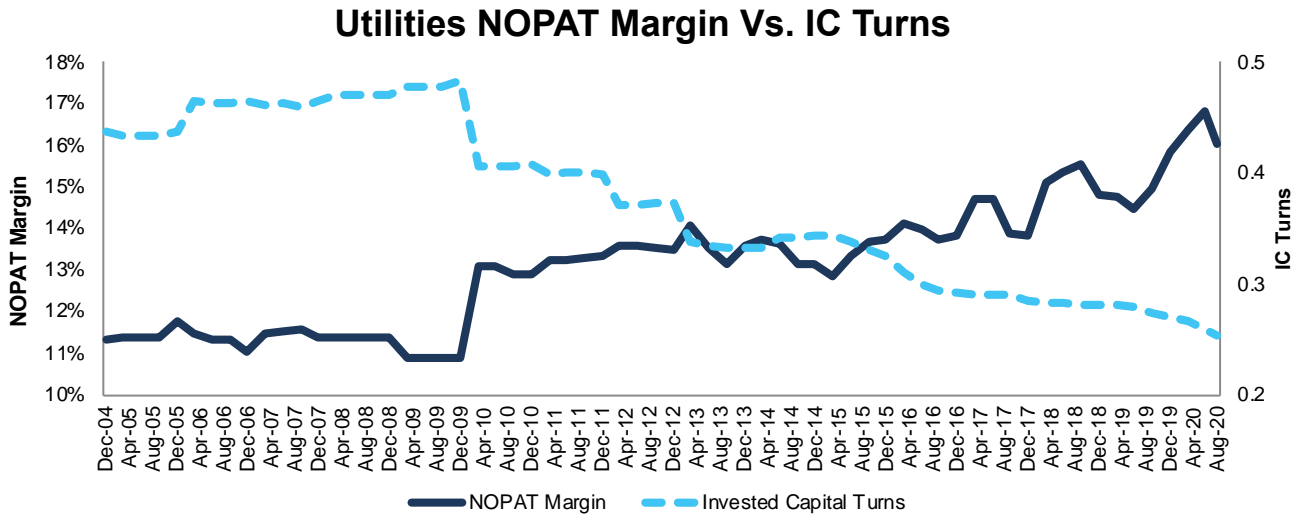


Figure 27: Telecom Services NOPAT Margin Vs. IC Turns: December 2004 – 8/11/20



Sources: New Constructs, LLC and company filings.

Figure 28: Utilities NOPAT Margin vs. IC Turns: December 2004 – 8/11/20



Sources: New Constructs, LLC and company filings.





### Appendix III: 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 in each sector in each period. Details:
  - a. Company weight equals the company’s market cap divided by the market cap of its sector
  - b. We multiply each company’s ROIC by its weight
  - c. Sector ROIC equals the sum of the weighted ROICs for all the companies in 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 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 each sector to determine each sector’s weighted NOPAT and weighted invested capital
  - d. 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 sector, regardless of company size or weighting in any indices.
- 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 sector and weights its metrics accordingly.

Cons:

- Vulnerable to outsized impact of one or a few companies, as shown below in the Consumer Non-cyclicals sector. 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 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.

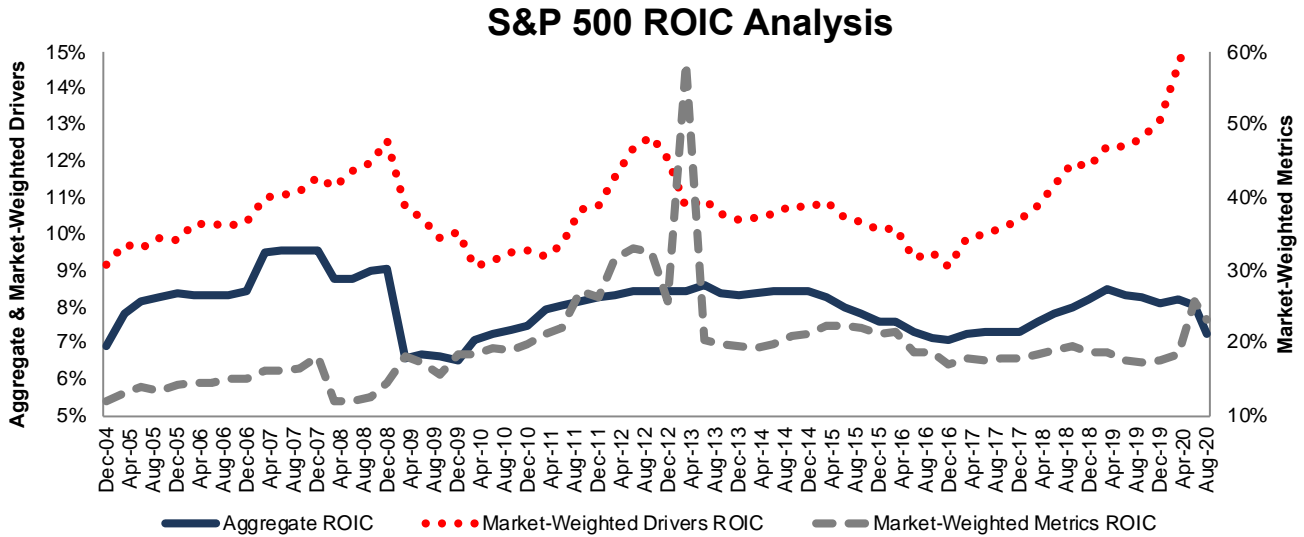
Figures 29-40 compares these three methods for calculating S&P 500 and sector ROICs.



