DISTILLATE CAPITAL

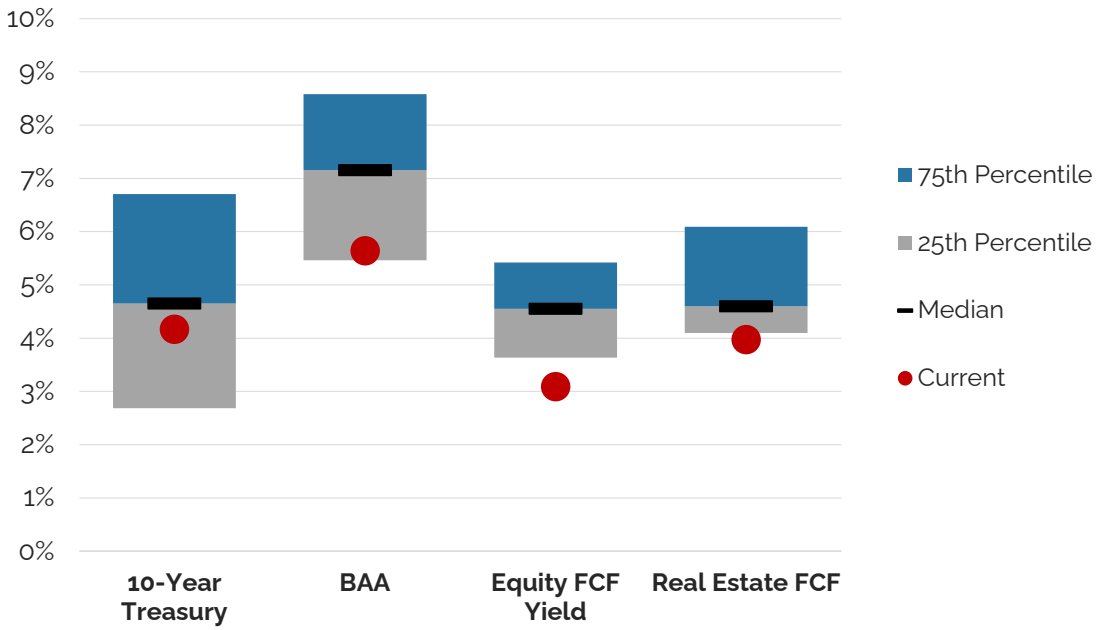
Asset Class Valuations in a Historical Context
2024 Update

Summary

- Given substantial movement across asset classes, we have updated our 2021 paper of the same title.
- Valuations have shifted substantially with most asset classes looking expensive relative to history **(See Figure 1)**. Equities, represented here by the S&P 500 index, are the most expensive in just the 11th percentile, and 10-Year Treasuries look the most reasonably valued in the 44th percentile vs. history.
- While the current equity free cash flow yield points to lower returns going forward and significant valuation risk, a great deal of this is concentrated in a small number of very large names and much of the rest of the market looks significantly more attractively valued.
- While equities today are not as extremely valued as they were in 2000, they are expensive and there are a number of parallels between then and now. One often overlooked similarity is that there was a contingent of inexpensive names back then (as there is now) and that those stocks subsequently performed quite well even as the overall market suffered.

Current yields for BAA bonds, equity free cash flows and real estate free cash flows are near the bottom of their historic ranges while the 10-year treasury yield stands out as looking somewhat more attractively valued.

Figure 1: Comparison of Current Asset Class Yields & Historical Ranges ('85 through Nov '24)



Source: FactSet, Standard & Poor's 11/30/2024

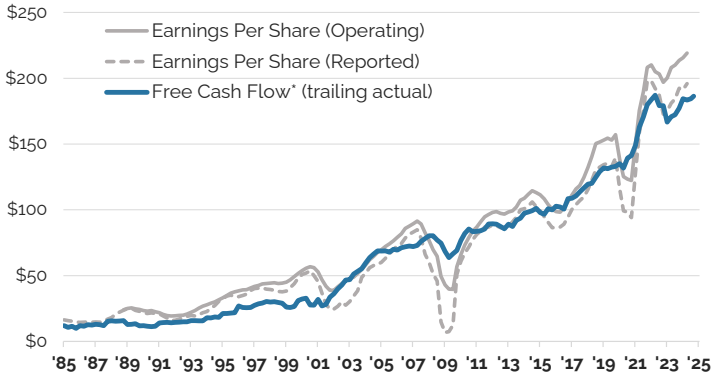
Past performance does not guarantee future results. One cannot invest directly in an index.

Equity Free Cash Flow:

Starting with equities, we prefer to look at valuations based on free cash flow. We have written extensively about the accounting distortions brought by the economic evolution to a capital-light economy and how this has made traditional metrics like price-to-earnings (P/E) or price-to-book (P/B) less meaningful (see our paper: "Value Investing in a Capital-Light World"). Consequently, we measure equity valuations with free cash flow since it is unaffected by this shift and is at the heart of a fundamental tenet that the value of an asset is the present value of its future free cash flows.

Accounting changes and the shift to intangible investment have made reported and operating earnings more volatile and less meaningful than free cash flow.

Figure 2: S&P 500 Free Cash Flow vs. Earnings Per Share



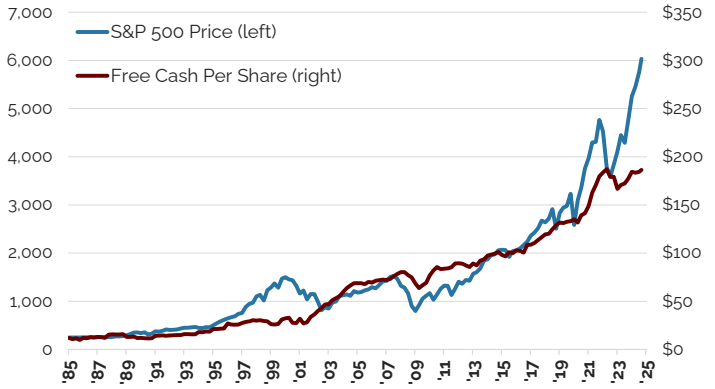
Source: FactSet, Standard & Poor's
*see footnote 1 for additional free cash methodology

Figure 2 shows trailing free cash flows for the S&P 500 Index versus reported and operating earnings dating back to the time Standard & Poor's began reporting the latter.[1] Both reported earnings, which are calculated in accordance with accounting rules, and operating earnings, which are self-reported by companies, suffer from distortions relating to the evolution toward capital-light businesses and related accounting issues that treat research and development and other intangible investments differently from investments in physical infrastructure, or capital expenditures. Free cash flow, on the other hand, incorporates both types of spending and so is unimpacted. Additionally, accounting rule changes requiring non-cash write-offs have made earnings measures more volatile over time, which also favors the use of free cash flows over measures like net income or book value.

Free cash flows can be expressed as a valuation measure when combined with price. **Figure 3** tracks the price of the S&P 500 against free cash flow generation. The chart highlights that the two lines generally track each other but can diverge periodically as is currently the case. The points where the lines intersect correspond to a 5% free cash flow yield.

Price and free cash flow generally track one another but can diverge.

