CALLODINE | CAPITAL

“The Dogma of AI: Heads and Tails”

Quarterly Market Commentary: Q2 2025

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Market Commentary

The collective wisdom of markets is very good at figuring things out well before they become apparent to most individuals. In this way, they are truly remarkable at "predicting" the future. However, although markets can have great prescience, they lack cognitive dissonance—the mental discomfort of holding true but conflicting beliefs. Therefore, markets can sometimes "predict" or price in future states that seem contradictory without demonstrating any sense of discomfort.

For example, if your friend argued that a single coin flip could end up as both heads and tails, with 100% probability of each outcome, you would likely consider this an untenable position. You might even think your friend had lost all mathematical reasoning capabilities. However, markets do not have this problem, as witnessed by the current "dogma" of AI, where all things make sense to seemingly all investors, and all indicators are bullish for nearly every player involved and in almost every outcome.

An explosion in capital expenditures is good for the suppliers of GPUs on a permanent and ever-growing basis, allowing for trillions of dollars of market-cap creation, as well as for the buyers of these GPUs, where the capital intensity of their business is parabolic and returns on capital are declining. In this scenario, heads and tails both win.

There is an unquestioned belief that all those GPUs need a lot more power, which is good for suppliers of new gas turbines (GE Vernova, etc.) whose order books have exploded, as well as the independent power producers (IPPs) that are swing-capacity providers destined to compete against this explosion of new entrants and power generation supply. Again, heads and tails both win.

Oracle is an AI winner, IBM is an AI winner, John Deere[1] is an AI winner. Heck, every industrial and technology business is an AI winner! Heads and tails are both winning everywhere.

The market seems to be handing out the equivalent of a participation trophy in the form of billions of dollars of enterprise value for anything remotely tied to some amorphous definition of "AI," irrespective of where it sits in the value chain and without concern about its business model, its logical ability to produce profits, or the future-state competitive landscape caused by trillions of dollars invested against the same amorphous AI landscape.

1 Source: Barron's: *Deere Stock Is Breaking Out. It Could Gain 50% (July 16, 2025)*.

In reality, there will be some equivalent losers in this race to deploy trillions of dollars of invested capital against an unknowable opportunity set, whether it's the investors themselves who end up commoditizing AI, the workers displaced by this rapid innovation, or the governments that rely on those wages to generate tax revenues.

Head and tails seldom both win.

Buy the Rumor, Then Buy the News (It's Always Good News!)

The manifestation of this kind of sentiment-driven market can be seen in the evolving performance and valuation landscape, which indicate to us that the market is being led by narrative, rather than fundamentals—perhaps more so than at any point since the late 1990s.

The flood of COVID-era liquidity absorbed into the global economy has caused reverberations across capital markets that are still being felt today, in our opinion. Fundamental analysis has taken a back seat to a one-way factor-correlated onslaught, reflecting the hegemony of a "risk-on" market. This risk-on market was briefly interrupted in 2022 as interest rates began to rise, an inconvenient fact now largely ignored by the equity market.

Cumulative Fund Flows to US Momentum ETFs

7/1/2020 through 6/30/2025 Daily

Sources: Bloomberg, Callodine Capital Research Team
Methodology: Cumulative fund flows from 7/1/2020 through 6/30/2025 daily for MTUM, SPMO, XMMO, XSMO, JMOM, VFMO, USVM, SEIM, DWAS, XSVM, FDMO, XMVM, ULVM, MMTM, ONEO.

As a stock characteristic, Momentum is agnostic to both valuations and fundamentals—it simply involves buying what is working now. Today, buying momentum means buying high-growth, high-volatility, expensive stocks that have performed well continuously and therefore stayed in the momentum basket. In other words, it's a self-reinforcing narrative. Call it a Momentum / Growth / Volatility super cycle of sorts:

Factor Pair Return Rank

As of July 18, 2025

Factor Pair	*Year to Date*	*1-Year*	*3-Year*	*Since Pre-Covid*
Realized Volatility (MSZZRVOL)	Best	2nd	2nd	3rd
Momentum (MSZZMOMO)	2nd	Best	3rd	2nd
Growth (MSZZGRW)	3rd	3rd	Best	Best
Dividend Yield (MSZZDYLD)	4th	4th	5th	4th
Quality (MSZZQLTY)	5th	5th	4th	Worst
Value (MSZZVAL)	Worst	Worst	Worst	5th

Sources: Morgan Stanley via Bloomberg, Callodine Capital Research Team
Methodology: Rank of Total Return of Factor Pair Index. Since Pre-Covid is 1/31/2020 through 7/18/2025.

