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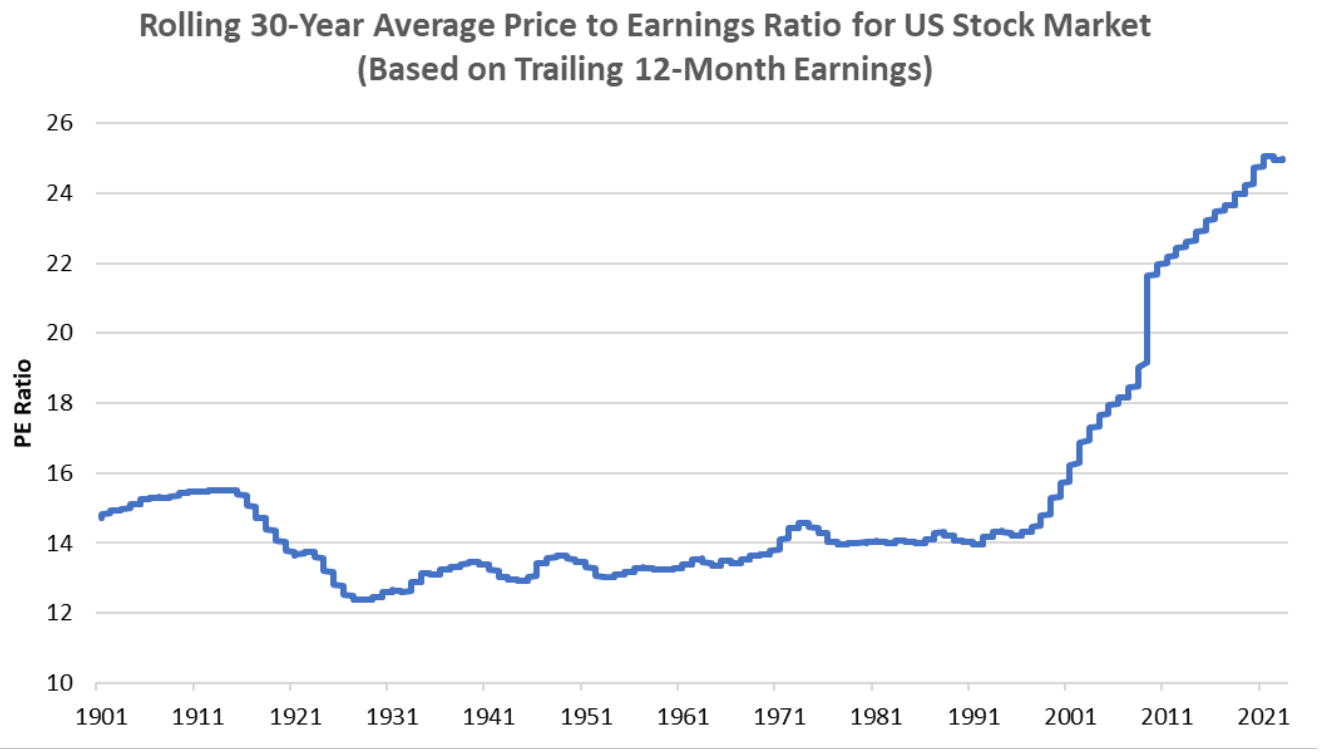
Valuations, Growth and Investment Revisited

The general wisdom is that as companies grow larger, they face diminishing return prospects. Markets mature, success invites competition, sales growth plateaus, firms maximize operating efficiencies, etc. Such dynamics historically become reflected in valuations as companies transition from a growth stage to seasoned businesses. Safe to say that for today's leading companies, the last few years have challenged these assumptions. Today, as many companies grow larger, their returns better compound. Earnings reports this quarter make that clear. This is a remarkable development that questions the wisdom of decades' old economics and investment orthodoxy.