Figure 3: S&P 500 Trailing Free Cash Flow & Price



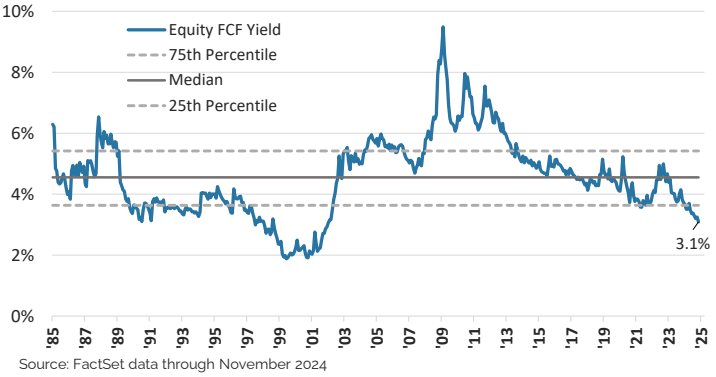
Source: FactSet, see footnote 1 for additional free cash methodology

Figure 4 takes those two histories and combines them into a free cash flow yield. Historically, the yield on trailing free cash flow has averaged around 4.5%. But as shown in the previous figure, the histories occasionally diverge from one another and the free cash yield can vary sharply. A low of around 2% was reached in the telecom, technology, and media bubble in the late 1990s and early 2000s before peaking at almost 10% just nine years later. A history of these yield levels does not follow a normal distribution around its average, so rather than discuss valuation in terms of standard deviations we instead use percentile ranks relative to history and show the 25th and 75th percentile bands as dotted lines in the figure.

The current yield of 3.1% ranks at the 11th percentile of this history with the market being more expensive only 10% of the time over the prior roughly 40 years, all of which occurred during the tech bubble in the late 1990's and into 2000.

Based on trailing free cash flow, the current equity market valuation is expensive relative to history going back to 1985.

Figure 4: S&P 500 Trailing Free Cash Flow Yield



Source: FactSet data through November 2024

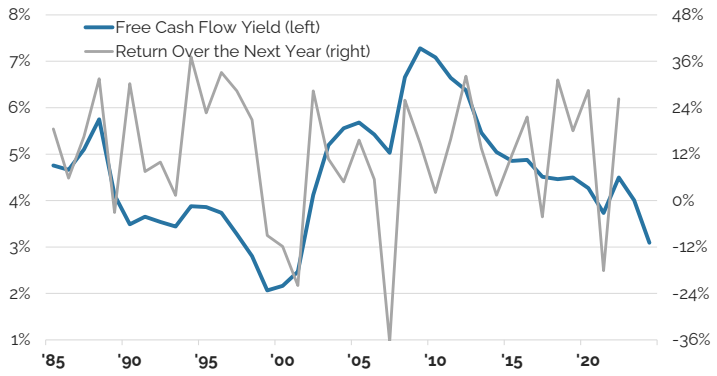
1 FactSet data is used for the free cash flow calculation and goes back to 1985 as it wasn't until 1984 that the Financial Accounting Standards Board (FASB) recommended a cash flow statement be include with companies' full financial statements and until 1987 when it was standardized. Constituents without cash flow data were excluded and the index re-weighted. Fiscal year data is used prior to 2000 and trailing twelve-month data thereafter.

A valuation measure is not of use, however, if it does not tell an investor anything about potential future returns. **Figures 5 & 6** do this by comparing free cash yield with one-year and 10-year forward returns. **Figure 5** looks at the equity free cash yield for the S&P 500 and overlays the market return over the following year. This noisy chart indicates no relationship and suggests that trying to predict short-term market moves with starting free cash flow valuation is a futile exercise. This is consistent with Warren Buffett's advice when he said, "I continue to believe short-term market forecasts are poison and should be kept locked up in a safe place, away from children and also from grown-ups who behave in the market like children."

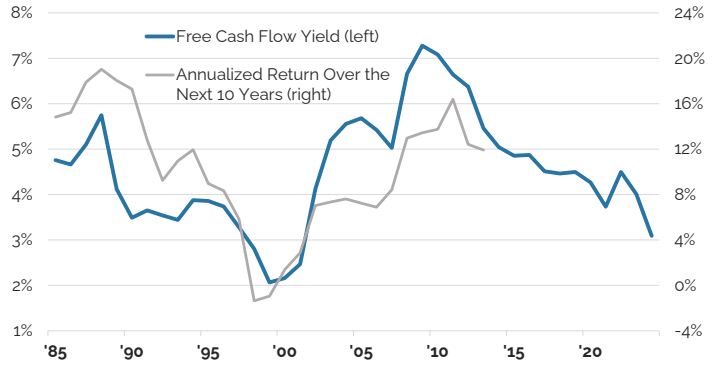
By contrast, free cash yields are much more useful at predicting returns over a longer-term period of 10 years. This is evident in **Figure 6** which shows a close relationship between the starting free cash yield and annualized returns over the next decade. The figure suggests that returns going forward for the overall equity market are likely to be more modest than they have been in the recent past when the equity free cash yield was considerably higher.

Free cash flow yield does not do a good job predicting 1 year forward returns but looks closely linked with returns 10 years into the future.

Figures 5 & 6: S&P 500 Free Cash Flow Yield vs. Returns Over the Next 1 and 10 Years



Source: FactSet November 2024



Source: FactSet November 2024

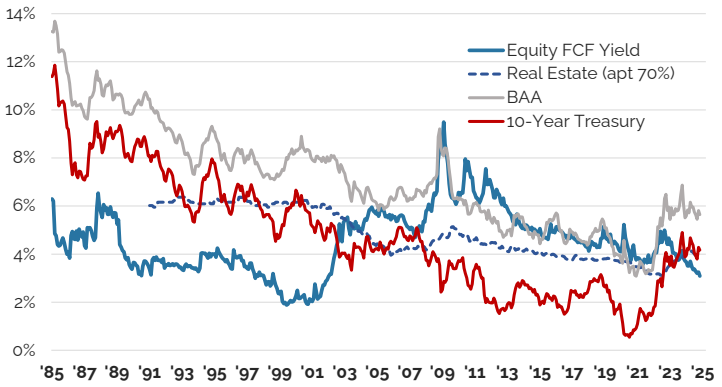
Comparing Yields Across Different Asset Classes

Using the previously described equity free cash flow yield, it is possible to compare yields across different asset classes. **Figure 7** shows historic yields for 10-year treasury bonds, BAA-rated corporate debt, an index of commercial real estate[1], and the S&P 500 Equity Index.

The BAA yield and real estate free cash flow yields have followed the 10-year Treasury yield fairly closely over time. The equity free cash flow yield (shown in red) has also moved in a similar pattern to the 10-year Treasury yield over the short-term, but has not followed a clear trend alongside bond and real estate yields over the full period.

10-year treasury yields, BAA bond yields, and real estate free cash flow yields have all moved sharply lower together over the past four decades while equity free cash flow yields are more mixed.

Figure 7: NTM Free Cash Flow Yield on the S&P 500 vs. 10-Year Treasury and BAA Yields



Source: FactSet, Standard & Poor's, RERC, Real Capital Analytics, Bloomberg. Data through November 2024

Another way to view the data in **Figure 7** is to plot them against historic ranges. **Figure 8** on the next page shows current valuations represented by the red circle, median valuations by the black bar, and the 25th to 75th percentile ranges in the grey and blue bars, giving us a better sense of the ranges of valuations over time as well as where current yields come out in that historical perspective. In this simple analysis, 10-Year Treasuries look more typically valued at present at a level near their median, while other asset classes and equities especially are expensive versus their historical ranges.

1 Based on cap rate yields for apartment buildings from RERC to 2000 and RCA thereafter and adjusted by the historic ~30% free cash flow discount to net operating income per the NCREIF Q2 2018 Indices Review as well as Joseph Paglia's 2017 "Some Thoughts on Real Estate Pricing". Lastly, it should be noted that this data is based on surveyed estimates of forward year net operating income and is thus more akin to forward estimated equity free cash flow rather than the trailing yield that is shown.

Current yields across asset classes look expensive relative to history for most asset classes other than 10-year treasuries.

