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Anomalies in finance
What are they and what are they good for?

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Abstract

In the natural sciences, anomalies contribute significantly to the development of new and ultimately more successful theories. The role of anomalies in financial economics, however, has been quite different. Although at the beginning, the word was used to show deviations from the Efficient Markets Hypothesis (EMH)/Capital Asset Pricing Model (CAPM) paradigm, lately, it has been applied to a new literature that is also more accurately called Behavioral Finance (BF). This paper argues that this misuse and misapplication of the word anomaly is not a simple coincidence. It is rather a sophisticated and accordant effort to imply that although there are some unresolved deviations from the norm, the reigning paradigm is irreplaceable, and its validity needs no empirical proof. In fact, an alternative paradigm such as BF is not only insignificant but also unnecessary and even impossible.

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1. Introduction

The word "anomaly" has gained both prominence and broadening use in that branch of economics that is commonly referred to as financial, having become the standard label for a flourishing and ever-expanding literature. Specifically, the word refers to a compendium of

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studies that shows evidence contrary to the empirical validity of the Efficient Markets Hypothesis (EMH, subsequently) of Fama (1965, 1970) and/or the Capital Asset Pricing Model (CAPM, subsequently) of Black (1972), Lintner (1965), Sharpe (1964), and others. In a recent paper, Fama (1998) implies that what is known today as Behavioral Finance (BF, subsequently) is, in fact, "the anomalies literature."

The objective of this paper is to show that this misuse and misapplication of the word "anomaly" is not a simple coincidence. It is rather a sophisticated and accordant effort to imply that although there are some unresolved deviations from the norm, the EMH/CAPM combination is irreplaceable, and its validity needs no empirical proof. In fact, an alternative paradigm such as BF is not only insignificant but also unnecessary and even impossible. Fama (1998) does not stop short of arguing that only an alternative proven with much more binding rigor can replace the EMH as a paradigm. If this claim is taken seriously, then, anomalies or not, the EMH is for all practical purposes immunized against any possibility of rejection. This is so, because the existence of the EMH has itself never been proven with any rigor, it having had to make do with circumstantial and indirect statistical evidence.

Fama's (1998) paper is a landmark with respect to another consideration as well. This is the first time that the advocates of the EMH/CAPM[2] have found it necessary to defend so rigorously their paradigm against another paradigm that shows more promise of coping with the continuing onslaught of anomalous results, in essence, against what they call BF. In earlier defenses of the EMH such as Ball (1996), anomalies were recognized but not taken too seriously.[3]

The way we see it, the anomaly imbroglio has two dimensions:

1. Whether there is any significance to finance's current misuse of the term other than misunderstanding the underlying philosophy of science.
2. What the role of anomalies ought to be in the growth of scientific knowledge and in the understanding of the financial world.

These two dimensions may not be totally independent of each other, which raises the question of how researchers should deal with a situation that might, in fact, be more harmful than one would imagine at first look.

Consistent with the objective stated above, then, the following section deals with the general thesis of what anomalies are in the philosophy of science, specifically in the sociology of science approach of Thomas Kuhn, who introduced the term in its philosophical sense. In the natural sciences, anomalies contribute significantly to the development of new and ultimately more successful theories. Although the disinclination to accept new theories is never trivial, eventually, usually with the help of better instruments of measurement, resentment is overcome via the triumph of empirical evidence over ideology.

[2] Fama argues that the two are inseparably linked together.

[3] In this paper, Ball argues that he was the first to find an "anomaly" in the finance paradigm and to use the term as Kuhn (1970) used it. We will not consider the first claim here, but the second will be addressed in the history of the use of the term in Section 3.