The improved financial performance of today's leading firms has filtered through to equity valuations. Currently, the S&P 500 trades at 22.6x estimated 2024 earnings, and 24x trailing 12-month earnings.[1] As depicted in the below chart, which shows the 30-year rolling average US stock market valuation (based on price to trailing 12-month earnings), current valuations are elevated by historical standards. (Note that we have used a 30-year rolling average to capture a generational timeframe.) However, we think it's worth considering the rise of valuations in the context of a changing economy and companies that continue to demonstrate growth as they scale.



Source: Robert Shiller Online Database

What stands out in the above chart is that since the mid-1990s, the U.S. stock market's 30-year average price to earnings ratio has steadily risen and far surpassed average levels during the preceding 120 years. So, from a valuation perspective, what makes the last 30-year period for U.S. markets so different than the preceding century?

To start, technology and the composition of the market and overall economy.[2] The 20th Century was dominated by companies operating in the physical realm: rails, banks, utilities, consumer products, energy, etc. While such firms remain important (and, in many cases, attractive investments), today's dominant firms operate

increasingly in the technological realm. Physical goods face real world constraints as to size and growth. There are only so many miles of track that rail companies can lay; only so many barrels of oil that energy companies can drill. To be sure, technology and technology-adjacent companies also face growth constraints, but they are considerably less restrictive as their markets are global in a way that was previously unattainable, growth requires less manpower and access to external capital, and as technology increasingly permeates every industry.

S&P 500 Sector	2024 Weighting	1900 Weighting*
Technology	29.76%	0.00%
Financials	12.87%	20.00%
Health Care	12.77%	0.00%
Consumer Disrectionary	10.47%	4.00%
Communications Services	9.06%	5.00%
Industrials *(*incl. Rails)*	8.63%	43.00%
Consumer Staples	6.06%	5.00%
Enegry	3.70%	8.00%
Real Estate	2.32%	1.00%
Materials	2.23%	8.00%
Utilities	2.13%	6.00%
	100.00%	**100.00%**

Second, as we have written about previously, the nature of operational risk has perhaps changed. Thanks to technology, operational risk has arguably decreased – both for the average company and for the average investor's ability to assess it. From the post-Civil War period up until 1990, the U.S. economy and public markets were dominated by capital- and labor-intensive firms. Today it is large technology firms (and firms utilizing technology to enhance operations) that lead markets.

If the average company today is (1) less capital- and labor-intensive than in the past – meaning less dependent on growth in fixed assets and personnel to drive sales – and (2) is using technology to make better strategic decisions (which has the effect of lowering costs and improving profit margins), then it should come as little surprise that average valuations have increased. If technology has improved capital efficiency, de-risked business models and – perhaps most importantly for valuation purposes – provided investors with more accessible and accurate data, then the "unknown" future that investors need to discount when assessing fair valuations – whether by estimating future cash flows or just ascribing a multiple to earnings – is perhaps not quite as unknown as it may have been in previous eras. Put another way, less cyclicality, better margins and more predictability justifiably contribute to higher valuations.

The impact of technology on economic cyclicality can perhaps be observed in the occurrence of US recessions since 1857.[3] The frequency of recessions noticeably decreased in the last 30 years, during which time technology has proliferated, with only four recessions since 1990 (three if we exclude the exogenous Covid-shock), compared to 30 in the preceding 133 years (or, one every 4.4 years).[4] The most infamous saying in investing is "this time is different." Yes, human nature remains the same – investors are just as prone to euphoria and despair, which drives market prices in the short term; but the nature of technology today *is* decidedly different than that in the late 19th and most of the 20th Centuries.

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The most dominant businesses today are the large technology firms whose sales, earnings growth and stock prices continue compounding, even at market caps exceeding $1 trillion. They have done so by bringing to global markets lucrative (and in many cases, essential) technologies and products, and by investing monumental sums to expand their markets and stay ahead of competition. Today's trillion-dollar market cap club (Microsoft, Apple, Alphabet, Amazon, Nvidia and Meta) generated combined trailing 12-month sales of $1.68 trillion, net income of $355 billion and – equally impressive – have reinvested $393 billion in research and development ("R&D") and capital expenditures ("CapEx"). Note: the best way to differentiate the two types of expenses is that R&D goes toward the creation of intangible assets (like intellectual property), whereas CapEx is for physical goods (property, plant, equipment).

