

or in factor premia. An increase in expected return should lead to a drop in prices, which is, in turn, reflected as a market correction.

Some of these theoretical predictions are upheld by the data. It is now well accepted that most market corrections are preceded by a sharp jump in short-term interest rates. An increase in the risk-free rate of interest is predicted by theory to increase the expected return, and hence to lead to a drop in current prices. Market corrections have also been driven by a decline in earnings momentum. The decline in earnings momentum leads investors to revise downward their expectation of future profitability. This, in turn, leads to a drop in current stock prices.

Revised beliefs about economic conditions, however, only partially explain why corrections occur. In a challenge to rational asset pricing models, fear and greed have been advanced as explanations for market corrections. It is believed that market corrections curb excessive investor optimism, also labeled as greed. Fear of further market declines keeps markets down thereafter. The situation reverses when rational investors step in to exploit the buying opportunity created by price drops. Proponents of this irrational behavior offer the short-lived nature of a typical correction as evidence to bolster their view. The average length of a market correction over the period from 1872 to 2004 has been about twelve months. Security prices return to their precorrection levels after this period and, in fact, continue to trend upward thereafter. Such a reversal is inconsistent with a theoretical asset pricing model since the underlying economic conditions that may warrant a market correction do not experience a similar reversal.

Whatever processes underlie a market correction, investors can expect to experience steep drops in security prices periodically. They should also expect every asset category to experience such corrections. Globalization of financial markets has meant that international markets are also not immune to such corrections. Emerging markets experienced a steep market correction of greater than 20 percent during May to June of 2006. Higher volatility in emerging markets makes them more susceptible to frequent market corrections.

Experienced investors are able to weather market corrections with appropriate risk management strategies, the simplest of which is diversification. Diversification across different asset categories protects an investor from steep drops in any one market. Diversification also imposes the discipline of reallocating a portfolio to restore optimal allocations to beaten down sectors of the market. It is these buying activities that have enabled markets to recover soon after a sharp correction.

SEE ALSO *Bubbles; Financial Markets; Globalization, Social and Economic Aspects of; Interest Rates; Rationality; Stock Exchanges*

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MARKET ECONOMY

A market economy is an economic system that allocates scarce resources based on the interaction of market forces of supply and demand. It is an economy that operates by voluntary exchange and is not planned or controlled by a central authority. A market economy, also called a free economy or free enterprise economy, is the conceptual opposite of a command economy, also known as a planned or government-controlled economy, where all goods and services are produced, priced, and distributed under government control. In the twenty-first century a market economy is most often associated with a capitalistic economy.

The market is a process in which individuals interact with one another in pursuit of their separate economic objectives. The basic principle under which the market functions is: If an individual has undisputed ownership of something and wishes to exchange it for another thing that is owned by someone else and the exchange is executed without violence, theft, or deception, then the individual becomes entitled to what the other person was previously entitled and vice-versa. Both parties to an economic transaction in the market benefit from it, provided the transaction is bilaterally voluntary and informed. In this way, through the market process everyone is able to escape coercion at the hands of any one buyer or seller by turning to another. The market prevents one person from interfering with another, allowing a high degree of autonomy. In addition, the society is able to reap the benefits from the division of labor and specialization and function.

The prices that emerge from voluntary transactions, which are motivated by separately self-interested individual behavior, generate a spontaneous order. Many economic theorists argue that these prices coordinate the activity of people in such a way as to make everyone bet-

ter off. An individual who intends only his or her own gain (profit) by producing goods and services at the same time is satisfying the needs of other people for these goods and services. According to the Scottish economist Adam Smith, individuals pursuing their own self-interest are led as if by an “invisible hand” to behave in a socially desirable way by satisfying people’s needs for goods and services (1976).

The result of the operation of a competitive market, efficient scarcity prices, in the absence of market failure is indispensable to the operation of the market system. Scarcity prices perform three functions in organizing economic activity: first, they transmit information about the divergent preferences of the economic actors; second, they provide an incentive to adopt least cost methods of production; finally, they determine who gets how much of the product. Prices can perform these functions only if the market is able to function freely; that is, able to function without any discretionary intervention, which results in distorting prices producing the undesirable results of shortages, queues, and low quality, as occurred in the Soviet Union. Before the collapse of the government-controlled economy of the Soviet Union, prices were set by the government, not by the market, below equilibrium. As a result, enterprises did not have an incentive to satisfy consumer demand.

Market-based economies require at least limited government intervention, because a market requires appropriate laws and institutions including defined property rights that are respected and enforced and procedures for guaranteeing the execution of contracts. Markets are also characterized by market failure; that is, an allocation of resources that is not efficient. The market is not able to produce public goods (defense, law and order), it is not able to include the social cost or benefits of externalities (environmental pollution, education), and it creates monopolies and oligopolies. The state takes on the responsibility of producing public goods and subsidizing positive externalities funded through taxation, while restricting negative externalities, monopolies, and oligopolies.

SEE ALSO *Market Clearinghouse; Markets*

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MARKET FUNDAMENTALS

The *market fundamental* (or fundamental value) of an asset is the discounted present value of the stream of future cash flows attached to the asset. When asset prices are determined by market fundamentals, the value of the asset depends positively on future expected cash flows and negatively on the discount rate used to obtain the present value. Although some estimates of market fundamentals move together with market values, they tend to exhibit lower volatility. This evidence, especially in the case of the stock market, suggests that asset prices deviate from their fundamental values.

The cash flows obtained by the owner of a stock are the dividends distributed by the firm. Since the source of dividends is the earnings generated by the firm, investors must take into account the factors behind earnings when forming expectations concerning future dividends. The most important factors that determine the evolution of expected earnings are the future profitability of current operations and future investment projects.

The second component of the market fundamental of stocks is the discount rate used to obtain the present value of dividends. Given a fixed stream of cash flows, an increase in expected future returns implies that the market fundamental decreases because the discount rate is higher. Expected returns for individual stocks and for the stock market as a whole are not constant, and different financial and macroeconomic variables contain significant information to forecast returns. This evidence implies that changes in expectations of future returns (i.e., changes in discount rates) can produce fluctuations in market fundamentals. In fact, John Campbell (1991) shows that movements in the aggregate stock market prices are mainly driven by news about future expected returns. However, Tuomo Vuolteenaho (2002) shows that stock returns for individual firms are mainly driven by cash-flow news, and that cash-flow news is largely idiosyncratic, while expected-returns news is common across firms. By a diversification argument, the results of both authors are compatible. Historically, the average real return on the stock market is higher than the real return on treasury bonds. The difference between both returns is denominated as *excess return*. It is a reward for holding a risky security. Hence, we can decompose the fluctuations in expected returns into changes in the expected return on a treasury bond and the expected excess return. John Campbell and John Ammer (1993) show that stock returns movement can be attributed to news about future excess returns, and that news about the return on a treasury bond has little impact. Therefore the most important component in the discount rate is the excess return. Since it is a reward for risk, the factors that determine its magnitude are