(Momentum + Growth + Volatility) / (Value + Quality + Div Yield)

6/30/2015 through 6/30/2025 Daily (Indexed to 1)

Sources: Morgan Stanley via Bloomberg, Callodine Capital Research Team
Methodology: Ratio of factor pairs Momentum (MSZZGRW) + Growth (MSZZGRW)+ Realized Volatility (MSZZRVOL) to factor pairs Value (MSZZVAL) + Quality (MSZZQLTY) + Dividend Yield (MSZZDYLD). Factor pairs are total return indicies, indexed to 1 on 6/30/2015.

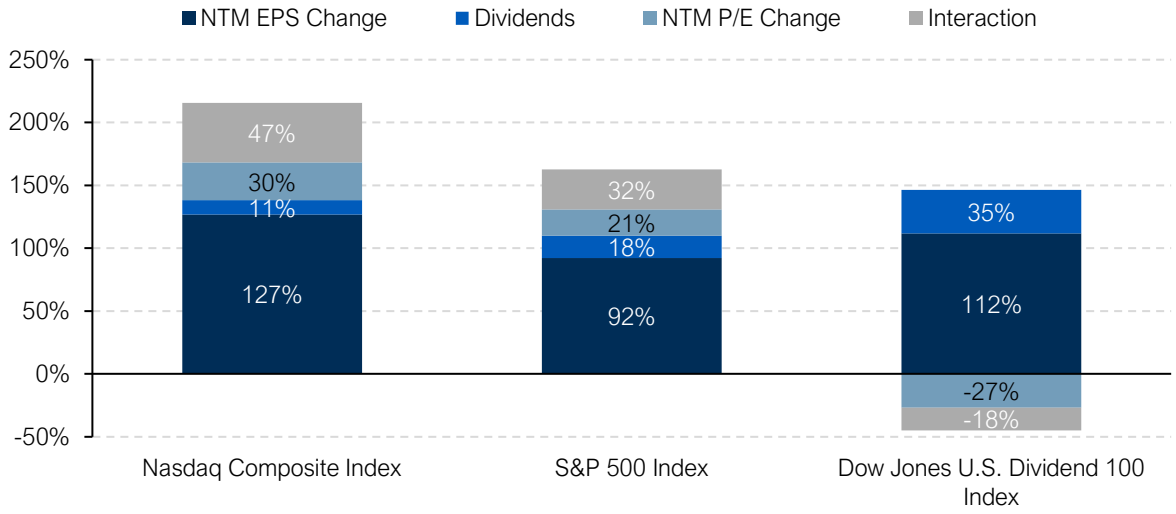
We believe many market participants assume this burst of relative performance is supported by dramatically better relative earnings growth, driven by the Magnificent 7 and other growth stocks and perpetuating the cycle of Growth = Momentum. However, this belief is not exactly the case.

While earnings have grown impressively over the past five years across the entire market, it has been the market's willingness to pay more for some earnings growth over others that has driven most of this one-way outperformance for all things growth, high-volatility, and, therefore, momentum related.

Because the excitement and capital (both active and passive) chasing the AI and Growth stock narrative far exceed the growth in profits being generated by these firms, multiples have expanded dramatically. This increase in valuation, which is somewhat deserved for mega-cap tech stocks, has now been transmitted to other areas of the stock market that we would argue are far less deserving.

