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Alambic Insights:

Value Stocks Outperform in the Long-Run, and also in a Downturn.

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With over 12 years in Quantitative Finance, a background in Engineering and a team of talented quant researchers, Danielle Lawson's thought leadership combines deep industry experience with a well-equipped analytical toolbox.

Before joining Alambic Investment Management, in 2013, Danielle was the Head of Quant Strategy at Thomson Reuters and a member of the Quantitative Research team at StarMIne. She has collaborated with some of the finest minds in quantitative research and has counted hundreds of quantitative fund managers and institutional investors as her clients.

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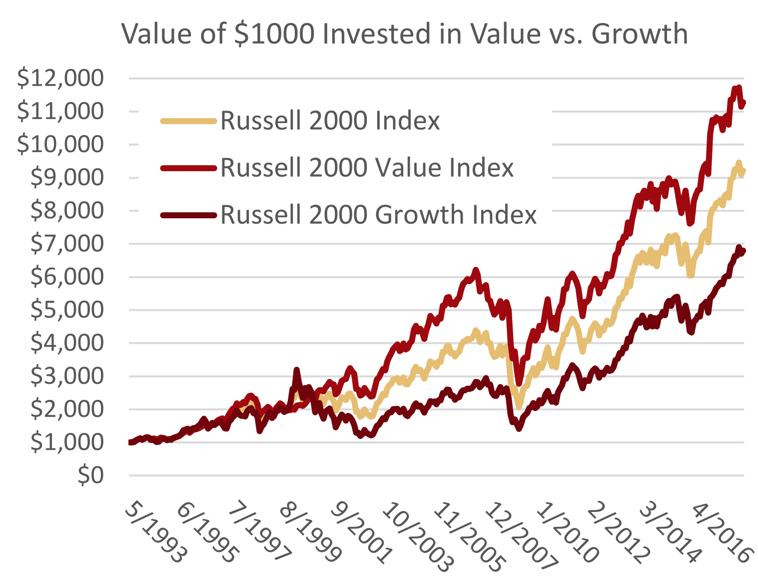
Warren Buffet is attributed with saying, "Whether we're talking about socks or stocks, I like buying quality merchandise when it is marked down." From Benjamin Graham, to Buffet to Professors Fama and French, the long-term advantages of investing in value stocks has been well studied and thoroughly documented. In the long-run, value stocks (low-price) outperform expensive stocks (high-price).

For instance, the **Russell 2000 Value Index®**, which is overweight stocks within the broader **Russell 2000 Index®** with more favorable book/price ratios, has outperformed the cap-weighted Russell 2000 Index and the **Russell 2000 Growth Index®** since the inception of the indices.[i]



While the long-term outperformance of Value is ubiquitous, the relative outperformance of Value in a market downturn has yet to receive the attention it is due. In the following pages, we will show the protective value of value in market hiccups.

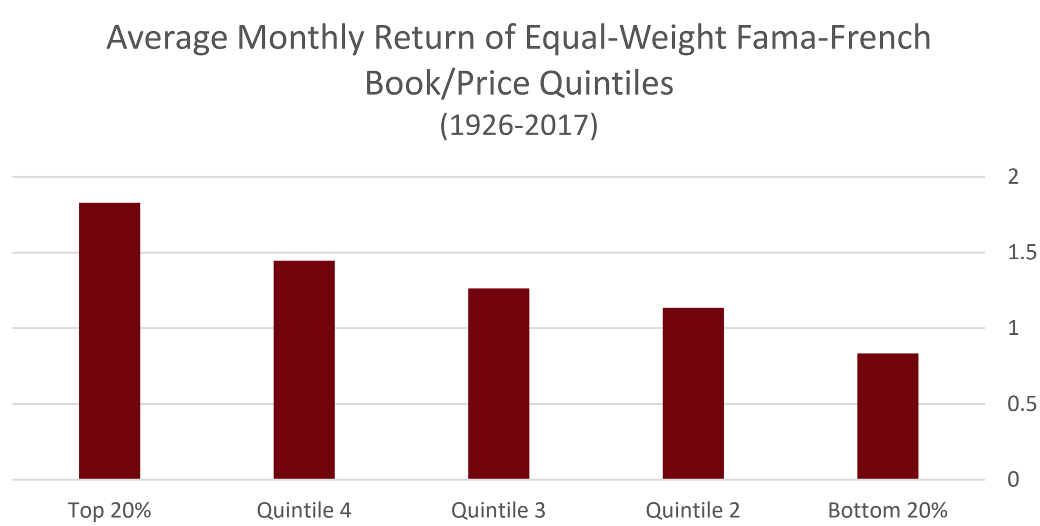
“Whether we’re talking about socks or stocks, I like buying quality merchandise when it is marked down.” – Warren Buffet