Figure 8: Current Yields vs. Historic Ranges by Asset

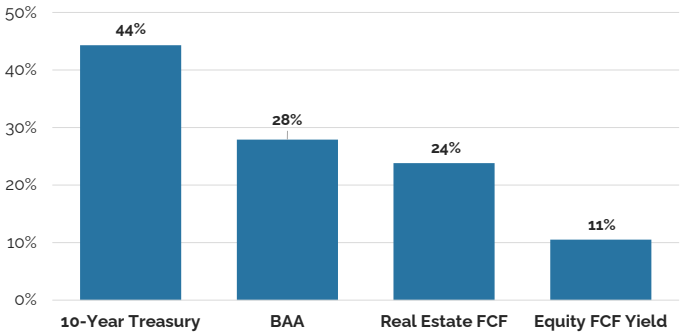
Source: FactSet, Standard & Poor's 11/30/2024

Figure 9 depicts the percentile ranking for the current yield against each group's history. Similar to the previous chart, this shows that 10-year treasuries are more typically valued at the 44th percentile, while the other assets are more expensive with equities being the most richly valued of the group relative to their own histories.

These percentiles are a sharp contrast with the last time we published this analysis in 2021 when equities looked the most reasonably valued and all other assets were in the 5th percentile or below. The change in the few years since then provides a good reminder that valuations can shift a great deal in a short period of time both in absolute terms and relative to one another.

Current yields across asset classes look expensive relative to history for most asset classes other than 10-year treasuries.

Figure 9: Current Yields vs. Historic Ranges by Asset



Source: FactSet, Standard & Poor's, RERC, Real Capital Analytics, Bloomberg, Data through November 2024

The Logic Behind Relative Yields

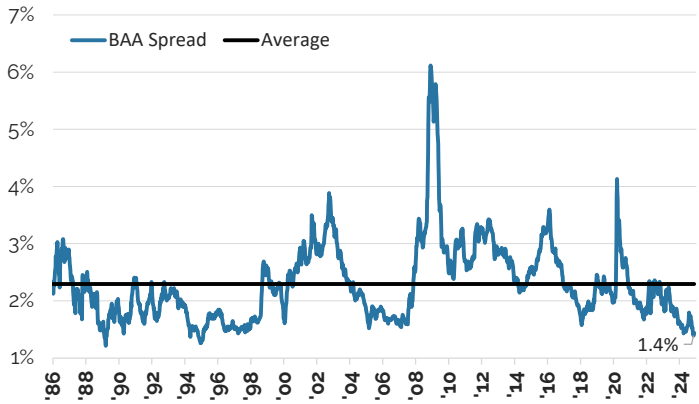
Beyond simply looking at how current yields compare in a historical context across various asset classes, it is worth discussing what each yield represents and the intuition behind where it ranks relative to the other assets.

10-Year Bonds: the yield on 10-year treasury bonds is the most straight-forward. This is the yield an investor will receive over 10 years if the bond is held to maturity. At the current yield of 4.17%, an investor paying $100 today will receive $4.17 per year for the next ten years. Since the bond is paid in a currency that the United States government can print, there is essentially no default risk. While the yield is safe in this sense, it is fixed and does not grow over time and provides no protection from inflation.

BAA Bonds: BAA bonds are those issued by corporations that are considered riskier than the A category but above the "junk" categories of double B and below. These bonds are like treasuries in that they pay a fixed amount that does not grow over time. But unlike treasuries, there is a risk of default. To compensate investors for taking on this risk, these bonds carry a higher yield than treasuries of a comparable maturity and this difference is referred to as a spread. This spread has averaged around 2.3% historically but can increase sharply when investors become more pessimistic and expect greater defaults. At present, the BAA spread is well below its historic average and ranks in just the 2nd percentile versus history, meaning that BAA yields are pricing in very little default risk relative to history and implying that investors are optimistic, perhaps significantly so (See **Figure 10**). Historically, data from Moody's points to a loss of around 0.3% for BAA bonds per year and approximately 1.0% cumulatively over three years. The BAA spread over treasuries less the default rate (adjusted for a recovery rate) is the excess return earned over risk-free treasury bonds.

The current BAA spread is well below the long-term average of 2.3%.

Figure 10: BAA Spread Over 10-Year Treasury Yield



Source: St. Louis Federal Reserve, weekly data through 11/29/2024

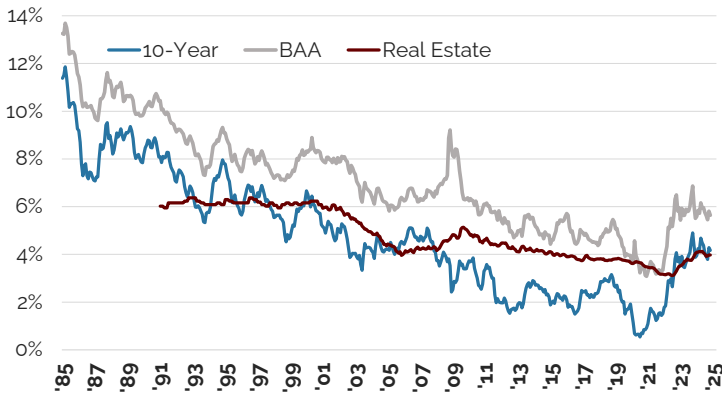
Real Estate: real estate valuations are usually described by cap rates, which measure net operating income (NOI) relative to the purchase price. Since NOI typically excludes expenses for leasing commissions, tenant improvements, and building maintenance, it needs to be adjusted to arrive at a comparable free cash flow figure that represents the cash actually available to the asset owner. Unlike bond payments, the cash flow paid by a real estate investment does grow over time, typically in line with the rate of inflation. Industry data shows an annual growth in NOI of just over 2% going back to the mid-1980s, roughly matching the rate of inflation over this period.

In terms of relative valuation, the real estate free cash yield has closely followed the 10-year Treasury and BAA yields, trailing the latter by roughly 2% or an amount nearly equivalent to the historic rate of NOI growth (See **Figure 11**). This means that after adjusting for growth, the risk premium for real estate and BAA bonds is almost identical. Worth noting, the lack of volatility in the real estate free cash yield is a function of the fact that real estate is not priced daily, versus the other two asset classes where daily data is available. We would be careful not to draw the conclusion that real estate is more stable.

Lastly, it should be noted that real estate can also be an appealing asset class to taxable investors as the taxes on cash flows can often be sheltered through depreciation charges. The tax code also offers additional benefits such as allowing investors to avoid capital gains on sale proceeds by reinvesting in similar assets through 1031 exchanges.

If historic NOI growth of 2% is added to the real estate free cash flow yield, the resulting figure roughly tracks the BAA yield.

Figure 11: Real Estate Free Cash Flow Yield Plus 2% Historic NOI Growth vs. BAA Yield



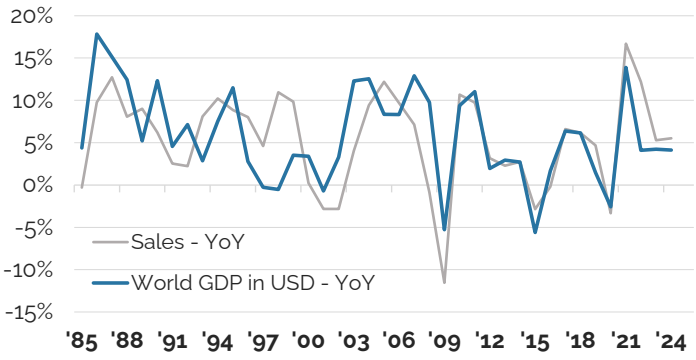
Source: FactSet, Real Estate Research Corporation (RERC), Real Capital Analytics (RCA)

Equities: Equities are much more complicated than bonds or real estate and consume the majority of this analysis. Equity free cash flows are similar to real estate in that they grow over time whereas fixed income payments do not. But unlike real estate, equity free cash flows grow much faster than the rate of inflation due to the substantial investments that are made in research and development, capital expenditures, and other areas. Because of this, it is worth digging a little deeper into the drivers of equity free cash flow per share growth to get a better sense of why it has averaged around 8% per year historically and what the growth potential may be going forward.

