



May 6, 2024

## Making New Highs

With the S&P 500 at all-time highs at the end of the first quarter, closing at 5,254.35 with a Price to Earnings (P/E) ratio was 26.2x , we thought it would be interesting to delve into the fundamentals to see what this price implies and determine if it is, in fact, reasonable. To do so, we gathered fundamental data on the S&P 500 over the past 20 years and present it in the table below. We then use the data to calculate the intrinsic value and the implied P/E multiple for the index.

S&P 500 Fundamental Review <sup>1</sup>								
Ending 2023	CAGR Years				Annual Median			
	5	10	15	20	5	10	15	20
Revenue Growth	7.0%	5.2%	4.2%	5.8%	5.3%	5.1%	5.0%	6.8%
Net Income Growth	7.2%	6.6%	5.3%	6.6%	3.4%	5.9%	6.8%	7.6%
Return on Equity					18.7%	16.2%	15.4%	15.6%
Reinvestment Rate					37.0%	27.1%	35.8%	34.6%
Implied Growth Rate					6.9%	4.4%	5.5%	5.4%

The fundamentals show how the S&P 500 has performed on average going back 20 years. Here are the summarized highlights:

- Revenue has compounded between 4.2% and 7.0%.
- Net income has compounded between 5.3% and 7.2%.
- Return on equity has a median ranging between 15.4% and 18.7%.
- Reinvestment rates have a median between 27.1% and 37.0%.

<sup>1</sup> Source: FactSet and Midway Partners calculations.

Now we must make a few selections for the future fundamentals and input them into a valuation model. We select 16.0% for the ROE and 37.5% for the reinvestment rate. This implies a growth rate of 6.0%. This is a high growth to use in perpetuity, but it is important to remember that the S&P 500 is not a fixed group of companies. The constituents can be changed to swap in smaller faster growing companies and remove older companies. This could keep the growth rate above Gross Domestic Product (GDP) growth or inflation rates<sup>2</sup>. We use a 10.0% required rate of return as the discount rate because that is what we believe is reasonable for long-term equity investment returns<sup>3</sup>. Here are the inputs shown in a table.

Fundamental	Selected Valuation Input
Return on Equity (ROE)	16.0%
Reinvestment Rate (RINV)	37.5%
Growth Rate (RINV x ROE)	6.0%
Required Rate of Return (r)	10.0%

These inputs look reasonable given the 5-20 year fundamental data provided. We have no doubt that others would make different selections with their own rationales. That is of course fine, we simply want to illustrate the intrinsic value with this set of inputs.

Plugging these drivers into a discounted cash flow model we get the following.

$$\text{Implied P/E} = \frac{V}{NI_0} = \frac{(1 - RINV)(1 + g)}{(r - g)} = \frac{(1 - 37.5\%)(1 + 6.0\%)}{(10.0\% - 6.0\%)} = 16.56x$$

Where:

$V$  = the present value of future cash flow

$NI_0$  = net income in prior year

$RINV$  = the reinvestment percentage of net income

$g$  = the growth rate (RINV x ROE)

$r$  = the required rate of return

Given the inputs selected above, the intrinsic value and implied P/E ratio for the S&P 500 is estimated to be 16.6x.

If we believe that the index is unlikely to grow faster, be more profitable, or utilize less capital in the future than it has have in the past, how do we wrap our minds around the S&P 500's March

<sup>2</sup> Even so, this is an optimistic perpetual growth rate.

<sup>3</sup> We do not rely on traditional equity risk premiums calculations to determine the discount rate as their link to equity returns and risk are precarious as demonstrated in "The Missing Risk Premium" by Eric Falkenstein.

28, 2024, P/E ratio of 26.2x. There is one variable that we can change to create a higher value and implied P/E ratio without changing the fundamental projections. We are, of course, referring to the discount rate or required rate of return.

If one is happy to accept a lower long-term rate of return, then a higher P/E multiple can be easily justified. Let's use the same fundamental assumptions but find the rate of return needed to justify a 26.2x P/E multiple.

$$\text{Implied P/E} = \frac{V}{NI_0} = \frac{(1 - RINV)(1 + g)}{(r - g)} = \frac{(1 - 37.5\%)(1 + 6.0\%)}{(8.53\% - 6.0\%)} = 26.20x$$

We find that a discount rate of 8.53% justifies a 26.2x P/E multiple. So, if one is willing to accept a long-term rate of return of 8.53%, and is comfortable with all the other assumptions, they should be willing to buy the S&P 500 at a 26.2x P/E multiple.

