STOCK MARKET EFFECIENCY

Market efficiency refers to the degree to which market prices reflect all available, relevant information.

If markets are efficient, then all information is already incorporated into prices, and so there is no way to "beat the market" because there are no undervalued or overvalued securities available.

Stock market efficiency

An efficient Stock (capital) market is one in which the share price, at any given time, fully and accurately reflects the available relevant information.

Investors buy and sell share on a stock market. The market price of a share is determined by supply and demand. If demand for share in a particular company increases but the supply of shares stays the name, investors will be prepared to pay more for those shares and hence the share price will rise. Conversely if the demand falls but supply stays the same, this will lead to an oversupply of shares and hence the same price will fall.

Through this process new information about a company is reflected in the share price. If, investors, for example, become aware of new information about a company that indicates that future dividends are likely to be a lot higher than previously forecast, this is likely to increased demand for the share and result in a rise in the share price. The share price will therefore reflect this new information.

In an efficient market, any information that is relevant to the company, and is available to investors, would be fully and accurately reflected in the share price. The level of efficiency of any particular stock market has a significant impact on a number of aspects of finance.

Analysts often, for example, refer to shares as being undervalued (and therefore a good 'buy') or overvalued (time to sell). In an efficient market any shares quoted on the market should always be 'correctly' priced.

Efficient market hypothesis

The efficient market hypothesis defines market efficiency at three different levels. In other words, if we assume that a capital market is efficient at communicating information into the share price, this theory suggests that there are three different levels, or **speeds** at which that information is reflected in the share price.

They are:

1. Weak form efficient
2. Semi-strong form efficient
3. Strong form efficient

Stock market efficiency usually refers to the way in which the prices of traded financial securities reflect relevant information.

If a stock market is efficient, share prices should vary in a **rational way** and will reflect the **amount of relevant information** that is available. The **efficient market hypothesis** identifies three forms of efficiency;

Weak form efficiency

Under the weak form hypothesis of market efficiency, **share prices reflect all** available information about **past changes** in the share price.

Since new information arrives unexpectedly, changes in share prices should occur at maturity in a **random fashion.**

If it is correct, then using technical analysis to **study past share price** movements will **not give** anyone an **extraordinary** advantage, because the information they use to predict share prices is already reflected in the share price.

*In a weak form market, the share price react slowly to new information that is publicity announced, in such a market any analyst who obtains **publicity available information** quickly has an opportunity to beat the market **(Extraordinary Gain)**.*

Semi-strong form efficiency

If a stock market displays semi-strong efficiency, current share prices reflect both:

1. **All relevant information** about **past price movements** and their implications, and
2. All **knowledge** which is **available publicly**

This means that individuals **cannot** 'beat the market' ***(Extraordinary Gain)*** by reading the newspapers Public or annual reports-past, since the information contained in these already reflected in the share price as **public information**.

The **difference** between the weak form and semi-strong form market **is really the speed**, following a public announcement; with which information about a company is reflect in the share price.

Stock markets are usually presumed to be semi-strong efficient.

*In a semi-strong market all publicly available information is reflected in the share price. The only for an analyst to **'beat the market' (Extraordinary Gain)** would be to aim to get insider information e.g. through insider trading. As this is illegal – there would clearly be severe consequences of aiming to do this!*

Strong form efficiency

If a stock market displays a strong form of efficiency, **share prices reflect all information** whether publicly available or not:

1. From **past** price changes
2. From **public** knowledge or anticipation
3. From specialists' or experts' **insider** knowledge (eg investment managers)

In the storng form efficient market there is, in essence no such thing as non-private informtaion – all informtion is assumed to be in the public domain.

In this type of market, as soon as the directors themselves become aware of the product recall the share price will change to fully and accurately reflect this information.

*In this case, as the share price reflects all information about a company it would not be possible to **'beat the market' (Extraordinary Gain)** through seeking to obtain and use any information.*

The three levels of efficiency – summary

The three levels of efficiency really build upon each other.

In other words, if a market is semi-strong form it must also be weak form, and if a market is strong form it must also be semi strong and weak form. A market that, for example, perfectly and accurately refects all information about a company must, by definition, reflect all publicly available informtaion about a company.

Real life illustration – Insider Trading

Boesky was a Wall Street analyst, who ran this own arbitrage firm between 1975 and the mid-1980s. He looked for companies that were potential takeover target. He would then buy shares in those companies just before a public announcement of the takeover. As soon as the announcement was made the would then sell the shares for a profit.

