Portfolio Jay Research

CAPE Insights: Consequences Of Equity Market Valuations

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Abstract

Renowned Yale Professor - Robert Shiller, is best known for his work on the Cyclically Adjusted Price to Earnings (CAPE) Ratio, also known as the Shiller P/E Ratio.

$$\textbf{CAPE Ratio} = \frac{\textbf{Price}}{\textbf{10 Year, Inflation Adjusted Earnings}}$$

The CAPE ratio differs from the standard P/E ratio in 3 ways:

1. Uses long-term 10-year earnings rather than earnings of the most recent period
2. CAPE adjusts earnings for inflation, while standard P/E ratio does not
3. CAPE is typically used to value the entire market, while P/E tends to be used for individual stocks

The CAPE ratio, like the P/E ratio, is a pricing metric, giving an indication of how much investors are willing to pay relative to the earnings of the company or market as a whole. A higher CAPE ratio suggests a more expensive market, and is often the basis of overvaluation fears among investors.

This report provides key insights from observations related to the CAPE ratio and market returns, considering both historical performance as well as the current situation in the market.

Process

The analysis was conducted using Excel, with data sourced from shillerdata.com. Statistical analysis techniques used included correlations and regressions.

CAPE and Subsequent Returns

Excess CAPE Yield is defined as:

$$\textbf{Excess CAPE Yield (ECY)} = \frac{1}{\textbf{CAPE Ratio}} - \textbf{Real 10Y Treasury Yield}$$

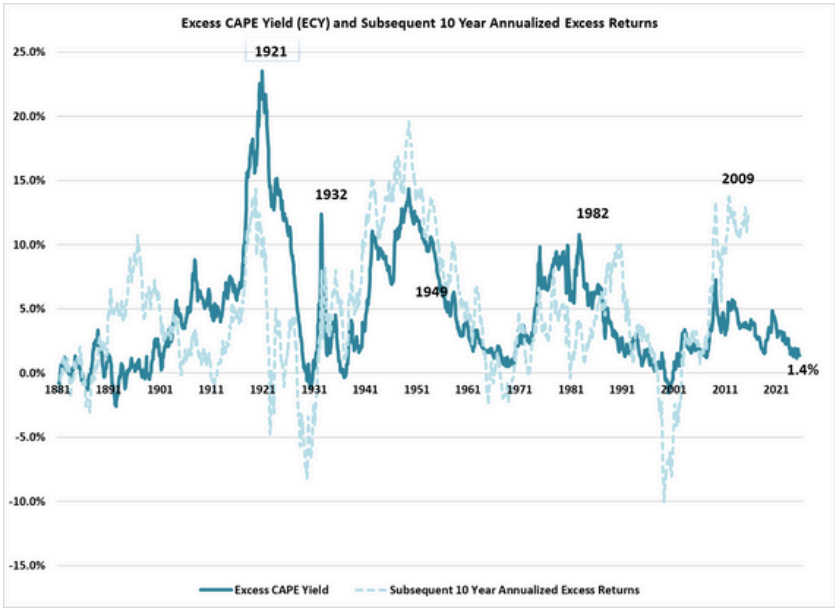


Fig 1. Excess CAPE Yield (ECY) and subsequent 10Y excess real returns of stocks

ECY measures the expected excess real returns of the stock market, based on the inverse of the CAPE ratio.

When stocks are cheap, the CAPE ratio is low and hence the ECY is high.

Or in simpler terms, when stocks are cheap, you get a better bargain on buying them, and thus your expected return would generally be higher.

The question is - how well does this logic actually reflect the reality of stock market performance?

Indeed, there is a non-negligible relationship between the ECY and the annualized excess real returns of the stock market over the subsequent 10Y period, with a correlation of 58.03% when using data stretching all the way from 1881 to 2015 (2015 being the most recent period to the current date in 2025 for which we have 10Y return data).