A return of 8.53% is not too bad. It is important to remember that the difference in compounding at 8.53% over 30 years versus 10.0% is much greater than the small difference would suggest. While \$100 compounding at 8.53% for 30 years will yield \$1,165, compounding at 10.0% will yield \$1,745. A difference of 49.7%! This is why price discipline is so important when investing. Small differences in entry prices create massive differences in ending wealth.

This example shows how it is easy for unscrupulous market pundits, analysts, or investment professionals to make minor tweaks to their assumptions and discount rates to justify almost any security price no matter how outrageous<sup>4</sup>. These "experts" can and will make almost any investment appear cheap. Beware of anyone peddling investments that are so good, the price paid does not matter.

In conclusion, is the S&P 500's price out of the bounds of reality? In our opinion, it is not, provided one will accept an 8.53% return along with the other assumptions used in the valuation model, some of which are a bit optimistic. We strive for a higher long-term rate of return and therefore would not commit capital to the S&P 500 index at these prices. If one commits capital now, we hope that they have some additional reserves to commit down the road at lower prices and higher implied rates of return. The reality is that an investor's ultimate rate of return will be a weighted average of all their individual investment returns made over time.

### A Specific Illustration

Since we are knee deep in assumptions and valuation models, let's apply the methodology to a specific example to further demonstrate the points we articulated above and see if we can draw some logical conclusions about an individual company and its market price.

Please note that this is an example and is not meant to represent an actual investment or recommendation made by Midway Partners. It will simply show how we translate numbers into intrinsic value for a specific company in the same way we did for the broad index.

<sup>4</sup> The sensitivity of value to changes in the discount rate is often a criticism of discounted cash flow valuation models. We believe it illustrates the price discipline necessary to generate superior returns.

We will be discussing Cintas Corporation (CTAS). CTAS was founded during the Great Depression and is headquartered in Cincinnati, Ohio. The company serves one million businesses of all types and sizes, primarily in the U.S., as well as Canada and Latin America. CTAS provides uniform rental and servicing of uniforms and other garments that are essential for businesses and their employees' daily operations. You may have seen their trucks driving around town. They compete with a handful of other large uniform companies such as Aramark and Unifirst, as well as smaller regional competitors. CTAS has the largest share with an estimated 15.0% of this market.

From a stock return perspective, the company has been an absolute juggernaut, going from \$59.59 per share 10 years ago in December 2013 to \$602.66 per share as of December 2023. That is a 26% compounded annual return, excluding dividends. What a run!

The market capitalization was about \$69.7 billion as of March 31, 2024, and the total enterprise value<sup>5</sup> was about \$73.4 billion. This translates to a whopping P/E ratio of 47.4x<sup>6</sup>.

Let's look at a few fundamental numbers before we attempt to calculate the intrinsic value of CTAS.

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<sup>5</sup> We typically do not refer to "value" when discussing anything that is based on the market and will instead use the word "price". However, we will refer to total enterprise "value" instead of total enterprise "price" because the former is a well-established nomenclature, and the latter sounds strange to the ear. We will never refer to market value and will always say market price or market capitalization when referring to equity.

<sup>6</sup> Share price of \$687.03 at 3/31/2024 and diluted earnings per share of \$14.49.