Benjamin Graham, famously said, “A great company is not a great investment if you pay too much for the stock.” His seminal book with David Dodd, *Security Analysis (1934),* was a scolding of the speculative fervor that had precipitated the Great Depression, wherein market participants failed to consider what the company is worth “based on the value of its businesses.”

While it is easy to think we have come a long way since the 1920s and 1930s, the euphoric neglect of valuations did not perish with Graham and Dodd’s warning. It is not difficult to see the parallels between the excess of 1929 and those in equity markets in the late 1990’s, and again in real estate (and equity markets) in 2007. More recently, we seem to have returned to bubble-like conditions, possibly fueled, at least to some extent, by the rapid rise in the popularity of ETFs. Equity investors have historically considered the valuation of individual stocks when forming their portfolios, but how many ETF investors consider valuation (aggregate or relative) in making their selections?

Academics Have Shown Value Outperforms in the Long-Run

There are many ways of measuring value, from the simplistic to the highly complex. Despite its flaws, the simplistic book-to-price ratio (B/P) contains valuable information when making investment decisions. University of Chicago Professors Eugene Fama and Ken French included book-to-price in the three-factor model described in their 1992 paper, “The Cross-Section of Expected Stock Returns.” With data from Prof. French’s website, we can demonstrate the relative outperformance of low-price (high book/price) versus high-price (low book/price) stocks since 1927.
(http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html)

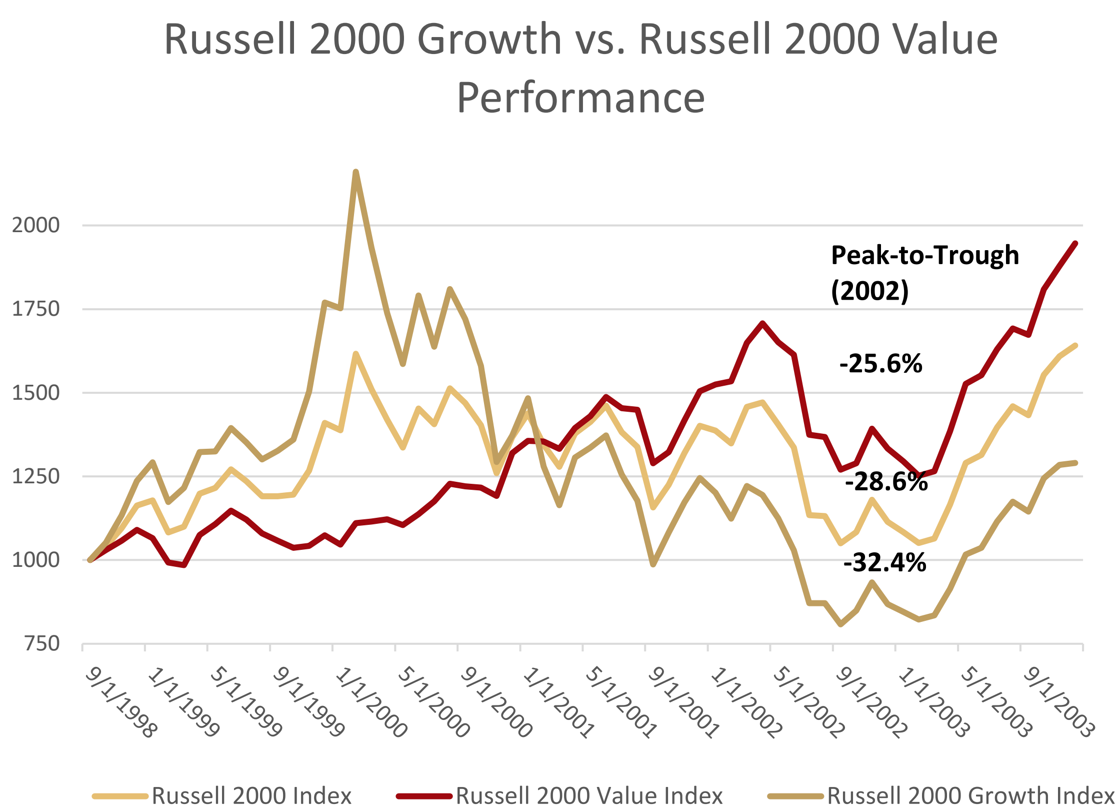


This trend has persisted over time and across sectors and industries, although sectors with more tangible assets tend to favor low-price stocks more persistently.