At the most basic level, free cash flow growth depends on sales growth. Sales, in turn, track changes in world nominal gross domestic product (GDP) in U.S. dollars (See **Figure 12**). It makes sense that sales should follow overall economic growth and given that around half of S&P 500 sales come from abroad, it is logical to look at global GDP as a relevant comparison. It also intuits that even though sales growth and world nominal GDP growth do not match perfectly in any given year, both have averaged a similar ~6% annual rate since the mid-1980s when the free cash flow data first becomes available.

S&P 500 sales growth has generally tracked world nominal GDP growth in U.S. dollar terms.

Figure 12: S&P 500 Sales Growth vs. World GDP Growth in U.S. Dollar Terms

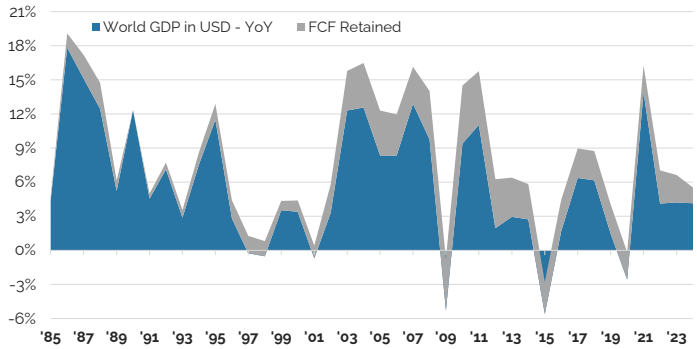


Source: FactSet through 10/31/2024 with IMF estimate for 2024 World GDP in USD

In addition to sales growth, we also need to consider the impact of free cash flow that is not paid out as dividends but that is instead reinvested for additional growth beyond that already spent on capital expenditures or research and development. For example, if the free cash yield after these investments is 4% and a 2% dividend is paid, then another 2% might go toward share repurchases or acquisitions to further grow free cash flow per share beyond topline sales growth. **Figure 13** (next page) adds retained free cash generation to nominal world GDP growth to arrive at an estimate of total potential free cash flow per share growth from both sources.

Free cash flows that are not paid out as dividends also add to growth and can be added to world GDP in U.S. dollars to better model free cash flow.

Figure 13: World Nominal GDP Growth in U.S. Dollar Terms Plus Retained Free Cash Flow

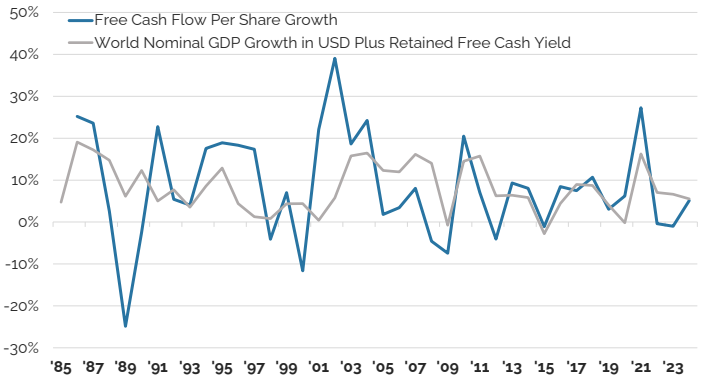


Source: FactSet through 10/31/2024 with IMF estimate for 2024 World GDP in USD

The combination of world nominal GDP growth in dollars plus retained free cash flow can then be used as a loose guideline for total growth in free cash flow per share. While the relationship between actual free cash flow per share and this model is not exact given the myriad additional factors that may cause a disconnect in any given year, it does seem to provide a good general guideline (See **Figure 14**.) Additionally, the long-term average free cash flow growth of 8% lines up well with the historical 6% average of world sales growth in U.S. dollar terms plus the historical average 2% retained free cash flow yield that is not paid out in dividends.

S&P 500 sales growth has generally tracked world nominal GDP growth in U.S. dollar terms, as would be expected.

Figure 14: Free Cash Flow Growth vs. World Nominal GDP Growth Plus Retained Free Cash Flow



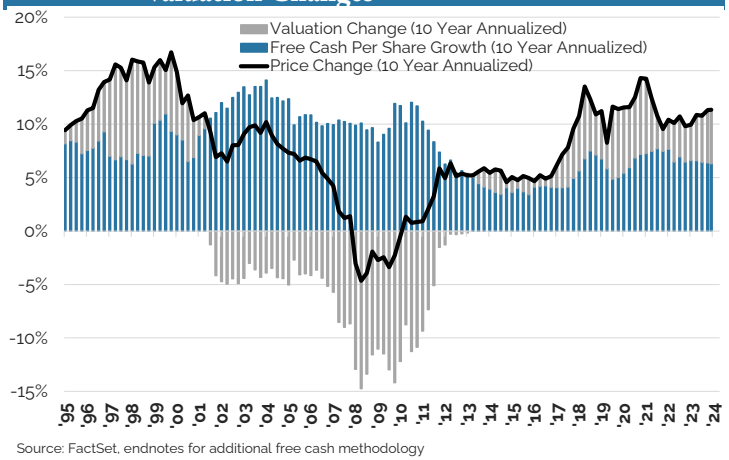
Source: FactSet 11/30/2024 using IMF estimate for 2024 World GDP in USD and 11/30/2024 free cash growth

This basic model is not designed to give an exact relationship to free cash flow growth, but instead a general guide that can provide insight into what future growth could look like. Estimates from the International Monetary Fund (IMF) call for longer-term post-recovery (2024 to 2028) nominal world GDP growth in dollar terms of 4.9% which is split into roughly 3% real GDP growth and dollar-based inflation of just under 2%. Faster real growth of 4% is forecast for the developing world, offsetting somewhat more moderate gains of 2% in the developed world. A more pessimistic investor could reduce this nominal growth rate to 4% with real GDP growth of just 2%. Forward estimates tend to be slightly optimistic historically, so this is not an unreasonable adjustment. This more subdued growth outlook then needs to be combined with the cash retained after dividend payments that roughly equates to a 1.4% free cash flow yield. The result is potential free cash per share growth of around 5% -- a figure lower than historic levels given slower global economic growth and a reduced benefit from retained cash versus history.

Looking forward, while this analysis points to reasonable underlying fundamental growth for equities, it does not address the issue of the multiple paid for those free cash flows and how it might change over time. Over rolling 10-year periods, the annualized equity return can be deconstructed into the contribution from free cash flows and changes in the multiple. Historically, the free cash flow component is more consistent while valuation changes are more variable (See **Figure 15**—note that for simplicity this figure looks at price and not total returns and excludes dividends.) Despite very strong free cash flow growth following the telecom, media, and technology bubble of the late 1990s and early 2000s, 10-year forward price returns were negative because of multiple contraction from very elevated levels. Also shown is how valuation expansion was a key driver of returns during that bubble period, and how they have become so again more recently.

Over 10-year periods, valuation changes can be the larger driver of equity returns while fundamentals tend to be more stable.

Figure 15: 10-Year Annualized Equity Free Cash Flow vs. Valuation Changes



Source: FactSet, endnotes for additional free cash methodology

With equities trading in just the 11th percentile of their historic range of free cash flow yield and multiple expansion having contributed substantially to overall returns recently, there looks to be a risk that valuation compression going forward could offset fundamental growth and reduce overall returns. One way to assess this risk and to examine what theoretical returns might look like is to construct a very simple 10-year model for each asset class.

