The Efficient Market Hypothesis

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The `Efficient Market Hypothesis' (EMH) is one of the most controversial theories of economics. It defines a market as efficient if all the (for the security price setting process relevant) information given is immediately `fully reflected' in market prices. Fama (1970) distinguished between three different types of informational efficiency, depending on the set of information given: weak form, semi-strong and strong form efficiency.

The highly controversial debate whether the EMH holds is due to the fact that its definition is too general. Thus, most empirical tests must rely on an underlying price setting theory (e.g. the CAPM). If a distortion is found, there are two possible explanations: either the market is inefficient or the price setting theory is incorrect. This problem is called the `joint hypothesis' problem and implies that market efficiency is per se not testable.

Empirical tests of the EMH have found various anomalies (with respect to security prices) which have not been fully explained yet. Critics of the EMH argue that neoclassical assumptions (individuals have rational preferences, maximize utility, act independently,...) characterizing market participants are not coherent with human behavior. In contrast, advocates of the EMH argue that methodological failures (e.g. biased data, data snooping,...) are the reason why such anomalies have been detected.

However, the statement `there is no free lunch' characterizes most results of studies concerning the EMH. Anomalies tend to disappear because once discovered, investors will immediately try to arbitrage them away. In fact, this is not always possible due to `limits of arbitrage'. Thus, anomalies may persist and cannot be exploited even if prices seem to be `not right'.

Unfortunately, there are not many alternative theories. The adaptive markets hypothesis introduced by Andrew W. Lo (2004) tries to include psychological findings and models a completely new approach. Unfortunately, conventional empirical methods are difficult to apply. Thus, it is quite probable that the debate on whether markets are efficient or not will go on for further decades on different aspects of market efficiency.