

# MARKET EFFICIENCY

In the 1950s, an early application of computers in economics was for analysis of economic time series. Business cycle theorists felt that tracing the evolution of several economic variables over time would clarify and predict the progress of the economy through boom and bust periods. A natural candidate for analysis was the behaviour of stock market prices over time. Assuming that stock prices reflect the prospects of the firm, recurrent patterns of peaks and troughs in economic performance ought to show up in those prices.

Maurice Kendall examined this proposition in 1953.<sup>1</sup> He found to his great surprise that he could identify *no* predictable patterns in stock prices. Prices seemed to evolve randomly. They were as likely to go up as they were to go down on any particular day, regardless of past performance. The data provided no way to predict price movements.

At first blush, Kendall's results were disturbing to some financial economists. They seemed to imply that the stock market is dominated by erratic market psychology, or “animal spirits”—that it follows no logical rules. In short, the results appeared to confirm the irrationality of the market. On further reflection, however, economists came to reverse their interpretation of Kendall's study.



It soon became apparent that random price movements indicated a well-functioning or efficient market, not an irrational one. In this chapter we will explore the reasoning behind what may seem a surprising conclusion. We show how competition among analysts leads naturally to market efficiency, and we examine the implications of the efficient market hypothesis for investment policy. We also consider empirical evidence that supports and contradicts the notion of market efficiency.

<sup>1</sup>Maurice Kendall, “The Analysis of Economic Time Series, Part I: Prices,” *Journal of the Royal Statistical Society* 96 (1953).