In this model, equities are shown as a function of both dividends and free cash flow with a starting dividend yield of 1.4%, and a free cash flow yield of 3.1%, based on current figures. Both are assumed to grow at 5%, which is below the long-term average but reflects a more cautious outlook for world nominal GDP growth combined with a more modest benefit from reinvested free cash flows owing to lower current free cash yields. The dividend payout ratio of free cash flow is assumed to be constant. Under these assumptions, a purchase of $100 today generates roughly $19 of dividend income over the next ten years and trailing free cash flow grows from $3.1 to $4.8 in year 10. This $4.8 of free cash flow results in sale value of roughly $105 based on a free cash yield in year 10 that is assumed to revert to the long-term median of 4.6%. When this is combined with the $19 generated from dividend payments, the accrued total payout in year-10 is $126 (See **Table 1**).

Using starting yields and forecast growth rates, we can create a simple model for future returns to examine implications of current valuations and different possible scenarios.

Table 1: 10-Year Income & Sale Model For Different Asset Classes

	Equity (Div)	Equity (Trailing FCF)	10 Year	BAA	Apt Bldg (FCF)
Purchase Price	$ 100	$ 100	$ 100	$ 100	$ 100
Yield at Purchase	1.4%	3.1%	4.2%	5.6%	4.0%
Growth (nominal)	8.0%	5.0%	0.0%	0.0%	2.0%
Default (BAA only)				0.30%	
Year 1	$ 1.4	$ 3.1	$ 4.2	$ 5.3	$ 4.0
Year 2	$ 1.5	$ 3.2	$ 4.2	$ 5.3	$ 4.1
Year 3	$ 1.6	$ 3.4	$ 4.2	$ 5.3	$ 4.1
Year 4	$ 1.8	$ 3.6	$ 4.2	$ 5.3	$ 4.2
Year 5	$ 1.9	$ 3.8	$ 4.2	$ 5.3	$ 4.3
Year 6	$ 2.1	$ 3.9	$ 4.2	$ 5.3	$ 4.4
Year 7	$ 2.2	$ 4.1	$ 4.2	$ 5.3	$ 4.5
Year 8	$ 2.4	$ 4.3	$ 4.2	$ 5.3	$ 4.6
Year 9	$ 2.6	$ 4.6	$ 4.2	$ 5.3	$ 4.7
Year 10	$ 2.8	$ 4.8	$ 4.2	$ 5.3	$ 4.8
Income Sum	$ 20.3		$ 41.7	$ 53.4	$ 43.5
Yield at Exit*	2.1%	4.6%	NA	NA	5.5%
Sale Price		$ 105.3	$ 100.0	$ 100.0	$ 85.9
Total (income and sales sum)		**$ 125.6**	**$ 141.7**	**$ 153.4**	**$ 129.4**

* assumes median yield for equities and real estate

The income from 10-year treasuries is straight forward with static annual income payments of $4.2 and a sale price of $100 equal to the $100 original investment. This generates a combined total of $142 over the full 10-year period.

BAA bonds in this model are assumed to suffer an unrecovered default of around 0.3% which reduces the 5.6% yield to 5.3% and produces a cumulative $53 of income over the 10-year period plus the $100 principal repayment for a combined $153.

Real estate free cash flows start at the current yield of 4.0% on forward estimates and grow at the historic 2% inflation rate. This produces $44 in income to the investor over the 10-years. The real estate sale price is then based on free cash flow of $4.8 in year 10 and is assumed to occur at a valuation, like equities, that is transacted at the historic median multiple.

While this model is very simplified, it allows us to compare current yields and the impact of future growth in some useful ways. Most notably, it highlights the risk around valuation changes for equities and real estate.

Focusing on equities, **Table 2** below shows the various total income and sales figures at different free cash yields in the final year of the model. If free cash yields stay where they are, the total income would rise to $175 and equity investors would do better than owning 10-Year Treasuries or BAA bonds and effectively be compensated for the increased risk of investing in equities. But if valuations do not hold at current levels for equities, there is significant downside risk with an equivalence between the total equity and 10-Year Treasury income occurring at a yield of 3.9%. A 3.9% free cash yield corresponds to the 34th percentile versus history and somewhat near the floor at which equities traded other than during the bubble in the 1990s and early 2000s and again most recently (refer to the equity free cash yield over time in **Figure 4**). Doing the same analysis for BAA bonds, for the total income to be equal, equities would need to trade at a 3.5% yield in the future which would rank in the 23rd percentile. Growth rates well in excess of what would be expected based on global nominal GDP growth and the retained free cash yield do support a higher return, but even at 8%, still fall short of the BAA return at the median free cash yield. Simply put, this sensitivity analysis shows that for equities to outperform less risky alternatives in the form of 10-Year Treasuries and BAA Bonds, they will need to continue trading at a very low level of free cash yield relative to history.

Equity returns are highly sensitive to future valuations.

Table 2: 10-Year Equity Total Income Under Different Free Cash Yield & Growth Scenarios

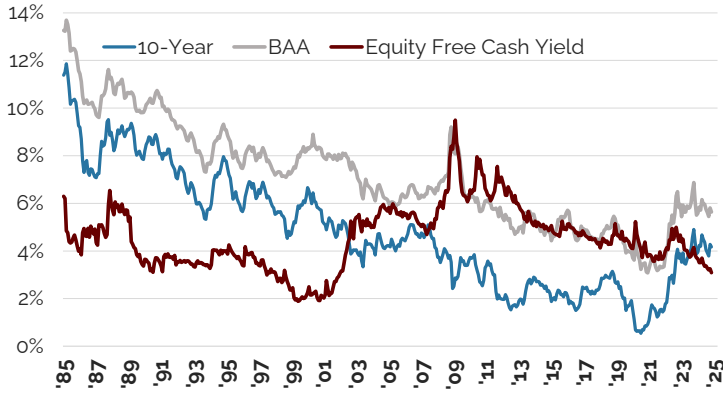
			Free Cash Flow & Dividend Growth				
			4%	5%	6%	7%	8%
Free Cash Yield	Current Yield	3.1%	$ 162.6	$ 175.4	$ 189.2	$ 204.1	$ 220.2
	10th %	2.9%	$ 170.5	$ 184.0	$ 198.6	$ 214.3	$ 231.2
	25th %	3.6%	$ 141.3	$ 152.2	$ 163.9	$ 176.6	$ 190.2
	35th %	4.0%	$ 130.2	$ 140.1	$ 150.8	$ 162.3	$ 174.7
	Median	4.6%	$ 116.9	$ 125.6	$ 135.0	$ 145.1	$ 156.0
	75th %	5.4%	$ 101.4	$ 108.7	$ 116.6	$ 125.1	$ 134.2
	90th %	6.3%	$ 89.9	$ 96.2	$ 103.0	$ 110.3	$ 118.1

Equity Valuations vs. Bonds

The return sensitivity to valuation for equities leads to the very obvious but difficult question of what is the appropriate free cash yield for equities. While the relationship between BAA yields or real estate free cash yields are closely linked with 10-Year Treasuries, the situation is much more complex with equities. **Figure 16** plots the equity free cash yield alongside the 10-Year Treasury Yield and the BAA bond yield and shows that while the yields can move similarly in the short term, the long-term trend is much less clear. Equities traded at a yield below both the 10-Year Treasury and BAA yields from 1985 through the telecom, media, and technology bubble in the late 1990s and early 2000s. They then traded at a yield in line with the BAA yield and well above the 10-Year Treasury Yield until only recently when they dropped back below each.

The relationship between the equity free cash yield and the 10-Year Treasury and BAA yield is mixed over time.

Figure 16: Historic Equity Free Cash Yield vs. Bonds



Source: FactSet, data through 11/30/2024

We break this chart into different periods and examine each. In the first period, from 1985 until just before the telecom, media, and media bubble in the late 1990s, the equity yield was well below both the BAA and 10-Year Treasury yields and hovered around 4% for several years before dropping sharply to 2% in the ebullience of the bubble that ended the period. Given that the free cash flows underpinning the equity yield grow and the bond coupons do not, it is arguable that equities should trade below their fixed income alternatives. Offsetting this growth benefit, however, is an increased risk given that dividend payments and free cash flows are not fixed nor is the principal investment guaranteed to be repaid at a comparable valuation. For this beginning period, the growth benefit sufficiently trumped the equity risk premium, or increased yield required to compensate investors for these risks. An alternate and more simple theory is that equity yields traded below bond yields in this period in part because the bond yields themselves were very high.

