

Unfortunately, economists do not have an agreed-upon model of the SML; we do not know for sure how to quantify “risk” comprehensively. In fact, there may well be multiple risk factors of concern to investors that affect the prices of investments.⁶

The result is that a number of cost of capital estimation models currently exist. This leads naturally to the question, what are the characteristics of a useful cost of capital model?

WHAT SHOULD WE EXPECT FROM MODELS?

It is important to recognize explicitly at the outset that models are imperfect. All models are simplifications of reality, and this is perhaps especially true of financial models. Because they cannot and do not capture all the dynamics and complexities of financial markets, asset pricing models can never perfectly determine or explain the actual prices we observe. Simplification, however, is what makes these models useful. By filtering out various complexities, a model can illuminate the underlying relationships and structures that are otherwise obscured. After all, while a perfect scale model representation of a city might be highly accurate, it would make a poor road map. Nevertheless, the gap between financial models and reality can sometimes be quite significant (as was painfully demonstrated by the recent financial crisis). There is no single, widely accepted, best pricing model—just as there is still no consensus on some fundamental issues, such as the efficient market hypothesis (EMH).⁷ Analysts have a dizzying array of potential models at their disposal, and it must be acknowledged that cost of capital estimation continues to include art, not just science. The generally recommended “best practice” is therefore to look at a totality of information from alternative methodologies. Analysts must exercise common sense as well as expertise in interpreting the results from the various models. When the results of models appear unusual, it is incumbent upon analysts to leverage their experience and expertise in an attempt to understand why, and to allow that understanding to inform their interpretation of the results.

While no model is perfect, there are certain features that make models more useful from a regulatory perspective. For example, it is desirable to have models and methods that (1) are consistent with the goal being pursued (i.e., actually estimate the cost of capital, something not all models in use do), (2) are transparent, (3) minimize the use of judgment, (4) produce consistent results when conditions are similar, (5) are as robust as possible to small deviations or sampling error, and to a wide range of economic conditions, (6) are as simple as possible, consistent with the other goals, (7) can be replicated by others (e.g., the necessary data are widely available), and (8) recognize the regulatory context and legislative requirements in which the regulatory body operates (e.g., produce results in nominal or real terms). Different models will clearly satisfy these criteria to differing degrees under different circumstances, and different models may be favored in different regulatory jurisdictions.