In Figure 29, we chart the market-weighted metrics version of ROIC on its own axis to highlight the differences in the aggregate and market-weighted drivers versions of ROIC.

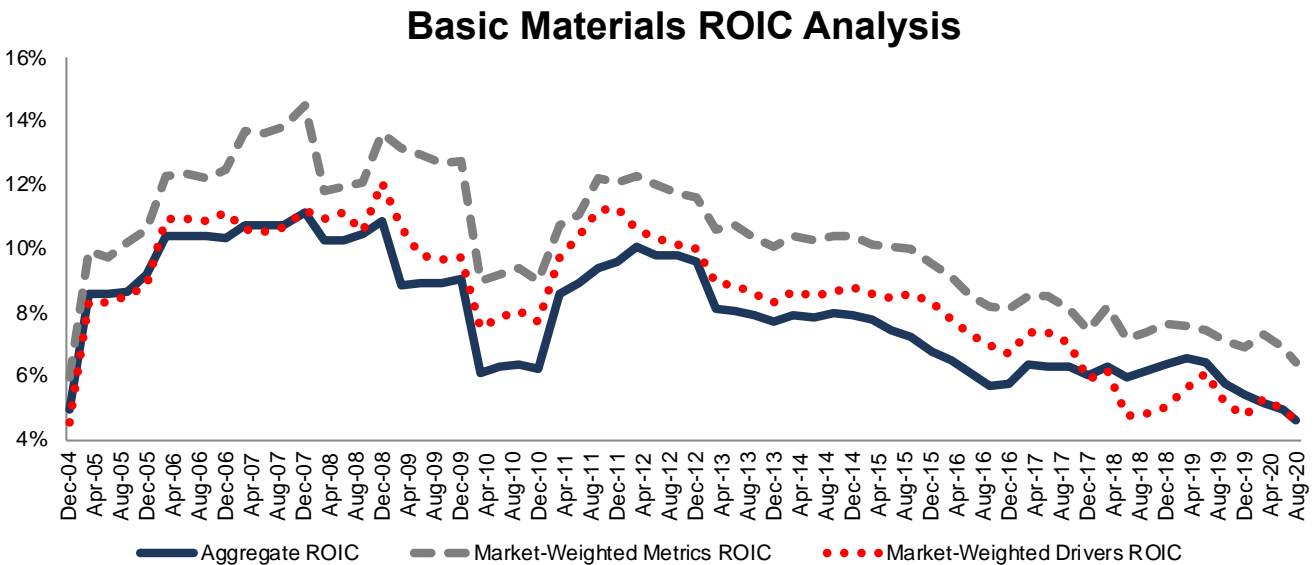
Note the impact on the market-weighted metrics version of ROIC for the entire S&P 500 from Lorillard (LO) in 2013, when the firm's ROIC was more than 36,000%.

Figure 29: S&P 500 ROIC Methodologies Compared: December 2004 – 8/11/20



Sources: New Constructs, LLC and company filings.