The trillion-dollar club trades at a premium average multiple of 33x their 2024 earnings estimates, but analysts expect those earnings to grow over the next 3-5 years at a compound rate of 17.2% – almost double the 9.2% expectation for the S&P 500. One can argue about what the fair valuation is for such firms, but the premium to the market is warranted based on their superior growth, earnings and ability to invest aggressively (and profitably) to drive future growth. While this level of investment does not guarantee a competitive barrier to entry, it certainly keeps the competition at bay – frankly, their greatest competition may be with each other as their growth avenues increasingly overlap.

Now, it is important to note that higher valuations and expectations create more room for downside should sales growth and earnings fail to materialize. But so long as these firms continue demonstrating excellent financial results, their valuations are likely to remain elevated.

Knowing how much technology drives sales and contributes to superior financial results, where can we find opportunities today? Looking at companies' spending on R&D and CapEx is an interesting first step. Of course, not every investment in the future will pan out, and spending money on internal investments is not always the wisest use of cash flow. If a company lacks meaningful investment opportunities from which it can earn a return, it is better off giving money back to shareholders in the form of dividends or stock repurchases.

Still, when companies invest in their future, it is usually a good indication that management is confident such investment will generate meaningful returns. For illustrative purposes, we have included an appendix (on the following page) showing the top-25 US public companies ranked by R&D spending, and also have included CapEx, as well as several other financial metrics (such as PE ratios, medium-term earnings growth expectations and returns on invested capital).

We also think it's worth comparing firms' investment spending relative to historic levels and that of their peers. There is a signal when companies – regardless of size – are investing more than competitors (or increasing investments at a higher rate) and doing so while remaining profitable. There are certainly more than 25 firms making strategic investments in their future. The ones we show just happen to be doing so at what would have been inconceivable scales only a decade ago. For instance. in 2014, the top-25 firms in terms of trailing 12-month R&D spending invested $124.5b in R&D vs $405.1b today. Over the same period, R&D plus CapEx for the top-25 firms has grown from $190.2b to $630.5b.

Lastly, we want to reiterate that while we understand why valuations have risen, we still think being attentive to valuations is paramount when making new investments. Ideally, we want to buy stocks whose valuations do not reflect their growth, earnings and/or cash flow potential – which is why looking at investment spending may be a worthwhile forward-looking metric.

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We are happy to discuss where else to look for compelling opportunities in today's markets, what firms are trading at attractive valuations and how to think about signals from R&D and CapEx when considering an investment opportunity.

We hope you and your families are well. As always, please reach out with any questions.

Sincerely,

Peter Karmin
Managing Member

Stuart Loren
Director

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Top-25 US Companies by Research & Development Expense

(Dollars in Millions)