The next period is the telecom, media, and technology bubble in the late 1990s and early 2000s. This period saw the equity free cash yield drop from around 4% to 2% as enthusiasm about equities and extreme bullishness on growth prospects resulted in a valuation bubble. While this period does offer a sense of how low equity free cash yields can fall in a period of extreme optimism, it does not tell us much about the relationship between equity free cash yields and fixed income alternatives.

The third period in the chart begins in the aftermath of that bubble when equity yields moved sharply higher. They initially rose from the 2% low of the bubble to around 5% to 6% for a few years before pessimism during the Financial Crisis caused them to surge to a record of nearly 10%. Free cash yields then settled back down and moved gradually lower to a level of around 4% just prior to the pandemic. During this time, the equity free cash yield moved in near lock step with the BAA bond yield. It seems investors were demanding an equity risk premium equal to the growth benefit over BAA bonds during this period. This may have been due to either a higher equity risk premium or greater pessimism about the prospects for equity free cash flow growth.

The tight linkage between equity free cash yields and BAA bond yields then broke down in the final period that encompasses the very recent several years. In this period, the equity free cash yields fell while both the 10-Year Treasury and BAA Bond yields rose. This is an unusual dynamic and not one we have seen previously except in the period in the late 1990s during the telecom, media, and technology bubble. It implies that the expected growth benefit from equities is well ahead of the equity risk premium either due to higher growth expectations, a lower equity risk premium, or both.

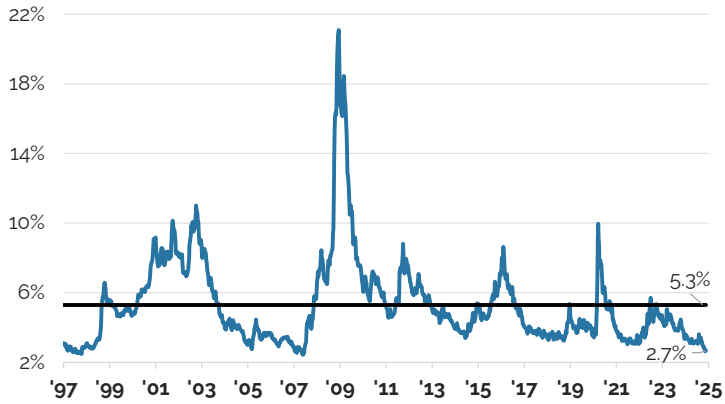
So where does this all leave us? While there appear to be different dynamics in each of these different periods, no clear pattern emerges overall. Equities traded at a lower yield than bonds when bonds were much higher and traded above or in line with them when yields were much lower. This seems to suggest that while equities correlate with bonds for stretches of time, the relationship can shift suddenly. Equities can also be highly variable in an absolute sense, with investors paying 50x free cash flows (a 2% yield) in 2000 and then paying a multiple about 80% lower just nine years later. Given this variability in equity yields both in absolute terms and relative to bonds, and with equities trading in the 11th percentile of their historic levels, we think longer-term investors should be somewhat cautious. Sentiment can be fickle and valuations at the current level have rarely persisted in the past.

Backdrop of Bullish Sentiment

Equity valuations today suggest that sentiment is very bullish and this is corroborated by a number other measures. As we saw in **Figure 10**, the BAA bond spread is near a record low trading in just the 2nd percentile versus its own history. The spread for high yield bonds that are of lower credit quality than BAA yields is similarly tight and also trading in the 2nd percentile of its history (See **Figure 17**).

High yield bond spreads are near the lowest ever recorded.

Figure 17: High Yield Bond Spread

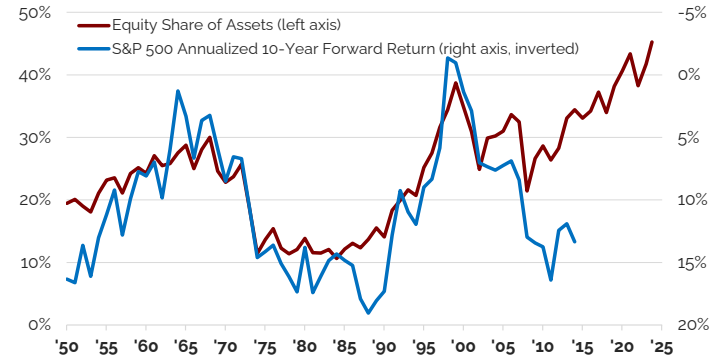


Source: St. Louis Federal Reserve, weekly data through 11/29/2024

Equity ownership levels are another sentiment measure that point to high levels of optimism. Using data from the Federal Reserve, the equity share of U.S. household financial assets is at an all-time high. This is a function both of equities having performed very well in recent years, but also of households' willingness and desire to own equities. This dataset, which goes back around 75 years, also tends to have a fairly strong inverse relationship with forward returns. This is evident in **Figure 18** which plots the equity share of household assets on the left axis and the 10-year forward annualized return for the S&P 500 on the right axis on an inverse scale.

The equity share of household assets is at an all time high, which has historically correlated with lower 10-year forward equity returns.

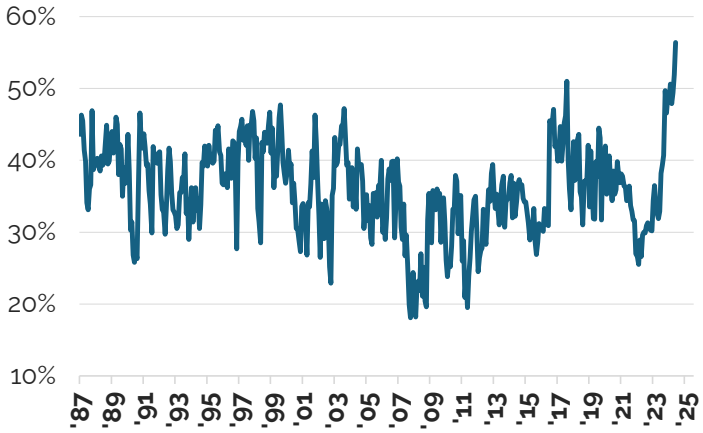
Figure 18: U.S. Household Equity Ownership vs. Returns



Source: Factset, Federal Reserve, data as of June 2024 for household assets and 2014 10 year forward return uses 2024 S&P 500 data through 12/5/2024

Consumer sentiment on stocks is at a record high.

Figure 19: Percent of Consumers Expecting Stocks to Be Higher in 12 Months



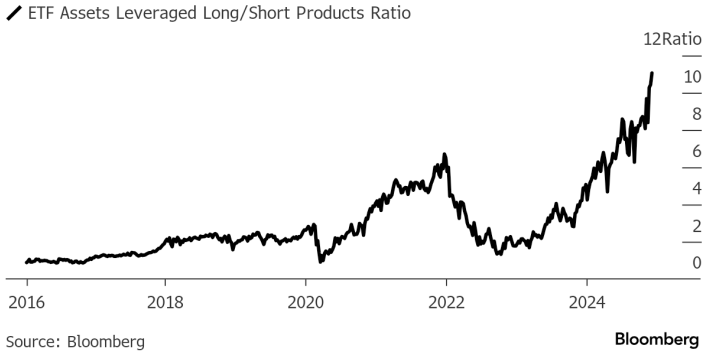
Source: FactSet, Conference Board Consumer Confidence Survey, as of November 2024

While we prefer to gauge sentiment through valuations and actions and generally find surveys to be more short term oriented and less useful, we were struck by the recent sharp move in the Conference Board's share of consumers expecting stocks to be higher in 12 months. This is seen in **Figure 19** which highlights both the level of bullishness and the speed of the recent move upward. Again, we generally don't prefer such measures, but in the context of other gauges of sentiment, this supports the notion that there is presently a great deal of optimism pushing valuations higher.