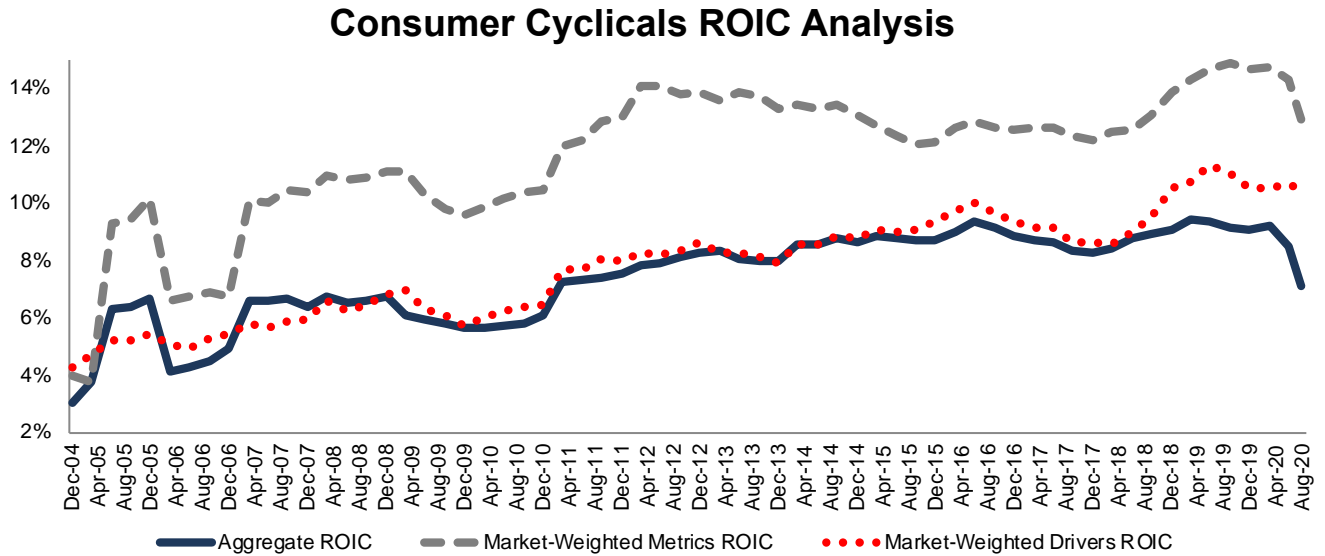
Figure 30: Basic Materials ROIC Methodologies Compared: December 2004 – 8/11/20



Sources: New Constructs, LLC and company filings.



**Figure 31: Consumer Cyclical ROIC Methodologies Compared: December 2004 – 8/11/20**

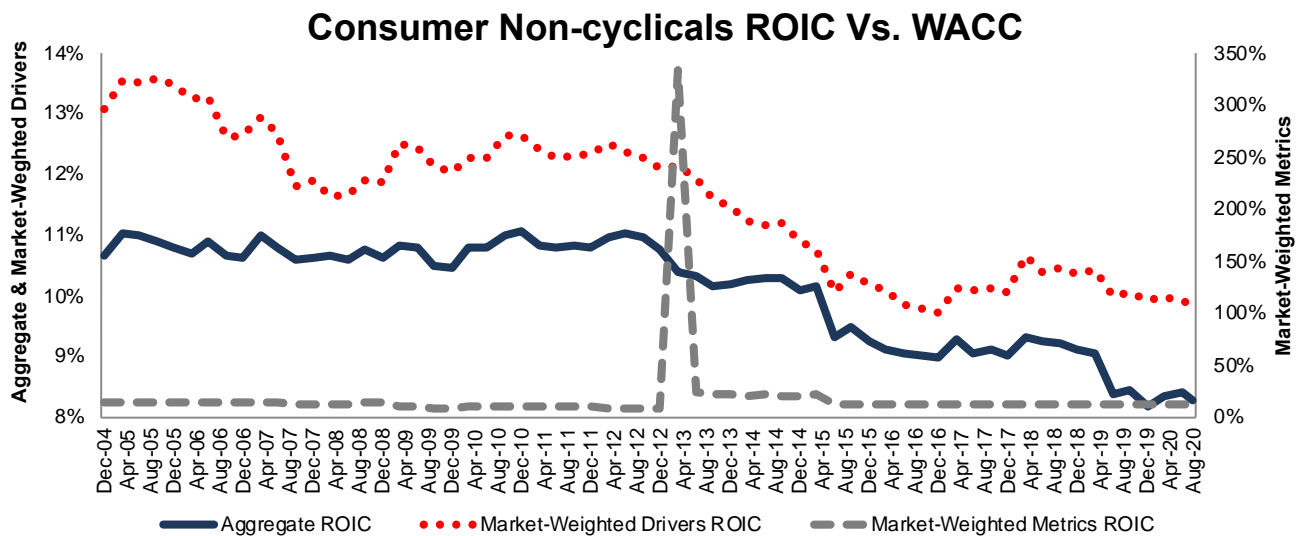


Sources: New Constructs, LLC and company filings.