Boesky was incredibly successful with this strategy and built up a multi-billion dollar business. A significant part of the success, however, was a result of insider trading. Boesky would pay significant amounts to contacts within companies for advanced information about imminent takeovers.

In 1986 he was convicted of insider trading. As a result of his actions Congress passed the insider Trading Act of 1988 which increased penalties for insider trading and provided incentives and rewards to whistle – blowers.

Boesky's actions were only possible because the stock market was not strong form efficient.

How efficient are established stock markets in the real world?

Most research indicates that established stock markets are, on the whole, efficient at communicating information about a company into the share price, and that, in terms of the level of efficiency, they most closely resemble semi-strong form.

The implications of this are:

1. There is little long term benefit from seeking to analyse trends in share price movements using charts.

2. Share prices are unlikely to be significantly over or under priced by the market. The current share price should, reasonably accurately, reflect publicly available information about that company at the time.

3. It is possible to beat the market consistently but only through obtaining non-publicly available information i.e. insider trading.

4. Directors of companies will often have access to important information that has not yet been made public. Directors need to exercise great care in deciding how and when this information is to be made public because of the impact that the public announcement will have on the share price and on shareholder wealth.

Significance to a listed company of semi-strong efficiency

The significance to a listed company of its shares being traded on a stock market which is found to be semi-strong form efficient is that any information relating to the company is quickly and accurately reflected in its share price.

The main consequence for financial managers will be that they simply need to **concentrate** on **maximizing the net present value** of the **company's investments** in order to maximise the wealth of shareholders.

Managers need not worry, for example, about the effect on share prices of financial results in the published accounts because investors will make **allowances** for **low profits** or **dividends** in the current year if higher profits or dividends are expected in the future. There is little point in financial managers attempting strategies that will attempt to mislead the markets.

If the EMH is correct and share prices are fair, there is **no point in financial managers seeking to mislead the capital market**, like window-dress the financial statements, because such attempts will be unsuccessful.
For example, in order to show a company's performance and position in a favourable light, will be seen through by financial analysts as the capital market digests the financial statement information in pricing the company's shares.

Another consequence of the EMH for financial managers is that there is **no particular time which is best for issuing new shares,** as share prices on the stock market are always fair.

Because share prices are always fair, there are **no bargains to be found on the stock market**, i.e. companies whose company's shares are undervalued. An acquisition strategy which seeks to identify and exploit such stock market bargains is pointless if the EMH is correct.

Conclusively, managers will not be able to deceive the market by the timing or presentation of new information, such as annual reports or analysts' briefings, since the market processes the information quickly and accurately to produce fair prices. However, managers should therefore simply concentrate on making financial decisions which increase the wealth of shareholders.

NOTE

It should be noted, however, that if real-world capital markets are semi-strong form efficient rather than strong form efficient, insider information may undermine the strength of the points made above. For example, a company which is valued fairly by the stock market may be undervalued or overvalued if private or insider information is taken into account.

FINANCE TERMINOLOGIES FOR THIS TOPIC

Random walk Theory – ***Unexpected/Unpredictable Movement***

The random walk hypothesis is a financial theory stating that stock market prices evolve according to a random walk and thus cannot be predicted. It is consistent with the efficient-market hypothesis.

Type of analyst

Analysts spend significant time and effort studying past share price movements and information about a company in order to predict future share price movements and recommend whether to buy, sell or hold share.

What approach do analysts take?

There are two main approaches:

- Chartist approach and
- Fundamental analysis

Chartist Approach – Past Trend Repeat in Future

A chartist (sometimes called a technical analyst) is a type of analyst who looks for trends and patterns in past share price movements and expect these to repeat in the future. There are many patterns or trends that are looked for. An example is a 'head and shoulders' pattern shown below:

Fundamental Analysis ***– Try to Identify the Natural Effect***

Analysts who use fundamental analysis to predict share price movements seek to obtain as much information as they possibly can about a company, and then value the share using a model such as the DVM (dividend valuation model) on the basis of this information.

The success of this approach depends on the type of efficiency that exists in the market.

Information asymmetry ***– Insider Information***

When directors or managers in a company have access to information that has not yet been made public this is known as information asymmetry. Whenever information asymmetry arises there is always a risk that managers can manipulate a share price.