CAPE ratio

The CAPE ratio (Cyclically Adjusted Price Earnings) ratio is a very recent invention by Robert Shiller.

The Formula for the CAPE Ratio Is:

$$CAPE \text{ ratio} = \frac{\text{Share price}}{\text{10}-\text{year average, inflation}-\text{adjusted earnings}}$$

Because EPS and consequently PE ratio can fluctuate, it is better, according to Professor Robert Shiller, to use a cyclically adjusted PE ratio.

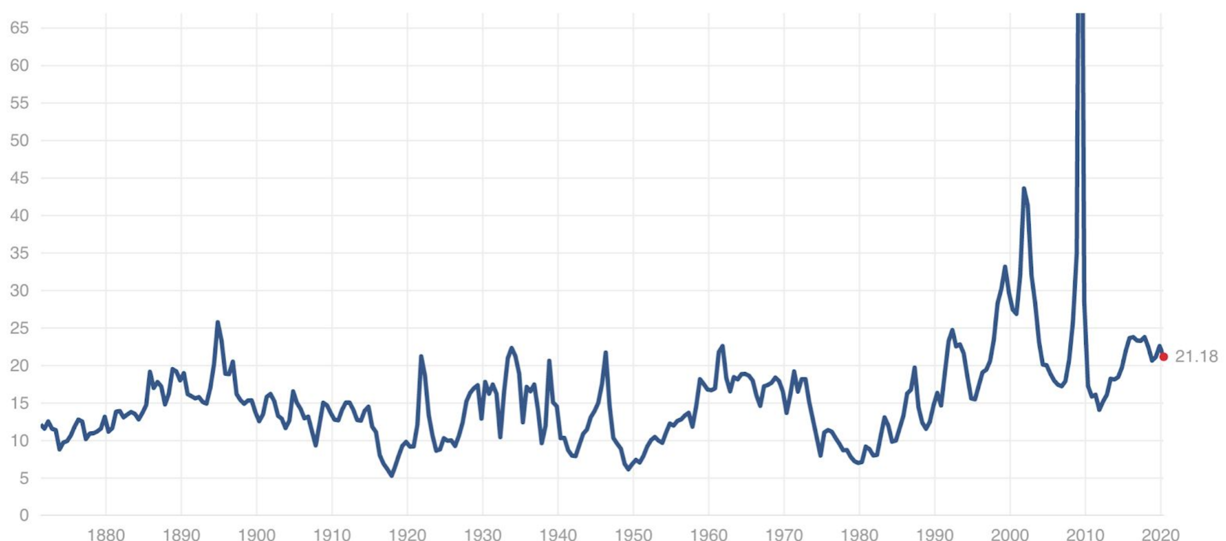
For some companies, EPS can really fall during recessions but that doesn't mean that it is a bad company. Recessions are part of the normal business cycle.

The CAPE ratio eliminates all these fluctuations and gives us a long-term view of a company.

The CAPE ratio is more accurate than the PE ratio but is rarely used for individual companies as it is more complex.

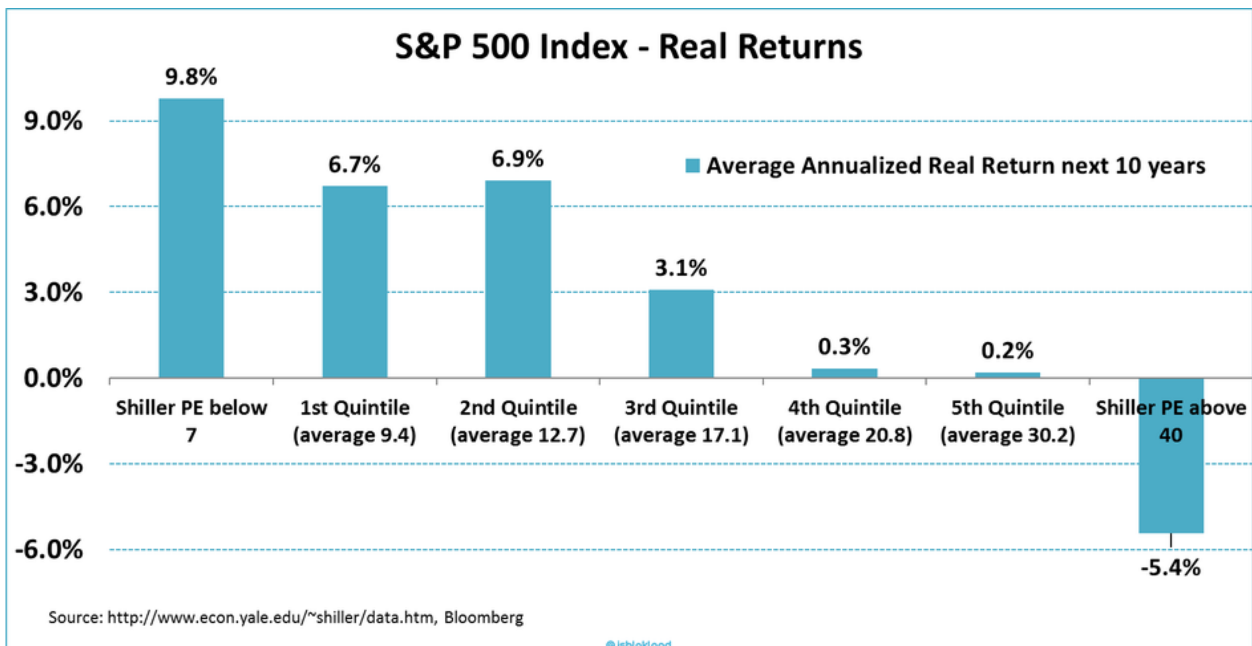
Instead it is used to look at markets in general.