Note the impact on the market-weighted metrics version of ROIC for the Consumer Non-cyclicals sector from Lorillard (LO) in 2013, when the firm’s ROIC was more than 36,000%.

This outlier caused the Consumer Non-cyclicals sector’s ROIC to increase from 9% to 334% in just one period, before falling to 24% one period later.

**Figure 32: Consumer Non-cyclicals ROIC Methodologies Compared: December 2004 – 8/11/20**

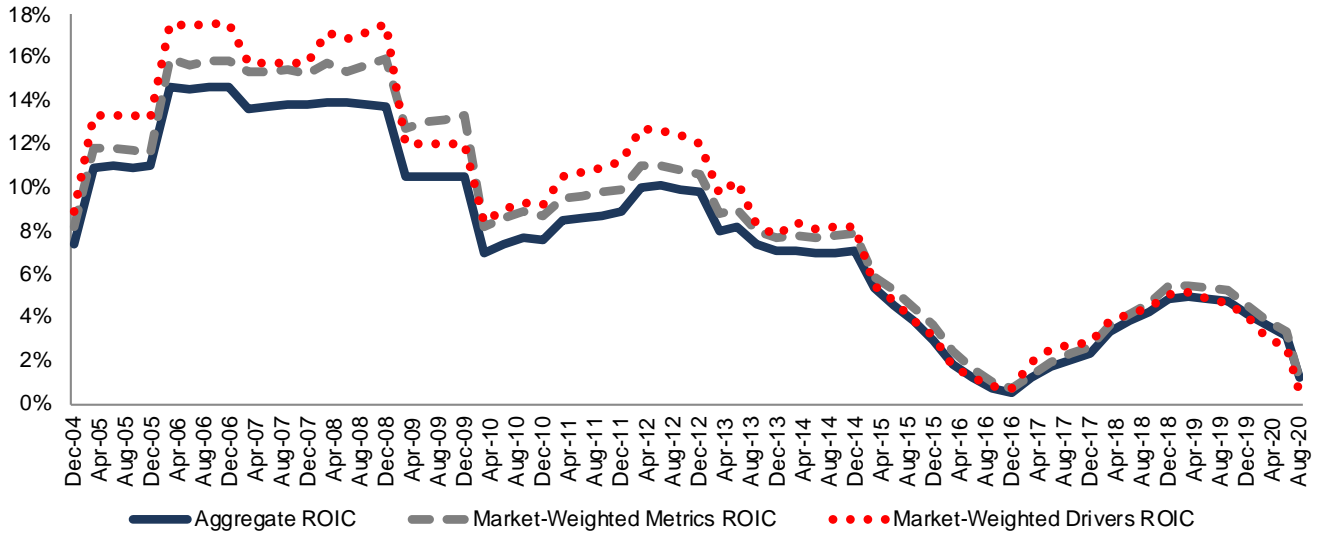


Sources: New Constructs, LLC and company filings.