58.03%

All-time Correlation

ECY to subsequent 10Y excess returns

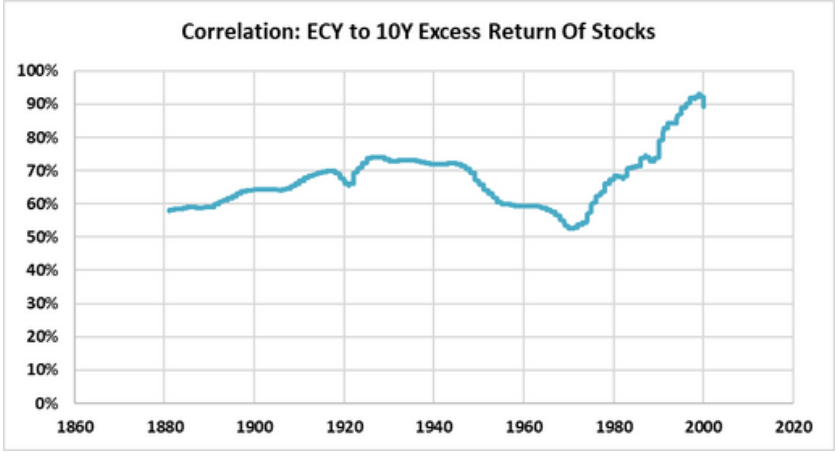
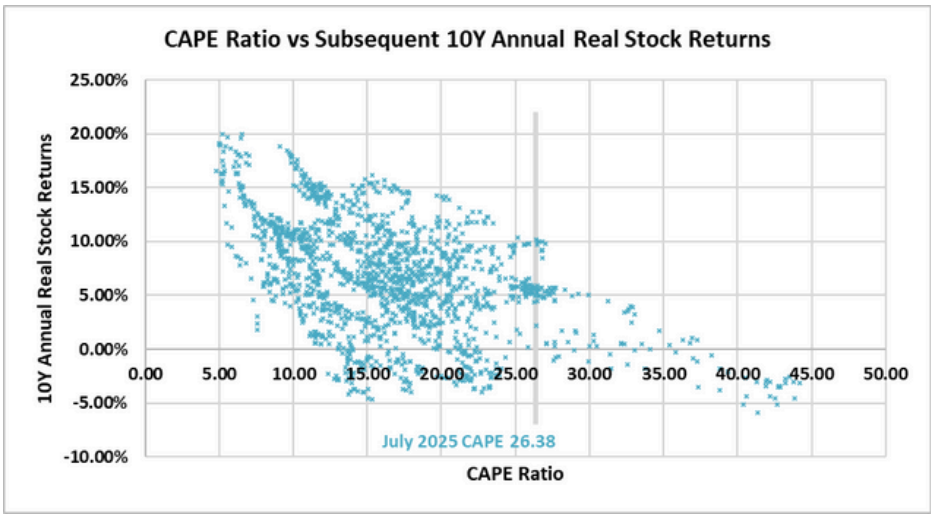


Fig 2. Correlation between ECY and 10Y excess returns of stocks over time

Though the correlation between the pricing of the stock market and the subsequent returns is not extremely high, it is still a notable relationship, suggesting that investors' concerns about market valuations are indeed at least somewhat reflected in the data.

Where We Stand

At the time of writing in July 2025, the current CAPE ratio for the US market is 26.38, which is in the 98th percentile of historical CAPE ratios. This would be considered a very highly priced market.



26.38

July 2025 CAPE

98th percentile highest all-time

1.38%

July 2025 ECY

22nd percentile lowest all-time

Fig 3. CAPE Ratio versus subsequent 10Y annualized real stock returns

The R-squared value of a linear regression of this dataset is 0.2504, which is not highly significant. That said, there remains a trend that higher CAPE ratios tend to generally result in worse subsequent 10Y real returns. Based on a linear regression, the expected 10Y real return on US stocks at the current CAPE ratio would be an annualized 2.88%. This statistic, taken at face value, presents a worrying outlook for US equities.

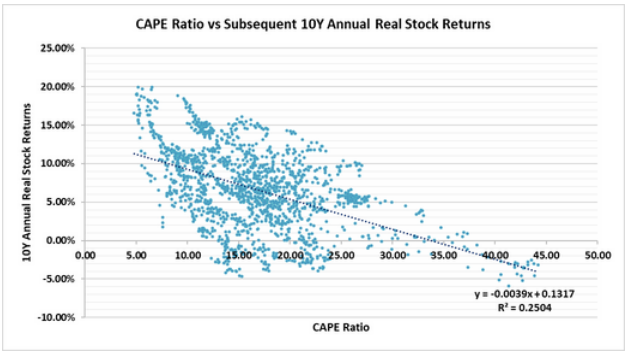


Fig 4. Linear regression, CAPE ratio versus subsequent 10Y annualized real stock returns

We can use excess CAPE yield (ECY) as another metric for this analysis. As mentioned earlier, ECY also incorporates treasury yields into the equation, while inverting CAPE.

As of July 2025, the ECY of the US market is 1.38%, which is in the 22nd percentile of historical ECY. While still considered pricey, this represents a less extreme pricing than we found with CAPE.

The R-squared for this regression is also higher, at 0.3367, as is the expected 10Y annualized real return of 4.46%.

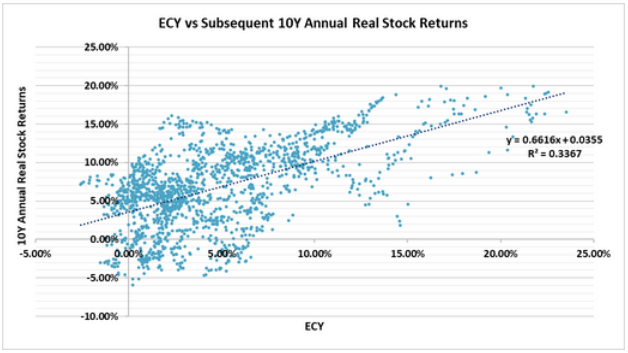


Fig 5. Linear regression, excess CAPE yield versus subsequent 10Y annualized real stock returns

CAPE Over Time

One of the key nuances when comparing today's CAPE ratio to historical figures is the fact that what is considered a "normal" or "fairly priced" CAPE ratio is itself a metric that changes over the years.