But Growth Can Lead into Market Peaks

The Russell Growth and Value indices were designed to track investment styles, as opposed to richness or cheapness, but because B/P is an important component in their definitions, it should come as no surprise that there is strong correlation between the relative performance of the Russell Growth and Value indices and the performance of portfolios determined by relative B/P ratios.

While low-priced stocks have outperformed high-priced stocks over time, there have been notable exceptions during certain time periods. For example, the Russell 2000 Value Index underperformed the Russell 2000 Growth Index during the tech bubble in the late 1990s as you can see in the following "close-up" view of the first chart.

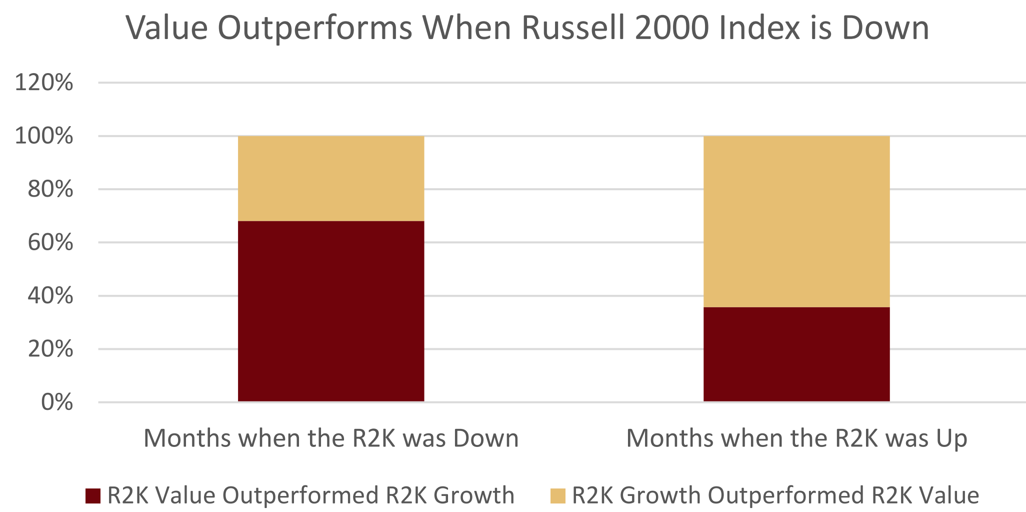


As shown above, in the lead up to the market-top in early 2000, growth eclipsed value and then reverted quite dramatically over the next 3 years. If you follow just the returns of the Russell 2000 Value Index, however, the tech bubble was a non-event – but those of us that remember the tech-bubble remember how disappointing 12% year-over-year returns were when surrounded by overnight tech-millionaires.

In addition to charting a more docile path through the bursting of the tech bubble, the Russell 2000 Value Index weathered the post-bubble correction much better than the Russell 2000 Growth Index. As shown in the above chart, both the Russell 2000 and the Russell 2000 Growth indices peaked in March of 2000, with the former declining 35.1% and the latter declining 62.6% through the trough in September 2002. Meanwhile, the Russell 2000 Value was actually ***up*** 14.4% over this same time period.

If we confine our analysis to the brief drawdown for the Russell 2000 Value index post its peak in early 2002, we again see Value outperformance in a downturn. During the precipitous decline from May 2002 to September 2003, the Russell 2000 Growth endured a drawdown of more than 32.4% whereas the Russell 2000 Value was down 25.6%.

Value outperformance in declining markets isn't limited to large market downturns. Indeed, if we look at month-to-month fluctuations of the Russell 2000 Index since 1995 (when we have data for the Growth and Value Indexes), we find that the Russell 2000 Value Index outperformed the Russell 2000 Growth Index in nearly 70% of the months when the Russell 2000 was down.