Figure 33: Energy ROIC Methodologies Compared: December 2004 – 8/11/20

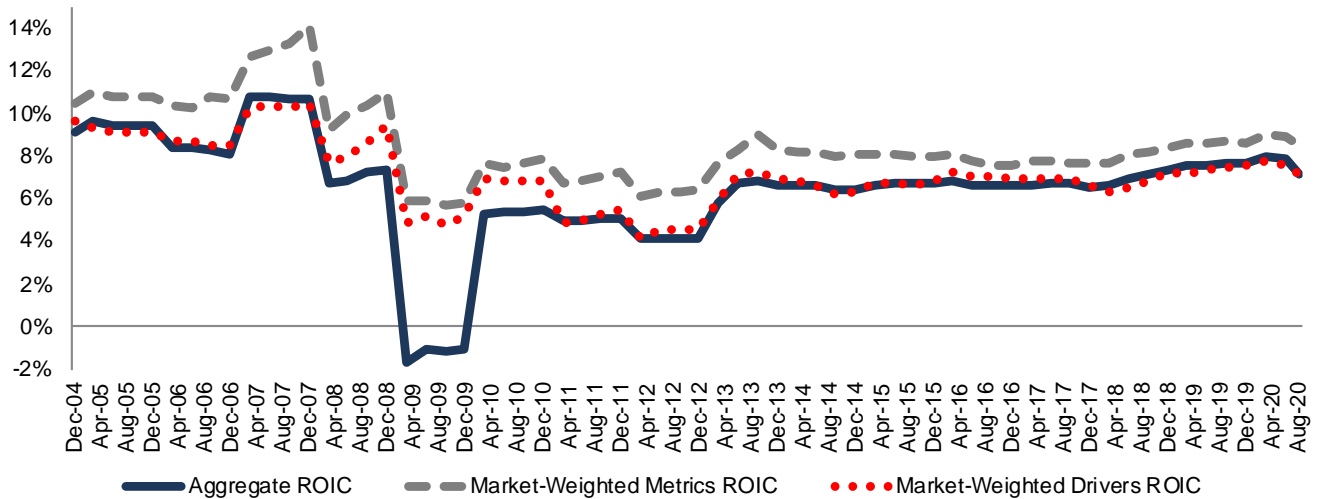
### Energy ROIC Analysis



Sources: New Constructs, LLC and company filings.

Figure 34: Financials ROIC Methodologies Compared: December 2004 – 8/11/20

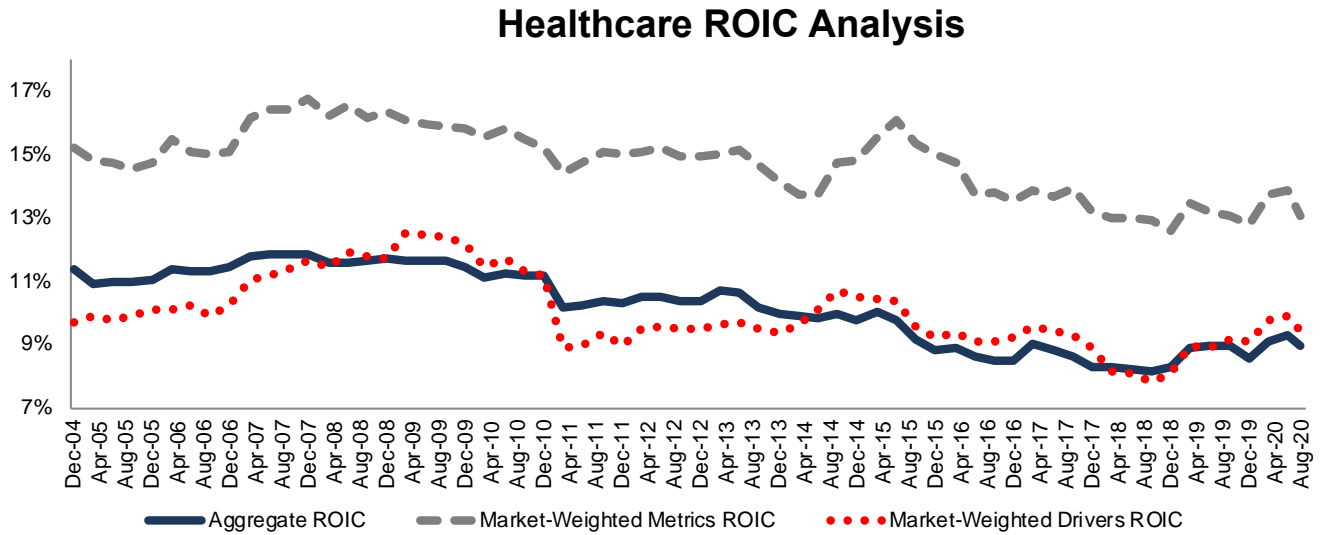
### Financials ROIC Analysis



Sources: New Constructs, LLC and company filings.

