Valuation Approaches and Metrics: A Survey of the Theory and Evidence

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Aswath Damodaran

Stern School of Business, New York University
44 W. 4th Street, 9th Floor, New York, NY10012-1126,
adamodar@stern.nyu.edu

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Aswath Damodaran

Stern School of Business, New York University, 44 W. 4th Street, 9th Floor, New York, NY10012-1126, adamodar@stern.nyu.edu

Abstract

Valuation lies at the heart of much of what we do in finance, whether it is the study of market efficiency and questions about corporate governance or the comparison of different investment decision rules in capital budgeting. In this paper, we consider the theory and evidence on valuation approaches. We begin by surveying the literature on discounted cash flow valuation models, ranging from the first mentions of the dividend discount model to value stocks to the use of excess return models in more recent years. In the second part of the paper, we examine relative valuation models and, in particular, the use of multiples and comparables in valuation and evaluate whether relative valuation models yield more or less precise estimates of value than discounted cash flow models. In the final part of the paper, we set the stage for further research in valuation by noting the estimation challenges we face as companies globalize and become exposed to risk in multiple countries.

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1

Introduction

Valuation can be considered the heart of finance. In corporate finance, we consider how best to increase firm value by changing its investment, financing and dividend decisions. In portfolio management, we expend resources trying to find firms that trade at less than their true value and then hope to generate profits as prices converge on value. In studying whether markets are efficient, we analyze whether market prices deviate from value, and if so, how quickly they revert back. Understanding what determines the value of a firm and how to estimate that value seems to be a prerequisite for making sensible decisions.

Given the centrality of its role, you would think that the question of how best to value a business, private or public, would have been well researched. As we will show in this paper, the research into valuation models and metrics in finance is surprisingly spotty, with some aspects of valuation, such as risk assessment, being deeply analyzed and others, such as how best to estimate cash flows and reconciling different versions of models, not receiving the attention that they deserve.

1.1 Overview of Valuation

Analysts use a wide spectrum of models, ranging from the simple to the sophisticated. These models often make very different assumptions about the fundamentals that determine value, but they do share some common characteristics and can be classified in broader terms. There are several advantages to such a classification -- it makes it easier to understand where individual models fit in to the big picture, why they provide different results and when they have fundamental errors in logic.

In general terms, there are four approaches to valuation. The first, discounted cashflow valuation, relates the value of an asset to the present value of expected future cashflows on that asset. The second, liquidation and accounting valuation, is built around valuing the existing assets of a firm, with accounting estimates of value or book value often used as a starting point. The third, relative valuation, estimates the value of an asset by looking at the pricing of "comparable" assets relative to a common variable like earnings, cashflows, book value or sales. The final approach, contingent claim valuation, uses option pricing models to measure the value of assets that share option characteristics. This is what generally falls under the rubric of real options.

Since almost everything in finance can be categorized as a subset of valuation and we run the risk of ranging far from our mission, we will keep a narrow focus in this paper. In particular, we will steer away any work done on real options, since it merits its own survey article.[1] In addition, we will keep our focus on papers that have examined the theory and practice of valuation of companies and stocks, rather than on questions of assessing risk and estimating discount rates that have consumed a great deal of attention in the literature.

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[1] For a more extensive discussion of real options and their place in valuation, see Copeland and Antikarov (2003), Trigeorgis (1996), and Schwartz and Trigeorgis (2004).

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