The Stan Clark Financial Team's

PERSPECTIVES

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Investing

What market indexes are – and how they work (Part 1)

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Investors often refer to stock market indexes: the Dow, for example, or the S&P 500 or the TSX. This month we want to spend some time explaining market indexes. We'll also look at the different types of indexes – and, with each index, things to watch out for.

First, let's look at why we even need indexes.

There are thousands of companies in a stock market. So we need some kind of an average, or index, to summarize the behaviour of a stock market in a concise, accurate and understandable way.

The first step in constructing an index is to decide what stocks to include. For example, it could be by country, size or type. Typically, a selection committee sets out the criteria for an index.

The second step is to decide how much of each stock to have in the index. In other words, what weighting to have for each stock. There are various weighting methods, each with its advantages as well as drawbacks.

A *market-cap-weighted index* is the most common weighting method. This weighs each company based on its market value: the total number of shares times the price per share. So if one company has a value of $100 billion, and a second company of $50 billion, the index would have twice as much of a weighting in the first company. Under this method, larger companies have larger weightings and smaller companies have smaller weightings. The performance of this index would be as if you owned 100% of each company in the index.

The big advantage of a market-cap-weighted index is that the number of shares each company has rarely changes. Once this type of index is set up, it is fairly easy to calculate and update. It is also easy to create and maintain an actual portfolio, such as an index fund, that can closely match the performance of the index.

The main problem with a market-cap-weighted index is that it can end up being heavily weighted to the big companies that are the most overpriced. We can recall an extreme example: During the dot-com boom of the late '90s, Nortel Networks made up about one-third of the TSX Index.

An *equal-weighted method* addresses this issue. In this case, each company has the same weighting in the index. So if an index has 100 companies, each company would have a one one-hundredth, or a 1%, weighting. For equal-weighted indexes, stocks need to be rebalanced regularly to ensure their equal weight, something that's accomplished by reducing stocks that have gone up and buying more of stocks that have gone down. This makes it harder to calculate the index – and also harder to replicate its exact performance with a fund. Another problem is that not all stocks are created equal. Should a start-up company really have the same weight as an established blue-chip?

A third type of index is *price-weighted*. This type uses an equal number of shares of each company, regardless of the price of the company. So a stock that is priced at $50 will have twice the weighting of a $25 stock, even if the $25 company is, say, 10 times larger. This seems a bit unfair, as greater importance is placed on high-priced stocks. On the other hand, price-weighted indexes are simple to construct and maintain.

Next month, we'll talk about some of the major indexes and how they compare. ■

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