Another indicator of bullish sentiment (albeit with a shorter history) is the ratio of assets in leveraged long exchange traded funds (ETFs) relative to assets in leveraged short ETFs, which again points to a very high level of optimism at present (See **Figure 20**).

Assets in leveraged long ETFs dramatically exceed those in short funds

Figure 20: Ratio of Assets in Leveraged Long ETFs Relative to Leveraged Short ETFs



Source: Bloomberg

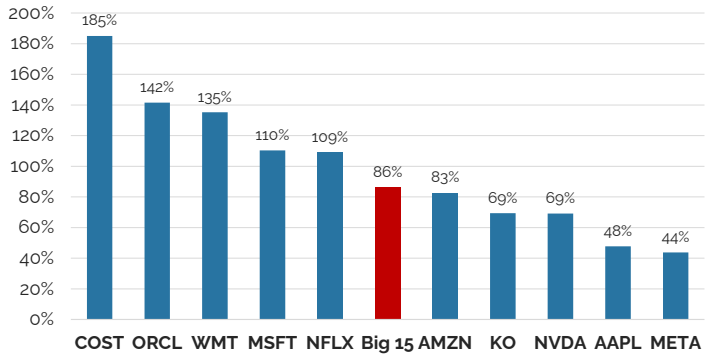
Equity Valuation Risk Focused on Largest Names

While the market overall is expensive and sentiment reads quite bullish, it is not true of every stock. Much of the rich valuation for equities at present is due to just a small handful of very large stocks. Outside of these stocks, much of the rest of the market looks much less expensive and less at risk from shifts in sentiment and valuation over the longer term.

The bifurcation is evident in **Figure 21** which shows the relative free cash flow valuation on consensus estimated next twelve-month free cash flows for the most expensive 15 stocks with market capitalizations over $250 billion, relative to the rest of the market. This group of just 15 companies accounts for 43% of the S&P 500's overall market capitalization (excluding companies without free cash estimates) and collectively trades at an 86% premium to the rest of the market. Without these names, the S&P 500 would be trading at a more reasonable 4.6% forward free cash flow yield, consistent with the long-term history, rather than the current 3.6%.

Much of the rich market valuation is attributable to a small number of names as the 15 most expensive stocks with market valuations over $250 billion are trading at a 86% premium to the rest of the market.

Figure 21: Valuation of the 15 Most Expensive Megacap Stocks Relative to the Rest of the Market



Big 15 includes AAPL, AMZN, AVGO, COST, KO, LLY, MA, META, MSFT, NFLX, NVDA, ORCL, TSLA, V, & WMT). FactSet data throgh 12/16/2024, excludes stocks without FCF data with index reweighted.

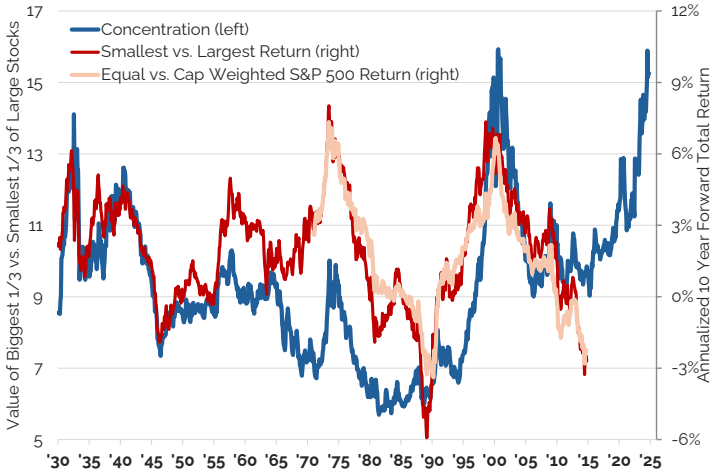
A corollary to the rich valuations being concentrated among a select few of the biggest companies is that the stock market overall is enormously concentrated, with the largest few stocks representing a disproportionate share of the total. Some analyses look at the top five or top ten stocks as a percentage of the total. On this metric the top ten collective weight of 34.1% as of mid-year marked the highest level in over 150 years according to Global Financial Data. But as noted previously, rich valuations among mega-cap companies and resulting concentration extends beyond just the largest 10 stocks.

As an alternate approach to examine concentration, we recently looked at the value of the largest third of U.S. large cap stocks relative to the smallest third. This data goes back to 1930 and shows that this broader measure of concentration is also at an all-time high, with the largest third of large cap U.S. stocks worth more than 15x the smallest third of this group. This figure is just above where it was in the telecom, media, and technology peak in 2000, noted by the blue line that links to the left axis in **Figure 22**.

Potentially more important is what this measure of concentration can tell us about future equity returns. Shown in the red line corresponding to the right axis in **Figure 22** is the relative performance of the smaller third of the large cap stock universe relative to the largest third on an annualized basis over the subsequent decade. A pattern emerges where after periods of high concentration among the biggest stocks, smaller stocks tend to outperform and sometimes do so by substantial amounts.

Equity market concentration is at a peak which has historically seen outperformance by smaller stocks over the next decade.

Figure 22: Equity Market Concentration & Returns



Source: Ken French Data Library. U.S. Large Cap stocks is defined as the largest 30% which equates to roughly the biggest 549 names. Data through October 2024

The performance of smaller stocks relative to larger (the red line) closely mirrors that of an equal weighted version of the S&P 500 relative to the standard market capitalization weighted version. This is also shown on the chart (the orange line), though this data only dates back to 1970.

Overall, the history suggests that while the broader equity market is quite expensive, investors need not be resigned to the prospect of lower returns if they are instead willing to own a portfolio that looks different from the standard capitalization weighted S&P 500. Investors in a portfolio that more resembles the equal weighted S&P 500 may fare much better in the coming decade if historic relationships hold. This dynamic is very similar to what played out in the aftermath of the telecom, media, and technology when concentration was most recently at similar levels.

Equity Echoes of 2000 and Why Valuation Matters

Stocks in aggregate are not as expensive as they were in 2000, as is evident by the current 3% trailing free cash yield versus the 2% yield back then (refer back to **Figure 4**). The current market is, however, still very expensive and there is much that looks similar between then and now. Concentration then was similar, equity ownership was comparable, and equity yields moved lower even as bond yields rose. Another feature of the market in 2000 that is often overlooked is that despite the overall market's richness at the time, there remained a subset of inexpensive stocks available to investors. We see this in today's market as well and believe it is of critical importance for long-term investors.

To measure the share of the market that is inexpensive or expensive, we simply split stocks into two groups trading above or below 30x trailing free cash flows (a yield below 3.33%). The analysis shows that in the TMT bubble, that over 80% of the S&P 500 by weight traded at a multiple over 30x free cash flows (See **Figure 23**). The weight of that group then declined and plateaued to about 30% in much of the period after, and reached a low of around 10% in 2009 when the overall market's free cash yield was it its cheapest on record. The share of the market in more expensive stocks then moved higher into 2020 before the numbers became very volatile due to depressed and highly volatile free cash flows in the pandemic period (we exclude that period from the chart to minimize noise). The share of expensive stocks touched near 30% again post-pandemic but then began to mover sharply higher in 2023 and 2024 when it hit a recent high of 66%.

The share of expensive stocks in the market (over 30x trailing free cash flows) has moved up sharply in 2023 and 2024 and is reminiscent of 2000.

