The Equity Premium Puzzle: A Review

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The Equity Premium Puzzle: A Review

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Abstract

Over two decades ago, Mehra and Prescott (1985) challenged the finance profession with a poser: the historical US equity premium is an order of magnitude greater than can be rationalized in the context of the standard neoclassical paradigm of financial economics. This regularity, dubbed "the equity premium puzzle," has spawned a plethora of research efforts to explain it away. In this review, the author takes a retrospective look at the original paper and explains the conclusion that the equity premium is not a premium for bearing non-diversifiable risk.

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Introduction

Over two decades ago, Edward Prescott and I (Mehra and Prescott, 1985) challenged the profession with a poser: the historical US equity premium, (the return earned by a risky security in excess of that earned by a relatively risk free US T-bill) is an order of magnitude greater than can be rationalized in the context of the standard neoclassical paradigm of financial economics. This regularity, dubbed "the equity premium puzzle," has spawned a plethora of research efforts to explain it away. In this review, I take a retrospective look at our original paper and show why we concluded that the equity premium is not a premium for bearing non-diversifiable risk.[1] I provide a birds eye view of the vast literature spawned by our paper and touch on other issues that may be of interest to the researcher who did not have a ringside seat over the last 25 years. The reader is referred to Mehra (2007, 2008) and the papers therein for a detailed survey.

The year 1978 saw the publication of Robert Lucas's seminal paper "Asset Prices in an Exchange Economy." Its publication transformed

[1] This article draws on material in Mehra (2003), Mehra and Prescott (2003, 2007, 2008a,b), and Donaldson and Mehra (2008). Some sections of this article closely follow the exposition in these papers. The acknowledgments in these papers continue to apply.

asset pricing and substantially raised the level of discussion, providing a theoretical construct to study issues that could not be addressed within the dominant paradigm at the time, the Capital Asset Pricing Model.[2] A crucial input parameter for using the latter is the equity premium (the return earned by a broad market index in excess of that earned by a relatively risk-free security). Lucas' asset pricing model allowed one to pose questions about the magnitude of the equity premium. In our paper "The Equity Premium: A Puzzle"[3] we decided to address this issue.

This review is organized into a further five sections. Section 2 documents the historical equity premium in the United States and in selected countries with significant capital markets (in terms of market value). Section 3 examines the question, "Is the equity premium a premium for bearing non-diversifiable risk?" Section 4 addresses risk and preference based explanations of the equity premium. Section 5, in contrast, reviews the nascent literature that takes as given the findings in Mehra and Prescott (1985) and tries to account for the equity premium by *factors other than aggregate risk*. Section 6 concludes the review.

[2] See Mossin (1966) for a lucid articulation.
[3] Mehra and Prescott (1985).

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