PRACTICAL GUIDE TO Economic Concepts AND Theories

For a better understanding of economic and financial markets

Desjardins Economic Studies
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Tobin’s Q

**Definition**
Tobin’s Q is the ratio between the stock market value of capital and the capital replacement cost. Developed by James Tobin, the Nobel Prize Laureate for Economics in 1981, the theory states that companies base their investment decisions on this ratio. When the stock market value is greater than the replacement value (Q > 1), companies are favourable toward investment. Conversely, when the stock market value is lower than the replacement value (Q < 1), companies prefer to divest.

\[
Q = \frac{\text{Stock market value of capital}}{\text{Replacement value of capital}}
\]

A company’s stock market capital value equals its present and expected profits. When a company’s stock market value is greater than its capital replacement cost, it is in the company’s interest to invest more since the expected value of its profits is greater than the value of the new investments. On the other hand, if a company’s stock market value is less than its capital replacement cost, this means that the expected value of its profits is lower than the value of new investments, meaning it is not in the company’s interest to invest. Moreover, in this situation, it is in the company’s interest to sell a part of its assets (divest).

Since capital’s marginal productivity usually declines, adding capital tends to reduce the value of Tobin’s Q, whereas reducing capital tends to increase it. At equilibrium, the marginal productivity of capital equals the marginal cost of capital, for a Tobin’s Q that is equal to 1.

The graph shows how Tobin’s Q has evolved in the United States since 1965. From 1974 to 1990, Tobin’s Q remained well below 1. It then shot up until the beginning of 2000, when the speculative bubble was overestimating the stock market value of capital. Since then, Tobin’s Q has oscillated between 0.75 and 1.

**Price/Earnings Ratio**

**Definition**
The price/earnings ratio corresponds to the price of a firm’s common share divided by what that company earns per share.

For example, a company whose profits per share are $0.75 and whose common share price is $12 has a price/earnings ratio of 16 (i.e., 12/0.75). This means that the company’s stock market valuation is 16 times its profits. A low ratio may mean that the share is undervalued, while an overly high ratio may be the sign of a speculative bubble. Expectations of declining profits that translate into a decline in a share’s price may be behind a lower ratio. On the other hand, companies whose revenues are expected to increase usually have a higher price/earnings ratio. Between 1900 and 2005, the price/earnings ratio of market-listed U.S. corporations oscillated around 15, on average.

The graph on page 161 shows the price/earnings ratio of the U.S. S&P 500 stock market index. The global ratio is calculated based on a weighted average of the price/earnings ratios of the companies in the index. The weight corresponds to the size of each company’s market capitalization.
Companies that are included in a popular stock market index usually have an above-average price/earnings ratio given that there is stronger demand for these securities. In fact, the popularity of indexed investment funds drives demand for the companies in those indexes up, which makes the value of their shares go up, giving them a higher price/earnings ratio.

**PRICE/EARNINGS RATIO AND THE BOND MARKET**

The reverse of the price/earnings ratio is the corporate rate of return based on market value. As the graph shows, in the United States, this rate of return moved on a path similar to that of the U.S. bond market’s 10-year rate until the end of 1999. During the tech bubble, this relationship was disrupted by the stock market’s inflated price and thus by a corporate rate of return that was unusually low. Moreover, since 2003, there has been a constant spread between the two variables. The Chinese savings surplus and recycling of petrodollars could be responsible for a bond rate that is abnormally low compared to the corporate rate of return.

**Technical and Fundamental Analyses**

**Definition**

Technical analysis is the analysis of the past evolution of the price of a security or index; among other things, it is based on the study of graphs and recognition of patterns that tend to repeat over time. Fundamental analysis, on the other hand, is based on the analysis of economic variables and financial data. Fundamental analysis ends in the evaluation of the companies studied and a buy or sell recommendation, depending on the results.

**TECHNICAL ANALYSIS**

Technical analysis does not consider economic and financial data. Based on how the market itself evolves, a technical analysis tries to identify trends, cycles and various patterns that repeat over time. The graph on page 162 depicts one of the many figures that can be detected using technical analysis. At the peak of a shoulder or head, the analyst will expect a share price to decline, whereas an increase can be expected in the troughs that occur after a shoulder or head has been reached.

Technical analysis is based on some theoretical principles. Among other things, it looks at crowd psychology: a market, like a crowd, can get caught up in a dynamic of optimism (even euphoria), a dynamic of pessimism (or despair) or a phase of hesitancy.
People come in contact with economic concepts each and every day, either directly or indirectly. The *Practical Guide to Economic Concepts and Theories* provides concise, useful explanations of various economic concepts and theories using concrete examples and real data.

This 206-page guide contains 230 sections that cover some 500 economic notions organized in a logical order. It covers microeconomics, macroeconomics, international economics and finance, public economics, market finance and statistical concepts regularly used in economic analyses. From the law of supply and demand, to GDP, labour productivity and portfolio theory, this guide explains a wide range of concepts, often as it applies to the Canadian and North American context.

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Phone: 514-281-2336 or 1 866 866-7000, ext. 2336
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