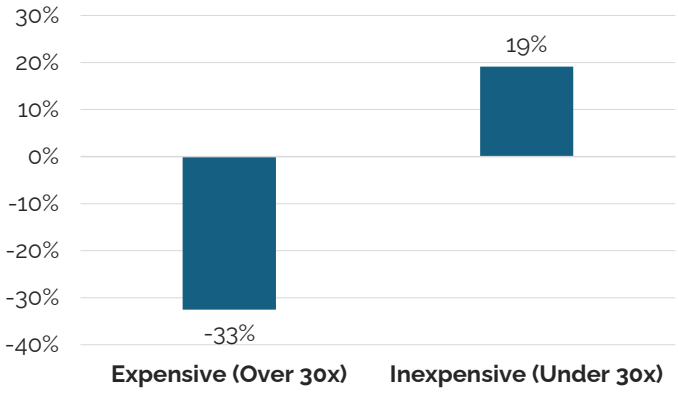
Figure 23: Share of the S&P 500 Trading Over 30x Trailing Free Cash Flows (ex Covid period)

Source: FactSet. Data through November 2023. Excludes Covid period due to volatility of fundamentals..

While this chart highlights that a very large share of the market was trading at a high multiple in 2000 (and a worryingly large portion is again today), it also demonstrates is that there was a subsegment of the market that was trading at more reasonable multiples at the time (as there is also today). But what is most important is what happened to each of these groups after the 2000 peak. While any investor old enough to have been around in 25 years ago well remembers the painful valuation compression that caused the overall market to fall sharply in the aftermath of the bubble, many forget that the inexpensive part of the market actually performed quite well. For our split of inexpensive and expensive stocks, for the roughly 80% of the market that was trading at over 30x trailing free cash flows in March of 2000, these stocks in aggregate saw their valuation fall by around 33% over the following two years. The inexpensive portion of the market, by contract, actually saw gains and was up nearly 20% over the same period (See **Figure 24**).

The expensive portion of the market in March of 2000 saw its aggregate value decline by 33% over the next two years, but the inexpensive group of stocks actually increase in value by almost 20%.

Figure 24: Aggregate Market Cap Change Two Years After March 2000: Expensive vs. Inexpensive Stocks



Source: FactSet.

We believe this is the most important similarity between the current equity environment and 2000. Even though the overall market was very richly valued at the time, there was a subsegment of stocks that were not, and those stocks significantly outperformed when a shift in sentiment ultimately caused valuations to revert to more normal levels. While today's market is not as extremely valued as it was in 2000, we think the lessons are the same—that it is paramount to remain disciplined on valuation in periods of high optimism.

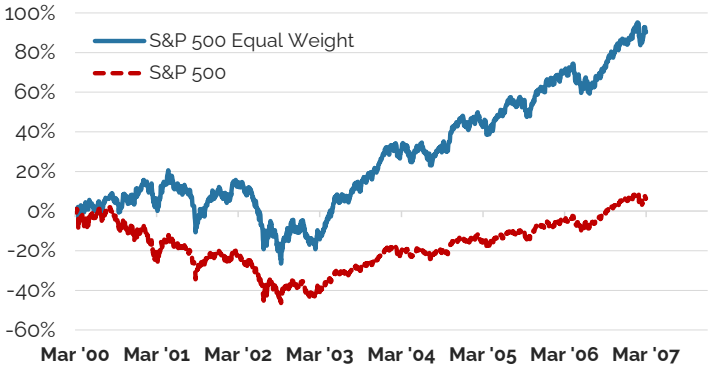
The performance of the equal weighted S&P 500 in the aftermath of the 2000 bubble provides another window to the significant deviation in performance that occurred. In 2000, the largest stocks had driven valuations higher. This is evident in the fact that the 80% of the market by weight that was expensive was comprised of only around half of the total stocks in the market. Put differently, while 80% of the capitalization weighted S&P 500 was trading at over 30x trailing free cash flows, a much smaller 53% of the equally weighted S&P 500 was representing those same stocks. The market today is quite similar as the 66% of the S&P 500 that is expensive is accounted for by 47% of the stocks.

Because of this dynamic, the equal weighted S&P 500 performed much differently than its more commonly quoted and much richer capitalization weighted counterpart back in 2000. It took almost

seven years for the standard cap weighted S&P 500 to fully recover from the declines suffered after the bursting of the bubble. The equal weighted S&P 500, by contrast, experienced a much more muted decline after 2000 and actually increased by over 80% in the same time that it took the cap weighted benchmark to recover (See **Figure 25**).

In the 7 years that it took the capitalization weighted S&P 500 to recover from the 2000 selloff, the equal weighted S&P 500 had rise over 80%.

Figure 25: Cap Weighted vs. Equal Weighted S&P 500 Post March 2000



Source: FactSet

Conclusion

Overall, most asset classes look expensive relative to history. 10-Year Treasuries look the most reasonable with a current yield that is near the long-term median while equities are the richest in the 11th percentile. Sentiment broadly is very optimistic with bond spreads near record lows, equity ownership levels at a record peak, and some survey measures similarly at record highs.

Amid this backdrop, there looks to be significant valuation risk for a number of asset groups and equities in particular. With more modest global economic growth and less benefit from retained earnings to further support growth, equity investors today are at risk of underperforming other asset classes if the current valuations do not hold. Historically, equity yields have correlated with bond yields in the short-term but have a much more inconsistent relationship with bonds broadly having traded both below and above them at times depending on whether investors are rewarding the growth benefit of equity ownership more than the risk premium demanded to compensate investors for the variability around equity free cash flows and valuation risk relative to bonds. While it is possible that equities will continue to trade at a low yield (high multiple) and at a level below fixed income alternatives, history suggests that this relationship can change suddenly. The last time that equity yields were falling while bond yields were moving higher preceded the tech bubble and equity yields shifted from their most expensive on record to their cheapest in the span of less than nine years.

Fortunately for equity investors, much of the current valuation risk stems from a relatively small number of very large and very expensive stocks. This dynamic is similar to what occurred in 2000 when equities were similarly concentrated and even more expensive than today but there remained a subset of inexpensive stocks that subsequently significantly outperformed the broader market. Given the backdrop of the current environment and a number of parallels to that period, we believe there remains significant opportunity in equities despite overall valuations as long as investors are willing to be more selective and seek out the inexpensive parts of the market.

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Methodology note for ***Figures including free cash flow yield (FCF)*** *or* ***free cash flow to enterprise value yield (FCF/EV):*** *figures reflect consensus estimates of next-twelve-months (NTM) FCF in comparison to market capitalization or enterprise value (EV) for the relevant portfolio/strategy or benchmark. Stocks without data are excluded and portfolios are reweighted accordingly. Stocks with FCF/Market Cap or FCF/EV values of greater than 50% or less than -20% have been eliminated to avoid distorting overall averages.*

The ***S&P 500 Index*** *is an index of roughly the largest 500 U.S. listed stocks maintained by Standard & Poor's. The* ***S&P 500 Equal Weight Index*** *is an index of the same stocks as the S&P 500 Index, but weights the constituents equally. The* ***iShares Russell 1000 Value ETF*** *is an investable benchmark used as a proxy for its underlying index, the* ***Russell 1000 Value Index****, an index of U.S. listed stocks that possess attractive valuation as measured by FTSE Russell. The* ***iShares MSCI ACWI Ex-US ETF*** *is an investable benchmark used as a proxy for its underlying index, the* ***MSCI ACWI ex USA Index****, an index managed by MSCI representing large and mid cap stocks outside of the U.S. The* ***iShares Russell 2000 ETF*** *and* ***iShares Russell 2000 Value ETF*** *are investable benchmarks used as a proxies for the underlying indexes of the* ***Russell 2000 Index*** *(an index of U.S. listed small cap stocks) and the* ***Russell 2000 Value Index*** *(an index of U.S. listed small cap stocks that possess attractive valuation as measured FTSE Russell).*

Indices are not available for direct investment. Investment in a security or strategy designed to replicate the performance of an index will incur expenses, such as management fees and transaction costs, which would reduce returns.