Contribution to Total Return

2018 through June 2025

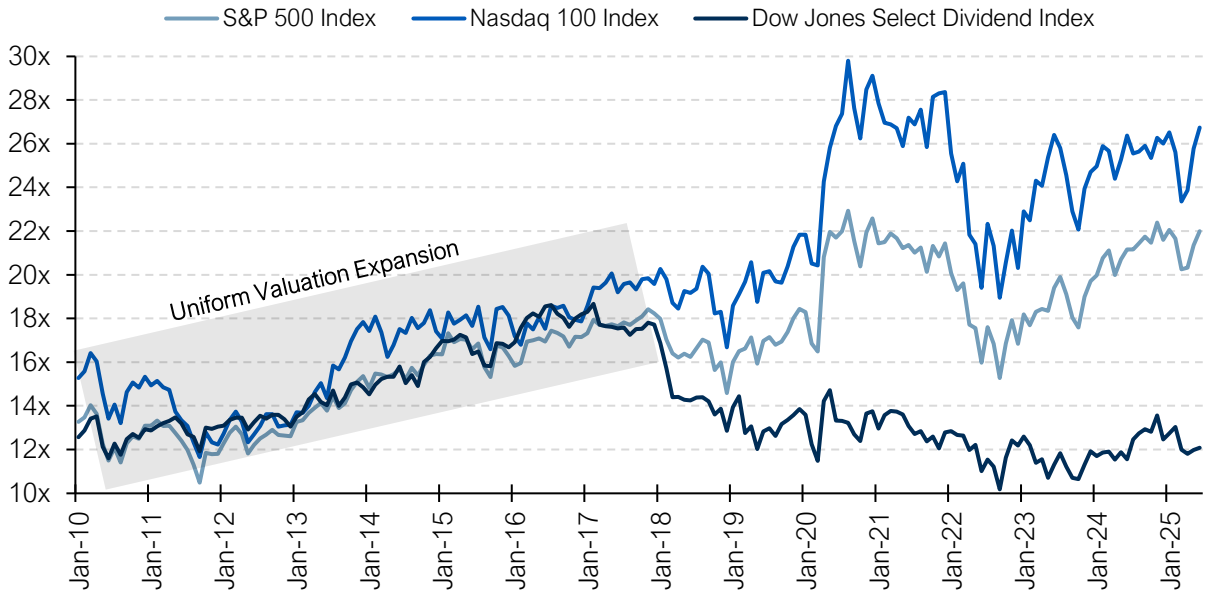


Sources: Bloomberg, Callodine Capital Research Team
Methodology: Contribution from NTM EPS Change is the percentage change in forward NTM EPS . Contribution from NTM P/E Change is the percentage change in the forward NTM P/E multiple. Contribution from Dividends is the difference in the total return with zero dividend reinvestment and the price return. Interaction is the deffernce in the total return with dividends reinvested and the summation of contribution form NTM EPS Change, NTM P/E Change, and Dividends.

The only area of the market that has not experienced a tailwind to its valuation structure is Value and income-oriented stocks (represented in the chart above by the Dow Jones Select Dividend Index). You can see the relentless upward expansion of the NASDAQ and S&P 500 forward earnings multiples, while dividend-paying stocks have seen their multiples compress over time. These stocks have had a valuation headwind, illustrating that the AI tide has not lifted all boats.

Forward P/E Multiples of Select Indices Since 2010

January 2010 through June 2025 Monthly



Sources: Bloomberg, Callodine Capital Research Team

Despite elevated interest rates and the prospect of a "higher for longer" rate regime, as is currently indicated by the fixed income market, the cyclicals-to-defensives ratio is amazingly back to 2000 (i.e., "risk-on") levels.

Cyclicals - Defensives

June 1995 through June 2025 Monthly (Indexed to 1 at January 2009)

Sources: Bloomberg, Callodine Capital Reseach Team

Methodology: Performance of going long cyclical sectors in S&P 500 and short defensive sectors in the S&P 500. Performance reflects each side rebalanced back to equal notional at the end of each month. Performance is indexed to 1 on January 31, 2009. Cyclical sector performance is the equal-weighted total returns of the materials, consumer discretionary, financial, information technology, communication services, and industrial sectors in the S&P 500. Defensive sector performance is the equal-weighted total returns of the health care, utility, and consumer staples sectors in the S&P 500.