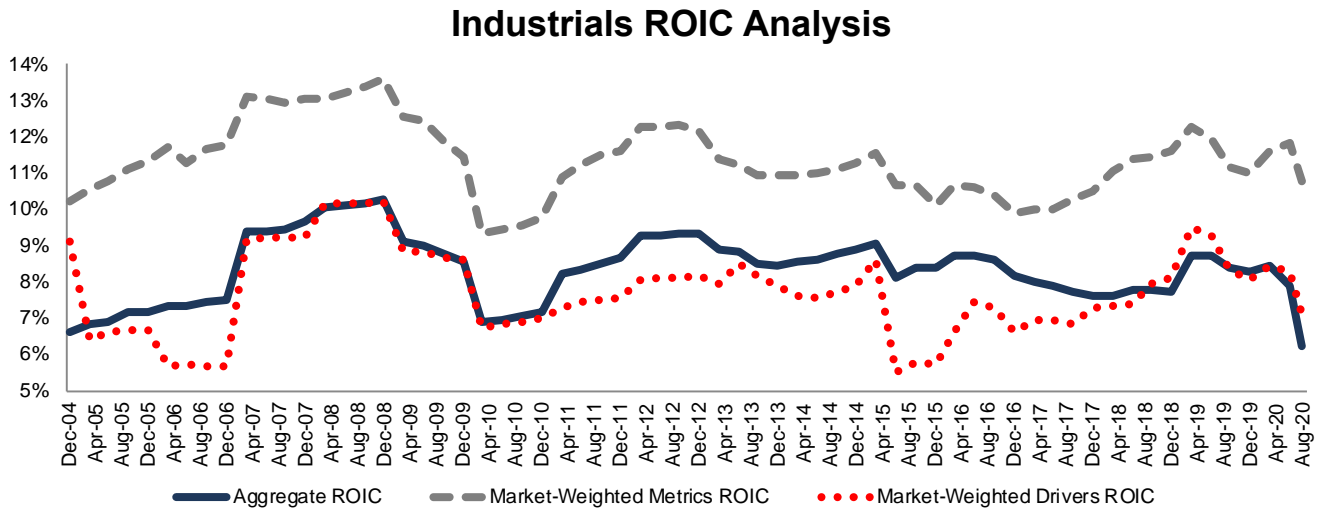


Figure 35: Healthcare ROIC Methodologies Compared: December 2004 – 8/11/20



Sources: New Constructs, LLC and company filings.

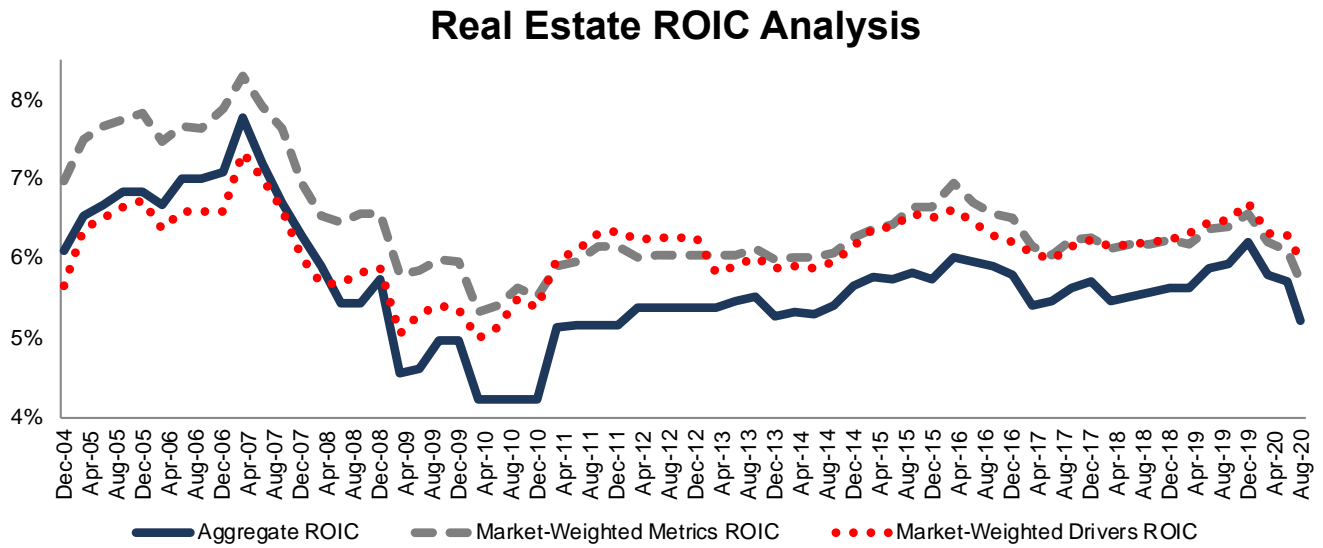
Figure 36: Industrials ROIC Methodologies Compared: December 2004 – 8/11/20



Sources: New Constructs, LLC and company filings.