Company Name	Sector	Market Cap	T12M Revenue	T12M Net Income	T12M R&D Expense	T12M CapEx	T12M R&D + CapEx	2024 PE Ratio	Est. 3-5 Yr EPS Growth (%)	ROIC (%)
Amazon.com Inc	Consumer Discretionary	1,771,412.07	574,785.00	30,747.92	85,622.00	52,729.00	138,351.00	34.29	16.67	12.30
Alphabet Inc	Communication Services	1,817,394.34	307,394.00	75,769.21	45,427.00	32,251.00	77,678.00	20.14	10.05	28.83
Meta Platforms Inc	Communication Services	1,194,358.66	134,901.00	45,228.98	38,483.00	27,266.00	65,749.00	24.11	19.18	31.16
Merck & Co Inc	Health Care	323,341.35	60,114.00	1,986.38	30,532.00	4,023.00	34,555.00	14.96	31.79	11.87
Apple Inc	Information Technology	2,920,214.12	385,706.00	100,913.00	29,902.00	9,564.00	39,466.00	28.58	13.00	67.81
Microsoft Corp	Information Technology	3,074,268.69	227,583.00	82,508.61	27,524.00	35,202.00	62,726.00	35.70	16.62	32.52
Intel Corp	Information Technology	180,928.38	54,228.00	588.03	16,046.00	25,750.00	41,796.00	32.44	31.13	-0.01
Johnson & Johnson	Health Care	381,204.61	85,159.00	21,263.77	15,085.00	4,541.00	19,626.00	14.85	3.76	30.69
Pfizer Inc	Health Care	155,502.22	58,497.00	7,239.17	10,679.00	3,864.00	14,543.00	12.11	33.35	8.40
Eli Lilly & Co	Health Care	691,646.27	34,124.10	8,482.49	9,313.40	2,877.70	12,191.10	58.69	30.16	32.29
Bristol-Myers Squibb Co	Health Care	98,980.79	45,006.00	9,422.24	9,299.00	1,225.00	10,524.00	6.98	2.24	12.43
Oracle Corp	Information Technology	321,678.85	51,629.00	10,508.05	8,814.00	6,935.00	15,749.00	21.02	15.00	17.65
QUALCOMM Inc	Information Technology	162,768.60	36,292.00	8,186.30	8,663.00	1,266.00	9,929.00	15.09	10.65	26.13
NVIDIA Corp	Information Technology	1,732,976.45	44,870.00	19,448.26	8,160.00	1,324.00	9,484.00	56.88	27.50	61.01
Cisco Systems Inc	Information Technology	202,401.72	58,034.00	14,231.82	7,683.00	807.00	8,490.00	12.83	10.00	31.03
AbbVie Inc	Health Care	309,663.43	54,318.00	15,422.97	7,675.00	785.00	8,460.00	15.63	10.20	28.78
International Business Machine	Information Technology	167,429.42	61,861.00	8,782.18	6,775.00	1,208.00	7,983.00	18.21	5.14	11.59
Advanced Micro Devices Inc	Information Technology	276,444.81	22,680.00	1,036.50	5,872.00	546.00	6,418.00	47.18	29.35	1.06
Gilead Sciences Inc	Health Care	93,060.64	27,117.00	7,602.82	5,719.00	584.00	6,303.00	10.50	3.52	18.85
Broadcom Inc	Information Technology	587,329.16	35,819.00	14,456.91	5,253.00	452.00	5,705.00	26.81	13.90	26.06
Amgen Inc	Health Care	159,494.20	28,190.00	6,966.22	4,784.00	1,112.00	5,896.00	15.10	4.50	17.57
Salesforce Inc	Information Technology	280,342.48	33,954.00	4,416.95	4,759.00	807.00	5,566.00	35.33	22.50	7.39
Moderna Inc	Health Care	37,850.06	9,121.00	-3,436.77	4,650.00	579.00	5,229.00		-29.33	-15.55
Regeneron Pharmaceuticals Inc	Health Care	103,559.25	13,117.20	4,408.19	4,439.00	773.50	5,212.50	21.17	13.00	17.48
Tesla Inc	Consumer Discretionary	601,288.43	96,773.00	9,070.00	3,969.00	8,898.00	12,867.00	60.67	2.00	13.38

Source: Bloomberg (2.7.24)

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Citations and Disclosures

[1] Bloomberg (2.7.24). Unless otherwise noted, all financial data herein is from Bloomberg.
[2] Bloomberg (2.7.24); Visual Capitalist, *Visualizing 200 Years of U.S. Stock Market Sectors* (Jan. 25, 2019), available at: https://www.visualcapitalist.com/200-years-u-s-stock-market-sectors/. Unless otherwise noted, all financial data herein is from Bloomberg.
[3] USA Facts, NBER (June 2023), available at: NBER, https://usafacts.org/articles/what-is-a-recession-what-have-recessions-looked-like-in-the-past/
[4] NBER, available at: https://www.nber.org/research/data/us-business-cycle-expansions-and-contractions

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