For example, let's look at the PE and CAPE ratios of the S&P 500.



The PE ratio of the S&P 500 is currently 21 but you can see that in 2008 it was infinite. That's because corporate earnings were negative that year. If we use instead the CAPE ratio, this infinite PE ratio is eliminated.

CAPE ratio gives us a good indication of future stock returns.



This is not 100% accurate but it shows that whenever the valuations on stocks are high, future returns are unlikely to be high.

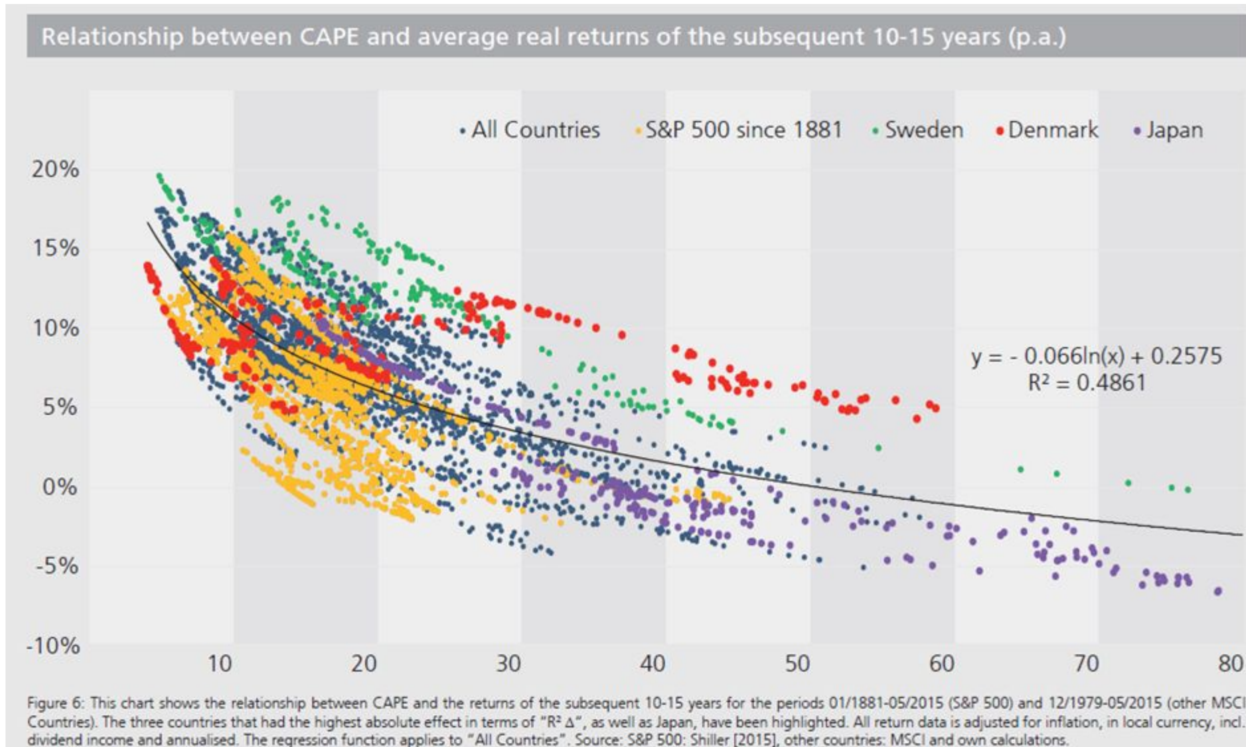


Figure 6: This chart shows the relationship between CAPE and the returns of the subsequent 10-15 years for the periods 01/1881-05/2015 (S&P 500) and 12/1979-05/2015 (other MSCI Countries). The three countries that had the highest absolute effect in terms of "R^2 Δ", as well as Japan, have been highlighted. All return data is adjusted for inflation, in local currency, incl. dividend income and annualised. The regression function applies to "All Countries". Source: S&P 500: Shiller [2015], other countries: MSCI and own calculations.

This doesn't work only in the US but all around the world. Currently the CAPE ratio of the S&P 500 is 27 and according to this chart, we must expect real returns of about 4% per year for the next 10 years. Let's come back in 10 years and let's see how accurate this is.

Investing is not that simple. We cannot rely solely on CAPE or PE ratio to say if something is expensive or not. There are several other factors to consider, one of which is the interest rate. In the next lecture, we will look at earnings yield, which makes it easier to work with interest rates.