Moreover, as demonstrated in the chart below, the weight of defensive sectors in the S&P 500 is at its lowest level since 2000. This is yet another lens through which the market is demonstrating "risk-on" behavior and early-cycle positioning, despite the fact that we are now five years past the COVID-19 mini-recession of 2020 and almost 16 years past what we would consider the last "real" recession.

Weight of Defensives in S&P 500

Weight of Healthcare + Utilities + Consumer Staples in S&P 500 Index
January 1990 through June 2025 Monthly

Sources: FactSet, BofA Global Investment Strategy, Callodine Capital Research Team

Reality Check: Revisiting the Capital Intensity of Mega-Cap Tech


FINANCIAL TIMES

Meta seeks $29bn from private credit giants to fund AI data centres

Apollo, Brookfield and Pimco among the lenders in talks with Mark Zuckerberg's social media group

The argument that this multiple expansion among Growth stocks is warranted hinges on one key thesis: that the massive capex currently underway for mega-cap tech is going to earn an attractive return on investment. When you look at the actual numbers, however, this seems like an increasingly Herculean task.

As capital intensity continues to skyrocket, the obfuscation of its undeniable impact on company profits has begun. There is the suggestion that Meta Platforms is exploring a $29 billion private

credit facility, paired with just $3 billion of equity in a joint venture–type structure, presumably to avoid the full capital impact of its AI-related infrastructure spending. If expected returns were reliably deemed attractive, this wouldn't be happening, as the related profits would justify the capex.

If this sounds a lot like the dropdown master limited partnership structures that got energy companies in trouble during the build-out of the U.S. shale infrastructure (2011–2016), or the off–balance sheet leveraged structures (2004–2007) that led to some of the worst debacles of the Great Financial Crisis for financials, it's because they are seeking the same objective: to hide the ball with respect to the increasing capital intensity of the AI experiment.

One factor that has made the current mega-cap tech darlings such powerful stories is that they have generated enormous returns on relatively small amounts of invested capital:

Microsoft: $1M (1981–1986); post-IPO profits $765bn[2]
Amazon: $9M (1995–1997); post-IPO profits $188bn[3]
Google: $26M (1998–2004), post-IPO profits $574bn[4]
Facebook $2.5-3.0B (2004–2012), post-IPO profits $286bn[5]

In contrast, OpenAI has raised nearly $60 billion to date to test its start-up business model, with other companies—including Anthropic, Databricks, and xAI—having raised at least $10 billion each.[6]

OpenAI had the largest private capital raise in history at $40 billion,[6] valuing the company at $300 billion. The firm then promptly promised Oracle $30 billion in future revenues to lease 4.5 gigawatts of data center capacity, helping fuel a $200 billion jump in Oracle's enterprise value year to date and a return to 12x enterprise value/sales multiples.[7] Those data centers will need many Nvidia GPUs as well, potentially driving that stock higher, and, similarly, the IPPs that might benefit from new power demand have added tens of billions of new market cap.

There is a chance that the market is double- or triple-counting the potential earnings impact of this spending, which is how all great cycles rise and ultimately fall, as they start to reward activity and speed of execution over building truly sustainable profit pools. For example, as far as we can tell, the business model for CoreWeave is to buy Nvidia GPUs primarily using debt capital and then rent them out to other entities. Perhaps that is an oversimplification, but it is not far from reality.

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2 Source: Bloomberg, Callodine Capital Research Team. Sum of Net Income to Common from Q1 1987 through Q1 2025.