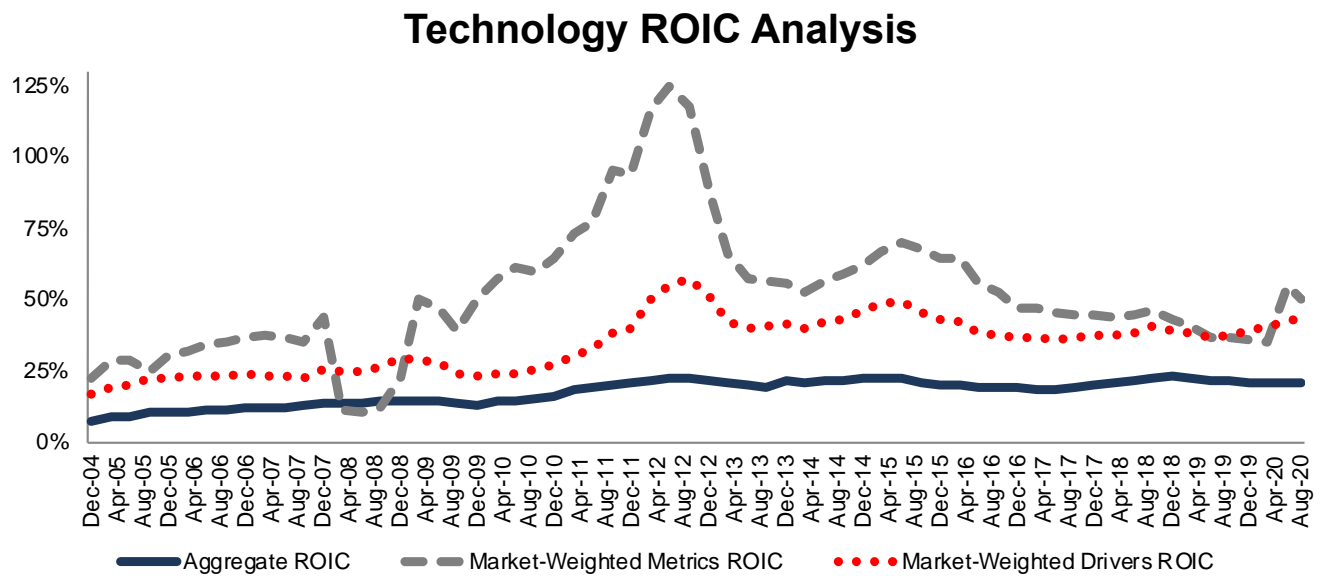


Figure 37: Real Estate ROIC Methodologies Compared: December 2004 – 8/11/20



Sources: New Constructs, LLC and company filings.

Figure 38: Technology ROIC Methodologies Compared: December 2004 – 8/11/20

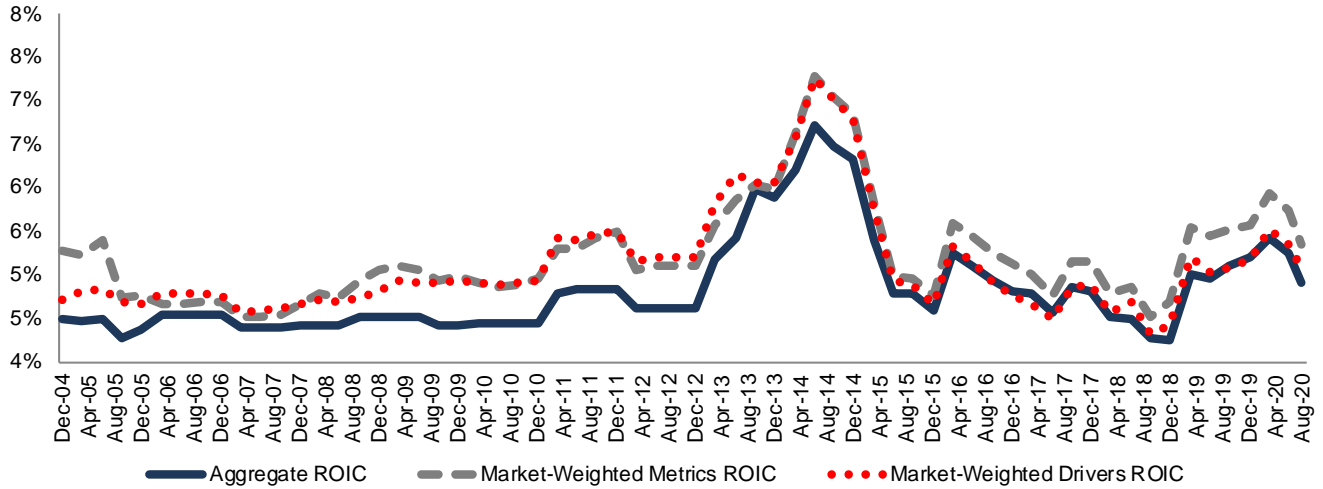


Sources: New Constructs, LLC and company filings.