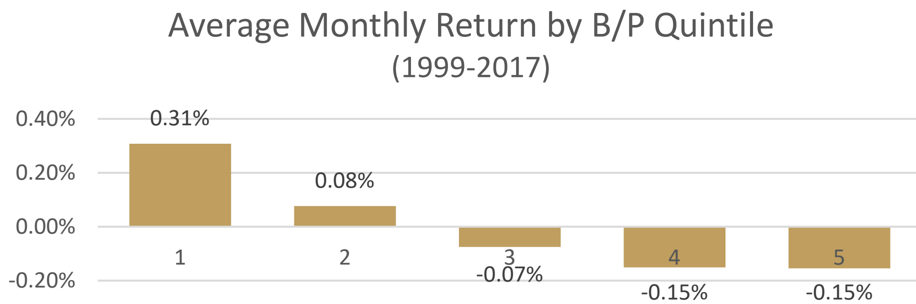


Of course, this doesn't mean that value will outperform in every market downturn – there are still 3 out of 10 down months in which growth outperformed value, including February 2018.

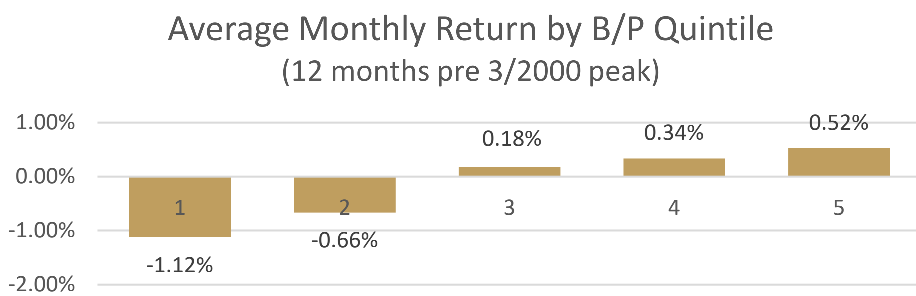
Back to Factors

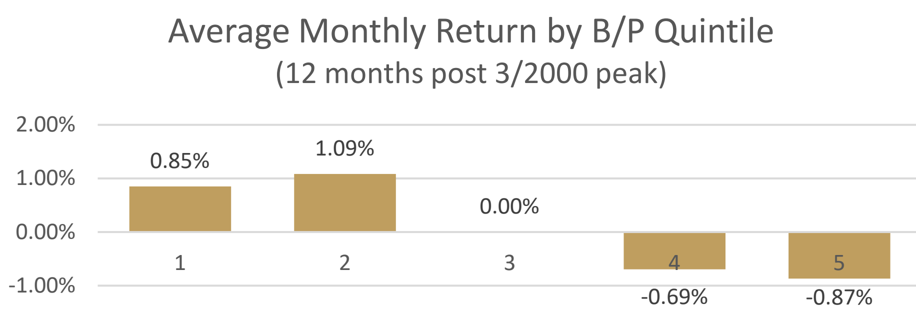
Because relative index performance includes market and sector trends that skew the results and make it difficult to discern the true contribution of value, we find it useful to distill sector and market-neutral value factors. To do so we build sector-neutral and market-cap neutral quintiles formed by ranking all securities (excluding financials and utilities) based on book/price. We then track the performance of each quintile over the next month. This type of factor analysis can provide more robust insights into how Value performs in discrete periods vs. historical trends.

When we create sector and market-cap neutral quintiles based on book/price (excluding financials and utilities), and look at data from 1999-2017, we find the same trend shown in the Fama-French data over the longer period. Low-price companies (Quintile 1) outperform high-price companies (Quintile 5) over the long-run.



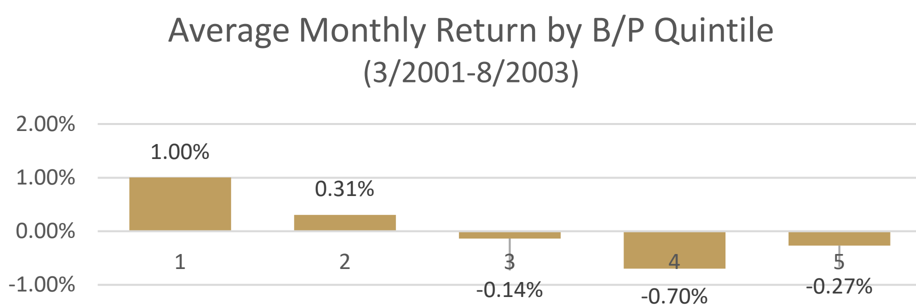
In the 12-months leading up to the market peak in March 2000, we see a reversal of the historical trend, followed by a return to the historical trend in the 12-months following March 2000, coupled with meaningful boost in the spread between quintile 1 and quintile 5.