3 Source: Bloomberg, Callodine Capital Research Team. Sum of Net Income to Common from Q1 1997 through Q1 2025.

4 Source: Bloomberg, Callodine Capital Research Team. Sum of Net Income to Common from Q4 2003 through Q1 2025.

5 Source: Bloomberg, Callodine Capital Research Team. Sum of Net Income to Common from Q1 2010 through Q1 2025.

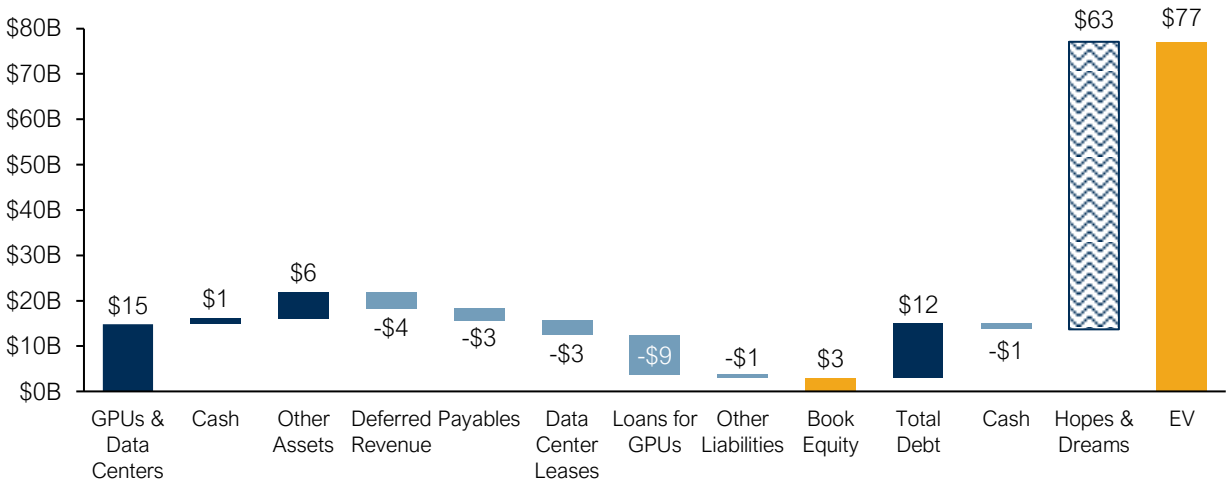
6 Source: Tracxn - Technology & Data for Venture Capital, Corp Dev, Investment Banks: *OpenAI – Funding & Investors*; *Anthropic - Funding & Investors*; *Databricks - Funding & Investors*; *xAI - Funding & Investors*.

7 Source: Financial Times: *OpenAI Signs $30bn Data Centre Deal with Oracle (July 2, 2025)*.

Public markets are full of similar rental-based models, and there is nothing inherently wrong with that business strategy. The key distinction is that most rental businesses are valued on some price/book multiple determined by returns on the capital they invest on behalf of their customers. At a $60 billion market cap, which is 20x current book value, CoreWeave seems to have found an outrageously lucrative rental model that few have ever dreamed about, let alone achieved. To that end, we present the following visualization of CoreWeave's enterprise value breakdown:

CoreWeave (CRWV) Enterprise Value Bridge

As of 7/16/2025



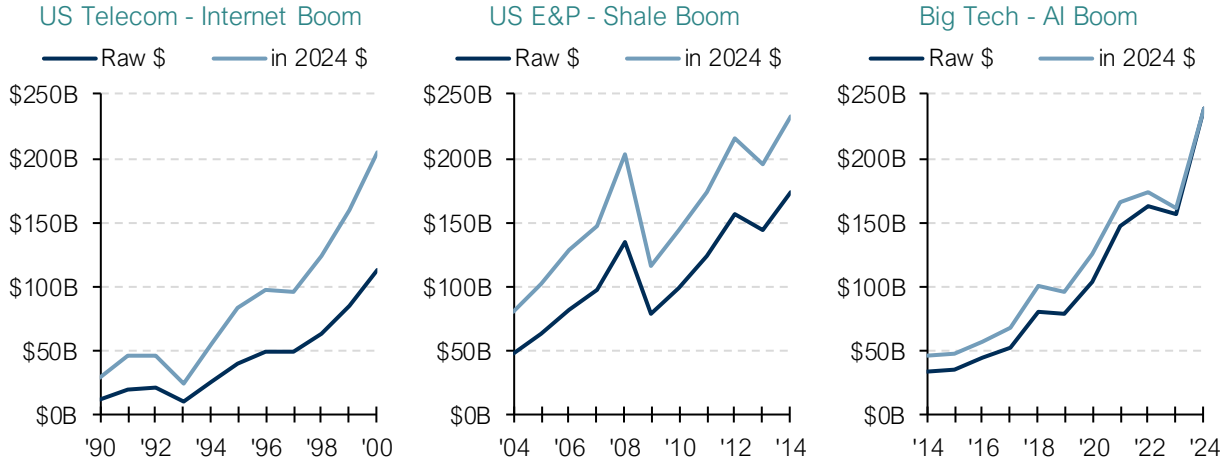
Sources: Bloomberg, Callodine Capital Research Team
Methodology: "GPUs & Data Centers" is the sum of Technology Equipment and Construction in Progress from balance sheet. "Cash" is Cash, Cash Equivalents & STI. "Other Assets" is Total Assets - ("GPUs & Data Centers" + "Cash"). "Payables" is Payables & Accruals. "Data Center Leases" is ST Lease Liabilities + LT Lease Liabilities. "Loans for GPUs" is Current Portion of LT Debt + LT Debt. "Other Liabilities" is Total Liabilities - ("Deferred Revenue" + "Payables" + "Data Center Leases" + "Loans for GPU's"). "Book Equity" is Total Assets - Total Liabilities". "Hopes & Dreams" is Enterprise Value - (Book Equity + Total Debt - Cash).

On top of "Hopes & Dreams," CoreWeave has now added a $6.6 billion all-stock purchase of Core Scientific, a money-losing Bitcoin miner with more debt than assets. To us, this seems like a set-up for less dreams and more nightmares.

Cautionary tales of boom/bust cycles throughout history, from railroads to competitive local exchange carriers, do not make the current AI infrastructure names seem doomed as shorts, but they should cause some concern, which is almost completely missing from the current narrative or valuation structure of the market.

Annual CAPEX During CAPEX Cycles (Raw and Inflation Adjusted)

US Telecom from 1990 through 2000, US E&P from 2004 through 2014, Big Tech from 2014 through 2024



Sources: Bloomberg, Callodine Capital Research Team

Methodology: US Telecom is the constituents in the Russell 3000 with BICS industry of "Telecommunications". US E&P is the constituents in the Russell 3000 with a BICS sub-industry of "Exploration and Production". Big Tech is AMZN + MSFT + META + AAPL + GOOG. In 2024 $ is the CPI Index adjusted value based on 12/31/2024 CPI value.

In September 2023, David Cahn of Sequoia Capital wrote a piece titled "AI's $200 billion Question," following it up nine months later with "AI's $600 billion Question." The original article, which we highly recommend, described the gap between the revenue expectations implied by the AI infrastructure build-out and actual revenue growth in the AI ecosystem as a "$125 billion hole that needs to be filled for each year of capex at today's levels."

The updated piece published in June 2024 showed that the gap between capex and the required revenue for payback had gotten larger. Updating Cahn's analysis for current Nvidia estimates, the picture has gotten dramatically starker. Based on a Q4 2028 estimate of $323 billion in data center revenue, this would imply $1.3 trillion of AI revenue required for payback, assuming a 50% software margin. To put this in perspective, that figure it is equivalent to the revenues of Microsoft, Google, Meta Platforms, and Amazon combined—no small task to replicate.

AI's *$200B $600B* $1.3 Trillion Question

AI Revenue Required for Payback Given NVDA's Data Center Run-Rate Revenue

	Q4 '20	Q4 '21	Q4 '22	Q4 '23	Q4 '24	Q4 '25	Q4 '26	Q4 '27	Q4 '28
	Actual					Estimate			
NVDA Data Center Run-Rate Revenue	$8B	$13B	$14B	$74B	$142B	$212B	$247B	$278B	$323B
Data Center Facility Build and Cost to Operate	50%	50%	50%	50%	50%	50%	50%	50%	50%
Implied Data Center AI Spend	$15B	$26B	$29B	$147B	$285B	$425B	$495B	$556B	$646B
Software Margin	50%	50%	50%	50%	50%	50%	50%	50%	50%
AI Revenue Required for Payback	**$30B**	**$52B**	**$58B**	**$294B**	**$569B**	**$849B**	**$990B**	**$1.1T**	**$1.3T**