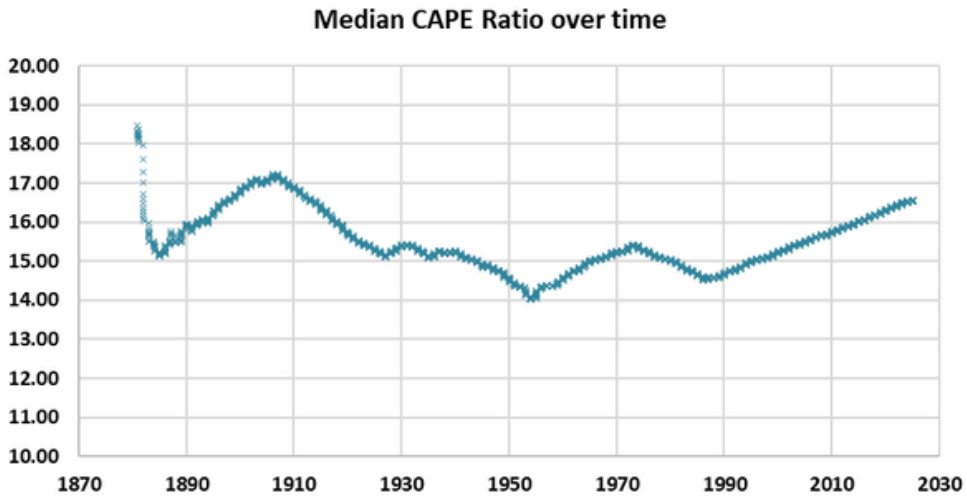


Fig 6. Median CAPE ratio from 1881 to 2025.

Since the mid 80s, the monthly median CAPE ratio has demonstrated a clear increasing trend, implying that it has become more normal for stock market valuations to be higher in the recent decades. This appears reasonable, given the high earnings growth of many of the largest companies.

The median excess CAPE yield (ECY) has also changed significantly over time. Undoubtedly, the US market's current CAPE of 26.38 and ECY of 1.38% do present real fears of overvaluation. If growth fails to catch up with price, US equities are set to underperform.

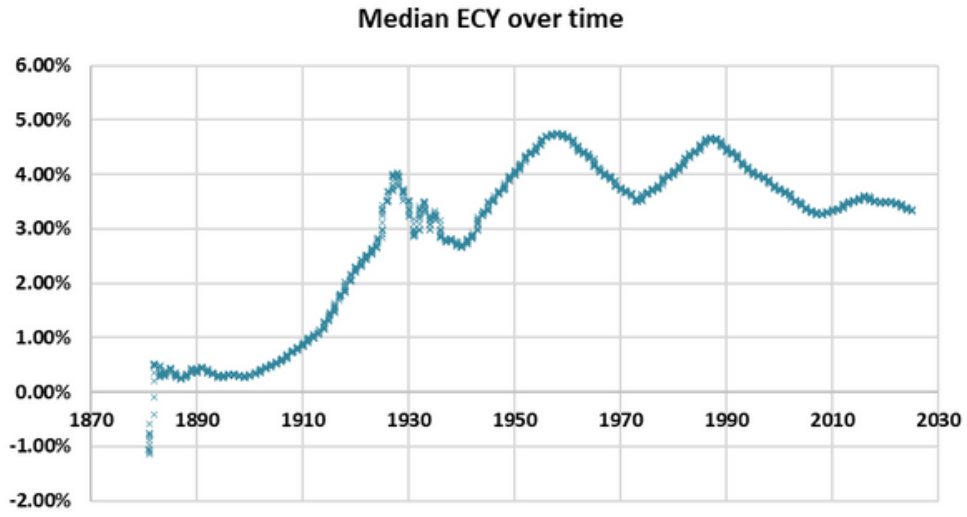


Fig 7. Median ECY from 1881 to 2025.

Takeaways

The current CAPE ratio and ECY in US markets is not particularly attractive, and seems to present a bleak out look for US equities. However, one has to keep in mind that price is forward looking, while earnings are backward looking.

A higher pricing ratio does not immediately imply poor future returns. If future earnings can grow at a rate at or exceeding pricing-implied expectations, then high pricing in the present is justified. Thus, it is not so much a question of whether equities are priced high or not relative to historical figures, but rather whether the price right now can be paid for by strong financial performance in the near future.

References

Shiller. (n.d.). Shiller data. Shiller Data. https://shillerdata.com/

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