Figure 39: Telecom Services ROIC Methodologies Compared: December 2004 – 8/11/20

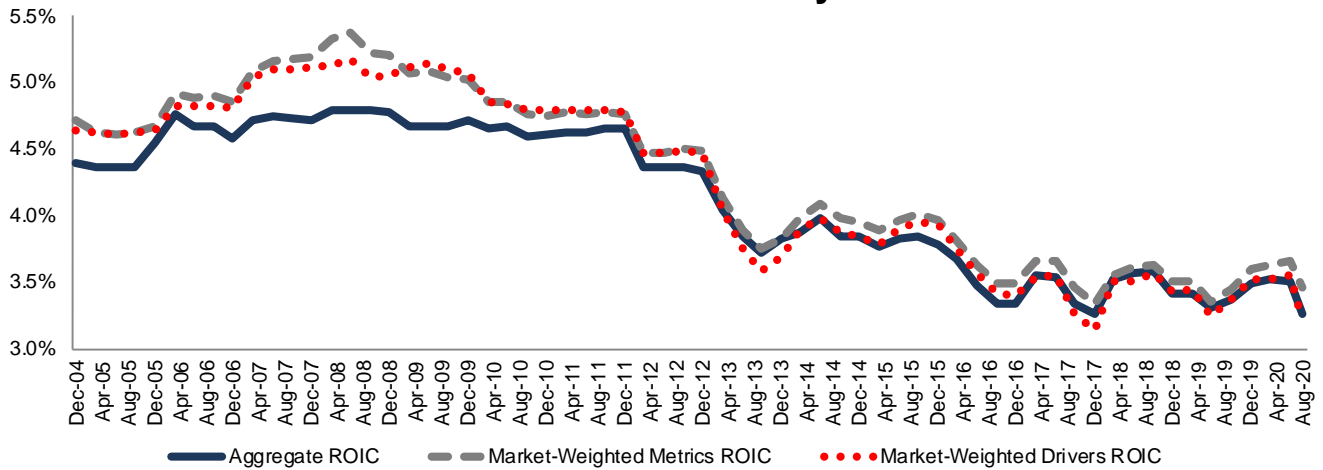
### Telecom Services ROIC Analysis



Sources: New Constructs, LLC and company filings.

Figure 40: Utilities ROIC Methodologies Compared: December 2004 – 8/11/20

### Utilities ROIC Analysis



Sources: New Constructs, LLC and company filings.



## Footnotes adjustments matter. We are the ONLY source.

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### **Get better research:**

*“...the NC dataset provides a novel opportunity to study the properties of non-operating items disclosed in 10-Ks, and to examine the extent to which the market impounds their implications.” – page 20*

### **Pick better stocks:**

*“Trading strategies that exploit cross-sectional differences in firms’ transitory earnings produce abnormal returns of 7-to-10% per year.” – Abstract*

### **Avoid losses from using other firms’ data:**

*“...many of the income-statement-relevant quantitative disclosures collected by NC do not appear to be easily identifiable in Compustat...” – page 14*

### **Build better models:**

*“Core Earnings [calculated using New Constructs’ novel dataset] provides predictive power for various measures of one-year-ahead performance...that is incremental to their current-period counterparts.” – page 4*

### **Exploit market inefficiencies:**

*“These results ... suggest that the adjustments made by analysts and Compustat to better capture core earnings are incomplete. Moreover, the non-core items identified by NC produce a measure of core earnings that is incremental to alternative measures of operating performance in predicting an array of future income measures.” – page 26*

### **Fulfill fiduciary duties:**

*“An appropriate measure of accounting performance for purposes of forecasting future performance requires detailed analysis of all quantitative performance disclosures detailed in the annual report, including those reported only in the footnotes and in the MD&A.” – page 33-34*





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