Sources: Bloomberg, Sequoia Capital, Callodine Capital Research Team

Methodology: Methodology uses same assumptions as Sequoia Capital.AI Revenue Required for Payback is NVDA Data Center Run-Rate Revenue multiplied by 2x to reflect the total cost of AI data centers and then multiplied by 2x again to reflect a 50% gross margin for the end-user of the GPU.

8 Sequoia: *AI's $200B Question (September 20, 2023)*

9 Sequoia: *AI's $600B Question (June 20, 2024)*

By now, you might suspect that we regard the euphoria surrounding all-things-AI with a fair degree of skepticism. Paradigm shifts typically create as many losers as winners, if not more. Something is always destroyed on the other side of technological innovation. This was true of the above-referenced railroads, CLECs, and a host of other engineering breakthroughs, and it will likely be the case with AI as well. The markets have no time for cognitive dissonance of this sort, but investors intending to protect against losses should pay attention.

Dividends as a Forgotten Source of Return

Amidst all the focus on exponential growth rates and AI, the market has slowly moved away from dividends as a source of total return. As income investors, we are simultaneously insulted by and ecstatic at the inefficiencies and alpha opportunities resulting from the lack of interest in our segment of the market.

While investors have been able to ride the wave of earnings growth and multiple expansion over the last decade, dividend yield has been all but forgotten. After all, who needs the safety and stability of current income when the market only goes in one direction?

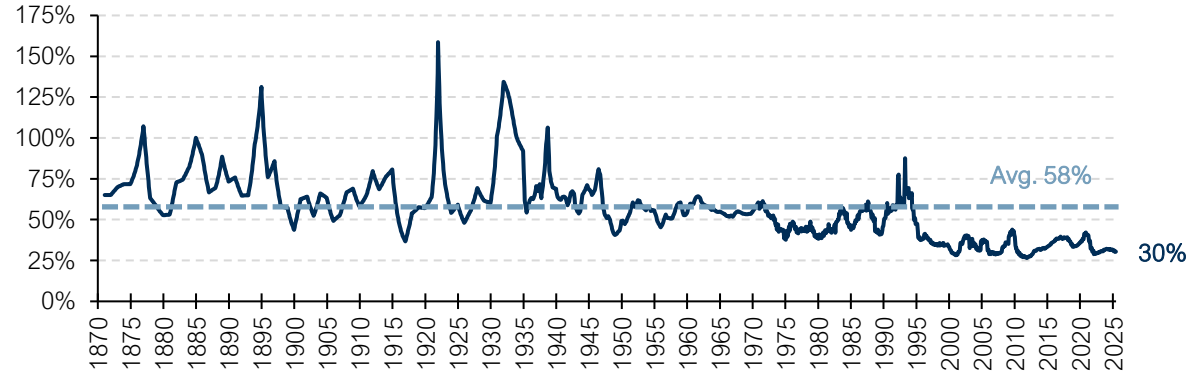
Looking at the S&P 500 today, the average dividend payout ratio has declined to 30% vs. an average of 58% over the last 250 years. There are several ways to interpret this trend:

1) Companies have many high-ROIC opportunities towards which they would prefer to direct their capital, such as capex, accretive M&A, etc., and/or

2) The market has not rewarded dividend payers with premium valuations, so companies are reluctant to share free cash flow with shareholders in the form of dividends.