Cintas Corporation <sup>7</sup> (USD in millions)												
Ending May 31	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	LTM Feb.'24
Total Capital	\$3,511	\$3,494	\$3,232	\$3,143	\$5,436	\$5,552	\$5,852	\$5,941	\$6,404	\$6,277	\$6,532	\$6,899
Equity	\$2,201	\$2,193	\$1,932	\$1,843	\$2,303	\$3,017	\$3,003	\$3,235	\$3,688	\$3,308	\$3,864	\$4,234
Revenue	\$4,316	\$4,552	\$4,477	\$4,905	\$5,323	\$6,477	\$6,892	\$7,085	\$7,116	\$7,854	\$8,816	\$9,410
Growth %	5.2%	5.5%	-1.6%	9.6%	8.5%	21.7%	6.4%	2.8%	0.4%	10.4%	12.2%	9.3%
EBIT	\$557	\$612	\$696	\$782	\$853	\$992	\$1,148	\$1,196	\$1,385	\$1,587	\$1,803	\$1,992
Margin %	12.9%	13.4%	15.6%	15.9%	16.0%	15.3%	16.7%	16.9%	19.5%	20.2%	20.4%	21.2%
Net Income	\$314	\$371	\$404	\$316	\$445	\$770	\$873	\$868	\$1,103	\$1,230	\$1,343	\$1,498
Margin %	7.3%	8.2%	9.0%	6.4%	8.4%	11.9%	12.7%	12.2%	15.5%	15.7%	15.2%	15.9%
ROIC (Pre-Tax)	16.1%	17.5%	20.7%	24.5%	19.9%	18.1%	20.1%	20.3%	22.4%	25.0%	28.1%	29.6%
ROE	14.4%	16.9%	19.6%	16.8%	21.5%	29.0%	29.0%	27.8%	31.9%	35.2%	37.4%	38.1%
<b>Years Ending May 31</b>												
<b>Annual CAGR</b>	<b>5</b>	<b>10</b>	<b>15</b>	<b>20</b>								
Total Capital	3.3%	6.4%	4.9%	5.6%								
Equity	5.1%	5.8%	3.7%	4.4%								
Revenue	6.4%	7.4%	5.5%	6.1%								
EBIT	12.7%	12.5%	7.9%	7.5%								
Net Income	11.7%	15.7%	9.7%	8.8%								
<b>Avg. Returns</b>												
Average ROIC	23.2%	21.2%	19.2%	19.3%								
Median ROIC	22.4%	20.5%	19.9%	19.9%								
Average ROE	32.3%	26.5%	21.4%	19.9%								
Median ROE	31.9%	28.4%	19.6%	16.2%								

Over the last 10 years, CTAS has dramatically improved its operating performance. The company has steadily increased EBIT margins over time from 12.9% in 2013 to 21.2% as of LTM February 2024, a 64% improvement. As a result, it has steadily increased net income margins from 7.3% in 2013 to 15.9% as of LTM February, a 117% increase. This has translated to increasing returns on invested capital (ROIC) and ROE. CTAS did dramatically increase margins and returns following the 2020 COVID-19 pandemic, but that trend had started long before 2020.

With this information we can make some future projections about the company. Any analyst would likely use different inputs for their valuation based on their unique outlook for the company and the industry. Our goal is to use the fundamental information above to provide some guard rails for illustrative valuation purposes. We make the following basic assumptions:

- The next 10 years of growth, margins, and ROE will be similar to the last five years.
- Afterwards, growth will slow and the marginal ROE will fall to 75% of its LTM February 2024 peak. This creates historically normalized operations and accounts for competitive pressure in a mature industry.

<sup>7</sup> Source: Factset

- The reinvestment rates are calculated based on the selected ROE and growth rate in each period.
- We use our 10.0% equity rate of return.

These projections are for illustrative purposes only and are quite optimistic, especially from a growth perspective. Here's how they are translated into numbers:

Fundamentals	High Growth	Stable Growth
Time Period	10 years	
Return on Equity (ROE)	38.1%	28.6%
Reinvestment Rate (RINV)	30.7%	12.2%
Growth Rate (RINV x ROE)	11.7%	3.5%
Required Rate of Return	10.0%	10.0%

When added into a two-stage DCF model, we get the following:

$$\text{Implied } P/E = \frac{V}{NI_0} = \frac{(1 - RINV_h)(1 + g_h) \left[ 1 - \frac{(1 + g_h)^n}{(1 + r)^n} \right]}{(r - g_h)} + \frac{(1 - RINV_s)(1 + g_h)^n(1 + g_s)}{(r - g_s)(1 + r)^n}$$

Where:

$V$  = the present value of future cash flow

$NI_0$  = net income in prior year

$RINV_h$  = the reinvestment percentage in high growth

$RINV_s$  = the reinvestment percentage in stable growth

$ROE_h$  = the return on equity in high growth

$ROE_s$  = the return on equity in stable growth

$g_h$  = the high growth rate ( $RINV_h \times ROE_h$ )

$g_s$  = the stable growth rate ( $RINV_s \times ROE_s$ )

$r$  = the required rate of return

$$P/E = \frac{(1 - 30.7\%)(1 + 11.7\%) \left[ 1 - \frac{(1 + 11.7\%)^{10}}{(1 + 10.0\%)^{10}} \right]}{(10.0\% - 11.7\%)} + \frac{(1 - 12.2\%)(1 + 11.7\%)^{10}(1 + 3.5\%)}{(10.0\% - 3.5\%)(1 + 10.0\%)^{10}} = 23.8x$$