Comparing the post-peak (2000) factor spread to the factor spread from 1999-2017, (top of page), shows similar trends with Quintile 1 (and 2) outperforming Quintile 5 (and 4). The magnitude of the spread post-peak, however, is more than 4 times as great, with the average historical spread equaling about 45 bps, and the spread during the first 12 months of the market downturn reaching more than 1.7%. In fact, as shown below, this unusually strong outperformance of valuation, persisted, to a lesser extent, through August 2003 when the broader Russell 2000 Index hit its eventual bottom.

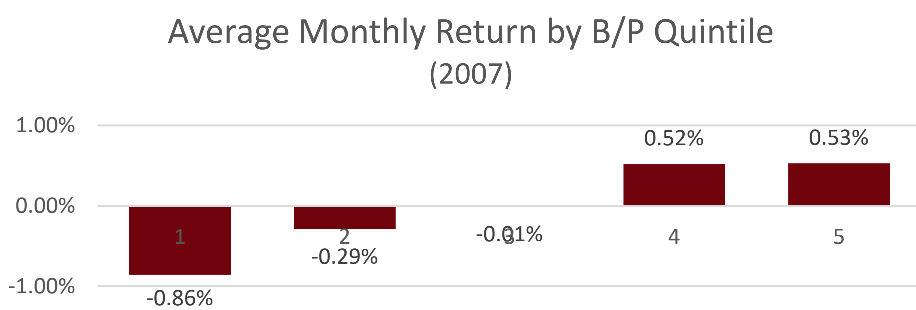
Value Continued to Outperform for Through 2003

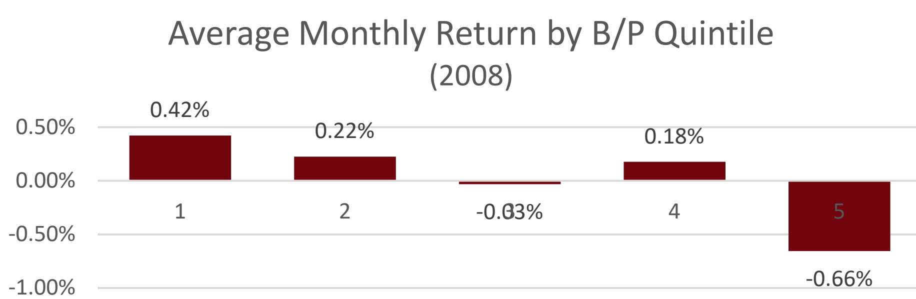


The chart above shows that in the subsequent two and a half years of the downturn, (March 2001 to August 2003,) the spread between the highest B/P quintile (Quintile 1) and the lowest B/P quintile (Quintile 5) averaged 1.25% -- almost 3 times the historical average spread of 45 bps.

And History Rhymed in 2007/2008

We see a repeat of the factor trends of 1999/2000 when we look at 2007 (pre-downturn) and 2008 (down market).

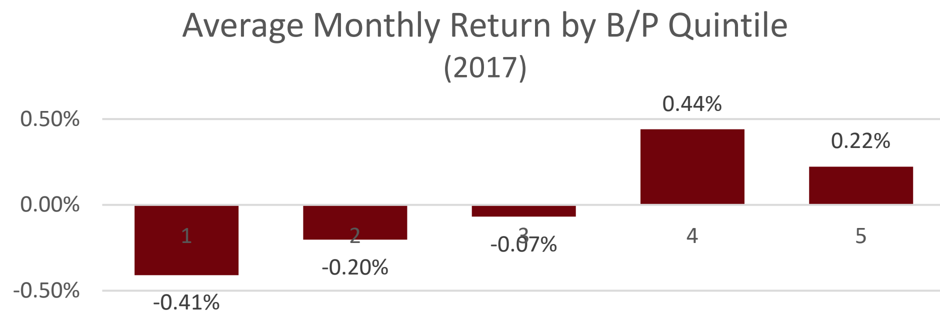




Again, in the year leading up to the eventual downturn in late 2007, value behaved contrary to historical averages and as the market corrected, value posted outsized spreads.

