

An Alternative Model: The Consumption CAPM

The capital asset pricing model pictures investors as solely concerned with the level and uncertainty of their future wealth. But for most people wealth is not an end in itself. What good is wealth if you can't spend it? People invest now to provide future consumption for themselves or for their families and heirs. The most important risks are those that might force a cutback of future consumption.

Douglas Breeden has developed a model in which a security's risk is measured by its sensitivity to changes in an investor's consumption. If he is right, a stock's expected return should move in line with its *consumption beta* rather than its market beta. In other words, it should depend on the sensitivity of stock returns to changes in aggregate consumption rather than to changes in the value of the market portfolio.

The following figure summarizes the chief differences between the standard and consumption CAPMs. In the standard model investors are concerned exclusively with the amount and uncertainty of their future wealth. Each investor's wealth ends up perfectly correlated with the return on the market portfolio; the demand for stocks and other risky assets is thus determined by their market risk. The deeper motive for investing -- to provide for consumption -- is outside the model.

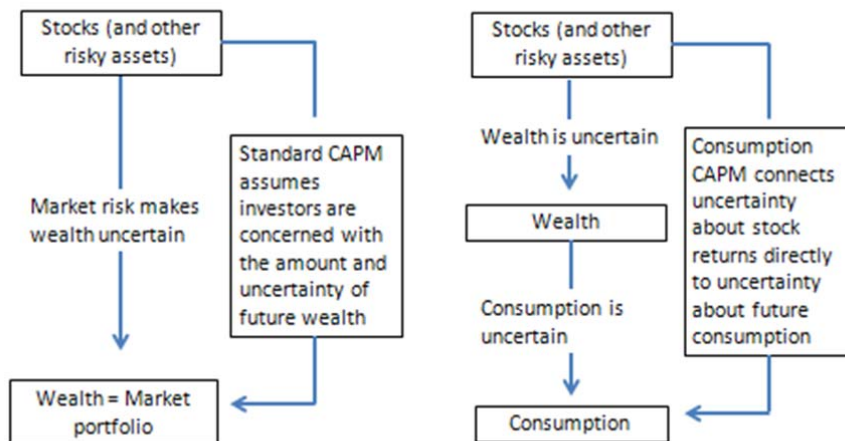
In the consumption CAPM, uncertainty about stock returns is connected directly to uncertainty about consumption. Of course, consumption depends on wealth, but wealth does not appear explicitly in the model.

The consumption CAPM has several appealing features. For example, you don't have to identify the market or any other benchmark portfolio. You don't have to worry that Standard & Poor's Composite Index doesn't track returns on bonds, commodities, and real estate.

However, you do have to measure consumption. Do you know how much you consumed last month? It is easy to count the hamburgers and movie tickets, but what about the depreciation on your car or washing machine or the daily cost of your homeowner's insurance policy? We suspect that your estimate of total consumption will rest on rough or arbitrary allocations and assumptions. And if it is hard for you to put a dollar value on your total consumption, think of the task facing a government statistician asked to estimate month-by-month consumption for all of us.

Compared with stock prices, estimated aggregate consumption changes smoothly and gradually over time. Changes in consumption often seem to be out of phase with the stock market. Individual stocks appear to have low or erratic consumption betas. Moreover, the volatility of consumption appears to be too low to explain the past average rates of return on common stocks unless one

assumes unreasonably high investor risk aversion. These problems may reflect our poor measures of consumption or perhaps poor models of how individuals distribute consumption over time. Until these issues are resolved, it seems too early for the consumption CAPM to see practical use.



(a) The standard CAPM concentrates on how stocks contribute to the level and uncertainty of future wealth. Consumption is outside the model. (b) The consumption CAPM defines risk as a stock's contribution to uncertainty about consumption. Wealth (the intermediate step between stock returns and consumption) drops out of the model.