US Equity Dividend Payout Ratio

January 1871 through June 2025 Monthly

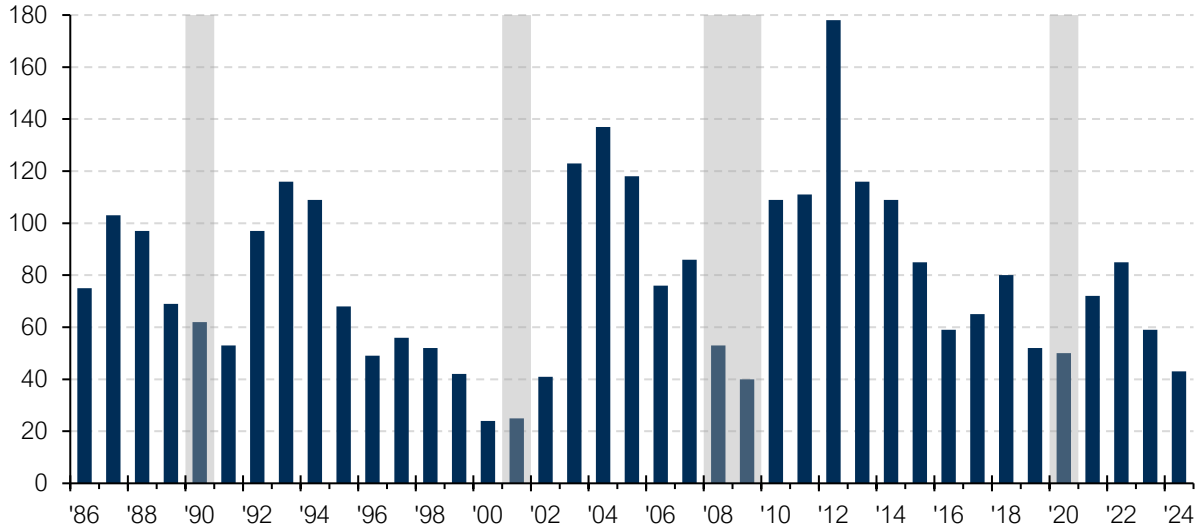


Sources: Bloomberg, Robert Shiller https://shillerdata.com/, Callodine Capital Research Team
Methodology: Trailing 12 Month Dividends Per Share / Trailing 12 Month Earnings Per Share. S&P Composite Data from Robert Shiller from Jan 1870 through Nov 1970. S&P 500 Data from Dec 1970 through Jun 2025.

This same theme can be seen in the number of new companies initiating dividends, which has been in steady decline over the last decade. While dividend initiations used to be a celebrated accomplishment, the establishment of a dividend might now be misinterpreted as an admission that management teams cannot find a more productive use of capital.

Russell 3000 Dividend Initiations by Year

1986 through 2024 (Recession Highlighted)



Sources: Bloomberg, Callodine Capital Research Team
Methodology: Number of Russell 3000 Constituents with Trailing 12 month dividends > 0 and Trailing 12 month dividends for the prior 12 months = 0. Measured at the end of the year.

We are cognizant of the fact that, when you have a hammer, there is a risk that everything looks like a nail. Those who disagree with our market views might say that we are old-fashioned cash-flow-oriented Value investors, to which we would reply, 1) That's because we are, and 2) that also doesn't mean we are wrong.

In the long run, how a company generates cash, spends its cash, and attempts to earn a return on that cash all matter. As fundamental investors, we hold these truths to be self-evident. Eventually, it all comes down to the math.

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The S&P 500 is a market capitalization weighted index of large-capitalization U.S. equities that includes 500 of the top companies in leading industries of the U.S. economy. The S&P 500 High Dividend Index is designed to measure the performance of 80 high yield companies within the S&P 500 and is equally weighted to best represent the performance of this group, regardless of constituent size. The Dow Jones U.S. Select Dividend Index aims to represent the U.S.'s leading stocks by dividend yield. The Russell MidCap Growth Index measures the performance of the midcap growth segment of the US equity universe and includes those Russell Midcap Index companies with relatively higher price-to-book ratios, higher I/B/E/S forecast medium term (2 year) growth and higher sales per share historical growth (5 years). The Russell 1000 Growth Index measures the performance of the large-capitalization growth segment of the US equity universe and includes those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values. The Russell 1000 Value Index measures the performance of the large-cap value segment of the US equity universe and includes those Russell 1000 companies with lower price-to-book ratios and lower expected growth values.

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