Looking Ahead

In the 2017, the Russell 2000 Growth Index was up more than 20%, outperforming the Russell 2000 Value Index by more than 10 percentage points. In addition, factor performance in 2017 bears striking similarities to the perverse behavior of value in 1999 and 2007.



Irrespective of your view on a future correction, downturn or prolonged period of "sidewaysness" (some up months and some down), there is good reason to be considering valuations in making portfolio selections.

While we aren't expecting an imminent market collapse, the current economic expansion is getting quite long in the tooth. If nothing else, markets on average don't perform well over the subsequent 2-year period whenever unemployment is below 5% (see our note to this effect), and we recently crossed the 4% barrier. Given this, we believe investors wishing to maintain their exposure to the equity markets will be well-served by making sure a healthy portion of that exposure is in more value-oriented strategies.

[1] Russell Investment Group is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes. Russell® is a trademark of Russell Investment Group.

Sources for all charts include: Compustat, Reuters, FTSE Russell and Alambic Internal data. Data represents average monthly returns for sect-neutral factor quintiles relative to sector means within the Russell 3000®, excluding banking, utilities and REITs.

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In the above discussion, we use certain terms, which have the meanings described below. Each of the indices defined below are not investible products. You cannot invest directly in an index.

Dow refers to the Dow Jones Industrial Average, a stock market index that tracks the daily price of shares of stock of 30 large publicly-owned companies sold on the US stock exchanges.

Beta is a measure of the volatility, or systematic risk, of a security or a portfolio in comparison to the market as a whole. Beta is used in the capital asset pricing model (CAPM), which calculates the expected return of an asset based on its beta and expected market returns. Source: www.investopedia.com/terms/b/beta.asp.

The **Russell 2000 Index** is an index measuring the performance of approximately 2,000 small-cap companies in the Russell 3000 Index, which is made up of 3,000 of the biggest U.S. stocks. The Russell 2000 serves as a benchmark for small-cap stocks in the United States. Source: https://www.investopedia.com/terms/r/russell2000.asp.

The **Russell 2000 Growth Index** is a subset of the securities found in the Russell 2000 Index. It measures the performance of Russell 2000 companies with higher price-to-book ratios and higher forecasted growth values. It refers to a composite of small cap companies located in the United States that also exhibit a growth probability. https://www.money-zine.com/definitions/investing.../russell-2000-growth-index/.

The **Russell 2000 Value Index** is also a subset of the securities in the Russell 2000 Index. The stocks in the value index are selected based on a "probability" of value, measured by their relative book-to-price (B/P) ratio. Source: https://www.money-zine.com/definitions/investing-dictionary/russell-2000-value-index/.

The **S&P 500** is The Standard & Poor's 500, sometimes abbreviated as the S&P 500, or S&P. The S&P is an American stock market index that is based on the market capitalizations of 500 large companies having common stock listed on the NYSE or NASDAQ. The S&P 500 index components and their weightings are determined by S&P Dow Jones Indices. Source: https://en.wikipedia.org/wiki/S%26P_500_Index

NASDAQ is an acronym for the "National Association of Securities Dealers Automated Quotations," which was founded in 1971 by the National Association of Securities Dealers (NASD). It is a US electronic securities market that quotes prices through a computer network, and allows brokers to conduct trades online or via telephone. Since there is no physical 'exchange' involved, it is referred to as an “over the counter” or OTC market. Source: http://www.businessdictionary.com/definition/NASDAQ.html.

Price to Earnings Ratio or **P/E Ratio** is a commonly used measure of how expensive a stock is. The P/E ratio is equal to a stock's market capitalization divided by its after-tax earnings over a 12-month period, usually the trailing 12 month period. A P/E Ratio for a stock is the same whether it’s done for the entire company or on an individual share basis. Source: http://www.investorwords.com/3656/P_E_ratio.html.

A company’s **operating margin** is a measure of a company's profitability, calculated by dividing operating income by revenue. Source: http://www.investorguide.com/definition/operating-margin.html.