The 23.8x P/E ratio that is implied by our intrinsic valuation is far from the actual 47.4x P/E ratio as of March 31, 2024. So, how can such a wide discrepancy exist? Is the solution to increase the optimism of the projections? We find it imprudent to assume that the next 10 years of operations are likely to be better than the stellar operating history over the last 10 years. We must turn to the only other variable in the analysis, the required rate of return. The discount rate that produces a 47.4x P/E ratio using the same operating assumptions is 7.09%.

In our opinion, the current price implies at most a 7.09% rate of return for CTAS stock over the long-term using what we believe are optimistic operating assumptions. If one is comfortable with the optimistic operating assumptions and a 7.09% rate of return, they should buy CTAS at the current market price.

We believe that the results show that the rate of return is just too low for equity risk, in our opinion, and provides no margin of safety. This is a situation where we believe that the market is severely mispriced. Can the price continue to appreciate? Of course, it can, but we would find it difficult for anyone to make a rationale argument to justify further increases in the near to mid-term.

One way we often think about market prices versus value is to imagine that we won the lottery and received exactly \$69.7 billion in proceeds that can be used to buy the entirety of CTAS<sup>8</sup>. The company would then be private as we would own the whole thing. No more closing prices, bid/ask spreads, earnings releases, or analyst reports. Just the company, the cash flow, and the price paid. Would we be happy with our above assumptions and a 7.09% implied rate of return? Or might we want to find other opportunities where less aggressive projections and a higher rate of return produce a margin of safety where the estimated intrinsic value is higher than the market price? This is for each investor to judge for themselves.

## Conclusion

We manage custom securities portfolios for current income or long-term appreciation all built based on intrinsic value. For those who we can call “Partners”, we are honored that you have chosen to trust Midway Partners Capital Management with your hard-earned capital.

Please contact [JL@midwaypartnersllc.com](mailto:JL@midwaypartnersllc.com) for more information.

Sincerely,



Jordan Lampos

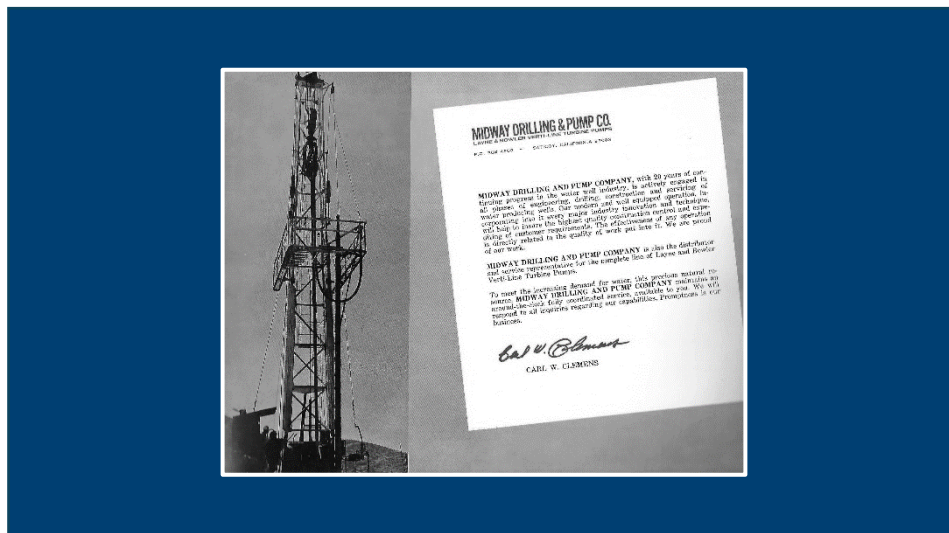
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<sup>8</sup> Excluding any control premium for the sake of the example.

Midway Partners Capital Management was named after a business that was founded by Jordan Lampos’ grandfather and great grandfather, Midway Partners Drilling & Pump Co. It was founded in 1945 and operated for almost 75 years.

While not affiliated or in the same industry, the two businesses share a common set of core values. Midway Drilling & Pump Co. built a reputation of integrity and trust with clients. Midway Partners Capital Management aims to do the same.

The picture shown is a page from the company’s 1965 brochure.





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